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## SPECIFICATIONS

# SMS/800 Mechanized Generic Interface (MGI) Specification

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## Revision History

Revision History		
Date	Version	Description
Nov. 2016	19	Introduced an enhancement to SMS/800 known as the MGI Unsolicited Message enhancement. With this enhancement, the UNS-RCH message will be sent to both the new Resp Org and the old Resp Org when a Toll-Free Number was moved from your Resp Org to another Resp Org and when a Toll-Free Number was moved to your Resp Org from another Resp Org. Prior to this enhancement, the UNS-RCH message was only sent to the new Resp Org unless the Help Desk performed the Resp Org change.

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# SMS/800 Mechanized Generic Interface Specification

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# 1. Introduction

The subject version of this document replaces all previous versions of SR-4592. This document version corresponds to the SMS/800 release number that is indicated on the cover page.

## 1.1 Purpose and Scope of this Document

This document presents the specifications for the messages comprising the application-message layer of the mechanized system interface between the Service Management System (SMS)/800 and other Operations Systems (OSs) residing in Interexchange Carriers (ICs) and Local Exchange Carriers (LECs). This interface is referred to as the mechanized generic interface (MGI). The MGI is “generic” in the sense that it is a common standard that can be used by all interested Resp Orgs that need to build to this interface specification.

Included in this document are specifications for interface message structures and formats, interface message language conventions, detailed syntax and semantics for individual messages, and requirements on the OS in order to send data to SMS and receive data from SMS. Also included are capacity requirements and performance guidelines for data transfer.

The function of the SMS/800 MGI, at the application level, is to facilitate the transfer of number administration and customer record administration data between SMS and an OS, in order to support various Responsible Organization (Resp Org) functions supported by SMS. The purpose of this interface is to provide an alternative method of interaction with SMS in order to accomplish several goals: achieve efficiency in managing 800 service number administration and customer record administration; decreasing on-line SMS system usage; and enabling Resp Orgs to link their OS to SMS.

*Note that for ease of readability, all references in this document to "800" should be interpreted as any Toll-Free area code that is supported by the SMS/800 system.*

*Throughout this document, the term “SMS” refers to the SMS/800 system or procedures.*

## 1.2 Laboratory Test Requirements

Any Resp Org that wants to interface to the SMS/800 system via MGI must first complete laboratory testing with the SMS/800 system, consistent with the *SMS/800 Mechanized Generic Interface (MGI) Specification* (SR-4592) and *SMS/800 MGI Industry Test Plan* (SR-4592 Addendum).

Any MGI company which expands or enhances its use of MGI must first complete laboratory testing of the additional functionality, consistent with the above documents.

The MGI laboratory test consists of the following test phases: Telcordia Protocol Conformance Testing Facility (verify TCP/IP protocol stack connectivity); User Application Layer (UAL) Testing; User Program Layer (UPL) Testing; and Volume Testing. Detailed testing requirements are set forth in *SMS/800 MGI Industry Test Plan*.

## 1.3 Document Organization

The remainder of this document is organized as follows:

Section 2 presents some general background information on 800 Data Base Service, the functionality of SMS/800 and functional overview of the interface.

Section 3 presents a discussion of the interface from the data communications standpoint. Areas included are communications requirements and description of protocol layers.

Section 4 contains implementation requirements, including such areas as architecture, security, and performance.

Section 5 contains general interaction and syntax requirements for application messages.

Section 6 presents a discussion of the message template used to define the various application messages. Included are communications parameters designation control functions, as well as a description of various portions of messages.

Section 7 comprises the bulk of this document, containing the application message specifications in the chosen language. Detailed syntax requirements and acknowledgement requirements for the specific messages are included for the following functions: (1) Number Administration, (2) Customer Record Administration, (3) Miscellaneous, and (4) Data Communications.

A list of referenced documents and a list of acronyms follow Section 7.

## 1.4 Requirements Terminology

The following terminology is used throughout this document:

- **Requirement**

Feature or function that, in the SMT software vendor's view, is *necessary* to satisfy the

needs of the user. Failure to meet a Requirement may cause application restrictions, result in improper functioning of the product, or hinder operations. A Requirement contains the words *shall* or *must* and is flagged by the letter "R" in parentheses: (R).

- **Conditional Requirement**

Feature or function that, in the SMT software vendor's view, is *necessary in specific applications* and may be reclassified as a requirement by a user, depending upon the applications environment in which the system is deployed. Conditional Requirements may depend on other Requirements, Objectives, or Conditional Requirements. A Conditional Requirement is flagged by the letters "CR" in parentheses: (CR).

- **Objective**

Feature or function that, in the SMT software vendor's view, is *desirable* and may be required. An Objective represents a goal to be achieved. An Objective is flagged by the letter "O" in parentheses: (O) and contains the words *it is desirable* or *it is an objective*.

- **Conditional Objective**

Feature or function that, in the SMT software vendor's view, is *desirable in specific applications* and may be required by a client. It represents a goal to be achieved in the specified Condition(s). If a client identifies a Conditional Objective as necessary, it shall be treated as a requirement for the application(s). A Conditional Objective is flagged by the letters CO.

- **Condition**

The circumstances that, in the SMT software vendor's view, will cause a Conditional Requirement or Conditional Objective to apply. A Condition is flagged by the letters Cn.

## 1.5 Recommendations for MGI Clients

1. Provide at least two socket connections, one to each SMS/800 MGI Data Communications Module (DCM) servers. This will provide redundancy for the connections.

2. Review your need for MGI Unsolicited messages, and inform the Help Desk of the MGI Unsolicited messages that you need so that they may set up the corresponding MGI administration screen (i.e., GUN screen) on your behalf.

Note: Receiving unnecessary unsolicited messages can consume network and CPU resources on both sides of the interface (i.e., your machine and SMS/800 machine), so please only subscribe to the unsolicited messages that you need.

3. Monitor your socket connections, and reinitialize the socket connection whenever the connection is dropped.

4. Inform the Help Desk whenever you need to bring your MGI network connection(s) down for more than 1 hour.

5. Review your call processing record (CPR) tree before submitting the record for

activation. Please try to make your records as efficient as practical.

Note: If you would like help in creating efficient CPRs, please call the Help Desk.

6. Please avoid consecutive searches for numbers in NPA 800 because this NPA is almost completely exhausted.

7. Please avoid updating or creating CRs that are very close in time (sequence) to each other. For example, please avoid creating two or more Pending records for the same dial# that are only 15 minutes apart. Also, please avoid creating or updating a large volume of CRs that have the same date/time or only vary by a quarter hour.

For example, when creating or updating a large volume of records, please spread out the effective date/times over several quarter hours or (if updating 1000s of records) over several hours.

8. Avoid updating copies of CRs that have no changes.

9. Avoid creating a "NOW" CR if the CR requires approval by carrier(s).

10. Do not use the Resp Org Change Request message [REQ-RCH] to try to change the Resp Org on another Resp Org's CR, because this message does not perform a Resp Org change, yet instead it *requests* a Resp Org change on another Resp Org's CR to your Resp Org. On the other hand, if you want to change the Resp Org on one of your own CRs to another Resp Org, then you can use any of the following messages as appropriate for your business needs: REQ-CRA, REQ-CRC or REQ-MRO. Please avoid using REQ-RCH for changing the Resp Org on a large quantity of records; and instead, use REQ-I:viRO whenever practical to change the Resp Org on your records.

## 2. Background

This section provides background information on toll-free service and presents a high-level overview of the features of SMS/800.

### 2.1 Toll-Free Service

The term "toll-free service" describes a local and/or interexchange service in which subscribers agree in advance to pay for calls made to them at specific designated numbers. The service is used primarily by businesses (but can be used in the residential sector) to provide clients, customers, and other individuals a free and convenient means of contacting them. Subscribers may choose to offer toll-free service on a nationwide basis or they may limit their service to smaller, more specific geographic areas.

Because the called party pays for the incoming call, the called party also selects an Interexchange Carrier (IC) to carry the call. The Local Exchange Carrier (LEC), in whose area the call originates, cannot identify the IC to which the call should be routed in the same manner as it identifies the IC for a non-toll-free call. When toll-free service was originally introduced, the LECs were unable to provide access for this service to any IC other than AT&T, because there was no mechanism available to identify the call recipient's (the toll-

free Service subscriber's) chosen IC.

In 1987, the Bell Operating Companies and other LECs began providing other carriers with toll-free access under the NXX plan. Under this system, LECs identified the carrier to which toll-free calls should be routed by analyzing the three digits that immediately follow the toll-free prefix (i.e., 800) of the dialed number. Because the NXX screening plan identified the toll-free carrier by the NXX, the system required that particular NXXs be assigned to particular carriers. That is, under the NXX plan, toll-free subscribers could not change carriers without changing their Toll-Free Number. Additionally, subscribers that sought a specific number had to obtain their toll-free service from the carrier to which the NXX digits had been assigned.

Currently, the "database" plan, mandated by the FCC in September 1991 and deployed in May 1993, facilitates number portability. That is, the service providers no longer have NXXs assigned to them. A subscriber can select a number independent of their service provider. Under this "database" plan, information on the carrier(s) associated with each number is loaded into various SCPs around the country. These SCPs contain databases with instructions based on a ten-digit screening of the number, as opposed to the six-digit screening involved in the NXX plan.

The toll-free service providers that access the SMS/800 system to reserve Toll-Free Numbers on behalf of their customers are called Responsible Organizations (Resp Orgs).

Toll-free service requires the use of databases at Service Control Points (SCPs) to perform number translations for the service calls. The translations provide carrier selection information and, optionally, routing number information that is needed to route and bill those calls. ICs provide the circuit-switched transport capabilities for interLATA and interstate calls, and LECs (or possibly other competing carriers in some states) provide the same capabilities for intraLATA calls.

When a call originates, the call is routed to a Service Switching Point (SSP). Using a Common Channel Signaling (CCS) network that supports the Signaling System No. 7 (SS7) protocol, the SSP sends a query, containing the dialed number and information about the call initiator, to an SCP which contains Customer Records (CRs) that consist of routing instructions (such as the carrier and the routing telephone number) and other control actions for all valid numbers. Using information contained within the CR of the dialed number, the SCP determines the routing and sends this routing information to the SSP. The routing information that is sent to the SSP contains either the single destination Plain Old Telephone Service (POTS) number to which the dialed call should be routed or an announcement type such as out-of-band or a "turnaround" number. A turnaround number provides necessary information for call hand-off to the IC responsible for routing the call. When a number turnaround occurs, the SSP routes the call to the IC's Point-of-Presence (POP) and the IC is responsible for completing the called number to POTS translation. LEC switching system translations use a CIC (carrier identification code) to identify the specific IC and network path over which the call should be carried.

## 2.2 SMS/800

The toll-free Service Management System (SMS/800) provides a common pool of available numbers for toll-free service and keeps track of which numbers are available for new customers and which numbers are reserved. SMS/800 allows service providers to reserve Toll-Free Numbers and subsequently create customer records (which contain administrative and call routing data) and load customer records into the SCPs.

One key function of SMS/800 is administration of the SCP databases. SMS/800 is the central database that handles additions, deletions, and changes to customer records. A customer record contains all data relevant to a particular number, such as subscriber information, the number of terminating lines, the customer's area of service, identification of carriers, and subscriber-specified decision criteria for call routing, such as time-of-day routing. SMS/800 validates the customer record data, translates it into the format required by the SCPs, and distributes the translated data to the SCP databases.

In addition to providing key functions listed above, SMS/800 provides capabilities necessary for the support of toll-free service, such as the following. SMS/800 allows carriers to define rules for carrier notification and approval regarding toll-free service. SMS/800 allows system administrators, network administrators, SCP administrators and other authorized users to perform administrative functions necessary to support toll-free

service. SMS/800 provides data to the BILL/800 system for billing SMS/800 Resp Orgs.

SMS/800 supports both basic service and complex service. From the Resp Org's perspective, basic service includes translation capabilities for call processing according to single intraLATA carrier selection and/or single interLATA carrier selection. In contrast, complex service supports multiple intraLATA and interLATA carriers, call routing to multiple POTS destination numbers, and the use of decision criteria for call routing.

Whereas SMS serves as the main repository of toll-free service customer records, it most likely does not contain detailed call processing logic for customer records where the carrier performs the actual number translation. This situation is commonly referred to as "*800 turnaround*".

### **2.2.1 User Interfaces**

Resp Orgs may interface to the SMS/800 system via any of the following methods: a machine-to-machine interface known as the Mechanized Generic Interface (MGI), a web-based user-interface known as Web-Based Access (WBA) and Web-based Reporting System (WRS), a terminal interface (also known as the character-based 3270 system) or via the batch update process. The WBA/WRS and terminal interface are also referred to as "on-line" systems.

### **2.2.2 Resp Orgs**

Every Toll-Free Number, other than "spare" numbers, will have a single "responsible organization" (Resp Org) that controls or owns that number. Once a subscriber (customer) for a Toll-Free Number places an order for service, the company entering the subscriber order into SMS is the Resp Org. The Resp Org is responsible for managing the subscriber's records in SMS. The Resp Org is typically responsible to its customers for the overall coordination to provision, maintain, and test toll-free service between various entities, such as LECs, ICs and SMS.

## **2.3 Operations Systems**

The Operations Systems (OSs) that may interface to SMS/800 via the MGI are LEC Service Order Processors (SOPs) as well as Interexchange Carrier (IC) Service-related systems and other OSs that support Toll-Free Service.

## 2.4 Interface Functionality

### 2.4.1 General

The basis for determining the mechanized interface functionality is the existing on-line SMS functionality. That is, certain capabilities available on-line have been identified for inclusion over the interface. The functionality proposed for the mechanized interface has been developed based on interactions with exchange carriers that have expressed interest in such activity. This document contains those functions which have been labeled as desirable by at least one company. It should be noted that each company desiring to interface with SMS may choose not to implement each function.

Key interface functionality includes number administration and customer record administration-related activities. The following list are care functions included in the mechanized interface, that are described in the following sections:

- **Number Administration (Number Search, Number Reservation, Number Query, Number Status Change)**
- **Customer Record Administration (Customer Record Update, Customer Record Status Query, Customer Record Query, Carrier Notification and Approval, and associated management activities)**
- **Resp Org Change Request.**

### 2.4.2 Number Administration

SMS keeps track of the status of all 800 numbers and allows personnel with number reservation capabilities to search for spare 800 numbers and to change the status of 800 numbers. The Help Desk, acting upon instructions from the North American Numbering Plan Administration (NANPA), makes 800 number NXXs available or unavailable for use within SMS. Number administration capabilities over the interface include the ability to perform a number search, reserve or cancel reservation of one or more 800 numbers, and to change parameters associated with already-reserved numbers. Also included is the ability to query numbers to determine the number status and other number administration parameters.

## NUMBER STATUS:

The following number statuses are recognized by SMS/800 for Toll-Free Numbers (i.e., Dial Number (also abbreviated Dial#)):

<b>SPARE</b>	A number that is available for use.
<b>UNAVAILABLE</b>	A number that has been taken out of use and cannot be assigned unless released by the SMS/800 Help Desk.
<b>RESERVED</b>	number being held for future use by a customer. Numbers are automatically reserved for an industry agreed-upon time period. Only the Help Desk and the user group that reserved the number can change the length of time a number is reserved by entering a date in the RESERVED UNTIL field.
<b>ASSIGNED</b>	A number that is associated with a customer record that is not yet active in an SCP.
<b>SUSPEND</b>	A number that was disconnected but is scheduled to be reactivated. A future pending new connect customer record has been established in SMS.
<b>WORKING</b>	A number that that has a customer record status of active or sending.
<b>DISCONNECT</b>	A number that whose service has been terminated. A number remains disconnected until the END INTERCEPT date is reached. The number is returned to SPARE at the end of intercept if it has been disconnected for an industry agreed-upon time interval; otherwise, it becomes TRANSITIONAL at the end of intercept.
<b>TRANSITIONAL</b>	A number that that is no longer on intercept and has been disconnected for less than an industry agreed-upon time period. After being disconnected for this period, the number automatically returns to <b>SPARE</b> .

The status associated with an 800 number can be changed by (1) the Help Desk and personnel with number reservation responsibilities using the SMS number administration functions, (2) the system in response to changes in the customer record, and (3) automatically by the system when certain events occur.

### 2.4.3 Customer Record Administration

Customer Record Administration supports the ability to handle new service, make modifications to existing records, delete pending records, and resend records to the SCPs. (For a customer record to be entered for new service, the number must first have a number administration status of reserved or transitional. An 800 number can have any number of customer records which become effective at different effective dates and times.) The interface also supports the ability to perform queries on customer records in order to determine the status of a record as well as the trouble referral number, which is a ten-digit telephone number for reporting trouble on a specific 800 number based on the RESP ORG. Finally, the interface supports notification of records that go active or fail to go active at the effective date and time.

The SMS Mechanized Interface supports three types of records: simple, basic, and complex. Simple records are records supporting only turnaround service, where routing is handled by the Interexchange Carrier (IC) identified by the Carrier Identification Code (CIC). A simple record contains only the 800 number and the CIC. No call routing is performed on simple records; instead, the record is passed to the carrier represented by the CIC code in the record for final treatment. A basic record can contain either one POTS (Plain Old Telephone Service) number, or one 800 number or one of each. A maximum of two carriers, one interLATA and one intraLATA, are supported with basic customer records.

An SMS customer record contains all data relevant to a particular 800 number. Each record is identified by three parameters:

- A unique 800 number
- The date the service becomes effective (Effective Date)
- The time the service becomes effective (Effective Time).

SMS customer records consist of three inter-related sections: Customer Administrative Data (CAD), Call Processing Data (CPR), and Label Definitions (LAD). The CAD contains details for the basic structure of a customer's service: billing information, customer information, and *simple* call routing. Each customer record must have a completed CAD.

Complex records are records requiring an SMS/800 CPR. CPRs are required when one or more of the following criteria are met:

1. There is more than one intraLATA or more than one interLATA carrier
2. There is more than one destination number for either the intraLATA or interLATA carrier
3. Routing is based on Decision Criteria (such as Time-of-Day or Percent Allocation).

The CPR contains specific call routing information when routing based on decision criteria has been selected by the customer. If a customer has requirements for call routing based on the time-of-day or day-of-week, for example, these criteria and the routing to be used in each case must be entered in a CPR. Finally, Label Definitions (LADs) are needed when groups of criteria are defined for call processing. For example, if a customer wanted to use a label named \*BEAST, a label could be defined as NJ, NY, CT, and PA in the STATE entry of the LAD and used as frequently as desired on the CPR portion of the record.

#### 2.4.3.1 Customer Record Status

##### **CUSTOMER RECORD STATUS:**

Customer record status is automatically generated by SMS. Ten possible statuses for a customer record indicate the state of a record relative to the SCP.

- **SAVED**

A *SAVED* record is one stored in SMS with a future effective date and time, but not yet validated completely. At its effective date/time, a saved record automatically changes status to FAILED, which prevents it from downloading to the SCPs.

- **PENDING**

A *PENDING* record is one that has passed all validations and has a future effective date/time. A *PENDING* record can be accessed and modified. When the effective date/time is reached, the status becomes either *SENDING* or *FAILED*.

- **SENDING**

A *SENDING* record is one being sent to the SCP at the designated effective date and time. When the effective date/time of a *PENDING* record is reached, the status becomes *SENDING* and the record is sent to all affected SCPs. After all affected SCPs receive the record and respond positively, the status becomes *ACTIVE* or *DISCONNECT*.

- **ACTIVE**

An *ACTIVE* record is the *one* record for the Toll-Free Number that is currently working in all affected SCPs (except during an incremental load). An *ACTIVE* record cannot be modified and there can only be one *ACTIVE* record at a time.

- **OLD**

An *OLD* customer record is one whose status was previously *ACTIVE*, *DISCONNECT* or *SENDING*. It has been replaced by another *ACTIVE*, *DISCONNECT* or *SENDING* record having a later effective date/time. An *OLD* record is saved for at least 5 days in SMS and cannot be modified.

- **INVALID**

An *INVALID* record has not completed validations successfully, but has a future effective date/time. When the effective date/time is reached, an *INVALID* record is not sent to the SCP but becomes a *FAILED* record.

- **DISCONNECT**

When the effective date/time of a customer record with *DISCONNECT* action is reached and the record is loaded into the SCP(s), the record becomes *DISCONNECT*. The record is kept by SMS until it reaches the END INTERCEPT date.

- **MUST CHECK**

When the effective date/time is reached, a **MUST CHECK** record is not sent to the SCP but becomes a **FAILED** record. If a RESP ORG change is made on a record that is followed by future records, and the record is updated, all future records with a status of Pending will be changed to **MUST CHECK**. When a RESP ORG change is made, the new RESP ORG can verify the routing of these records prior to any future records going active.

- **FAILED**

A **FAILED** customer record has not been activated in any affected SCP.

- **HOLD**

**HOLD** status indicates that a record has been placed on hold by the customer or work center request. The record is not sent to the SCP at the effective date/ time and remains in the **HOLD** status after the effective date/time.

### 2.4.3.2 Customer Record Transactions

A number of actions that can be performed relative to a customer record (CR) are supported over the interface. These include:

- **Create a new CR (new service)**

To create a new CR, certain required administrative data must be provided. In order to create a new CR, the 800 number and effective date/time must be specified.

- **Change (update) an existing CR**

Any data associated with a CR can be modified, assuming proper authorization permissions. This includes changing the RESP ORG of the record.

- **Delete a CR**

Any record with a *future* effective date/time can be deleted. This includes records with a status of PENDING, SAVED, INVALID, HOLD, and MUST CHECK.

- **Transfer a CR**

To reschedule a customer record, an existing record is *transferred* to a new effective date/time. The original version of the customer record is deleted. Transfer could be used to change a record to the new effective date/time when the original record is no longer needed. Records with the status of SAVED, PENDING (assuming the effective date has not passed), INVALID, MUST CHECK, FAILED, or HOLD may be transferred. A record can be transferred forward only as far as the effective date/ time of the next input record, or backward only as far as the effective date/time on the previous input record. A record cannot be transferred backward to a date/time prior to NOW.

- **Disconnect service**

An ACTIVE customer record may be disconnected. When a disconnect record is sent to the SCP(s), it replaces the active record. When the end intercept date is reached, a delete record is sent to the SCP and the disconnect plus any OLD records are removed from SMS/800 providing there are no future pending new connects following the disconnect record.

- **Resend a CR**

SMS/800 selects the latest version of the customer record that has a status of ACTIVE, DISCONNECT, SENDING, or FAILED. That version is resent to all the SCPs in the area of service. A customer record with a status of FAILED will only be resent to an SCP if the cause of the failure was rejection at that SCP.

#### 2.4.3.3 Emergency/Immediate Updates

This interface will support emergency and immediate customer record updates. An emergency update is defined as an update on a customer record with an effective date/time less than 24 hours from the update time. SMS/800 is able to infer from the effective date/time that the update is an emergency.

An immediate update is one in which the effective date/time can be set equal to the current or next quarter hour (NOW), by using the effective date parameter equal to "NOW".

#### 2.4.3.4 Complex Record Call Routing Criteria

The CPR allows for the entry of call processing criteria that determine the routing of calls for the specified 800 number. All call routing criteria available to on-line users will be supported over the interface, except for the GO TO node. This node eases on-line data entry and as a result is not appropriate for the mechanized interface. Table 2-1 portrays supported criteria over the interface.

**Table 2-1.** Complex Record Call Routing Criteria

DECISION NODES	ACTION NODES
TIME-OF-DAY	CARRIER
DATE	ANNOUNCEMENT
DAY-OF-WEEK	TERMINATING NUMBER

**Table 2-1.** Complex Record Call Routing Criteria (Continued)

LATA	
STATE	
AREA CODE	
NXX	
SWITCH	
PERCENT ALLOCATION	
SIX-DIGIT	
TEN-DIGIT	

Table 2-1 demonstrates that call routing criteria are divided between decision nodes and action nodes. Decision nodes have more than one outcome in the routing logic of an 800 number. Action nodes have, at most, one outcome in the routing logic. For example, the DAY-OF-WEEK criterion could be used to route calls made on Saturday or Sunday to a

different destination phone number than those made on Monday through Friday. Therefore, the DAY-OF-WEEK decision node would branch to two different telephone numbers according to the day of the week.

#### 2.4.3.5 Labels Used in a Call Processing Record

A *label* can be used as a value in the following criterion fields, as shown in Table 2-2.

**Table 2-2.** LAD Label Criteria

<b>Time</b>
<b>Date</b>
<b>LATA</b>
<b>State</b>
<b>Area Code</b>
<b>NXN</b>
<b>Six-Digit Number</b>
<b>Ten-Digit Number</b>
<b>Telephone Number</b>

Labels are used to group values of criteria. The maximum number of values that can be associated with a specific label is 255, except when NXX labels are specified, in which case the maximum number is 256 to allow for the specification of the associated NPA. When a label is defined, it must be preceded by an asterisk (\*) and is limited to 8 characters, including the asterisk. For example, \*CITY could be defined as all LATAs comprising a major metropolitan area. Labels are applicable to the 800 customer record for which they are defined.

#### 2.4.3.6 Complex Record Matrix Representation

Complex record data will be represented as a matrix. The call processing (CPR) portion of the customer record is used to define the call routing treatment for an 800 number. *Row and Column specification is close to the way data is currently entered on-line.* Additionally, for those mechanized interface users accustomed to on-line access, the concept of rows and columns should be familiar. Section 2.4.3.7 details a method for specifying row and column data entry.

## Complex Record Data Representation

Following is a discussion of how the row and column approach can be applied to the specification of interface messages:

Envision a CPR as a matrix, similar to how CPR data is input on-line in SMS today.

Define:

**c = column number r = row number**

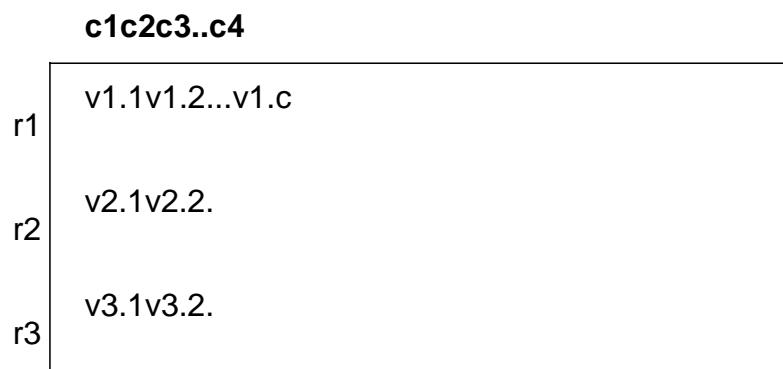
**cc = # of columns = number of decision nodes + action nodes**

**rr = # of rows = number of distinct call routing paths/branches**

**r.c = address of the intersection of row r and column c where a value is stored**

**Total number of vr.c entries = cc \* rr**

Messages will consist of specification of the number and types of nodes (decision or action), along with the call routing branches for each possible path of the call routing tree. Data will continue to be positionally defined. See Figure 2-1.



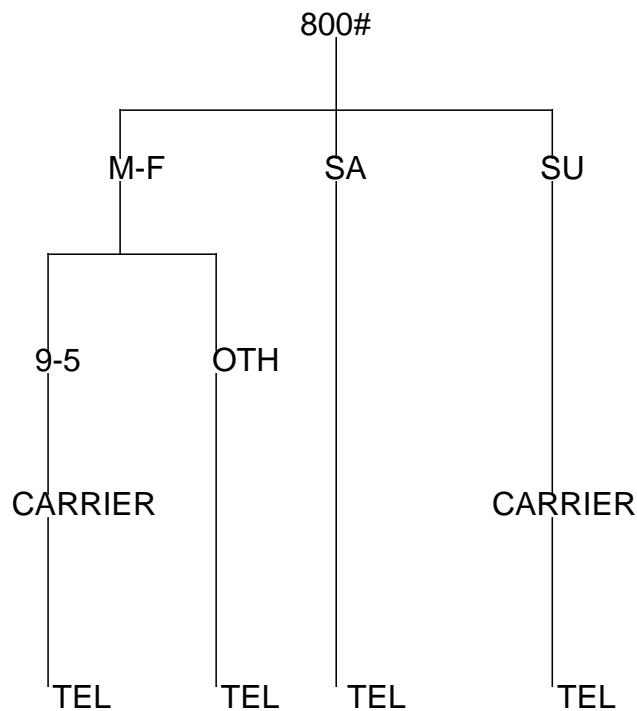
**Figure 2-1. CPR Representation**

#### 2.4.3.7 Complex Record Sizing Considerations

As noted, complex record transmission over the mechanized interface involves (on an 800 number basis) the specification of the number of call routing criteria, along with the number of terminating numbers (i.e., distinct call routing paths). SMS/800 will support a maximum of 600 terminating numbers and 20 call routing criteria per 800 customer record. In the language presented, therefore, the maximum value of rr is 600, and the maximum value of cc is 20.

#### 2.4.3.8 Complex Record Example

Figure 2-2 is an example of how the call routing of an 800 number requiring an SMS complex record might be defined using the above scheme.



**Figure 2-2.** Call Routing Example

Figure 2-2 portrays call routing logic for one particular 800 number. The routing involves decision and action criteria, and as a result, the associated SMS customer record requires a CPR. By definition, the record also requires a CAD. In this example, the value of cc is 4 (because the decision and action nodes are day-of-week, time-of-day, carrier, and terminating number). The value of rr is also 4, because the number of distinct call routing paths available is 4, corresponding to the number of distinct terminating paths.

#### 2.4.3.9 Carrier View

The Carrier View feature (formerly called Multi-Carrier View) allows all *involved carriers* to view those portions of a customer record for which they are responsible for routing. The Control RESP ORG, which is the RESP ORG associated with the 800 number, has full view and update capability for the customer record. An involved carrier is a carrier whose Carrier Identification Code (CIC) is listed in the IntraLATA Carrier or InterLATA Carrier fields in the CAD Basic portion of the customer record. Involved carriers include both interLATA and intraLATA carriers. The control RESP ORG is always returned to the requesting OS.

This feature allows any involved carrier to view Area-of-Service (AOS) data for which the CIC is responsible for routing, along with selected CAD data. If the OS requesting the data is in no way involved in the record, no AOS or routing data will be returned, and the query is considered failed. Such information can be useful for auditing purposes, as well as for trouble investigation. An OS may request this at any time and must provide the 800 number, and optionally, the effective date and time, or customer record status. If the effective date and time are not provided, and multiple records exist for the specified number, the most recent SENDING, ACTIVE, or DISCONNECT record will be returned if one exists.

If a customer record contains multiple call processing record (CPR) sections, the response message back from SMS to the OS will return only one main section, with references to subsections via the GO TO node. Although the MGI interface does not support the creation of CPR subsections using the GO TO node, CPRs created on-line may contain such constructs. An error code will accompany the response, indicating that the record contains more sections that are viewable on-line. This is consistent with the Complex Record Update command (REQ-CRC) which supports only single section CPRs.

Any routing data not applicable to the particular involved carrier will not be shared. Additionally, the primary intraLATA and interLATA carriers will be shared only if the requesting OS corresponds to the primary carrier. If the routing data contains OTHER branches, the value of OTHER will be sent back to the OS. If there are more than one OTHER values, SMS will differentiate them by giving them unique identifiers, such as: OTHER-1, OTHER-2, etc. All explanations of the meaning of the OTHER entries will be provided in a separate parameter: "OTH". Labels used in the CPR will be defined in the LAD portion of the customer record. This is to ensure the proper access and security mechanisms currently in place.

#### 2.4.3.10 Carrier Notification and Approval

An 800 number can have any number of customer records, which become effective at different effective dates and times. A record is established each time a change in the service is submitted either on a service order or on a supplemental form. Examples of changes include new terminating numbers added, an expansion of the area of service, or changes in the call routing for the particular 800 number. Some 800 numbers will have multiple carriers routing traffic using features provisioned through SMS. When multiple carriers are associated with the same 800 number, notification can be provided to those carriers that so desire that their routing may be impacted with changes made to the record. Carrier Notification refers to the capability of SMS to notify one or more carriers of certain activities associated with SMS customer records. Specifically, this capability allows carriers to determine for themselves whether notification is desired or not.

This feature introduces the concept of authorized CICs. Authorized CICs are defined as carriers specified on an SMS customer record with which the RESP ORG has defined arrangements. Each RESP ORG can have arrangements with a number of carriers, and SMS supports the ability for each carrier to define their own CIC-to-RESP ORG arrangements. The implications are that customer records will not pass validations if CICs are listed that do not have defined arrangements. These arrangements are defined on-line. Assuming that these relationships have been defined, following is a discussion of how notification and approval will work over the mechanized interface.

This feature introduces the concept of CIC-to-RESP ORG arrangements defined by CICs. Basically, each CIC, corresponding to a carrier, will be required to specify those RESP ORGs that can list the CIC on a customer record built by those RESP ORGs. If an arrangement is not defined, any record built by the RESP ORG will not pass validation and will be placed in a status of INVALID. Customer records contained within SMS prior to the definition of the arrangement will remain as is in the SMS database. CICs can also delete arrangements with RESP ORGs. Deletions will cause future customer record activity reflecting such relationships to be placed in a status of INVALID. Existing customer records will not be affected. Notification of such deletions will be on-line only.

This feature also has as a basis the concept of *triggering* conditions. When a change is made to a customer record by a control RESP ORG, SMS will compare that version of the record with a record (same 800 #) with the most recent closest previous effective date and time, assuming it is pending, sending, disconnect, or active. If no such record exists, the record is considered a new record, and the activity initiated by the control RESP ORG is treated as a CIC addition.

These activities are initiated by the control RESP ORG and are divided into the following categories: CIC Additions and CIC Deletions, and CIC Routing Changes. CIC additions and deletions refer to changes to the SMS CAD and CPR. If a CIC is added or deleted from the CAD, but the CIC is not used in routing, notification does not apply. If a CIC is added or deleted from the CAD and the CIC is used in routing, notification applies.

Changes to the referral field can trigger CIC addition, when the field is changed from 'N' to 'Y' or blank. When the referral field changes from 'Y' or blank to 'N', the change will be

treated as a CIC deletion. Changes to the InterLATA and IntraLATA fields are also treated as CIC additions or deletions. Changes to AOS and terminating telephone number (Destination Number) fields are treated as routing changes.

Any time a change is made to the CPR and/or LAD for complex records, all affected carriers will receive notification indicating that they are potentially impacted. The carrier may then view their carrier view portion for more information. Other changes that trigger notification relate to any customer record: Control RESP ORG change (coordinated conversion), and Change to Effective Date and Time (record transfer). Mass changes do not trigger notification.

All RESP ORG initiated changes for which CICs desire notification will take place at the time of record validation, except for CIC deletions. CIC deletions from customer records will take place at the time of record download to the appropriate SCPs. The CIC corresponding to the Control RESP ORG of the record will not be notified or asked for approval. For CIC additions and CIC routing changes, the applicable carrier view portion of the customer record will be transmitted over the mechanized interface. In the case of CIC deletion, only the 800 number, effective date and time, and control RESP ORG are supplied. A control RESP ORG change will trigger transmittal of 800 number, effective date and time, old control RESP ORG and new control RESP ORG. A record transfer will trigger transmittal of 800 number, old effective date and time, and new effective date and time.

Carrier Approval supports the ability for involved carriers (CICs) to approve or deny planned involvement in the routing of 800 numbers. When a change is made to a customer record, and the carriers choose to select approval or denial of that involvement, SMS will launch an approval request to the affected carrier. Approval requirements for CICs are defined on-line. Note that all CICs, except 0110, are candidates for carrier approval. That is, CICs of 0110 will not be given the opportunity to approve customer record changes. This approval request will be sent in the form of an unsolicited message (UNS-SNA), and the approval indicator **ap** will be populated with a value of "Y". The affected carrier responds over the interface using the REPT-APR message. If no approvals are required, per the affected carrier, SMS customer record processing is unaffected. If all required approvals are granted, the record is processed regularly and at the effective date and time, SMS attempts downloads to the SCP(s). If all required approvals are not granted, SMS will indicate that the record is awaiting approval, through a new indicator **app**. This indicator may have a value of NA (not applicable), OK (all required approvals received by SMS), AW (SMS is awaiting at least one carrier approval, and none of the required approvals were denied), DN (at least one affected carrier denied the approval request). This indicator will become part of the customer record data, and will have a value of DN for records requiring approval with an effective date of NOW.

Triggers for carrier approval are the same as the triggers for notification, except for the following. If any of the following changes are made, there will be no approvals requested:

- **Control RESP ORG change**
- **Change to referral field**
- **Change to end-intercept date field**
- **Record transfer to a later date**
- **CIC deletion from routing**
- **Disconnects**
- **TEL# change for CAD, and CAD/LAD-only records.**

SMS/800 supports the ability of an affected carrier to change their approval response at any time prior to the effective date and time from DENY APPROVAL to APPROVAL, but not vice versa.

**NOTE** Carrier Notification and Approval does not apply to customer records that are updated via a Mass Change (such as an NPA Split, NPA Move, Mass Carrier change, etc.).

**NOTE** Carrier Notification and Approval does not apply to CICs that are owned by Resp Org Entity “BR” because that is the Help Desk and Site Support, and these organizations are not carriers.

**NOTE** CIC-0110 exception: The Carrier Approval feature is not available to CIC-0110 because CIC-0110 does not have the option to approve or deny changes to customer records. However, the Carrier Notification feature is available to CIC-0110.

## 2.4.4 Interface Messages

Two types of messages are included in this document: application messages and data communications messages. Both types of messages are fully described later in this document. This section provides a list of application messages contained herein supported as of Issue 14.

- **Number Search, Reservation or Query**

### **Response to Number Search, Reservation or Query**

These messages support the ability to search for, reserve, or query an 800 number by entering the actual number to be searched for or reserved, or by using the random search function of SMS. Different types of searches are supported. These include specific number searches, spare number searches within a specific NXX or line number combination, and contiguous searches.

- **Number Status Change**

### **Response to Number Status Change**

These messages support changing the status of an 800 number from reserved or transitional to spare and to change the control RESP ORG, contact name, contact phone, notes, and reserved until date of a previously reserved number.

- **Unsolicited Number Status Notification**

This message is sent from SMS to an MGI user when a number reservation that is in a waiting status completes after time-out, or when the maximum number of reservation-days have passed and the status is still waiting. The message is returned to the original sender of the associated number reservation request.

- **Unsolicited Reservation Notification**

This message is sent from SMS to an MGI user when a number reservation completes via on-line for a Resp Org belonging to an MGI user. The message is triggered if the number status changes from spare to reserve or from transitional to reserve only if the Resp Org at the time of the reservation is an MGI Resp Org. The on-line GUN screen must be properly formatted via the Help Desk for users to receive this message.

- **Update Customer Record**

**Response to Update Complex Record**

These messages support a host of customer record administration functions. New records can be created, changes to existing records can be made, entire records can be deleted, and records can be disconnected, or transferred. Emergency and immediate updates are supported. Also, a customer record resend capability is provided to resend a customer record to all SCPs in the area of service.

- **Customer Record Status Query**

**Response to Customer Record Status Query**

These messages support the query of the status information of the individual instances of a customer record. The information returned includes the customer record status, and the effective date and time for each instance.

- **Customer Record Activation Notification**

This message supports notification of activation or failure of customer records at the intended effective date and time.

- **Customer Record Query**

**Response to Customer Record Query**

These messages allow involved carriers to view portions of a customer record for which they are responsible for routing. The Control RESP ORG has full view of the record data; involved carriers have partial view of the record data. Users specify an 800 number and, optionally, an effective date and time. The information returned includes both the record status, as well as applicable area-of-service and call routing data.

- **Trouble Referral Number Query**

**Response to Trouble Referral Number Query**

These messages support the ability to acquire the trouble referral number for a RESP ORG or for up to ten dial numbers.

- **Retrieve Application Status Information**

**Report Application Status Information**

These messages allow SMS to poll for the version number of the interface specification that the OS is currently supporting, and for an OS to autonomously send a message to SMS indicating the same. Version control can be accomplished using these messages.

- **Request Test Capabilities**

**Response to Test Capabilities**

These messages allow both SMS and the OS to exercise and verify that the UAL header field population procedures, message segmentation, confirmation options, and UPL response message generating software are performing in an integrated manner according to this interface specification.

- **Unsolicited Bulletin Board Message**

This message is sent from SMS to MGI users in order to convey information pertaining to the operation of SMS/800. Such information may be of a purely informational nature, or of a problem nature. All MGI users will receive the same messages.

- **Unsolicited SMS Carrier Notification/Approval**

This message supports notification or notification and approval by SMS to affected carriers, following a control RESP ORG-initiated change. This change may be a Carrier Identification Code (CIC) addition, a CIC deletion, or a CIC routing change or (for notification only) a CR Resp Org Change. The OS corresponding to the affected CIC receives this message either at validation time or at download time, based on the rules specified later in this document. Refer to [\(Section 7.2.14\)](#) for further details regarding the SMS/800 Carrier Notification and Approval (CNA) process.

- **Report Approval**

- Response to Report Approval**

These messages support the ability for an OS to respond to an approval request, following the receipt of an unsolicited SMS carrier notification/approval message. A carrier listed on a customer record and which requires approval prior to the record being placed in a status of PENDING, sends the Report Approval message to SMS and indicates whether approval is granted. The Response message indicates whether the Report Approval message was successfully processed.

- **Unsolicited Approval Status**

This message is sent from SMS to all affected carriers and to the control RESP ORG at download time, whenever any affected carrier denies an approval request for a particular 800 customer record. This is useful information because the record will not go ACTIVE.

- **Unsolicited Approval Control**

This message is sent from SMS to the control RESP ORG when all approvals are received from a customer record or when an involved carrier has denied an approval request, provided the RESP ORG has previously specified that they desire such notification over MGI. Data contained herein can be used by the control RESP ORG to better monitor approval activity.

- **Request Detail Approval Status**

- Response to Detail Approval Status**

These messages support the query of detail approval status information. Data returned to control RESP ORGs include specific responses by involved routing carriers from whom approvals were requested.

- **Unsolicited RESP ORG Change**

This message is sent from SMS to a RESP ORG informing them that a RESP ORG change has occurred, provided the RESP ORG has previously specified that they desire such notification over MGI. Information provided includes the RESP ORG that initiated the change, the 800 number, the old and new RESP ORGs, and the status of the number.

- **Request RESP ORG Change**

**Response to Request RESP ORG Change**

These messages support the request of a RESP ORG change or the cancellation of a previously submitted RESP ORG change on up to 48 DIAL numbers. To cancel a RESP ORG change request, it must be in an open or reopen status.

- **Unsolicited RESP ORG Change Request Notification**

This unsolicited message is sent from SMS to a control RESP ORG following a successful RESP ORG change request or cancellation of a RESP ORG change request. This request may have been initiated via MGI or on-line. This message is sent when another RESP ORG has placed a successful request to obtain control of one or more DIAL numbers.

- **Report RESP ORG Change Request Denial**

**Response to RESP ORG Change Request Denial**

These messages allow RESP ORGs to deny a previously received RESP ORG change request. In order to deny, a reason code must be provided.

- **Unsolicited RESP ORG Change Denial**

This message is sent from SMS to the requesting RESP ORG, who previously submitted a RESP ORG change request, when the control RESP ORG denies the request. The original request and/or the denial may have been submitted via on-line or MGI.

- **Request Multiple Dial Number RESP ORG Change**

**Response to Multiple Dial Number RESP ORG Change**

These messages allow RESP ORGs to change the RESP ORG on multiple numbers from the same old RESP ORG to the same new RESP ORG.

- **Request System Automation Limits**

#### **Response to System Automation Limits Request**

These messages allow RESP ORGs to retrieve the automation limits in effect at the time of the request.

- **Unsolicited System Automation Limits**

This message is sent from SMS to an OS whenever there is a change to any system limit supporting automation and contains all current limits. To receive this message, the MGI user must make arrangements with the Help Desk.

## **3. Communications**

This section support TCP/IP Protocol of the MGI interface.

### **3.1 SMS/800 Communications Functions/Requirements**

#### **3.1.1 Application Interface Requirements**

For this document, the subject of interest is the communications between applications. This interface can best be described as connection-oriented, peer-to-peer, asynchronous, and symmetric.

Connection-oriented communications refers to those in which both systems must be present during the exchange of information. SMS and an OS will share common state information with respect to the exchange.

Peer-to-peer (or symmetrical) communications refers to the fact that SMS or an OS can initiate and respond to requests.

Asynchronous refers to communications in which the sending system (SMS or an OS) is not required to wait for a reply before submitting additional requests. The sending application can continue submitting requests without waiting for replies from previous

requests to be performed.

This interface will support message-based interaction with SMS/800. Message-based transactions refer to those interactions launched by a user of another system waiting for a response. These interactions require reasonable response times and support both number administration and customer record administrations functions.

### 3.1.1.1 Message Based: Request/Response and Unsolicited

Two types of messages have been identified for the mechanized interface: Request/Response and Unsolicited. These two message types are used by all interfaces, independent of the transport protocol.

Request/response messages refer to pairwise interactions. These pairwise interactions are correlated via the *message id* standard parameter which is part of every message. Both SMS/800 and an OS can initiate a request or a response to a request. Response messages indicate whether the requested action has been accepted or rejected. If the request is accepted, data may be returned to the requester. If the request is denied, the response message contains an explanation for failure. All number administration functions fall under request/response interactions. Most customer record administration functions fall under this category as well; however, there are also some unsolicited customer record administration functions.

Unsolicited messages refer to communication that is not pairwise correlated, such as an on-occurrence event at either SMS/800 or an OS. For example, SMS/800 is going down and needs to broadcast a message that communication with it is suspended until further notice. As noted, an OS can also send unsolicited messages, particularly in the event that communications with it will be suspended. As the interface matures, it is likely that the number of unsolicited messages will increase.

### 3.1.2 Message Specification and Representation Requirements

A language for message specification imposes rules of syntax, semantics, information structure, and intermessage context to ensure uniform construction of messages. Specifying available standards is an important step toward using the same message for the same function for different types of OSs. Information is provided to help ensure there are no gaps or inconsistencies with the protocol specification. The language chosen provides for commands, acknowledgements, responses and autonomous outputs. This language is used by the TCP/IP protocol. TCP/IP encapsulates the MGI messages without affecting the language used for the messages.

- R3-1** [1]For message specification and representation, the SMS mechanized generic interface requires the following:
- ...
    - Version Control

- ... • **Specification of optional and mandatory fields**
- ... • **Support of variable length fields**
- ... • **Support of different data types (e.g., integer).**

### 3.2 SMS/800 - OS Protocol

The Application Service of the SMS/800 - OS communication protocol is referred to as the UAL. The features of UAL comprise a minimum set of required capabilities for communications between SMS/800 and OS applications. UAL makes the user application programs within SMS/800 and the OS transparent to all TCP/IP network controls and management. The UAL is a collection of protocol constructs that provide the User Program Layer with the following services:

For outgoing messages, the UAL: accepts data and input parameters from the application programs (i.e., the User Program Layer), generates a unique message identification number (message ID), sets the destination message priority (based on UPL input), sets the destination code (based on UPL input), sets a site-to-site confirmation flag (based on UPL input), segments the message into a number of units, if the message is longer than an installation-defined limit, retransmits, if any of the segments are lost, creates the message

header, logs the message, and sends the message to multiple destinations, if necessary (based on UPL input).

For incoming messages, the UAL: receives incoming messages from its communication counterpart, analyzes the message header, invokes the necessary application program, reconstructs the message, if the message contains multiple segments, and correlates the request and response.

In addition to the functions performed for the incoming and outgoing traffic, the UAL also performs the following communication control functions: initiates communication start-up and shut-down messages, synchronizes and re-synchronizes the transmission, performs site-to-site and application-to-application confirmation, and maintains communications link status.

### 3.3 SMS/800 - OS Protocol X.25 -- OBSOLETE

**NOTE** SMS/800 no longer supports X.25, and this section number has been intentionally retained in order to preserve existing paragraph numbering.

## 3.4 SMS/800 - OS Protocol For TCP/IP

The MGI OSs will need to use TCP/IP as their communications protocol. This section provides technical information needed to implement and support TCP/IP for the SMS/800-MGI interface.

### 3.4.1 Overview of the TCP/IP Implementation

Before addressing the details of the TCP/IP messages, an overview is provided of the new SMS Transport Layer, data representation, the concept of data encapsulation and how a message is processed through the protocol layers.

#### 3.4.1.1 SMS Transport Layer

This “layer” is comprised of ISO Layers 5 through 7. It runs on top of TCP/IP performing minimum but robust functions for the Session, Presentation and Application layers. The following services are provided by the SMS Transport Layer:

- provides a symmetric protocol for peer-to-peer communication
- defines the message boundary in the TCP stream of data
- defines session ID exchange and keep alive message (Good-Day)
- defines procedures for session release (graceful disconnect, Good-Bye)
- defines procedures for session disconnect (immediate disconnect, Good-Night)
- preserves UAL application confirmation support
- encapsulates a subset of UAL header data and all UPL command/response messages
- uses ASN.1/BER for message structure representation for cross platform interoperability.

#### 3.4.1.2 ASN.1 (Abstract Syntax Notation 1)

**ANS.1 is the international standard for data representation and encoding (CCITT Recommendation X.208, ISO 8824) and it is used by SMS/800 for MGI.** It provides a robust data structure for complicated data representations (e.g., array, link-list, conditional existence, conditional format etc.), is platform independent (globally transportable) and it is a mature standard with compilers available on most platforms.

### 3.4.1.3 BER (Basic Encoding Rules)

This language is used to encode **ASN.1** data into a stream for transport. It is an international standard (CCITT Recommendation X.209, ISO 8825). The encoded stream is compact (i.e., saves network communication bandwidth), it is platform independent (globally transportable) and it is a mature standard with encoders/decoders available on most platforms.

A human-readable text version of the ASN.1 source code is provided in section 3.4.7.4.

### 3.4.1.4 Data Encapsulation

The subset of UAL header data is referred to as UPL header data. The data are encapsulated in **ASN.1 OCTET STRINGS**.

Telecommunications uses ‘octet’ as the unit measure, whereas the TCP Header and the IP Header are defined using ‘bits’, and the UPL Header fields are defined as ‘bytes’. One byte is equal to eight bits, which is equal to one octet.

### 3.4.1.5 How a Message is Processed

The application layer performs high-level protocol functions such as request/reply correlation, message queuing, message priority, and system failure/recovery. The transport, network, and NAL layers provide an error-free communications path for the transfer of data between the SMS/800 and communicating OSs. They relieve the application layer of any concerns about the way in which reliable data transfer is achieved.

When a message is sent from an MGI OS to the SMS/800, the message will be processed by each of these layers in the following order: application, transport, network, and NAL. The SMS/800 will then process the message by the same layers, but in the reverse order. The SMS/800 will deliver the message to the appropriate MGI OS.

The communication protocols defined in this document describe how messages are exchanged between SMS/800 and the MGI OS. The ASN.1 message language defines how the messages themselves are encoded. This language is a set of rules that specify the allowable formats for coding message data.

### 3.4.1.6 Maximum Message Size

SMS/800 supports a maximum TCP/IP message size of 800kB (i.e., 800,000 bytes) for inbound messages (e.g., REQ-CRC) and outbound messages (e.g., RSP-CRV).

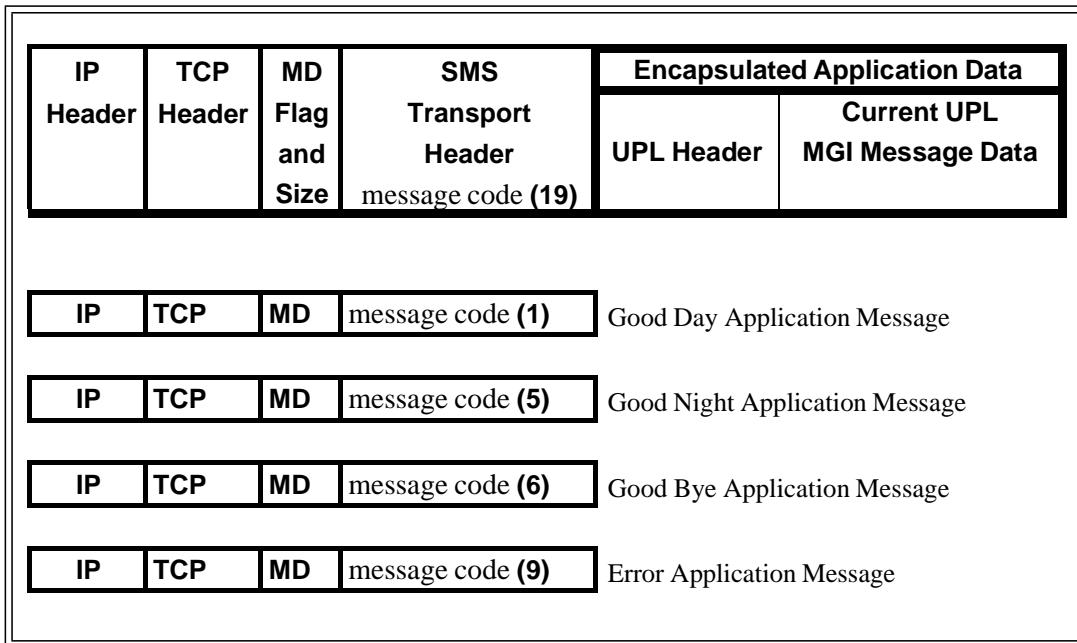
## 3.4.2 Message Structure

The message structure consists of the Industry Standard IP and TCP Headers, the SMS

Transport Header, preceded by a delimiter and encapsulated application data, or administrative data.

The SMS Transport Header includes a **Message Code** field which identifies the type of message: Session Control Messages (message codes 1, 5, 6), the Data Message (message code 19) and the Error Message (message code 9). These messages are illustrated in Table 3-2.

**Table 3-1.** Message Structure



- The IP Header and TCP Header are the standard formats defined by the TCP/IP Communication Protocol, which is presented in Sections 3.4.3.5 and 3.4.3.6.
- The Message Delimiter (MD) contains a flag and the message size, discussed in Section 3.4.3.4.
- The SMS Transport Header is described in Section 3.4.3.3.
- The UPL Header is described in Section 3.4.3.2. The Encapsulated data includes a subset of the same UAL Header (renamed UPL Header); however, it is encapsulated as data, and it precedes the current UPL data. This encapsulation enables the use of essentially current logic to process the UPL Header data and the UPL data.
- The MGI Application Messages are described in Section 7. They have not changed to support TCP/IP.

Implementation of this message structure is further defined in the following sections.

#### 3.4.2.1 MGI Messages

The MGI messages are encapsulated as data. See Section 7 for MGI Message details.

### 3.4.2.2 UPL Header

The UAL Header is renamed the ‘UPL Header’ for the TCP/IP Implementation. The UPL Header is encapsulated as data. The fields are presented below along with the values used when the message is transported by the TCP/IP Protocol.

**Table 3-2.** UPL Header Fields

Field Number	Field Name	Field Length	Values when message is TCP/IP
1	Confirmation Flag	1 byte	‘0’-none, ‘3’-Application-to-Application
2	Correlation ID	10 bytes	10 byte Message ID
3	Source Node Name	12 bytes	12 bytes
4	Destination Routing Code (DRC)	3 bytes	3 bytes
5	Error Code	1 byte	values are C (confirmation flag), M (correlation ID), O (source node name), or D (DRC). Default is blank.

### 3.4.2.3 SMS Transport Header

This header is new. It is the TCP/IP message header that precedes the encapsulated MGI application messages.

The ASN.1 encoding in Section 3.4.7 defines the message syntax used to describe the transfer syntax of the application messages exchanged between the SMS/800 and MGI OSs. Each application message will be prefixed with a header (sequence Y1T1iHdr) as defined by sequence Y1DcmMsg. The header is used to store data which informs the receiving node about the sender and type of application message. The remaining portion of the message syntax contains the application message data, if appropriate, corresponding to the particular type of application message. The message header is stripped off by the application layer so that only the message data portion of the message is passed to the proper user program layer.

The table below identifies the components of the SMS Transport Header:

**Table 3-3.** SMS Transport Header

Field Number	Field Name	Definition
1	Version Number	Integer
2	Priority	For future use
3	Message Tag	See below
4	Destination Node Name	See below

5	Source Node Name	See below
6	Error Code	0,1,2 or 3 (See below)
7	Message Code	Integer

1. **Version Number** - This field contains an INTEGER value representing the TCP/IP message header version number. The allowable value is 1.
2. **Priority** - This field contains an INTEGER that indicates the processing priority of a message. Allowable value is ‘00’. This is for future use.
3. **Message Tag** - This OCTET STRING field contains up to 11 octets and identifies a message from a particular node in case an error is returned. This Tag is assigned by the sending OS.
4. **Destination Node Name** - This OCTET STRING field can contain up to 50 octets, (recommended ASCII characters for readability). It identifies the name of the destination node. This name must uniquely identify a node within the network. The destination node name represents the receiver of a Y1DcmMsg (see Section 3.4.8.1).
5. **Source Node Name** - This OCTET STRING field can contain up to 50 octets (recommended ASCII characters for readability). The source node name identifies the sender of a Y1DcmMsg.
6. **Error Code** - This field contains an INTEGER value that represents the reason for the protocol error. Valid values are:

Error Code	Description
0	No Error
1	Bad Source
2	Bad Destination
3	Bad Version

Note: Additional error codes may be added in future releases. Error codes reported and not identifiable (i.e., are not one of these codes) should be treated as “other” (mcomerror(9) in message header).

Section 3.4.4.7 provides a more detailed description of error processing procedures.

7. **Message Code** - This field contains an INTEGER value that represents the type of application message provided. There are two types of messages: Protocol Control Messages and Data Messages.

#### 3.4.2.4 Message Delimiter (MD)

TCP views a data stream as a continuous stream of octets with no explicit boundaries for messages. For communicating OSs, it is necessary to delimit all messages. For every message transmitted, the message data will be prefixed with a 4-octet flag (0x7e7e7e7e)

plus a 4-octet unsigned binary number: the octet order is from highest to lowest, indicating the length in octets of the message data. The message prefix has a total length of 8 octets. Bit zero (0) is the most significant bit. All messages must be separated by these octets.

**R3-2** [2]For every message transmitted via TCP/IP, the message data must be prefixed by a 4-octet flag (0x7e7e7e7e) plus a 4-octet unsigned binary number; the octet order is from highest to lowest, representing the length in octets of the message data. (See Table 1).

... **Table 1.** Message Data Format

MD Four Octet Flag	MD Four Octet Prefix	SMS Transport Header	UPL Header and UPL Data
(Hex)7e7e7e7e	Message Length		Message Data

### 3.4.2.5 Transport Layer (TCP)

TCP is a reliable, connection-oriented communications protocol that processes packets to and from the IP. It provides a reliable end-to-end connection for each pair of communicating processes. TCP Reliable Delivery Service provides:

- Connection-oriented service, which requires that the two application programs establish a logical connection with each other before communications can take place
- Stream Orientation, with bits divided into bytes
- Buffered Transfer, with sizes as small as a single byte, but usually large enough to fill a reasonably large Datagram before sending it across an internet, and with a push mechanism to force the processing of unfilled Datagrams
- Unstructured Streams (no application boundaries)
- Full duplex connection with piggybacking, which can send control information for one stream back to the source in datagrams carrying data in the opposite direction.

The TCP Header that is used is the Industry Standard format and content (see the following table).

**Table 3-4.** TCP Header

Field	Bits	Definition
Source Port Number	16	Identifies the sending Application. This, plus IP Address, uniquely identifies a connection/socket.

Destination Port Number	16	Identifies the receiving Application. This, plus IP Address, uniquely identifies a connection/socket. It is provided by the application layer.
Sequence Number	32	Each byte is numbered. The initial # is chosen by the host for each connection.
Acknowledgment Number	32	Next sequence # the sender of the ACK expects to receive.
Header Length	4	# of 32-bit words. Default is 20 bytes
Reserved	6	
KEY - URG	1	Urgent Pointer is valid
KEY - ACK	1	Acknowledgment number is valid. On when new connection is being established.
KEY - PSH	1	Receiver must pass data to application ASAP
KEY - RST	1	Reset the connection
KEY - SYN	1	Synchronize sequence numbers to initiate a connection
KEY - FIN	1	Sender is finished sending data
Window Size	16	# of bytes, starting with the value in the ACK Number field, receiver is willing to accept
TCP Checksum	16	Size of TCP segment: TCP Header plus TCP Data
Urgent Pointer	16	Used to determine sequence number of last byte of urgent data
Options	var	End of Option List; No Operation; Maximum Segment Size; Window Scale Factor; Timestamp

**R3-3**

[3]The SMS/800 must support the industry de facto standard transport layer protocol TCP/IP (RFC 793 “Transmission Control Protocol, September 1981” and RFC 791 “Internet Protocol, September 1981”) for inter-operability with other MGI OSs.

#### 3.4.2.6 Internet Layer (IP)

The Internet Protocol (IP) determines the route for packet delivery. The TCP/IP network routes a packet according to the destination IP address attached to it by the IP protocol of the sending host. The IP protocol defines the basic unit of data transfer, the exact format of all data, and a set of rules that define how hosts and gateways should process packets, how and when error messages should be generated and the conditions under which packets can be discarded. SMS/800 will not support switched networks.

IP will serve as the network layer. IP is a connectionless, unreliable, packet delivery protocol. This protocol is termed unreliable because there is no guarantee of packet delivery. IP determines the route for the packet delivery.

A TCP/IP network routes a packet according to a destination IP address attached to it by the IP protocol on the sending host (e.g., SMS/800). The IP address is 32 bits in length and divided into four, 8-bit octets. The information in each octet represents a decimal number with each number separated by a period. This number correlates to one octet of the IP address and can have a value ranging from 0 to 255. A typical IP address is of the form “xxx.xx.xxx.xx”.

The Internet Header (IP) used is the Industry Standard format and content (see the following table).

**Table 3-5. IP Header**

Field	Size in bits	Definition
Version	4	IP version in use
Header Length	4	# of 32-bit words in Header. Max is 60 bytes
Type of Service	8	min delay; max throughput; max reliability; min \$cost
Total Length in bytes	16	Datagram size in bytes, or size of fragment
Identification	16	Host assigned unique # of Datagram
Flags	3x1	‘more fragments’ bit is on in all except last fragment
Fragment Offset	13	Position in datagram from the beginning of the unfragmented datagram. Enables re-assembly at final destination
Time To Live	8	Max # of routers the Datagram can pass through
Protocol	8	Identifies which protocol gave IP the data to send: 1=ICMP - network 2=IGMP - network 6=TCP - transport 17=UDP - transport
Header Checksum	16	calc of IP Header size only, not the data

**Table 3-5. IP Header (Continued)**

Field	Size in bits	Definition
Source IP Address	32	Source dotted-decimal notation, normally 4 numbers
Destination IP Address	32	Destination dotted-decimal notation, normally 4 numbers

options	var	Security & Handling Restrictions; Record Route; Timestamp; Loose Source Routing; Strict Source Routing
---------	-----	--

### 3.4.2.7 Network Access Layer (NAL)

NAL provides the interface to the communication network. It is comprised of the OSI Reference Model Physical layer and the Data Link layer. NAL processes network specific frames to and from the network. NAL relies on existing protocols and provides network services such as priority, security, and reliability. As depicted in Section 3.4.9, a high-speed, back-end LAN shows MGI OSs connecting either directly to the LAN, or via a router/bridge to the LAN. TCP/IP supports a number of physical layer protocols, including Ethernet, IEEE 802.5, and others.

### 3.4.3 Application Messages

#### 3.4.3.1 Message Types Supported

The following TCP/IP Message Types must be supported (see the following table).

**Table 3-6.** Application Messages

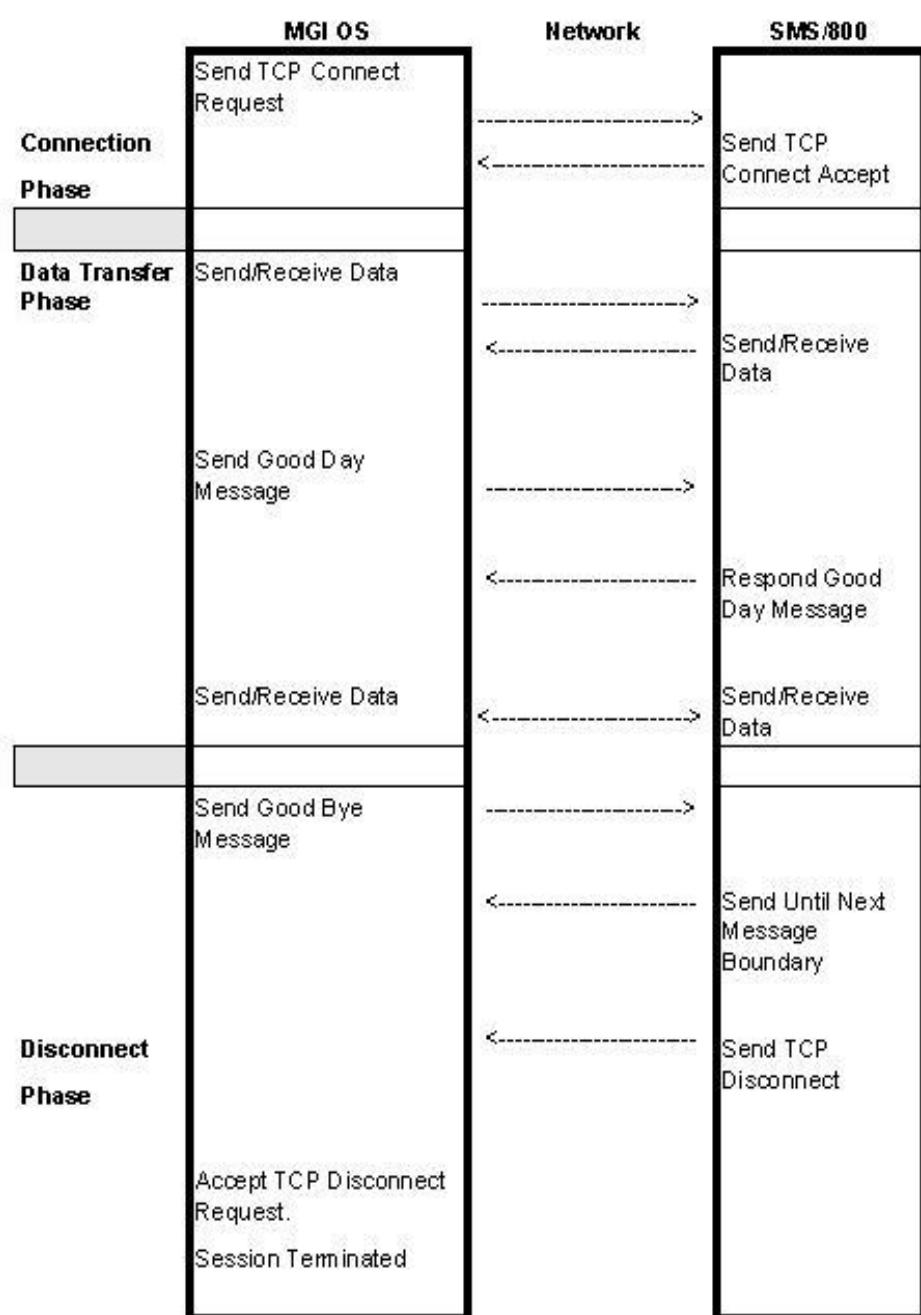
Message Code	Message Type	Description
01	Good Day	used to request the Identification of peer NodeName, or to test if session is still alive.
05	Good Night	used to notify the peer that the sending process is shutting down immediately.
06	Good Bye, Disconnect Request	used to invite the peer to disconnect the current session. Graceful disconnect.
09	Error	used to indicate a protocol error.
19	Data (UPL Header/UPL Data)	used to facilitate the transfer of administrative messages and operational data. This message contains the application layer UPL header with the application message UPL data.

R3-4

[4]Each application message sent to/from the SMS/800 and MGI OS shall include a message header consisting of the above information.

#### 3.4.3.2 Connect / Disconnect Sequence Example

The following figure illustrates which side of the interface usually initiates the message type, although it does not depict the Symmetric Peer-to-Peer relationship that TCP/IP supports.



**Figure 3-10.** Connect/Disconnect Sequence Example

### 3.4.3.2.1 Connect/Disconnect Dialogue

TCP connections are viewed as full duplex (i.e., two independent data paths, one in each direction). Once a TCP connection is requested and accepted, both sides are in “data transfer phase”. Both sides can send both data and Good Day messages.

For example, the software on one system (SMS/800) waits for a connect request (see Section 3.4.4.2, connection phase) while the other host (MGI OS) initiates the request. Once a TCP connection has been established, data can flow in both directions. During “data transfer phase”, data can be exchanged. Optional Good Day messages can be mixed with data messages. In the example, an MGI OS sends Good Day message with zero-length destNodeName, the receiving host (SMS/800) responds a good day message (with non-zero-length destNodeName).

After the sender has no more data to transmit and the TCP connection has been idle for a time determined by the *idle timer*, a goodbye (i.e., disconnect request) message **may** be initiated, but frequent use is not encouraged. In this example, the sender (MGI OS) can still receive data from SMS/800, but the MGI OS cannot send more data. Any new messages must be sent through a new connection. After reaching the next message boundary, the receiving host (SMS/800) must initiate a TCP disconnect (see Section 3.4.4.2, disconnect phase).

Under normal conditions, a graceful disconnect (Good Bye) should be used. While a good bye message is used to close the current session, a good night message is used to notify the peer that the sending process is shutting down for the night. It is usually followed by the transport layer disconnect (TCP Disconnect) message from the sending and receiving processes. Upon receipt of the TCP Disconnect message, the sending and receiving process should close the connection.

### 3.4.3.3 Good Day Message (mcommgdy)

Good day messages can be used by either side if verification of the other side's identity is needed. Good day messages can also be used to test if the session is still alive. Whenever the TCP connection between an MGI OS and SMS/800 is restored or whenever an MGI OS or SMS/800 is activated, it is recommended that at least one Good day message be exchanged; however, extensive use of this message is not advised.

The SMS/800 application layer will send a Good day message each time the TCP connection request is accepted by an MGI OS. The initial good day message contains the application layer message header parameters with no application message data.

This message is to let the peer application know "who I am" and/or "who are you/are you there" This message can be sent anytime during a connected session. The following rules must be adhered to:

1. "who are you/are you there"- If the destNodeName is null (zero length), the receiving side MUST return a "mcommgdy" or any message with both the destNodeName and the srcNodeName filled. For a process accepting TCP connection, it only knows the requester's IP-address/TCP-port#. This message can be used to find out the Node Name of the peer.
2. "who am I"- If the destNodeName and srcNodeName contains a non-zero-length value, the receiving side MUST NOT respond with a mcommgdy". This is done to avoid infinite good-day handshakes. Although any side may send a "mcommgdy" to the other side at anytime, it is recommended that the connect-requester send the "mcommgdy" immediately after the connection is accepted by the other side.

R3-5

[5]The "mcommgdy" message must be supported to respond to the "mcommgdy" request, and it must adhere to the above-mentioned rules.

### 3.4.3.4 Good Night Messages (mcommgnt)

This message is used to notify the peer that the sending process is “shutting down”. It is usually followed by a transport layer disconnect (i.e., TCP DISCONNECT). Upon receipt of this message, the receiving process should close the connection. When the MGI OS or SMS/800 is deactivated for such activity as periodic maintenance, the terminating application should send the peer application a good night message. The good night message contains the application message header parameter with no application message data. The source and destination node name for the good night message will be non-null (a valid CLLI™ code), with the source node name representing the receiving application.

**R3-6 [6]The good night message (mcommgnt) shall be supported for process termination.**

### 3.4.3.5 Good Bye, Disconnect Request (mcommbye)

This message is used to invite the peer to disconnect the current session. The message **could** be sent after the connection has been idle for a time designated by the *idle timer*, and the sender has nothing to send. Note, to disconnect after idle time is not a requirement.

After sending the next message boundary, the receiving side must disconnect the TCP session. This message is needed to prevent a process from sending a disconnect while the other side starts sending new messages (i.e., prevents lost messages). The sending process should receive, but not send, more messages. The good bye sender should send the newly arrived messages, if any, through a new connection. The good bye message contains the application message header parameter with no application message data.

**R3-7 [7]The “mcommbye” message shall be supported for graceful disconnection of the current session.**

### 3.4.3.6 Data Message

The UPL Header/UPL message is used to facilitate the transfer of administrative messages and operational data, in both directions, between the SMS/800 and the MGI OSs in order to support the various operations functions performed by OS applications. The administrative and operations data to be exchanged are defined in this section. This document provides detailed descriptions of the following types of UPL Header/UPL messages that are required to be supported by the SMS/800 and MGI OSs.

The UPL Header/UPL Message contains the application layer message header parameter with the application message data portion as defined therein.

**R3-8**

**[8] The “mUPL” message shall be supported to facilitate the transfer of administrative messages and operational data between the MGI OS and SMS/800.**

### 3.4.3.7 Message Error Processing

An application message sent between the SMS/800 and MGI OS may fail for one of the following reasons:

- Bad Source
- Bad Destination
- Bad Version.

Any one of these errors will result in the application message not being delivered to its destination. If an application message cannot be delivered to its destination, the application message will fail and be discarded. When an application message fails, an error message **may** be returned to the originator of the message. The error message should consist of the application message header with the appropriate error code. No data is returned.

The selection of the appropriate error code for an error message should correspond to the following guidelines:

- If the MGI OS receives an application message with an invalid source node name, the error code should indicate “bad source” (error code: 1).
- If the MGI OS receives an application message with an invalid destination node name, the error code should indicate “bad destination” (error code: 2).
- If the MGI OS receives an application message with an invalid version, the error code should indicate “bad version” (error code: 3).

- If the MGI OS receives an application message with an error not defined above, the error code should indicate “other” (error code: 9).

The MGI OS shall fail and discard any application message that cannot be processed.

**R3-9**

**[9] The MGI OS or SMS/800 may choose to send an error message to one another with the appropriate error code as described in the above guidelines if the MGI OS cannot process an application message.**

### 3.4.4 Naming Convention for Nodes

SMS

Although the SMS/800 node name can be anything, it must be unique. Therefore, a standard naming convention is required. The SMS/800 naming convention contains two parts concatenated:

1. The first part is the CLLI™ code for the DCM: an 11-octet (CLLI™ code-like format) unique symbolic name to identify an SMS/800 instance.
2. The second part is the process: a 6-octet symbolic name uniquely identifying a Process Instance within the SMS/800 instance. (For example, ysA701)

**R3-10**

**[10]The SMS/800 node name must contain a concatenation of the 11-octet symbolic name representing an instance of the SMS/800 plus a 6-octet symbolic name uniquely identifying a process instance within a SMS/800 instance. (See Table 2.)**

... **Table 2.** SMS/800 Node Name

CLLI of DCM	Process
(11)	(6)

The MGI OS node name is used by SMS/800 to register that MGI OS for selected messages forwarded by the SMS/800 to that MGI OS. In addition, each MGI OS node name is used by the SMS/800 to identify the sending MGI OS (e.g., which OS process can send what message). This is done for security reasons.

MGI OS

Although the MGI OS Node Name can be anything (i.e., like the SMS/800), it must be unique among all the MGI OSs that are communicating with the SMS/800. Therefore, a similar naming convention is needed.

Section 3.4.8.2 describes the ASN.1 listing for the SMS/800 message header. The field

“*dest Node Name*” is used to identify “who are you” (i.e., your Node Name). The value of this field should uniquely identify a process that is listening at an IP-address/TCP-port-number. The field “*src Node Name*” is used to identify “who am I” (i.e., my Node Name).

- R3-11** [11]The MGI OS node name must contain a concatenation of the symbolic name representing an instance of the MGI OS (MGI CLLI™ code), plus a unique symbolic name identifying a receiving/sending process instance within an MGI OS. The MGI OS node name can be up to 50 octets. The sending/receiving process may or may not be the same.

### 3.4.5 Addresses of TCP/IP Connections

The addresses of the TCP/IP connections for the various types of application services interconnected on the TCP/IP interface should be published to all using MGI OSs. Ideally, these addresses should be published via a network directory service. Currently, a network directory service is not being implemented. However, the address look-up convention used should provide for a smooth transition into the ISO Directory Service Element (X.500), which is part of the Telcordia Data Communications Standard.

A Directory Service is a method of mapping a name to an address. This name-to-address mapping alleviates the burden of maintaining address information by applications.

The SMS/800 must allow all MGI OSs having a need, to register themselves as the receiver of messages. This registration process is done manually (see form in Section 3.4.11). The identifier of the MGI OSs must allow SMS/800 to register themselves as the receiver of messages. The following information must be supplied by both SMS/800 and the MGI OSs to each other:

1. Host names and associated IP addresses
2. Node Name (e.g., 11-character CLLI™)
3. Unique IDs for all receiving/sending processes
4. TCP port number for connection request listening of all receiving processes.

Note: The receiving/sending process may or may not be the same.

- R3-12** [12]The IP addresses and TCP port numbers for the SMS/800 and MGI OSs TCP/IP connections must be determined at installation time.

- R3-13** [13]MGI must maintain at least one active TCP session connected to a pair of Data Communication Managers.

SMS/800 will have multiple DCMs, each with a published unique IP Address and each supporting three port addresses. These IP/port number address pairs will be mapped to destination IP/port number address pairs for each session. SMS/800 will accept only one session per port. Responses sent back from SMS/800

may be sent back over any port.

Each MGI OS can simultaneously connect to two SMS/800 DCM Servers. Each connection is established by using a unique IP/port number address pair. Each MGI OS can connect with up to three ports per SMS/800 DCM Server; therefore, the maximum number of connections per MGI OS is six.

### 3.4.6 ASN.1 Data Representation and BER Data Transfer Protocols

**ASN.1** - The application layer enables specific applications to use the communications subsystems provided by the lower layers. Telcordia DC/SOE recommends that the ISO Abstract Syntax Notation One (ASN.1) and the Basic Encoding Rules (BER) be used as the data representation and the data transfer syntax protocols. ASN.1 has no executable statements. Its single function is to define abstract syntaxes only, including the language constructs necessary to define types and values. ASN.1 describes data in a machine-independent manner; this means that there is no dependency on machine architecture (e.g., 16-bit versus 32-bit, etc.). Since ASN.1 is a formal description language, there exists a grammar that defines the rules used to create descriptions. There are no restrictions on the transfer syntax used to represent the values from an abstract syntax defined using ASN.1. Section 3.4.9 lists the ASN.1 message syntax of the message exchanged between the SMS/800 and MGI OSs.

**BER** - BER is defined for ASN.1 so that data can be unambiguously transmitted. BER is specified in ISO 8825 and CCITT X.209. BER defines a transfer syntax, containing the rules for encoding values of many different types. BER is sometimes referred to as type-length-value (tlv) encoding.

**R3-14 [14] ISO Abstract Syntax Notation One (ASN.1) and Basic Encoding Rules (BER) shall be used as the data representation and data transfer syntax protocol.**

### 3.4.7 ASN.1 Message Transfer Syntax

The following **ASN.1** message syntax defines the transfer syntax of the messages exchanged between SMS/800 and the OSs.

- Note: A human-readable text version of the ASN.1 source code is provided in section 3.4.7.4.

Each ASN.1 message begins with a header (sequence Y1T1iHdr) as defined by the sequence Y1DcmMsg. Depending on the message code in the Y1T1iHdr, the data application OCTET STRING (data Appl) contains different types of ASN.1 encoded data messages. The following are examples of the message codes that will be supported:

- messageCode==mcommgdy(1), the dataAppl contains nothing
- messageCode==mcommgnt(5), the dataAppl contains nothing
- messageCode==mcommbye(6), the dataAppl contains nothing
- messageCode==mcommerror(9), the dataAppl contains nothing
- messageCode==mUpI(19), the dataAppl contains sequence Y1UpI

Arrangements can be made by a Resp Org with SMS/800 Business Manager to have SMS/800 Software Support email the source ASN.1 code to the Resp Org.

Note: Embedded in the ASN.1 definitions are numerous ASN.1 comments. A comment can be identified by the double-dash (--) preceding it. The following example with brief description was extracted from the proposed Y1T1iHdr sequence:

```
desNodeName OCTET STRING,--CMAP nts char [50]
    -The comment begins with the double-dash (--)
    -CMAP-This is a signal to ASN.1 compiler to translate the BER OCTET
    STRING into a 'C' data type using the following 'C' attributes:
        a. nts-actual length of the field could be shorter than maximum length
           specified by the char[50].
        b. char [50]-only up to 50 bytes are allowed in the OCTET STRING.
```

### 3.4.7.1 ASN.1/TCP/IP General Message Format (Y1DcmMsg SEQUENCE)

Sequence Y1DcmMsg is the general format of all ASN.1/TCP/IP messages used by the SMS/800. The following is a listing of the proposed encoding:

Y1DcmMsg ::=SEQUENCE

```
{
  t1iHdr          Y1T1iHdr,           --SMS/800 message Header
  dataAppl        OCTET STRING       --encoding application data defined by
                                messageCode
}
```

### 3.4.7.2 SMS/800 Transport Header (Y1T1iHdr SEQUENCE)

Y1T1iHdr ::=SEQUENCE

```
{
  version         INTEGER
  {
    dcmver(1)      --See Note 1
  },
  priority        INTEGER           --future usage
  messageId       OCTET STRING,    --CMAP nts char[11]
  destNodeName    OCTET STRING,    --See Note 2
  srcNodeName     OCTET STRING,    --See Note 3
  errorCode        ErrorCode,       --See Note 4
  messageCode     INTEGER          --SMS/800 Message Names
  {
    mcommgdy(1),      --See Note 5
    mcommgnt(5),      --See Note 6
    mcommbye(6),      --See Note 7
    mcommerrror(9),   --See Note 8
    mUPL(19),        --See Note 9
  }
}
```

--End of Y1T1iHdr

ErrorCode ::=INTEGER--See Note 4

```
{  
    mNo Error(0),  
    mbadSource(1),  
    mbadDestination(2),  
    mbadVersion(3),  
    mcomerror(9)  
}
```

Notes for Y1T1iHdr SEQUENCE:

1. This is the SMS/800 message header version number and the allowed value is one (1).
2. The receiver of this Y1DcmMsg message (--CMAP nts char[50]).
3. The sender of this Y1DcmMsg message (--CMAP nts char[50]).
4. Return an error code for an invalid message header.
5. This is a Good Day message (i.e., connect request) and has no dataAppl.
6. This is a Good Night message (i.e., process shutdown notice) and has no dataAPPL.
7. This is a Good Bye message (i.e., disconnect request) and has no dataAppl.
8. An invalid Y1T1iHdr has been received (no dataAppl). See errorCode for details.
9. This Y1DcmMsg.dataAppl contains the ASN.1 encoded Y1Up1 message.

### 3.4.7.3 Transfer Syntax of ASN.1 UPL Header/UPL Message

The following ASN.1 message syntax defines the transfer syntax of the UPL Header/UPL Message exchanged between the SMS/800 and MGI OSs. Each message begins with the header (sequence Y1T1iHDR) as defined by sequence Y1DcmMsg. Depending on the message (i.e., messageCode) in the Y1T1iHdr, the application message (i.e., dataAppl OCTET STRING) contains different types of ASN.1 encoded data messages.

For example: messageCode==mUpI(19)

The dataAppl OCTET STRING of Y1DcmMsg sequence contains Y1UpI sequence.

Y1UpI ::= SEQUENCE--SMS/800 UPL Header/UPL Message with out segmentation

```
{  
    uplHeader      OCTET STRING,    --CMAP char[27] i.e., UPL header data  
    upl          OCTET STRING     -- UPL data  
}
```

### 3.4.7.4 ASN.1 Human-Readable Version

The following is a human-readable version of the ASN.1 source code for SMS/MGI TCP interface. To obtain a copy of the ASN.1 source code for use in SMS/800 MGI interface, please contact the SMS/800 Business Manager, or if they have already approved SMS/800 Lab-to-Lab MGI testing with your Resp Org, then please contact Site Support.

```
--  
=====  
-- SCCSID: @(#) yIDcmMsg.asn.m4 85.1@(#)   
CCSMR-CONTRACT DEFINITIONS IMPLICIT TAGS ::=  
BEGIN  
--  
=====  
-- ===== FileName: yIDcmMsgHDR.asn STARTS =====  
-- Each message started with the header SEQUENCE YITliHdr as defined in  
-- sequence YIDcmMsg.  
-- Depending on the messageCode in the YITliHdr, the dataAppl OCTET STRING  
-- field contains different type of asn.1 encoded data message:  
-- For example:  
-- messageCode==mcommgdy(1) dataAppl contains nothing  
-- messageCode==mcommgmt(5) dataAppl contains nothing  
-- messageCode==mUpI (19) dataAppl contains YIUalUpI sequence  
-- ETC.  
-- YIDcmMsg is the general format of all ASN.1/TCP/IP message  
YIDcmMsg ::= SEQUENCE  
{  
    tliHdr YITliHdr, -- CCSOSMR message header  
    dataAppl OCTET STRING -- asn.1 encoded application  
    -- data defined by messageCode  
}  
YITliHdr ::= SEQUENCE -- CCSOSMR message header  
{  
    -- Interface Version Number allowed values:  
    version INTEGER --CMAP ulong --  
    { dcmver(1) -- DCM version number  
    },  
    priority INTEGER, -- future usage  
    messageId OCTET STRING --CMAP nts char [12]--,  
    destNodeName OCTET STRING --CMAP nts char [51]--,  
    -- the receiver of this yIDcmMsg msg  
    srcNodeName OCTET STRING --CMAP nts char [51]--,  
    -- the sender of this yIDcmMsg msg  
    errorCode ErrorCode, -- return an error code for  
    -- an invalid message header  
    messageCode INTEGER  
{  
    --DCM Messages Names--  
    mcommgdy(1), -- Keep Alive message (connect), no dataAppl  
    mcommgmt(5), -- process shut down notice, no dataAppl  
    -- i.e. sending process is shutting down
```

```
mcommbye(6), -- good bye (disconnect request), no dataAppl
mcommerror(9), -- invalid YITliHdr received, no dataAppl
-- see errorCode for details
mUpI (19) -- YIDcmMsg.dataAppl contains YIUpI for SMS/MGI
}
} -- end of YITliHdr --
ErrorCode ::= INTEGER
{
-- errorCode for an invalid message header
mNoError(0),
mbadSource(1),
mbadDestination(2),
mbadVersion(3)
-- any error code not defined in above list should be treated as
-- other errors
}
--
=====
=
YIUpI ::= SEQUENCE -- SMS MGI UPL message w/o UAL header
{
upIHeader OCTET STRING --CMAP char[27]--,
-- GR4592-CORE UPL Header
upI OCTET STRING -- GR4592-CORE UPL data
}
--
=====
END -- end of BEGEIN
```

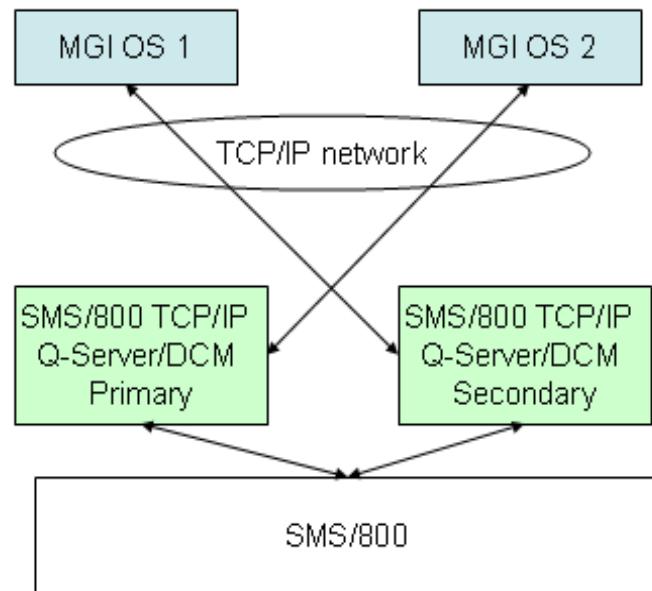


### 3.4.8 Network Sample

The figure below illustrates a sample MGI network with SMS/800 sites.

An MGI OS must maintain at least one active TCP session connected to a pair of Data Communication Managers. If an MGI OS has only one link, we recommend it connect to both DCMs.

**Figure 3-11.** Sample Network



### 3.4.9 Session Management Summary

#### 3.4.9.1 Connection Initialization

- Each MGI OS and SMS DCM receiver process must publish a **well-known TCP** listening address containing IP address and TCP port.
- Either side **must** initiate Connect-Request when there is data to send and no session exists.
- Connect-Request should not be initiated if a session already exists.

#### 3.4.9.2 Session Usage

- MGI OS should use any active SMS DCM sessions (DCMServer1 and DCMServer2) to send data.
- If one session is not active, the remaining active sessions should be used.
- MGI must be able to receive data through all active SMS DCM sessions.
- TCP sessions are two-way full-duplex for data transmission.

#### 3.4.9.3 Session Release/Disconnect

- Either side **may choose** to release a session (graceful disconnect) after an extended idle time.
- Graceful Session Release procedure should be used for normal shutdown.
- Session Immediate Disconnect procedure should be used only for abnormal shutdown.

### 3.4.10 SMS/800 Node Name Map

The following table captures the information needed by both SMS/800 and the MGI OSs. Some of the data is contrived.

**Table 3-7.** SMS/800 and MGI Node Name Examples

Host Name	SMS/800 Name	IP Address	Receive/ Send	MGI OS Name	TCP Port #
MGIDCM1	SLPR1MN01E0	128.121.42.4	ysA701	MGI1	4801
MGIDCM1	SLPR1MN01E0		ysA702	MGI2	4802
MGIDCM1	SLPR1MN01E0		ysA703	MGI3	4803
MGIDCM2	SLPR1MN02E0	128.121.37.8	ysA701	MGI1	4801
MGIDCM2	SLPR1MN02E0		ysA702	MGI2	4802
MGIDCM2	SLPR1MN02E0		ysA703	MGI3	4803

## 4. Implementation Requirements

### 4.1 Network Configuration

SMS/800 has primary and backup processors (MVS mainframes), and a disaster site processor. The MGI interface uses TCP/IP protocol. For information regarding connectivity to the SMS/800 machines at the Data Center, refer to the document titled: [SMS/800 Network Connectivity Guide](#), written by the Data Center and viewable at [www.sms800.com](http://www.sms800.com) Resp Org Website.

### 4.2 Security

Security in SMS for the mechanized interface will exist at several levels: (1) physical access, (2) login security, and (3) data base security.

Physical access to the system via the mechanized interface will be controlled by the use of dedicated lines to SMS. Once physical access is attained, the user must provide valid login information. Each message initiated by an OS will have both a Logon ID (identification) parameter and a responsible organization (Resp Org) parameter. The Logon ID parameter will be validated by SMS and if the login provided is not recognized by SMS, the transaction will be denied. The responsible organization will serve as identification of the Resp Org appropriate for this message. If the Resp Org is not recognized, the message will also be denied.

In summary, the authorization policy will be provided through Logon IDs and Resp Orgs. Logon IDs allow the OS sending the message to identify the individual, work unit, or company initiating the message. Each OS has to determine for themselves what the scope of their Logon IDs should be. The Resp Org parameter identifies the entity that is assuming ownership for managing the data associated with the message.

The functions that a user may perform are indicated by the interface commands that users can initiate. At the current time, all users planning to utilize the interface will have access to all commands; however, it is at the discretion of each company which commands they choose to implement.

This interface must protect the privacy of the individual company wishing to communicate with SMS. As such, SMS will ensure security by means of an authorization policy and an enforcement process.

The authorization policy specifies

- Users - those who may access SMS
- Security matrix - specifications of permitted actions for each company.

Companies wishing to gain access to the interface, or for that matter, participate in testing, should contact the Help Desk. The Help Desk will assign valid logins for use over this interface.

For each action request, the enforcement process will validate the identity of the requester and act on the request based on the authorization data for that user.

Data base security exists so that users may, for example, have access only to data pertaining to their own regions' SCPs. Companies will be able to view customer record data in which they are 'involved'. Involved is defined to include those records that are either loaded into their SCPs or are regions in which an 800 number terminates, even if the records are not loaded in the region's SCPs. Only the control Resp Org can modify these records.

The area of service of the customer record is used to determine whether a company is permitted access to the record. Access to records by non-involved companies is prohibited. This section applies to TCP/IP Interfaces.

### 4.3 Recovery

The primary goals of the recovery procedures are to minimize SMS service disruption, to minimize the loss of data when either SMS or an OS fails, and to maintain the consistency of the SMS and OS data bases.

In order to maintain necessary communication paths between the SMS and OS systems, SMS communication interface software will monitor the status of the links between the SMS and the OSs, and will detect a failure of one of these links.

Failures are unplanned events causing service interruption or loss of data. They can involve hardware and/or software. All data transmissions between hardware components will detect and correct single bit errors automatically without affecting service. When necessary, SMS will be shut down manually and an announcement broadcast to all active users, if possible. When the nature of the failure precludes graceful shutdown, it may not be possible to send a Good Night message. Information on SMS system status is available from the Help Desk. This section applies to TCP/IP Interfaces.

## 4.4 Performance

To provide the users of this mechanized interface with acceptable service, a certain level of performance is required. Performance levels can be divided into three major areas: (1) availability and reliability, (2) response times, and (3) link capacity. These areas are further described in the subsections below. This section applies to TCP/IP Interfaces.

Per the SMS/800 “**MGI Transaction Limitation Policy**” (ref. Notification Number NWS-15-2, Revised March 4, 2015): Like any software system, the SMS/800 platform is designed and built to handle a defined volume of user-initiated transactions. The SMS/800 platform is not designed to support an unlimited number of MGI transactions per second. Resp Org Entities must limit their transaction rates for MGI traffic to no more than 5 user-initiated MGI transactions per second (the “MGI Transaction Limit”). This limitation must be observed at all times, twenty-four hours a day, seven days a week (24x7). If you have any questions concerning the MGI Transaction Limitation Policy, please contact the Help Desk at 888-SMS-3300, Option 1.

### 4.4.1 Availability and Reliability

SMS/800 is expected to support this interface during all periods when it is in service. If SMS becomes unavailable after being operational, connected users of the interface will be notified by the Help Desk by an email message such as a Client Support Bulletin (CSB) message. Should this message be broadcast, OSs will not be able to communicate with SMS and all attempts to do so will be denied. Transactions received by SMS immediately prior to the broadcast will be queued by SMS/800 and subsequently de-queued upon re-activation of the interface.

Infrequently, in addition to the daily routine preventive maintenance and file maintenance period, longer scheduled maintenance periods may be required.

Mechanized interface users will have no priority over on-line users. Similarly, on-line users will have no priority over mechanized interface users.

### 4.4.2 Response Times

The transit time of outgoing or incoming messages across the mechanized interface will depend on the telecommunications medium that companies choose to implement. This will impact the total response times as seen by the end applications but cannot be controlled by those applications. Therefore, system response time as referred to here is expressed as the maximum allowable time from receipt of a message or occurrence of an event to the transmission of a response or unsolicited message within a system.

In general, it is anticipated that processing time for transactions within SMS/800 will be comparable to analogous transactions launched by on-line SMS users. It should also be recognized that the overall response time realized by an OS is contingent upon three factors: (1) response time within the OS, (2) transmission time over the links, and (3) response time within SMS. The OS has control over the first factor. The second factor is

dependent upon data volumes. Telcordia has control over the third factor. The interface, as defined in this document, will evolve over time so as to most efficiently communicate.

#### 4.4.2.1 Response Types

In general, an SMS/800 response to number administration, customer record administration, or "other" transactions can take one of the following forms:

- SMS/800 Completion Responses

The elapsed time at SMS for a completion response will be dependent on the particular OS command that SMS is to perform. Included in the SMS completion response may be a termination report and requested output data.

- Error Response on Input

If an OS command is in error, an error indication and supporting diagnostics will be provided by SMS in the acknowledgement. An input error response to an OS command should be sent as quickly after receipt of the failed command as possible.

- Error Response on Execution

Execution error responses should be returned immediately when the execution of a validated command terminates abnormally. Generally, execution error responses, if any, should be expected to arrive at the OS no later than the expected completion responses for a given command.

#### 4.4.3 Capacity Planning

Data volume estimates cannot be provided based upon operating experience; however, companies are advised to engineer their administrative processing capabilities with additional capacity to meet unforeseen loads. Companies should be cautioned that additional capacity to handle the UAL message header associated with each message segment must be considered. For the purposes of accounting for UAL-level overhead, companies should allow for the additional 60 bytes of the UAL message header. Site-to-Site confirmation messages also add to the overall volume of data transferred. This section applies to TCP/IP Interfaces.

The peak hour is defined as the single hour in which SMS/800 will experience its maximum interface traffic load. Expected message rates and data volumes will be highly dependent on several key variables:

- Types of interactions - queries require less resources than data manipulation
- The manner in which OSs package transactions - i.e., single requests versus aggregated requests
- General business needs - dictated by 800 subscribers.

#### 4.4.4 Link Sizing

It is each OS's responsibility to determine the number of the links, within certain constraints. These constraints include the number of PVCs / sockets supported, the peak hour traffic that is expected, tolerance to link outages, and the link speed supported by SMS/800. As an aid, the following are offered:

- It is suggested that 40% of a link's capacity be reserved for the transmission overhead in the lower protocol layers (i.e., TCP/IP).
- It is suggested that expected peak-hour traffic volumes be used for sizing.
- It is suggested that at least two links, ordered with alternate routing, be employed.

## 4.5 Version Control

Version control is supported by the REPT-ASI message. The REPT-ASI message is sent by the OS to SMS whenever there is change in the version of the interface specification that the OS is supporting. SMS will use the version number to interpret the messages it receives from the OS, as well as to select the correct message format for the messages it sends to the OS.

Given this paradigm, companies interfacing with SMS/800 will need to identify which issue of the interface specification they plan to communicate to SMS with. The mechanism by which such identification is accomplished is the ASI (Application Status Identification) messages. This section applies to TCP/IP Interfaces.

## 4.6 Release Independence

Tag-values provide a method of extending the messages simply. New functionality in subsequent phases of this interface may cause changes to existing message formats. Tags can be added or removed more understandably than the alternative, positional defined parameters. Although unknown tags can be ignored to achieve some measure of release independence, the approach taken in this specification is to reject the message to avoid any possible ambiguity in how to process the message. This section applies to TCP/IP Interfaces.

# 5. General Interaction and Syntax for Application Messages

This section presents general guidelines for the SMS-OS application messages. This section applies to TCP/IP interfaces. This section includes:

- Terminology and definitions associated with the exchange of commands and responses during interactions
- General syntax requirements for application messages in accordance with the selected application-level language which is based on Modified MML (huMan Machine Language), which has been superseded by USL (User System Language).

## 5.1 Interaction Descriptions and Terminology

As mentioned earlier in this document, the purpose of this interface is to facilitate the transfer of messages and data, in both directions, between SMS and an OS in order to support the various operational functions performed by SMS and 800 Service-related personnel in ICs and LECs.

Under the standard mode of operation of the interface, OS users will not communicate directly with SMS. Requests will first be interpreted by interface procedures which will then generate appropriate commands. Inputs will be checked for consistency and standardized command messages containing suitable syntax and semantics will then be generated and sent to lower protocol layers for transmission. It is assumed that similar administrative processing capabilities will exist at OSs communicating with SMS.

There will be three types of application messages associated with the SMS-OS interface:

- Commands
- Responses
- Autonomous messages.

Each of these messages is described in the subsections below.

### 5.1.1 Commands

Commands are instructions sent by SMS or an OS that request a specific action or series of actions be performed. These actions may include the sending of data or may involve the entry or modification of information stored at the intended system. Commands may also contain instructions that change the status of or control data stored at the remote end. Commands will contain a command code (i.e., name) and parameter values that, together, specify the action or actions to be performed.

### 5.1.2 Responses

Responses are notifications that the associated command has been accepted or denied. Each response is associated with a command and as such contains the command message id for tracking purposes.

### 5.1.3 Autonomous Messages

Autonomous messages are not sent in direct response to a request but are triggered by an event. Examples of autonomous messages include: (a) A customer record failed to go active at the effective date/time and SMS sends a message to the appropriate OS, or (b) SMS is going down and sends a broadcast message to all OSs currently communicating with it. In each of these cases, the OS did not previously send a command to SMS.

The remainder of this section describes a subset of the " MML" that is to be implemented for messages in this specification. The subset of MML to be implemented is the Input (command) Language with binary data definition enhancement for data. Both commands and responses will use this format.

For messages between SMS and an OS, some of the option blocks are not needed and will not be used.

This section presents only the major highlights of the language and the features that are to be implemented for the definition of the messages between systems.

## 5.2 Language Specification

The following is the meta-language used for the description of the MML in this document:

...	to indicate a consecutive and inclusive string
(vertical bar)	alternatives (or)
[]	optional units
*	to have zero or more repetitions
+	to have one or more repetitions
()	to enclose a unit
:=	is defined as

### 5.2.1 Character Set of Data Elements

These are the allowable characters within each data element of MML. The character set is a subset of the 7-bit ASCII code. Characters not defined here are illegal in data elements, and character validation will be applied to all non-binary fields.

#### 5.2.1.1 Digits

Digits are characters with hexadecimal values 30 to 39 (ASCII 0-9).

digit := 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

#### 5.2.1.2 Letters

Letters are characters with hexadecimal values 41 to 5A (ASCII A-Z).

letter := A |...|Z

### 5.2.1.3 Graphic Characters

Graphic characters are defined as the following ASCII characters:

```
graphics:= | !| #| $| %| &| '|(|)|*|+|,|-|.|
/|:|;| <|=|>|?|@|[|\\|]|_|`|{||||
```

The following characters are **not** supported by the MGI within any message tag: double quotes (because this character is used as a field delimiter for text strings), cent sign, tilde ~, hat ^ and vertical bar |, as well as ASCII extended characters and EBCDIC extended characters.

Each of the following special characters will be converted to a single space if SMS/800 receives an MGI message that contains any of these characters: tilde ~, hat ^ and vertical bar |. This is done in order to ensure proper processing of the message by SMS/800 and for compatibility with the SMS/800 on-line user interfaces

#### 5.2.1.4 Summary of Key Characters

Key characters are used for special purposes within MML.

ASCII Character	Hex Value	Purpose of Character
blank	20	A character used in text strings.
" (quote)	22	A character used as a text string delimiter.
\$ (dollar)	24	A character used in binary data.
,	2C	A separator for parameters within a block of parameters.
- (hyphen)	2D	A separator for information units in command codes.
.	2E	A separator for the integer and fractional portion of a decimal number.
:	3A	A separator which precedes each block of parameters. An indicator for parameter block request indication.
;	3B	An indicator for terminating a command.
= (equal)	3D	A separator for parameter names and parameter values.

## 5.2.2 Data Elements

### 5.2.2.1 Identifier

An IDENTIFIER is a string of one to ten characters which begins with a letter, followed by digits and/or letters.

```
identifier := letter(digit | letter)*  
e.g., : RSP
```

### 5.2.2.2 Decimal Numeral

DECIMAL NUMERAL data elements are interpreted as decimal digits. A decimal numeral consists of one or more digits (0-9).

```
DECIMAL NUMBER := (digit)+
```

```
e.g., : 10  
      1
```

### 5.2.2.3 Text String

TEXT STRING data elements are zero or more characters enclosed within one beginning double-quotation mark and one ending double-quotation mark. Double-quotes will be interpreted by SMS as a tag delimiter. A text string is also referred to as a free-text field or text field.

```
text string := "(letter | digit | graphics | blanks)*"  
eg : "ABC$#"  
    ""
```

#### 5.2.2.4 Binary Data

BINARY data items are used to transfer binary strings. Binary data are byte oriented and each binary unit is 8 bits long. They are not checked for illegal characters. Bit count starts from right to left, where bit 0 is the right most bit position. Bit 7 is the most significant bit. Bit 0 is the least significant bit.

In binary data strings, the data is sent with the most significant byte first and the least significant byte last.

**BINARY\_DATA := \$(integer)(bin\_data)**

WHERE :

integer      is a positive signed binary number 4 bytes long and each byte has 8 bits. This number indicates the number of bytes in 'bin\_data'.

bin\_data      contains the binary data string where each byte is eight bits long.

ie:            the internal representation of a one-byte binary data definition of the bit pattern 00000001 in hex :  
240000000101  
where :

24            byte 0 is the ASCII character \$ (24 in hex).

00000001      bytes 1 to 4 are the internal representation of the integer 1 (00000001 in hex).

01            byte 5 is the bit pattern 00000001 (01 in hex).

ie:            the internal representation of a two-byte binary data definition of the bit pattern 1111111111111111 in hex :  
2400000002FFFF  
where :

24            byte 0 is the ASCII character \$ (24 in hex).

00000002      bytes 1 to 4 are the internal representation of the integer 2 (00000002 in hex).

FFFF          bytes 5 and 6 are the bit pattern 1111111111111111 (FFFF in hex representation).

#### 5.2.3 Commands and Reply Messages

All commands and replies have the same syntax in this MML subset for messages. All

parameters in the parameter block are parameter-named (i.e., keyed), except for parameters in the first five blocks. The first five blocks are positional defined parameters, and are considered header data. The positional-defined parameter option is not used for any subsequent parameter blocks for messages.

- SYNTAX

```
command syntax := command[:parameter block]*;
```

- COMMAND

```
command := identifier[-identifier[-identifier]]
```

Note: The first identifier is the MML command verb.

- PARAMETER BLOCK

```
parameter block :=
```

```
(parameter-name defined parameter  
    (,parameter-name defined parameter)*)
```

```
parameter-name defined parameter :=
```

```
parameter_name=parameter_value
```

- PARAMETER NAME

```
parameter_name :=  
    identifier
```

- PARAMETER VALUE

```
parameter_value :=  
    simple parameter argument
```

- SIMPLE PARAMETER ARGUMENT

```
simple parameter argument :=  
    information_unit
```

- INFORMATION UNIT

```
information_unit :=  
    identifier | decimal numeral | text string | binary_data
```

## 5.3 Message Format

For the messages between SMS and an OS, some of the optional header blocks are not needed and will not be used. Optional header blocks not used are indicated by a colon with no parameters following it, as illustrated in the following format definitions.

### 5.3.1 Command Format

For non-automation-related messages that are defined as input command messages, the following format is used:

verb-mod:,date,time:::[message specific data block]\*;

where:

- o verb : input MML command verb. Maximum of 10 characters/verb.
- o mod : the individual message id. Maximum of 10 characters/modifier.
- o The message ID must be unique for each message, including when resending a message, and should be in all caps.
- o date : as below for response messages. time : as below for response messages.
- o Message specific data block: keyed block, maximum of 50 keys per block, maximum of 200 blocks per message.
- o Maximum of 10 characters/key.

### 5.3.2 Response Format

For response messages, the following format is used :

verb-mod:,date,time:::status[:message specific data block(s)]\*;

where:

verb := response MML command verb. Maximum of 10 characters/verb mod := the individual message id. Maximum of 10 characters/modifier.

The message ID must be unique for each message, including when resending a message, and should be in all caps.

date := year-month-day [10 bytes of the form yyyy-mm-dd]

year := digit digit digit digit (e.g., 1989)

month := digit digit (range 01 to 12)

day := digit digit (range 01 to 31)

time := hour-minute-second-zone [12 bytes of the form hh-mm-ss-zzz]

hour := digit digit (range 00 to 23)

minute := digit digit (range 00 to 59)

second := digit digit (range 00 to 59)

zone := time zone of sending site

(NST,NDT,AST,ADT,EST,EDT,CST,CDT,MDT,  
MST,PST,PDT,YST,YDT,HST,HDT,BST,BDT) Response and  
Unsolicited Messages only return zone=CST if no errors (except for  
REPT-ASI and RSP- ASI messages). If there is an error in a request  
message sent in, the associated response message may return the exact  
input which may or may not have zone=CST.

status := term\_rept,error\_cd

term\_rept := one of the following:

COMPLD - message request completed.

DENIED - message request denied.

error\_cd := message specific error code as defined  
for each message should be 00 if term\_rept is  
COMPLD. Should be 01 for syntax errors.  
(maximum 4 alphanumeric characters)  
Other codes are message specific.

Message specific data block : keyed block, maximum of 50 keys per block.

**Maximum of 200 blocks per message. Maximum of 10 characters/key.**

### 5.3.3 Unsolicited Response Format

For unsolicited messages, the following format is used :

verb-mod:,date,time:::[message specific data block(s)]\*

where:

verb : unsolicited message MML command verb Maximum of 10 characters/  
verb

mod : the individual message id. Maximum of 10 characters/modifier.  
The message ID must be unique for each message, including when resending a  
message, and should be in all caps.

date := as above for response messages

time := as above for response messages

message specific block: as above for response messages

### 5.3.4 Data Block Format

Repeating data structures should be used in a data block whenever multiple values are assigned to an array of variables. More than one structure may repeat in a block.

Keys may not be repeated in a data block. Data structures that repeat in a data block must use different keys for each instance of the data. If the same key words are desired, each instance of data may be placed in different data blocks with keys repeated from one block to the next.

Data structures that repeat in a block must have a count field of the number of repeating instances of the data that precedes the first occurrence. The count field must precede the first occurrence of the repeating structure.

## 5.4 Record SCP Limits

This section includes SCP limits that should be taken into consideration when building complex record (complex Customer Records and complex Template Records).

1. A Customer Record and Template Record cannot have more than 255 branches per CPR node due to an inherent limit in the SCP network. For additional details, refer to the section titled: [Customer Record Branches](#).
2. **A Customer Record and Template Record cannot be more than 170,000 bytes in size in terms of the length of the message that is transmitted to the SCPs.** This message length is determined at the time the record is being downloaded to the SCPs. If the actual message size for a record is larger than 170,000 bytes, the status of the record will be set to **FAILED**. SMS/800 will indicate the failure or rejection of the record by sending a UNS-CRA message to the control Resp Org.
3. When creating a record, make sure the message size (as calculated per the formula in the Table below) that is downloaded by SMS/800 to the SCPs is below 170,000 bytes. However, please note that even if SMS/800 allows a record with message size below 170,000 bytes to be sent to the SCPs, the SCPs may have their own limitations (e.g., based on the SCP's storage limitations) that may result in one or more SCPs rejecting a record, resulting in the record remaining in SENDING status.

**NOTE** - The size for a CR and Template Record is not known to SMS/800 until the record is converted to a download message to be sent to SCPs.

4. The following formula can be used to estimate the length of a Customer Record's or Template Record's message that is to be sent to the SCPs.

**Table 5-1** Estimated CR and Template Record Size Formula

Estimated Record Size Formula:
# bytes estimate = 91+ (24 * # rows) + (10 * # decision nodes * # rows) + (X * # LAD values)
Notes for the above table: <ul style="list-style-type: none"> <li>• The constant 'X' can be either '6' or '3'. Set X to 6 if the LAD types are primarily 6# or 10#; otherwise set X to 3. Setting X to 6 yields a high estimate whereas setting X to 3 yields a low estimate.</li> <li>• # decision nodes = # of CPR column headers that are deciding factors for routing, which means CPR columns that are not any of the following types: Carrier, Tel#, Announcement, Switch or GOTO.</li> <li>• This calculation is to be used as an estimate only, and results greater than or less than 170,000 based on this formula will not guarantee that the ACTUAL size is greater than or less than 170,000, and therefore will not guarantee that the record is accepted or rejected by SMS/800 or the SCPs.</li> </ul>

### 5.4.1 Customer Record Branches

The figure shown below provides a sample of a CPR with branches. A branch results when a preceding node contains a single value and is followed by a row, or rows, of unique values. A Customer Record cannot have more than 255 branches per node and a node may contain LAD labels which may additionally consist of up to 255 LAD values. The LAD label is considered to be a single entry of the branch although it may contain up to 255 values.

**Figure 5-1** Customer Record Branches Example

Section:	MAIN	Add Section	Delete Section
State	6-digit#	Time, C	Tel#
State	6-digit#	Time	Tel#
NJ	908-699	08:00A-04:00P	201-257-0000
NJ	908-699	04:00P-05:00P	800-944-0000
NJ	908-699	OTHER	201-257-0000
NJ	908359,908360		201-257-0000
NJ	*LABEL		800-944-0000
NJ	908-257	09:00A-04:00P	800-944-0000
NJ	908-257	OTHER	201-257-0000
NJ	OTHER		800-944-0000
OTHER			800-944-0000

In this example, there are five (5) branches that stem from NJ.

Each row is a branch provided the rows are not duplicated. In this example, the State column consists of two (2) branches: NJ and OTHER. However, in the 6-digit# column the values in the rows change and create five (5) branches from NJ. Three (3) branches stem from the 6-digit# 908-699. No additional branches stem from 908359, 908360 or \*LABEL, two (2) branches from 908-257, and no additional branches from NJ-OTHER.

## 6. Application Message Conventions

This section applies to TCP/IP Interfaces.

## 6.1 Document Conventions

Messages are described using the following convention in the definition of the messages.

Upper case: These are characters or words that are part of the actual message definition. Tag names must be in upper case.

Lower case: These are characters or words that describe the content of that parameter.

## 6.2 Message Page Description

Each message is described on a separate message page. A message page contains the following:

- The message name and its message acronym
- A brief description of the message
- A list of UAL parameters for that given message as described in the next section
- The message format for that message
- The description of each of the parameters in the message
- The data types for each value of a parameter (identifier, decimal numeral, text string, binary data).

**NOTE** The terms “text” and “text string” are synonymous and imply that double-quotation marks are required to enclose the data; and the term “binary” implies a “\$” followed by a byte count is required to precede the data. Refer to [\(Section 5.2\)](#) for further details.

Throughout this document, message examples may not show double-quotes around text strings, and the reason for this is so that the reader does not interpret the example value to mean the literal (required) value.

## 6.3 UAL Parameters

The User Application Layer (UAL) is an application layer that provides the common services necessary for communication between the SMS and an OS. There are several parameters that will be passed to the UAL to indicate the need for message confirmation, queuing treatment, and route selection.

Each message transmitted between an OS and the SMS UALs should have these parameters specified. The parameter values associated with a particular message are presented in the following message descriptions. A description of each parameter follows together with a discussion of permissible values.

### 6.3.1 Message Type

Message Type can take on one of three values:

- Command
- Response
- Unsolicited.

Message Type is used to categorize messages and is for informational purposes only.

### 6.3.2 Logical Channel Assignment

Messages are classified into six categories: (1) Number Administration commands, (2) Number Administration responses, (3) Customer Record Administration commands, (4) Customer Record Administration responses, (5) Unsolicited messages, and (6) Site-to-Site Confirmations. For TCP/IP, logical channel assignments are not required, but may be used by an OS for message management purposes. The reason for categorizing the commands and assigning them to distinct logical channels is to facilitate different treatment and different routing assignments. The channels used between SMS/800 and OS communications are identified as X1, X2, X3, X4, X5, and X6. The following defines message categories together with their suggested logical channel assignments:

1. Category 1:

This category includes Number Administration command messages and is assigned to logical channel X1.

2. Category 2:

This category includes Number Administration response messages and is assigned to logical channel X2.

3. Category 3:

This category includes Customer Record Administration command messages and is assigned to logical channel X3.

4. Category 4:

This category includes Customer Record Administration response messages and is assigned to logical channel X4.

5. Category 5:

This category includes unsolicited messages and is assigned to logical channel X5.

6. Category 6:

This category includes Site-to-Site Confirmation messages sent from SMS/800 to the OS, and the Site-to-Site Confirmation messages sent from the OS to SMS/800. The message types in this category are assigned to logical channel X6.

If there is a failure in a specific logical channel, or if a logical channel is unavailable, any other logical channel can be used. That is, any message can be sent on any logical channel. It is suggested that the sender maintain secondary logical channel assignments for each primary logical channel. Also strongly suggested is using a round-robin scheme. For example, if X6 is unavailable, use X1 for both X6 and X1 traffic. If X1 is unavailable, use X2 for X1 and X2 traffic, and so forth. If both X6 and X1 are unavailable, use any available logical channel for X6 traffic.

### 6.3.2.1 Mapping of Logical Channels to Physical Links

While one physical link is required, a minimum of two physical links are suggested to achieve some measure of physical redundancy. While there are no requirements as to the mapping of logical channels to physical links, one possible arrangement is to place the command message channels, X1 and X3, on one physical link, and the response message channels, X2 and X4, on a separate physical link. The unsolicited message channel, X5, and the site-to-site confirmation channel, X6, should be allocated between the links to balance the expected load.

If more than two physical links are used, a similar arrangement should be employed to balance the traffic.

### 6.3.2.2 Planning Support

Prior to connection, each OS should inform the SMS/800 production data center as to the number of physical links, size of each link, and logical channel assignments for each link that they plan to implement. This information will be used to configure the SMS/800 end of the links according to each OS's plans and to properly size the SMS/800 data communications network facilities.

### 6.3.3 Source

This parameter is used to designate which system can send a message, that is, SMS/800 or an OS. Source can have a value of SMS or OS and is used for informational purposes.

### 6.3.4 Confirmation

There are three types of confirmation used to ensure that a message is received by the other system:

- |     |  |
|-----|--|
| A   | Application-to-Application confirmation, used for the messages that require responses.               |
| N/A | No confirmation is necessary, and the field is empty, e.g., SSC (Site-to-Site Confirmation) message. |

In general, commands sent from an OS require application-to-application level confirmation, while responses from the SMS require site-to-site confirmation from the OS back to the SMS. Note that site-to-site confirmation is not used for TCP/IP. There are no multi-segment application messages.

### 6.3.5 Queuing

Queuing is used whenever link failure, system failure, or overload occurs, and a message can therefore not be sent. Allowable values for queuing include

- |          |   |
|----------|---|
| Yes      | This message should always be queued indefinitely whenever the failure occurs.  |
| No       | This message is not queued.   |
| Optional | It is left to the sender of the message to decide whether to queue the message. |

### 6.3.6 Command or Response

This indicator is used to cross-reference messages. If a command message is described, this indicator is referred to as *Response* and is populated with the associated Response message. If a response message is described, this indicator is referred to as a *Command*, and is populated with the associated Command message. This indicator is used for informational purposes.

### 6.3.7 Route ID

The routing identifier (**Route ID**) is used to identify the application that will process the message. It is generated by the sending UAL, based on the routing identifier specified by the application message.

Each MGI message has a unique **Route ID**, which is three alphabetic characters. The format used to assign routing ids is that commands have routing codes beginning with the letter C, responses have routing codes beginning with the letter R, and unsolicited messages have routing codes beginning with the letter “U”.

## 7. Application Message Specifications

This section applies to TCP/IP Interfaces.

**MGI Resp Orgs are responsible for supporting all error/warning/informational codes (messages such as 0006) in all application messages that the MGI Resp Org supports.**

Note: The Resp Org ID in each MGI request message must be defined on the MGI Logon ID's MGI Security Administration (GSA) screen for the MGI Logon ID that sent the request message in order to be permitted to view proprietary data.

### 7.1 Number Administration

This section contains the number administration interface messages. See Section 7.3 for the **Unsolicited RESP ORG Change (UNS-RCH)** message, which can be triggered by number administration activity.

- CR7-1** [15] Companies wishing to utilize this interface for number search, number reservation, number query, and number status change, must implement all messages in this section; however, companies may choose not to implement certain messages depending upon specific business needs.

### 7.1.1 Number Search, Reservation or Query [REQ-NSR]

#### NUMBER SEARCH, RESERVATION OR QUERY [REQ-NSR]

##### NUMBER ADMINISTRATION

This command will allow an OS to search for, reserve, or query a number, by either entering the actual number, or by using the random search function of SMS/800. Different types of searches are supported. These include specific number searches, spare number searches within a specific NXX or line number combination, and consecutive searches. Both the search function and the search and reservation function can be for up to ten numbers at a time. Number queries can be requested only one at a time and can be used to obtain status and ownership information. The status of a number being reserved must be either transitional or spare. As new NPAs are supported for 800 Data Base Service, the **npa** parameter may be specified. However, it cannot co-exist with the **num** parameter.

MGI users have the option of specifying, through the Help Desk, if they want numbers from a reservation request that did not complete in the allotted time-out period to be automatically returned to the spare pool. The default is that numbers will be protected and left in a waiting status if the request did not complete in time.

Message Type	Command
Logical Channel	X1
Source	OS
Confirmation	A
Queuing	Optional
Response	RSP-NSR
Route ID	CSR

##### MESSAGE FORMAT

###### SCENARIO #1: SEARCH ONLY SPARE NUMBERS:

- OPTION 1: Search for one random spare number
  - SPECIFY NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,NPA=npa,AC=S;**

## B. WITHOUT SPECIFYING NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S;**

- OPTION 2: Search for up to ten spare numbers

## A. SPECIFY NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa;**

## B. WITHOUT SPECIFYING NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,NUM=num,QT=qt,  
CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,NUM=num,QT=qt;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt;**

- OPTION 3: Search for up to ten spare numbers in starting NXX (consecutive or non-consecutive)

## A. SPECIFY NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
NXX=nxx,CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
NXX=nxx;**

## B. WITHOUT SPECIFYING NPA

**num, if present, must be all wildcards in the NXX character positions.**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NXX=nxx,  
CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,NUM=num,QT=qt,  
NXX=nxx,CONT=cont;**

- OPTION 4: Search for up to ten spare numbers in a starting Line number (consecutive or non-consecutive)

A. SPECIFY NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
LINE=line,CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
LINE=line;**

B. WITHOUT SPECIFYING NPA

**num, if present must be all wildcards in the LINE character positions.**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,LINE=line,  
CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,LINE=line;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,NUM=num,QT=qt,  
LINE=line,CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,NUM=num,QT=qt,  
LINE=line;**

- OPTION 5: Search for up to ten spare numbers in a starting NXX and Line number (consecutive or non-consecutive)

A. SPECIFY NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
NXX=nxx,LINE=line,CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NPA=npa,  
NXX=nxx,LINE=line;**

B. WITHOUT SPECIFYING NPA

**num, if present, must contain all wildcards in the NXX and LINE character positions.**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NXX=nxx,  
LINE=line,CONT=cont;**

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=S,QT=qt,NXX=nxx,  
LINE=line;**

**REQ-NSR:,date,time::::ID=id,RO=ro,AC=S,QT=qt,NUM=num,  
NXX=nxx,LINE=line,CONT=cont;**

**REQ-NSR:,date,time::::ID=id,RO=ro,AC=S,QT=qt,NUM=num,  
NXX=nxx,LINE=line;**

#### SCENARIO #2: QUERY ONLY ONE SPECIFIC NUMBER:

**num must not contain any wildcards**

**REQ-NSR:,date,time::::ID=id,RO=ro,AC=Q,NUM=num;**

#### SCENARIO #3: SEARCH UP TO TEN SPECIFIC SPARE NUMBERS

**num must not contain any wildcards**

**REQ- NSR:,date,time::::ID=id,RO=ro,AC=S,QT=qt,NUM=num1,  
NUM=num2,... NUM=num10;**

#### SCENARIO #4: SEARCH AND RESERVE UP TO TEN SPECIFIC SPARE NUMBERS

**num must not contain any wildcards**

**REQ-NSR:,date,time::::ID=id,RO=ro,AC=R,NCON=ncon,CTEL=ctel,  
NOTES=notes:QT=qt:NUM=num1,NUM=num2,...NUM=num10;**

#### SCENARIO #5: SEARCH AND RESERVE NUMBERS

**num, if present, must contain wildcards (“\*” or “&” symbol(s))**

- OPTION 1: Request one random spare number to search and reserve

##### A. SPECIFY NPA

**REQ-NSR:,date,time::::ID=id,RO=ro,AC=R,NPA=npa,NCON=ncon,  
CTEL=ctel,NOTES=notes;**

##### B. WITHOUT SPECIFYING NPA

**REQ-NSR:,date,time::::ID=id,RO=ro,AC=R,NCON=ncon,CTEL=ctel,  
NOTES=notes;**

- OPTION 2: Request up to ten spare numbers (asterisks and ampersands allowed in

**num)** without specifying NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NCON=ncon,CTEL=ctel,  
NOTES=notes,QT=qt,NUM=num,CONT=cont;**

- OPTION 3: Specify a starting NXX

A. SPECIFYING NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NPA=npa,NXX=nxx,  
QT=qt,CONT=cont,NCON=ncon,CTEL=ctel,NOTES=notes;**

B. WITHOUT SPECIFYING NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NXX=nxx,QT=qt,  
CONT=cont,NCON=ncon,CTEL=ctel,NOTES=notes;**

C. WITHOUT SPECIFYING NPA YET WHEN SPECIFYING THE NUM

When NUM is present, the NXX must contain all wildcards.

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NUM=num,QT=qt,  
NXX=nxx,CONT=cont,NCON=ncon,CTEL=ctel;**

- OPTION 4: Specify a starting NXX and line number

A. SPECIFY NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NPA=npa,NXX=nxx,  
LINE=line,QT=qt,CONT=cont,NCON=ncon,CTEL=ctel,  
NOTES=notes;**

B. WITHOUT SPECIFYING NPA

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NXX=nxx,LINE=line,  
QT=qt,CONT=cont,NCON=ncon,CTEL=ctel,NOTES=notes;**

C. WITHOUT SPECIFYING NPA YET WHEN SPECIFYING THE NUM

When NUM is present, the LINE must contain all wildcards.

**REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,QT=qt,NUM=num,  
LINE=line,NCON=ncon,CTEL=ctel;**

- OPTION 5: Specify a starting line number

#### A. SPECIFYING NPA

```
REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NPA=npa,LINE=line,
QT=qt,CONT=cont,NCON=ncon,CTEL=ctel,NOTES=notes;
```

#### B. WITHOUT SPECIFYING NPA

```
REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,LINE=line,QT=qt,
CONT=cont,NCON=ncon,CTEL=ctel,NOTES=notes;
```

#### C. WITHOUT SPECIFYING NPA YET WHEN SPECIFYING THE NUM

When NUM is present, the NXX and LINE must contain all wildcards.

```
REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,QT=qt,NUM=num,
NXX=nxx,LINE=line,NCON=ncon,CTEL=ctel;
```

- OPTION 6: *Specify up to ten spare numbers (consecutive or non-consecutive)*

#### A. SPECIFYING NPA

```
REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,NPA=npa,QT=qt,
CONT=cont,NCON=ncon,CTEL=ctel,NOTES=notes;
```

#### B. WITHOUT SPECIFYING NPA

```
REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,QT=qt,CONT=cont,
NCON=ncon,CTEL=ctel,NOTES=notes;
```

```
REQ-NSR:,date,time:::::ID=id,RO=ro,AC=R,QT=qt,NUM=num,
NXX=nxx,LINE=line,NCON=ncon,CTEL=ctel;
```



*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Logon Id 8 bytes identifier identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier responsible organization for this message
<b>ac</b>	Action Code 1 byte identifier allowable values: S (search), Q (query), R (search and reserve)
<b>qt</b>	Quantity of numbers to be searched for, or searched for and reserved 2 bytes decimal numeral (optional) QT can only be 1 for a number query (AC=Q) or omit the QT tag when submitting a query request. allowable range: 1-10 (default value = 1)
<b>npa</b>	NPA of Dialed Number 3 bytes decimal numeral (optional) valid entries: 800 or other NPAs associated with 800 Data Base Service (e.g., 888) specifies the first 3 characters of the dialed number requested cannot be entered if "num" is entered

**num**      The Dialed Telephone number  
           10 or 12 bytes text string  
           must contain 10 alphanumerics or 10 numerics;  
           format is npanxxxxxx, where npanxxxxxx = dialed number  
           The dial number must contain 10 alphanumerics, although wildcard  
           characters '\*' and '&' are allowed for a number reservation (AC=R) and  
           number search (AC=S). Special characters are not allowed for a number  
           query (AC=Q).

Two blank spaces are allowed.  
           a 10-byte number can be partially or fully specified via use of asterisks  
           (\*)  
           or ampersands (&) which can be substituted for any part of number

\* indicates no specific number or character is required  
           & indicates repeated wild card and may occur in combination with \*.  
           If & is used, there must be at least 2 occurrences (e.g., 7251&9&)  
           use of asterisks or ampersands is not allowed with AC = Q

if used with nxx, character positions 4-6 of num must be \* or &.  
           if used with line, character positions 7-10 of num must be \* or &.  
           if used with cont, character position 10 of num must be \*.

**nxx**      Start NXX  
           3 bytes decimal numeral (optional)  
           valid values are 000 - 999  
           specifies the NXX where search should start

**line**      Start line number  
           4 bytes decimal numeral (optional)  
           valid values are 0000 - 9999  
           specifies the last 4 characters of phone number where search should  
           start

<b>cont</b>	Consecutive or non-consecutive 1 byte text string (optional) allowable values are N: non-consecutive (default value), Y: consecutive previously called "contiguous or non-contiguous"
<b>ncon</b>	Contact Person 30 bytes text string (optional except required for a Reservation) maximum of 30 bytes required for AC=R
<b>ctel</b>	Contact Phone Number 10 bytes text string (optional except required for a Reservation) format is npanxxxxxx required for AC=R
<b>notes</b>	Additional Information 72 bytes text string (optional) this field has a maximum size of 72 bytes

**NOTES:**

1. If AC=S and no number, NXX, or LINE parameters are provided, SMS/800 will invoke the random search function and look for the appropriate amount of spare numbers (with or without specified NPA).
2. If AC=S and START NXX is specified, and no spare numbers are found in that NXX, SMS/800 will select numbers from the next open NXX in the specified NPA or in any NPA if no NPA is specified. If SMS/800 is unable to find the entire quantity of numbers requested, SMS/800 will return what it found and mark the response as a "partial completion".
3. If SMS/800 cannot find a number specified in the NUM parameter, then no number will be returned.
4. If AC=R, any number searched for and found will simultaneously be reserved.
5. Duplicate numbers and RCC numbers are no longer supported by SMS/800.

## 7.1.2 Response to Number Search, Reservation or Query [RSP-NSR]

### RESPONSE TO NUMBER SEARCH, RESERVATION OR QUERY [RSP-NSR]

#### NUMBER ADMINISTRATION

This message serves as the response to the command NUMBER SEARCH, RESERVATION OR QUERY. Because the request command could contain multiple numbers or numbers could be randomly selected by SMS/800, the response message includes the number that was sent or found via random search, or an error code if applicable.

A **COMPLD,00** response is returned for a fully successful query, search, or search and reservation. A **COMPLD,11** response *with* the **ecnt** parameter is returned when not all specific numbers could be reserved, or when a random search/reservation results in numbers crossing NPAs and, when the time-out period is reached, some of the numbers are still in a waiting status. In this case, the **cnt** parameter contains the count of numbers successfully reserved, and the **ecnt** parameter contains the count of numbers not reserved.

A **COMPLD,11** response *without* the **ecnt** parameter is returned when not enough spare numbers were found matching the random search or search/reservation criteria, or when all numbers in a number search/reservation (in the same or multiple NPAs) were in a waiting status at time-out. A **COMPLD,10** response is returned for a successful search and reservation with warning. A **DENIED,01** response is returned for a fully unsuccessful query, search, or search and reservation.

After doing a search and a number has been found to be spare, a pre-reservation lock is placed on it for a period of time, defined on the on-line REL screen. During the pre-reservation period, the number is protected and can only be reserved by the same RESP ORG that did the initial search. If the number has not been reserved by the RESP ORG that did the initial search, it becomes available to anyone. If the same RESP ORG or another RESP ORG queries or searches the same number before the pre-reservation time-out occurs, error message 38 is returned. If the RESP ORG that submitted the original search requests submits a reservation request after the pre-reservation period has expired, it may result in an error message if another user has a lock (pre-reservation or waiting) on it or has reserved it.

When a reservation request is submitted (AC=R), a ‘waiting’ lock is placed on the number(s) for a period of time, defined on the on-line REL screen. If the RSP-NSR is unable to fully complete a reservation request within the allotted time, a **COMPLD,11** response with an error message of 99 will be returned for each number still in a ‘waiting’ status. Waiting means that SMS is still processing the request but does not guarantee a reservation. Upon the completion of the reservation request, a **UNS-NSR** message is returned to confirm completion.

An error message of 50, which can be returned in a "DENIED,01" or a "COMPLD,11" response, will be returned when a REQ-NSR search, query, or search and reserve is made on a specific number that already has a waiting status in the protected pool.

MGI reservation requests that remain in a waiting status will be resubmitted periodically until completed or the maximum number of reservation-days have passed. Upon successful reservation, the system will populate the **notes** field of the record with the following text: REQUEST AUTOMATICALLY RESUBMITTED.

<b>Message Type</b>	<b>Response</b>
<b>Logical Channel</b>	<b>X2</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>REQ-NSR</b>
<b>Route ID</b>	<b>RSR</b>

#### *MESSAGE FORMAT*

- RESPONSE TO SEARCH, RESERVE OR QUERY:

- *Successful Query:*

**RSP-NSR:,date,time:::COMPLD,00::ID=id,RO=ro,NUM=num,LACT=lact,  
RU=ru, DU=du,SE=se,STAT=stat,CRO=cro,NCON=ncon,CTEL=ctel,  
NOTES=notes;**

- *Successful Search:*

**RSP-NSR:,date,time:::COMPLD,00::ID=id,RO=ro:CNT=cnt:NUM=num;**

- *Successful Search and Reservation:*

**RSP-NSR:,date,time:::COMPLD,00::ID=id,RO=ro:CNT=cnt:NUM=num,  
LACT=lact;**

- *Partially Successful Search and Reservation (may be returned when not all specific numbers could be reserved or when random search results in numbers crossing multiple NPAs and some numbers in waiting status at time-out). The second version is returned when not enough numbers were found to satisfy the search:*

**RSP-NSR:,date,time:::COMPLD,11::ID=id,RO=ro,CNT=cnt:NUM=num,  
LACT=lact:ECNT=ecnt:ERR=err,VERR=verr;**

**RSP-NSR:,date,time:::COMPLD,11::ID=id,RO=ro,ERR=err:  
CNT=cnt:NUM=num,LACT=lact;**

- *Partially Successful Search (may be returned when not enough numbers found matching random search criteria or when search/reservation results in all numbers in waiting status at time out):*

**RSP-NSR:,date,time:::COMPLD,11::ID=id,RO=ro,ERR=err:CNT=cnt:  
NUM=num;**

- *Partially Successful Search and Reservation (may be returned when not enough numbers found matching random search criteria or when search/reservation results in all numbers in waiting status at time out):*

**RSP-NSR:,date,time:::COMPLD,11::ID=id,RO=ro,ERR=err:CNT=cnt:  
NUM=num,LACT=lact;**

- *Successful Search and Reservation with Warning:*

**RSP-NSR:,date,time:::COMPLD,10::ID=id,RO=ro,ERR=err:CNT=cnt:  
NUM=num,LACT=lact;**

- *Unsuccessful Search, Query, or, Search and Reservation:*

**RSP-NSR:,date,time:::DENIED,01::ID=id,RO=ro,NUM=num:CNT=cnt:  
ERR=err,VERR=verr;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	Termination Report Code 6 byte identifier COMPLD - Entire or Partial Request Completed DENIED - Entire Request Denied
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00: no error 01: error present (see err field) 10: warning (see err field) 11: partial completion (see err field)
<b>id</b>	Login Id 8 bytes identifier identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier responsible organization for this message
<b>cnt</b>	Count of numbers successfully reserved or count of errors if failure 2 bytes decimal numeral
<b>ecnt</b>	Count of numbers not reserved 2 bytes decimal numeral (optional) returned only in COMPLD,11 (partially successful) response

<b>num</b>	Number sent or found via random search 12 bytes text string (optional); format is npanxxxxxx where npanxxxxxx = dialed number The dial number will contain 10 numerics and 2 trailing blank spaces; this field will be returned only if used in the request message
<b>lact</b>	Last active date 8 bytes text string (optional) format is mm/dd/yy this field will be returned with AC=R for each number successfully reserved and with AC=Q if number is spare or has a status of reserved and the requesting RESP ORG is the control RESP ORG of the number
<b>ru</b>	Reserved Until Date 8 bytes text string (optional) format is mm/dd/yy The default value will be 45 days from the date the number was reserved, in accordance with the FCC's SMS/800 Tariff rules.
<b>du</b>	Disconnect Until Date 8 bytes text string (optional) allowable format is mm/dd/yy The value will equal the End Intercept Date of the Customer Record.
<b>se</b>	Status Effective Date 8 bytes text string (optional) date on which number was given current status not applicable if status is SPARE
<b>stat</b>	Number Status Result of Query 7 bytes text string (optional) allowable values: SPARE,UNAVAIL,RESERVE,ASSIGNE, SUSPEND,WORKING,DISCONN,TRANSIT

<b>cro</b>	Control RESP ORG 5 bytes identifier (optional) RESP ORG of the controlling organization returned if field is available
<b>ncon</b>	Contact Person 30 bytes text string (optional) allowable range 0-30 bytes
<b>ctel</b>	Contact Phone Number 10 bytes text string (optional) format is npanxxxxxx
<b>notes</b>	Additional Information 72 bytes text string (optional) this field has a maximum size of 72 bytes

<b>err</b>	Error Code at application level 2 bytes decimal numeral (optional) 01: too many parameters (warning) 02: required parameter missing 03: unrecognized parameter 04: invalid parameter combination 05: syntax error 06: number not available 07: NXX is closed  09: invalid CTEL 10: search failed 11: permission denied 12: reservation limit exceeded
	Error code 12 is an error that is sent when an Entity tries to reserve Toll-Free Numbers and the Entity has already reached their number reservation limit.

Number reservation limits are normally set by an authorized system administrator via the Reservation Limit (REL) screen, yet can be set via the Number Allocation enhancement using the Reservation Market Share Allocation Control (RMS) and Weekly Reservation Allocation (WRA) screen prior to a toll-free NPA code opening. When Number Allocation is set to 'on' via the REL screen, then an Entity's reservation limits are set via RMS and WRA instead of REL.

- 13: number search and reservation is invalid
- 15: number not spare
- 16: invalid NXX
- 17: cannot find enough spare numbers for requested quantity
- 18: invalid action code
- 19: invalid quantity

20: invalid number . The dial number (NUM tag) must contain 10 alphanumerics, although a number reservation (AC=R) and a number search (AC=S) allow wildcard characters '\*' and '&'. Special characters are not allowed for a number query (AC=Q). Up to 2 blank spaces are allowed in the NUM tag. Refer to the definition of the NUM tag for further details.

21: invalid start line number

22: invalid contact person

23: invalid start NXX

24: invalid contiguous value

25: number not found

29: random select not allowed for this NXX

30: only the number(s) returned were reserved

31: nearing number reservation limit

Error code 31 is a warning that is sent when an Entity reserves a number that results in the Entity reaching or surpassing 97% of their reservation limit when they reserve a number(s).

Refer to warning code 12 for additional information regarding number reservation limit.

32: number - Character positions 4-7 must be '\*' or '&' with Start NXX entry

33: number - Last 4 characters must be '\*' or '&' with Start Line # entry

35: number cannot contain a single '&'

36: number - Last character must equal '\*' if contiguous equals 'Y'

37: number - If the REQ-NSR message contains only one dial number and the quantity (qt) is greater than 1, then the number must contain either an "\*" and/or "&".

38: number - In pre-reservation state

39: Customer record creation in progress

40: invalid NPA

41: system error-database inconsistency, contact the SMS/800 Help Desk

50: waiting to be reserved

94: number administration database is unavailable. This can occur with AC=Q.

98: invalid or missing date and/or time in application message

99: other

<b>VERR</b>	Value of Field in Error up to 12 bytes text string (optional) returns original input in error where possible
-------------	--

Notes:

1. Error code 99: If a Resp Org Change for a Toll-Free Number results in the new Resp Org exceeding their number reservation limit, then SMS/800 will return error code 99 in RSP-NSR with the VERR tag set to the following value: NEWRO>RESLIM.
2. If a Resp Org performs a search for “Consecutive” numbers with the Start NXX and/or Start Line# specified, if SMS/800 does not find consecutive Spare numbers that meet this criteria within a quick time frame, SMS/800 may return an error (for system performance reasons) indicating no Spare numbers were found. This most commonly occurs when a user performs the same combined Consecutive Start NXX plus Start Line# search more than once within one minute. To avoid encountering this result, wait at least one minute before performing the same Consecutive Start search or specify different Start criteria when repeating this type of search.
3. When error code is 99 and VERR has value of “ALLOCATION”, that means the Resp Org Entity that sent the REQ-NSR message to SMS/800 exceeded that Entity’s Number Allocation Limit. The Number Allocation Limit is shown on the WBA/3270 Reservation Allocation (WRA) screen.

### 7.1.3 Number Status Change [REQ-NSC]

#### NUMBER STATUS CHANGE [REQ-NSC]

#### NUMBER ADMINISTRATION

This command allows an OS that is the control Resp Org of a number to change the status of their number from (a) Reserved to Spare and from (b) Transitional to Reserved and from (c) Transitional to Spare.

This command also allows an OS that is the control Resp Org of a number to change the contact information on their number (i.e., control Resp Org, contact name, and contact phone number).

This command also allows an OS that is the control Resp Org of a number to change the Reserved Until Date of their number that is currently in Reserved status, within the industry allowed Reserved Until period.

This message can also support sparing of multiple numbers, as part of automation. The associated response message will not be returned until the entire request has been fully processed. The UAL retry timer should be reset for automation requests as responses will take longer to be returned.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	X1
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queuing</b>	Optional
<b>Response</b>	RSP-NSC
<b>Route ID</b>	CSC

**MESSAGE FORMAT**

- *TO CHANGE NUMBER STATUS INFORMATION:*

**REQ-NSC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,RU=ru,  
NEWRO=newro, NCON=ncon, CTEL=ctel, NOTES=notes;**

- *TO SPARE A NUMBER:*

**REQ-NSC:,date,time:::::ID=id,RO=ro,AC=S,NUM=num;**

- *TO CHANGE A TRANSITIONAL NUMBER TO RESERVED:*

**REQ-NSC:,date,time:::::ID=id,RO=ro,AC=R,NUM=num,  
NCON=ncon, CTEL=ctel, NOTES=notes;**

- *TO SPARE MULTIPLE NUMBERS (AUTOMATION):*

*(wildcards not allowed)*

**REQ-NSC:,date,time:::::ID=id,RO=ro,AC=S:QT=qt:NUML=numl;**

This message format can be presented two different ways, as seen in the examples below:

- REQ-NSC Example that Follows Specification Standard (one pair of double quotation marks surrounding all the numbers in the value portion of the NUML tag-value pair):

```
REQ-NSC:,2003-03-28,12-43-48-CST:::::ID=XXXXX101,
RO=XXXX1,AC=S:QT=12:NUML="8005601111,8005601112,
8005601113,8005601114,8005601115,8005601116,8005601117,
8005601118,8005601119,8005601120,8005601121,8005601122";
```

- REQ-NSC Example that Does Not Follow Specification Standard (pairs of double quotation marks, each pair surrounding a number in the value portion of the NUML tag-value pair):

```
REQ-NSC:,2003-03-28,12-43-48-CST:::::ID=XXXXX101,
RO=XXXX1,AC=S:QT=12:NUML="8005601111","8005601112",
"8005601113","8005601114","8005601115","8005601116",
"8005601117","8005601118","8005601119","8005601120","8005601121",
"8005601122";
```

*PARAMETERS DESCRIPTION*

**date,time** See Section 5.3

<b>id</b>	Login Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier(required) The Responsible Organization for this message
<b>ac</b>	Action Code 1 byte identifier(required) misc descriptors acceptable values: C (change reserved number), S (spare a number), R (reserve a transitional number)
<b>num</b>	The Dialed Number 10 or 12 bytes text string (not allowed if qt used, otherwise required) format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.
<b>qt</b>	Quantity of Dial Numbers to Spare 8 bytes decimal numeral (required for automation) The maximum allowed can be obtained via the REQ-ASL message. To spare only one number, the QT tag is not required. To spare multiple numbers, the QT tag is required and action code must be 'S'. Requests containing the QT and NUML tags are likely to process slower than requests without these tags.

<b>numl</b>	The List of Dialed Numbers to spare (required for automation) A list of 10 or 12 bytes text string entries, separated by commas (required if qt is used, otherwise not allowed) The number of entries must match the qt field format of each entry is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.
<b>ru</b>	Reserved Until Date 8 bytes text string (optional; not allowed for automation) acceptable format is: mm/dd/yy Cannot be equal to current date or greater than the industry-set number of days from the status effective date of the original reservation (i.e., 45 days maximum per the FCC's SMS/800 Tariff rules).
<b>newro</b>	New Responsible Organization (RESP ORG) 5 bytes identifier (optional; not allowed for automation) RESP ORG can be changed if the number is in transitional status or in reserved status
<b>ncon</b>	Contact Person 30 bytes text string (optional; not allowed for automation) allowable range: 0-30 bytes
<b>ctel</b>	Contact Phone Number 10 byte text string (optional; not allowed for automation) format is npanxxxxxx
<b>notes</b>	Additional Information 72 bytes text string (optional; not allowed for automation) this field has a maximum size of 72 bytes

NOTES:

- After a number has been made Reserved or Unavailable, the NCON, CTEL, and NOTES parameters can only be viewed by organizations that belong to the same RESP ORG.
- Only the Help Desk can change a number to/from Unavailable.
- If AC=C, at least one optional parameter must appear in the message.

### 7.1.4 Response to Number Status Change [RSP-NSC]

#### RESPONSE TO NUMBER STATUS CHANGE [RSP-NSC]

##### NUMBER ADMINISTRATION

This message is the response to the command NUMBER STATUS CHANGE. The response message contains the number, and if changed, the status of that number, additional effective date information, contact information, or an error code if applicable. The new data will be transmitted in this message. A partially successful response message format supports multiple sparing requests.

Message Type	Response
Logical Channel	X2
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-NSC
Route ID	RSC

##### MESSAGE FORMAT

- *Successful Number Status Change or Number Sparing (Single Number):*

**RSP-NSC:,date,time:::COMPLD,00::ID=id,RO=ro,NUM=num,RU=ru,  
NEWRO=newro,SE=se,STAT=stat,NCON=ncon,CTEL=ctel,NOTES=notes;**

- *Unsuccessful Number Status Change or Number Sparing (Single Number):*

**RSP-NSC:,date,time:::DENIED,01::ID=id,RO=ro,NUM=num:CNT=cnt:  
ERR=err,VERR=verr;**

- *Successful Multiple Number Sparing (Automation only):*

**RSP-NSC:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:NUML=numl;**

*Example of a Successful Multiple Number Sparing (Automation only):*

**RSP-NSC:,2003-03-28,12-02-01-CST:::COMPLD,00::ID=XXXXX101,  
RO=XXXX1:QT=00000012:NUML="8005601111,8005601112,8005601113,  
8005601114,8005601115,8005601116,8005601117,8005601118,8005601119,  
8005601120,8005601121,8005601122";**

- *Partially Successful Multiple Number Sparing with Errors (Automation only):*

**RSP-NSC:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:NUML=numl:  
ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),....ERRV=errv(ecnt);**

*Example of a Partially Successful Multiple Number Sparing with Errors (Automation only):*

**RSP-NSC:,2003-03-28,12-02-01-CST:::COMPLD,11::ID=XXXXX101,  
RO=XXXX1:QT=00000012:NUML="8005601111,8005601112,8005601113,  
8005601114,8005601115,8005601116,8005601117,8005601118,8005601119,  
8005601120,8005601121,8005601122":ECNT=00000002:  
ERRV="06,1,8001231234",ERRV="06,1,8001231235";**

- *Unsuccessful Multiple Number Sparing(Automation only):*

**RSP-NSC:,date,time:::DENIED,01::ID=id,RO=ro:ECNT=ecnt:  
ERRV=errv(1),ERRV=errv(2),....ERRV=errv(ecnt);**

*Example of Unsuccessful Multiple Number Sparing(Automation only):*

**RSP-NSC:,2003-03-28,12-02-01-CST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1:ECNT=00000002:ERRV="03,0,NCON",ERRV="50";**

*Example of Unsuccessful Multiple Number Sparing(Automation only):*

**RSP-NSC:,2003-03-28,12-02-01-CST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1:ECNT=00000002:ERRV="06,1,8001231234",  
ERRV="06,1,8001231235";**

*PARAMETERS DESCRIPTION***date,time**

See Section 5.3

**term\_rept**

Termination Report Code

6 byte identifier

COMPLD - All or part of the request was completed successfully

DENIED - Entire Request Denied

**error\_cd**

Error Code

2 bytes decimal numeral

**Values used for single number processing:**

00: dial number was processed successfully.

01: error present.

**Values for automation processing:**

00: all dial numbers were processed successfully, with no errors found.

11: at least one dial number was processed successfully and one or more other numbers resulted in an error.

01: no dial numbers processed successfully. Errors were found, either in the request message or for every dial number.

**id**

Login Id

8 bytes identifier

identifies sender of message

**ro**

Responsible Organization

5 bytes identifier

responsible organization for this message

<b>num</b>	Dial Number Changed 10 or 12 bytes text string for single number spare or number status change: format is npanxxxxxx where npanxxxxxx = dialed number The dial number must contain 10 alphanumerics. Two blank spaces are allowed.
<b>qt</b>	Count of number of successfully processed DIAL#s for COMPLD response for automation. 8 bytes decimal numeral, fixed length the maximum number allowed can be obtained via the REQ-ASL message
<b>numl</b>	The List of Dialed Numbers successfully spared (for automation only) A list of 10 bytes text string entries, separated by commas the number of entries must match the qt field. format of each entry is npanxxxxxx where npanxxxxxx = dialed number Each dial number must contain 10 alphanumerics.
<b>ru</b>	Reserved Until Date 8 bytes text string (optional) format is: mm/dd/yy The maximum value is 45 days from the date the number was reserved, in accordance with the FCC's SMS/800 Tariff rules.
<b>newro</b>	New Responsible Organization (RESP ORG) 5 bytes identifier (optional) RESP ORG for displayed number

<b>se</b>	Status Effective Date 8 bytes text string (optional) if status is not SPARE, this is date on which number was given current status not applicable if status is SPARE
<b>stat</b>	Number Status Result of Change 7 bytes text string (optional) values: SPARE,RESERVE
<b>ncon</b>	Contact Person 30 bytes text string (optional) range: 0-30 bytes
<b>ctel</b>	Contact Phone Number 10 bytes text string (optional) format is npanxxxxxx
<b>notes</b>	Additional Information 72 bytes text string (optional) this field has a maximum size of 72 bytes
<b>cnt</b>	Count of number of errors for DENIED,01 response for single number processing 2 bytes decimal numeral

<b>err</b>	Error Code
	2 bytes decimal numeral (optional - single number only)
	01: Too many parameters
	02: Required parameter missing
	03: Unrecognized parameter
	04: Invalid parameter combination
	05: Syntax error
	06: Incorrect number status
	07: Invalid date
	08: Invalid RESP ORG
	09: Invalid CTEL
	10: NXX closed
	12: Permission denied
	14: Invalid action code
	15: Invalid number. The dial number must contain 10 alphanumerics and no wildcard characters allowed.
	16: Number does not have reserved or transitional status
	17: Number not found
	18: Status not reserved
	19: Reserved until date is greater than industry-set time period from the Status Effective Date (SE) value
	20: Reserved until date <= current date
	21: Customer record creation in progress
	40: Invalid NPA
	45: Number status change request denied. Previous change request in progress for the same number. Try again later.
	94: Number administration database is unavailable
	98: Invalid or missing date and/or time in application message
	99: Other

<b>verr</b>	Value of Field in Error up to 30 bytes text string (optional - single number only) returns original input in error where possible
<b>ecnt</b>	Number of Error Sets 8 bytes decimal numeral fixed length(optional - automation only)
<b>errv</b>	Error code, error type and value of field that results in an Error (optional - automation only) entries are of the form err, etyp, verr where: err is the 2-byte error code etyp is the 1-byte type code specifying the type of verr and verr is the 1-30 byte value of field with an error. err is required, etyp is optional, verr is optional. The number of err, etyp, verr sets must match the value of ecnt and sets are separated by commas. Each are defined below:

**err values:**

- 02 - Required parameter missing
- 03 - Unrecognized parameter
- 04 - Invalid parameter combination
- 05 - Syntax error
- 06 - Incorrect number status
- 08 - Invalid RESP ORG
- 12 - Permission denied
  
- 14 - Invalid action code
- 15: Invalid number. The dial number must contain 10 alphanumerics and no wildcard characters allowed.
- 17 - Number not found
- 21 - Customer record creation in progress
- 30 - Number specified in qt does not match the quantity in numl.
- 40 - Invalid NPA
- 50 - Quantity exceeds system automation limit. Verify limit using REQ-ASL.
- 94 - Number administration database is unavailable
- 99 - Other

**etyp values:**

- 0 - verr is a text string which includes original input if possible
- 1 - verr is a valid dial number format (10 or 12 bytes text string)

**verr values:**

returns original input in error where possible

### 7.1.5 Unsolicited Number Status Notification [UNS-NSR]

#### UNSOLICITED NUMBER STATUS NOTIFICATION [UNS-NSR] NUMBER ADMINISTRATION

This unsolicited message is sent from SMS to an OS when a number reservation that is in a waiting status completes after the time-out, or when the maximum number of reservation-days have passed and the status is still waiting. The message is returned to the original sender of the associated REQ-NSR message and contains the message id of that message for correspondence purposes.

The message is sent only if the MGI user has not specified that reservation requests in a waiting status at time-out be returned to spare. In such a case, it does not matter which issue of this interface specification the user has implemented.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>UNR</b>

#### *MESSAGE FORMAT*

**UNS- NSR;date,time:::::MID=mid,RO=ro:  
CNT=cnt:NUM=num,LACT=lact,STAT=stat, ERR=err;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>mid</b>	Message ID 10 bytes text string Message identifier that exactly maps the original REQ-NSR to this UNS-NSR. If multiple UNS-NSRs for the same REQ-NSR are generated, they will all contain the same message ID. Users must ensure uniqueness of REQ-NSR messages.
<b>ro</b>	RESP ORG 5 bytes identifier responsible organization for this message
<b>cnt</b>	Count of Dial Numbers 2 bytes decimal numeral allowable range: 1-10 quantity of dial numbers contained within this message
<b>num</b>	The Dial Number 10 bytes text string format is npanxxxxx, where npanxxxxx = dial number
<b>lact</b>	Last Active Date 8 bytes text string (optional) format is mm/dd/yy this field will be returned for each number successfully reserved

<b>stat</b>	Number Reservation Status 7 bytes text string (optional) Values: Reserve (number successfully reserved) Failed (number could not be reserved) Trans (number could not be reserved)
<b>err</b>	Error Message 2 bytes decimal numeral (optional) Valid entries: 06: number not available 11: permission denied 15: number not spare 17: cannot find enough spare numbers for requested quantity 30: only the number(s) returned were reserved 39: customer record creation in progress 41: system error - database inconsistency, contact the Help Desk 42: number has been spared-the maximum number of reservation-days have passed since number placed in waiting status 99: other reason for failed reservation. Returned only if STAT=Failed

### 7.1.6 Unsolicited Reservation Notification [UNS-RSV]

#### UNSOLICITED RESERVATION NOTIFICATION [UNS-RSV] NUMBER ADMINISTRATION

This unsolicited message is sent from SMS to an OS when a number reservation completes, via on-line 3270 or WBA, for a Resp Org belonging to an MGI user. This message will be triggered if the number status changes from spare to reserve or from transitional to reserve only if the Resp Org at the time of the reservation is an MGI Resp Org. This message will not be triggered by a Resp Org change, since UNS-RCH is designed for that purpose. This message can be disabled globally at the direction of the SMS/800 Management Team.

To receive this message, an OS must make arrangements with the Help Desk to have the on-line GUN screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>USV</b>

#### *MESSAGE FORMAT*

**UNS-RSV,date,time:::::RO=ro:cnt:cNUM=num;**

#### *EXAMPLE*

**UNS-RSV:,2005-04-04,11-42-11-CST:::::RO=BRX01:cnt=03:NUM=""8775551234"  
,NUM=""8775550002",NUM=""8775550003";**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	Resp Org 5 bytes identifier responsible organization for this message this Resp Org belongs to an MGI user.
<b>cnt</b>	Count of dial numbers 2 bytes decimal numeral allowable range: 1-10 quantity of dial numbers contained within this message the dial numbers were successfully reserved by an on-line 3270 or WBA user
<b>num</b>	The Dial Number 10 bytes text string format is npanxxxxxx, where npanxxxxxx = dial number

### 7.1.7 Request Multi-Dial Number Query [REQ-MNQ]

#### REQUEST MULTIPLE DIAL NUMBER QUERY [REQ-MNQ] NUMBER ADMINISTRATION

This command will allow an OS to query multiple numbers through a single request message (also referred to as an automation request).

Message Type	Command
Source	OS
Confirmatio	A
Queuing	Optional
Response	RSP-MNQ
Route ID	CNQ

#### *MESSAGE FORMAT*

**REQ-MNQ:,date,time:::::ID=id,RO=ro:QT=qt:NUML=numl;**

This message format can be presented two different ways, as seen in the examples below:

- REQ-MNQ Example that Follows Specification Standard (one pair of double quotation marks surrounding all the numbers in the value portion of the NUML tag-value pair):

**REQ-MNQ:, 2010-12-25,11-02-01-CST:::::ID=XXXXX101,RO=XXXX1  
:QT=3:NUML="8007671111,8887671112,8887671113";**

- REQ-MNQ Example that Does Not Follow Specification Standard (pairs of double quotation marks, each pair surrounding a number in the value portion of the NUML tag-value pair):

**REQ-MNQ:, 2010-12-25,11-02-01-CST:::::ID=XXXXX101,RO=XXXX1  
:QT=3:NUML="8007671111","8887671112","8887671113";**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Logon ID 8 bytes identifier (required) identifies sender of this message
<b>ro</b>	Resp Org 5 bytes identifier (required) The Responsible Organization for this message.
<b>qt</b>	Quantity of numbers 8 bytes decimal numeral (required) the maximum number allowed can be obtained via the REQ-ASL message
<b>numl</b>	The list of Dial Telephone Numbers A series of 10 or 12 bytes text string entries, separated by commas. (required) The number of entries must match the qt field. must contain 10 alphanumerics or 10 numerics; format is npanxxxxxx, where npanxxxxxx = dialed number 2 trailing blank spaces are allowed.

### 7.1.8 Response Multi-Dial Number Query [RSP-MNQ]

#### RESPONSE TO MULTIPLE DIAL NUMBER REQUEST [RSP-MNQ] NUMBER ADMINISTRATION

This message is the response to the command MULTIPLE DIAL NUMBER REQUEST. Because the request command could contain multiple numbers, the response message includes the number of dial numbers that were successfully queried, or an error code if applicable.

A **COMPLD,00** response is returned for a fully successful query.

A **COMPLD,11** response is returned when not all specified numbers could be queried. **qt** contains the count of numbers queried successfully. **ecnt** contains the count of numbers queried with errors.

A **DENIED,01** response is returned for a fully unsuccessful query.

Message Type	Response
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-MNQ
Route ID	RNQ

#### MESSAGE FORMAT

- *Successful Request*

```
RSP-MNQ:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:
NUM=num(1),LACT=lact,RU=ru,DU=du,SE=se,STAT=stat,CRO=cro,
NCON=ncon,CTEL=ctel,NOTES=notes:NUM=num(2)...:NUM=num(qt)...;
```

*Example of a Successful Request (assuming four numbers in request message):*

```
RSP-MNQ:,2010-06-10,12-02-01-CST:::COMPLD,00::ID=XXXXX101,
RO=XXXX1:QT=00000004:
NUM="8007671111 ",LACT="02/01/10",RU="07/01/10",SE="06/01/
10",STAT=" RESERVE",CRO=XXXX1, NCON="MY NAME",
CTEL="7326002111", NOTES="IMPORTANT NOTE":
NUM="8007671112 ",LACT="02/01/10",STAT="SPARE ":
NUM="8007671113 ",DU="07/01/10",SE="06/01/10",
STAT="DISCONN",CRO=XXXX1, NCON="OTHER
NAME",CTEL="7326002113",NOTES="OTHER NOTE":NUM="8667671234
",STAT="WORKING",CRO=YYYY1;
```

- *Partially Successful Request with Errors*

```
RSP-MNQ:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:
NUM=num(1),LACT=lact,RU=ru,DU=du,SE=se,STAT=stat,CRO=cro,
NCON=ncon,CTEL=ctel,NOTES=notes:NUM=num(2)...:NUM=num(qt) ...:
ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),...ERRV=errv(ecnt);
```

*Example of a Partially Successful Request message (assuming three numbers in request message):*

```
RSP-MNQ:,2010-06-10,12-02-01-CST:::COMPLD,11::ID=XXXXX101,
RO=XXXX1:QT=00000001:NUM="8007671111 ",LACT="02/01/10",RU="07/
01/10",SE="06/01/10",STAT= "RESERVE",CRO=XXXX1, NCON="MY
NAME",CTEL="7326002111",NOTES="IMPORTANT
NOTE":ECNT=00000002:ERRV="07,1,8007671112",ERRV="07,1,8007671113
"
```

- *Unsuccessful Request*

```
RSP-MNQ:,date,time:::DENIED,01::ID=id,RO=ro:ECNT=ecnt:ERRV=errv(1),
ERRV=errv(2),...ERRV=errv(ecnt);
```

*Example of an Unsuccessful Request message (assuming three numbers in request message):*

```
RSP-MNQ:,2010-06-10,12-02-01-CST:::DENIED,01::ID=XXXXX101,
RO=XXXX1:ECNT=00000003:ERRV="07,1,8007671111 ",
ERRV="07,1,8007671112 ",ERRV="07,1,8007671113 "
```

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code 6 bytes identifier COMPLD - All or part of the request was completed successfully DENIED - Entire request was denied</p>
<b>error_cd</b>	<p>Error Code 2 bytes decimal numeral 00: all dial numbers were processed successfully, with no errors found. 11: at least one dial number was processed successfully, there was at least one error found. 01: no dial numbers processed successfully. Errors were found, either in the request message or for every dial number.</p>
<b>id</b>	<p>Logon ID 8 bytes identifier (required) identifies sender of this message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier (required) valid RO, responsible organization for the message</p>
<b>qt</b>	<p>Quantity of numbers for which the number query has successfully completed 8 bytes decimal numeral, fixed length (required) the maximum number allowed can be obtained via the REQ-ASL message</p>

<b>num</b>	The Dial Telephone Number for which the number query has successfully completed. Each <b>num</b> will be followed by a subset of <b>lact, ru, du, se, stat, cro, ncon, ctel</b> and <b>notes</b> . 12 bytes text string (optional). The number of <b>num</b> entries must match the <b>qt</b> field. format of each entry is is npnxxxxxxxx, where npnxxxxxxxx = dial number. The dial number will contain 10 numerics and 2 trailing blank spaces.
<b>lact</b>	Last active date 8 bytes text string (optional) format is mm/dd/yy This field will be returned if number is spare or has a status of reserved and the requesting RESP ORG is the control RESP ORG of the number. The Last Active Date is historical information that shows the date that the last customer record (CR) for this dial number was removed from the SCPs, which is the date the number went Transitional.
<b>ru</b>	Reserved Until Date 8 bytes text string (optional) format is mm/dd/yy
<b>du</b>	Disconnect Until Date 8 bytes text string (optional) format is mm/dd/yy The value will equal the End Intercept Date of the Customer Record.
<b>se</b>	Status Effective Date 8 bytes text string (optional) format is mm/dd/yy  date on which number was given current status not applicable if status is SPARE

<b>stat</b>	Number Status Result of Query 7 bytes text string (optional) allowable values: SPARE,UNAVAIL,RESERVE,ASSIGNE, SUSPEND,WORKING,DISCONN,TRANSIT
<b>cro</b>	Control RESP ORG 5 bytes identifier (optional) RESP ORG of the controlling organization returned if field is available
<b>ncon</b>	Contact Person 30 bytes text string (optional) allowable range 0-30 bytes
<b>ctel</b>	Contact Phone Number 10 bytes text string (optional) format is npanxxxxxx
<b>notes</b>	Additional Information 72 bytes text string (optional) this field has a maximum size of 72 bytes
<b>ecnt</b>	Number of Error Sets 8 bytes decimal numeral, fixed length (optional)

**errv** Error code, error type, and value of field that results in an Error.  
entries are text string fields of the form err,etyp,verr where:  
err is the 2-byte error code,  
etyp is the 1-byte type code specifying the type of verr and  
verr is the 1-30 byte value of field in error.  
err is required, etyp is optional, verr is optional.  
The number of err,etyp,verr sets must match the value of ecnt and  
sets are separated by commas. Each are defined below:

**err values:**

- 01 - Too many parameters (warning)
- 02 - Required parameter missing
- 03 - Unrecognized parameter
- 04 - Invalid parameter combination
- 05 - Syntax error
- 07 - NXX is Closed
- 10 - Quantity exceeds system automation limit. Verify limit using  
REQ-ASL
- 11 - Permission denied
- 15 - Number specified in qt does not match the quantity in numl
- 20 - Invalid number (for example, too many digits)
- 94 - < this error code is reserved for future use >
- 98 - Invalid or missing date and/or time in application message
- 99 - Other

**etyp values:**

0 - verr is a text string, will include the original input if possible.

1 - verr is a valid dial number format (10 bytes)

**verr values:**

returns original input in error where possible

## 7.2 Customer Record Administration

This section contains the customer record administration interface messages.

**MGI users are responsible for supporting all error messages in all application messages.**

- CR7-2 [16] Companies wishing to utilize this interface for updating customer records, resending customer records, querying customer records for information, receiving notification for customer records that go active or fail to go active, querying for the trouble referral number associated with a RESP ORG, or receiving and responding to notification and approval messages and status information, must implement all messages in this section; however, companies may choose not to implement certain messages depending upon specific business needs.

For example, companies that will not support complex records do not have to implement REQ-CRC and RSP-CRC.

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### 7.2.1 Update Customer Record [REQ-CRA]

#### UPDATE CUSTOMER RECORD [REQ-CRA] CUSTOMER RECORD ADMINISTRATION

**NOTE** The REQ-CRA message is only applicable for simple (basic) customer record (which means the record doesn't contain a call processing record (CPR) or labels). REQ-CRA message cannot be used for complex records or Pointer records.

This command performs a host of customer record administration functions for **simple (basic) Customer Records (CRs)**. New records can be created, changes to existing records can be made, entire records can be deleted, entire records can be transferred, and entire records can be resent. The command supports additions, changes, and deletions one-number-at-a-time. That is, changes to multiple numbers cannot be handled in one REQ-CRA message; however, multiple changes to the same number can be handled in one REQ-CRA message. Several types of change and transfer are supported. Transfer CR to NOW capability allows an existing record to replace itself providing the record status is not ACTIVE, SENDING, or DISCONNECT, and the effective date/time of the source record equals the current 15-minute window. The change capability has two options. The first applies updates to an existing customer record, and updates the record. The second option copies the record (leaving the existing record intact) to a new effective date and time, applies any data changes, and updates the record. The *NOTES* section at the end of the message description provides additional detailed information.

Emergency and immediate updates will be supported in this command. An emergency update is defined as an update on a customer record with an effective date/time less than 24 hours from the update time. A separate emergency update parameter for the interface is not needed since SMS will be able to infer from the effective date/time parameter value that the update is an emergency. An immediate update is one in which the effective date/time can be set equal to *NOW*. A separate parameter for the interface is not needed since SMS will be able to infer from the effective date parameter value of *NOW* that the update is immediate.

Authorized users will be provided the capability to update customer records with High Priority (so that the record will be sent to the SCPs with high priority) when the **priority=H** option is used. To become an authorized user of this feature, the user's logon id must be defined on the SMS/800 system's HPU screen. The High Priority CR Update capability will be allowed for customer records with effective date equal to *NOW* or today's date. Each Resp Org entity will be allowed up to 10 High Priority CR Updates per day per entity. This limit will be tunable.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	X3
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queuing</b>	Optional
<b>Response</b>	RSP-CRA
<b>Route ID</b>	CRU

### *MESSAGE FORMAT*

#### 1. Action Code of N (New Customer Record):

REQ-CRA:,date,time:::::ID=id,RO=ro,AC=N,NUM=num,ED=ed,ET=et,  
 PRIORITY=priority,  
 INTERC=interc,INTRAC=intrac,ABN=abn,DAU=dau,  
 DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,  
 NOTE=note,AGENT=agent,TELCO=telco,CUS=cus,  
 NEWRO=newro,LA=la,CBI=cbi,NCON=ncon,CTEL=ctel:  
 CNT3=cnt3:ALBL=albl:  
 CNT4=cnt4:AAC=aac:  
 CNT5=cnt5:ALAT=alat:  
 CNT6=cnt6:ANET=anet:  
 CNT7=cnt7:ASTA=asta:  
 CNT8=cnt8:LN=ln:  
 CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fs0,  
 HML=hml,LSIS=lsis,LSO=lso,SFG=sfg,STN=stn,UTS=uts;

## 2. Action Code of C (Change):

```

REQ-CRA:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,
PRIORITY=priority,
SEFD=sefd,INTERC=interc,INTRAC=intrac,ABN=abn,DAU=dau,
DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,
NOTE=note,AGENT=agent,TELCO=telco,CUS=cus,
NEWRO=newro,LA=la,CBI=cbi,NCON=ncon,CTEL=ctel:
CNT3=cnt3:ALBL=albl:
CNT4=cnt4:AAC=aac:
CNT5=cnt5:ALAT=alat:
CNT6=cnt6:ANET=anet:
CNT7=cnt7:ASTA=asta:CNT8=cnt8:LN=ln:
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,
HML=hml,LSIS=lsis,LSO=lso,SFG=sfg,STN=stn,UTS=uts;

```

## 3. Action Code of D (Disconnect) or T (Transfer):

```

REQ-CRA:,date,time:::::ID=id,RO=ro,AC=ac,NUM=num,ED=ed,ET=et,
PRIORITY=priority,
SEFD=sefd,INTERC=interc,INTRAC=intrac,ABN=abn,DAU=dau,
DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,
REFER=refer,EINT=eint,NOTE=note,AGENT=agent,TELCO=telco,
CUS=cus,NEWRO=newro,LA=la,CBI=cbi,NCON=ncon,CTEL=ctel:
CNT3=cnt3:ALBL=albl:
CNT4=cnt4:AAC=aac:
CNT5=cnt5:ALAT=alat:
CNT6=cnt6:ANET=anet:
CNT7=cnt7:ASTA=asta:
CNT8=cnt8:LN=ln:
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,
HML=hml,LSIS=lsis,LSO=lso,SFG=sfg,STN=stn,UTS=uts;

```

**4. Action Code of R (Resend Customer Record):**

REQ-CRA:,date,time:::::ID=id,RO=ro,AC=R,  
NUM=num,ED=ed,ET=et;

**Action Code of X (Delete Customer Record):**

REQ-CRA:,date,time:::::ID=id,RO=ro,AC=X,  
NUM=num,ED=ed,ET=et,DCSN=dcsn;

If a parameter is listed in a message format above, its presence is permitted. Both the following Parameters Description and Notes sections contain more detailed guidelines for each parameter. If a parameter is listed as optional in the Parameters Description section, its presence is not required all of the time in those message formats where it is permitted. If a default value is listed for a parameter, that value will be used by SMS/800 unless that parameter and its associated value are contained in a message instance. If the default value is desired, it is not necessary to specify the parameter in the message instance.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) Responsible Organization for this message
<b>ac</b>	Action Code (required) 1 byte identifier N : New customer record (New Service) C : Change customer record (modify a CR or copy it forward to a new date/time) D : Disconnect Service T : Transfer the customer record R : Resend the customer record X : Delete the customer record
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (required) format is npanxxxxxx where npanxxxxxx = dialed number (required) Two blank spaces are allowed.

<b>ed</b>	<p>Effective Date 8 bytes text string (optional) optional for ac=C, D and R; otherwise required Two Allowable Formats:</p> <p>format 1: mm/dd/yy where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94) Effective date and time combination can be up to x months into the future, where x is the industry set standard (currently x = 6 months).</p> <p>format 2: NOW Format 2 is not allowed for ac=R or X et can only exist when ed is present</p>
<b>et</b>	<p>Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable values: N - Newfoundland, A - Atlantic, E - Eastern, C - Central, M - Mountain, P - Pacific, Y - Alaska, H - Hawaiian-Aleutian, B - Bering) required for ac=X, otherwise optional except not used when ed=NOW</p>

<b>sefd</b>	<p>Source Effective Date and/or Time</p> <p>16 bytes text string</p> <p>Optional, yet required in certain scenarios (see note 14).</p> <p>Effective date and/or time of the record to be changed or transferred.</p> <p>Used with AC=C, D, or T.</p> <p>See notes 11,13,14 and 26 for further information</p> <p>Allowable formats, 8 bytes and 16 bytes: format</p> <p>1: mm/dd/yy</p> <p>format 2: mm/dd/yyhh:mmx/z, where</p> <p>mm : month (allowable range: 01 - 12)</p> <p>dd : day (allowable range: 01 - 31)</p> <p>yy : year (e.g., 94)</p> <p>hh : hour (allowable range: 01 - 12)</p> <p>mm : minute (allowable values: 00, 15, 30, 45)</p> <p>x : am or pm (allowable values: A, P)</p> <p>z : time zone (allowable values: N - Newfoundland, A - Atlantic, E - Eastern, C - Central, M - Mountain, P - Pacific, Y - Alaska, H – Hawaiian-Aleutian, B - Bering)</p>
<b>priority</b>	<p>Priority of the Update</p> <p>optional</p> <p>1 byte identifier</p> <p>H: High</p> <p>The value 'H' is the only allowed value at this time.</p> <p>When <b>priority</b>=H, then effective date of customer record must equal "NOW" or today's date; and your Logon ID must have High Priority CR Update permission defined within the SMS/800 system's HPU screen for the customer record's Resp Org Entity.</p>

<b>interc</b>	Interlata Carrier 4 bytes text string format is 3-letter (alpha) ACNA or 4-digit (numeric) CIC for ac=N, either one interc or one intrac, or one of each required, otherwise optional maximum of one of each allowed
<b>intrac</b>	Intralata Carrier 4 bytes text string format is same as interc above for ac=N, either one interc or one intrac, or one of each required, otherwise optional maximum of one of each allowed

<b>abn</b>	Bill To Number (Alternate Billing Number) 10 bytes text string (optional) Defaults to 9999999999.  Format is alphanumeric. If rao=999, then abn must = 9999999999 and vice versa.
<b>dau</b>	Directory Assistance Update 1 byte identifier (optional) N : No (default) Y : Yes  The default value of 'N' is the normal entry by a work center.  If li = 'BL' or 'NP', only 'N' is allowed. A value of 'Y' could mean that the DA provider requested an edit change.
<b>dat</b>	Directory Assistance Type 1 byte identifier (optional) N : Normal (default) G : Government F : Frequently Called
<b>dd</b>	Due Date 8 bytes text string (optional) format is mm/dd/yy See ed 1 <sup>st</sup> format for allowable ranges.  If not resent, SMS/800 will generate.
<b>hdd</b>	Hold Due Date 1 byte identifier (optional) N : No (default) Y : Yes

<b>li</b>	<p>Listing (Directory Assistance) 2 bytes identifier (optional) If dat=F, value defaults to LI else defaults to BL</p> <p>BL : Blocked - not sent to DA LI : Published - sent to DA NP : Non-published - not sent to DA</p>
<b>rao</b>	<p>Revenue Accounting Office 3 bytes decimal numeral (optional) Defaults to 999 If abn=9999999999, rao must equal 999</p>
<b>so</b>	<p>Service Order Number 13 bytes identifier range can be from 4 to 13 bytes first character must be alphabetic second thru twelfth characters must be alphanumeric thirteenth character must be alphabetic required unless sf field is used either sf or so is required</p>
<b>sf</b>	<p>Supplemental Form Number 6 bytes text string maximum of 6 bytes alphanumeric required unless so field is used either sf or so is required</p>

<b>refer</b>	Referral Option 1 byte identifier (required for ac=D, otherwise optional) N : the terminating number is ignored and a recorded message that the number was disconnected is returned Y : a call to a disconnected number is directed to the appropriate carrier where a message refers the caller to a different number
<b>eint</b>	End Intercept Date 8 bytes text string (maximum) (required if ac=D) format is mm/dd/yy or NOW see ed format 1 for allowable ranges if not present, SMS/800 will generate a default date of an industry-set number of days from the effective date must be within industry-set time frame of effective date EINT can only be used with ac=D. This tag is not allowed with other action code (ac) values.
<b>note</b>	Notes 151 bytes text string (optional) maximum of 151 bytes any notes on the Service Order or Supplemental Form which need to be stored and for which no specific field exists
<b>agent</b>	On Line Agent for Customer 5 bytes text string (optional) alphanumeric values only
<b>telco</b>	Company that sold SMS access 4 bytes text string (optional) If populated, must contain 4 alphanumeric. SMS/800 generated on new service (action code N) if telco tag is not sent, then SMS defaults the value to the first 4 characters of the user's Resp Org ID.

<b>cus</b>	On-line Access Customer 5 bytes text string (optional) alphanumeric values only
<b>newro</b>	New Responsible Organization 5 bytes identifier (optional) new organization in charge of the record.
<b>la</b>	Listing Address  75 bytes text string (optional) see note 20 for allowable characters maximum of 75 bytes
<b>cbi</b>	IC/EC Billing Indicator 4 bytes identifier (optional) if IC (Interexchange Carrier), 3 character alphabetic if EC (Exchange Carrier), 4 character alphabetic
<b>ncon</b>	Name of Contact 30 bytes text string (optional) maximum of 30 bytes
<b>ctel</b>	Contact Phone Number 10 bytes decimal numeral (optional) format is npanxxxxxx
<b>cnt3</b>	Count of Number of Label Area of Service entries 2 bytes decimal numeral allowable range: 0 - 16 required if albl data present. Default is 1 if only one instance of albl.

<b>albl</b>	Areas of Service - Label 7 bytes text string (optional) allowable range 3 - 7 alphanumeric characters can repeat up to 16 occurrences must be an existing label
<b>cnt4</b>	Count of Number of Area Code Area of Service entries 2 bytes decimal numeral allowable range: 0 - 34 required if aac data present. Default is 1 if only one instance of aac
<b>aac</b>	Areas of Service - Area Code 3 bytes decimal numeral must be valid NPA can repeat up to 34 occurrences
<b>cnt5</b>	Count of Number of LATA Area of Service (ALAT) entries 2 bytes decimal numeral allowable range: 0 - 34 required if alat data present. Default is 1 if only one instance of alat
<b>alat</b>	Areas of Service - Lata 3 bytes decimal numeral must be valid Lata can repeat up to 34 occurrences

<b>cnt6</b>	Count of Number of Network Area of Service (ANET) entries 2 bytes decimal numeral allowable range: 0 - 23 required if anet data present. Default is 1 if only one instance of anet
<b>anet</b>	Areas of Service - Network 2 bytes identifier must be valid network code examples include AM, BA, BS, GT, NX, PC, SH, SN, UW and CN: Canada CR: Caribbean US: United States (50 states and D.C.) XA: US and Canada XB: US and Caribbean XC: US and Canada and Caribbean can repeat up to 23 occurrences except US, XA, XB, and XC can not be combined with any other anet, or with any other Area-of-Service type

<b>cnt7</b>	Count of Number of State Area of Service entries 2 bytes decimal numeral allowable range: 0 - 46 required if asta present. Default is 1 if only one instance of asta
<b>asta</b>	Areas of Service - State 2 bytes identifier must be valid state code can repeat up to 46 occurrences
<b>cnt8</b>	Count of Number of Listing Name entries 2 bytes decimal numeral allowable range: 1 - 9
<b>In</b>	Listing Name 75 bytes text string (optional) see note 20 for allowable characters maximum of 75 bytes can repeat up to 9 occurrences optional See note 20 for a list of supported characters.
<b>cnt9</b>	Count of Destination Telephone Blocks (tel thru uts) 3 bytes decimal numeral Allowable values: 1 or 2. A simple record can only have 1 or 2 Destination numbers.

<b>tel</b>	Destination Telephone Number 10 bytes text string  format is npanxxxxx where nxxxxxx is alphanumeric Required if ac=N, otherwise optional maximum of two entries are allowed  if two entries, one must be POTS# and the other an 800-type format (i.e., an NPA associated with 800 Data Base Service) if entered, it must equal num value.
<b>lns</b>	Number of Terminating Lines  4 bytes decimal numeral, maximum of 4 bytes  Allowable range is 1 to 9999  Value of 9999 will maximize the time at which regional network management controls are activated  Required if ac=N, otherwise optional
<b>city</b>	City 16 bytes text string (optional)  maximum of 16 characters consisting of alphas, blanks, dashes, periods, and single quotes  The value is where the Destination Telephone Number terminates.
<b>fso</b>	Foreign Serving Office 6 bytes decimal numeral (optional) format is NPANXX central office that terminates the service line if different from the Iso

<b>hml</b>	Multiline Hunt Group 4 bytes decimal numeral (optional) maximum of 4 bytes this is a code to identify a specific software arrangement of customer lines. used to investigate maintenance problems.
<b>Isis</b>	Lead SIS 4 bytes decimal numeral (optional) this is the first number in the sequence of a customer service group for the number entered in the tel field.
<b>Iso</b>	Local Serving Office 6 bytes decimal numeral format is NPANXX required if tel entry is a POTS number
<b>sfg</b>	Simulated Facility Group 5 bytes text string (optional) allowable range is 3 to 5 bytes used to investigate billing and maintenance problems
<b>stn</b>	Screening Telephone Number 7 bytes decimal numeral (optional) format is NXXXXXX number recorded on terminating AMA tape can be used for billing inquiries

<b>uts</b>	Jurisdictional Billing Indicator 3 bytes text string (optional) 1st char: A,B,C,D,E,F or blank 2nd char: C,B,W or blank 3rd char: J,N or blank entries are at the discretion of the entity that controls the customer record.
<b>dcsn</b>	Delete CR and Spare Number if this CR was the Last CR 1 byte identifier; Optional yet conditionally required. Valid values: Y or N. Y = Yes (delete the CR and SPARE the number if this was the last CR for the number). N = No (don't spare the number if this was the last CR for the number, yet do delete the CR; and if the Reserved Until Date has <u>not</u> yet been reached, return the Dial# to RESERVED status). Conditionally required scenario - DCSN=Y is required in the following scenario: When AC=X and this is the last CR and the Reserved Until Date has past. Sending DCSN=Y tells SMS/800 to delete the CR and return the Dial# to SPARE in this scenario, and this informs the Resp Org that the number will be spared in addition to deleting the CR.

## NOTES FOR REQ-CRA

1. The Resp Org that reserved a number can create administrative data for that number. Additionally, an OS will be able to create a new record (ac=N) for any RESP ORG that it has update capability, meaning the REQ-CRA message includes a Resp Org that is on the GSA screen for the Logon ID that sent the REQ-CRA message, provided that Resp Org matches the number administration control Resp Org. Administrative data can be updated (ac=C) by any OS having update permission for the Resp Org of the record as long as the Resp Org of the customer record is on the GSA screen for the Logon ID that sent the REQ-CRA message.
2. A customer record can only be deleted (**ac=X**) if it has a future effective date and time. Furthermore, for **ac=X**, the **ed** and **et** fields must match a future record that is stored in SMS. Use of **ed=NOW** will result in an error with AC=X. SEFD is not needed for AC=X.
3. Entire CR can be transferred; however, a transfer CR can only be performed to the same number (that is, the source Dial# must be the same as the target Dial#). Transferring only part of a CR (e.g., only the CPR component) is not supported in MGI. Changes to a future updateable record and its effective date can be made simultaneously via **ac=T**.
4. Any records with status of saved, pending, invalid, must check, failed, or hold may be transferred. Records with status of sending, active, old or disconnect cannot be transferred.
5. The following parameters are required when creating the first instance of the customer record:

**id ro**  
**ac=N**  
**num**  
**ed**  
at least one area of service: **ablb, aac, alat, anet, or asta**  
either one carrier, intraLATA (**intrac**)  
or interLATA (**interc**),  
or two carriers, one **intrac** and one **interc**  
**ln**  
**so or sf** (not both)  
**tel**  
for each **tel**: **lns, lso** (if **tel=POTS#**)

6. N/A
7. N/A
8. If **city, lns, lsis, lso, fso, stn, sfg, and/or hml** are populated, there must be a corresponding entry in **tel**.
9. If only one **tel** is present and it is an 800 Data Base Service NPA, only one carrier is permitted and it cannot have a value of "otc", which is a term for local exchange carrier.

10. If **ac=C**, **D**, or **T** and administrative data is changing, only the changed parameters must be specified, with the exception of fields that have a Count field associated with the blocks containing the fields. To change data for those fields, all related blocks must be sent. For example to change any data in the Destination Telephone Block (**tel** through **uts**), all data in all blocks must be sent, preceded by the appropriate value in **cnt9**. To delete all data in the block(s) following a specific Count field, send the Count field with a value of zero. For example, to delete all entries in the Area Codes Areas of Service blocks, send **cnt4=0**.
11. If **ac=C** or **T**, the **ed** and **et** parameters will be the new (target) effective date and time (required for transfer, and optional for change). The existing effective date and time is specified in the **sefd** field (source effective date and time field). A record can be transferred forward up to the industry-set time period into the future (providing no future records exist), or backward only as far the effective date and time on the previous record. A record cannot be transferred backward to a date/time prior to *NOW*. A record with a future effective date and time can be changed without changing the effective date and time, or can be changed to a new effective date and time.
12. If **et** is not entered when **ac=N**, **C**, **T**, or **D**, SMS/800 will assign an effective time from a range of times when SMS/800 has a lighter workload. The response message, RSP-CRA, will contain the time SMS/800 selected. Use of this capability is encouraged to distribute the workload evenly.
13. SMS/800 allows an existing record to replace itself by being transferred to *NOW* providing:
  - The customer record status of the record being transferred is FAILED, SAVED, INVALID, MUST CHECK, PENDING, or HOLD.
  - The **sefd** of the source record being transferred is equal to the current 15-minute window.
  - **ac=T**.
  - **ed=NOW**.

The same record can be transferred to "NOW" multiple times within the current 15-minute window as long as it doesn't go ACTIVE, SENDING, or DISCONNECT.

14. The following rules apply to change or copy a CR: Use **ac=C**. For Action Code (AC) = "C", if the **sefd** and **ed** and **et** parameters are present, SMS will use the record instance as specified by the **sefd** parameter to copy (if **ac=C**) to a new instance with the target date/time as specified in the **ed,et** parameters. If only the **sefd** parameter is present, SMS will update the record instance as specified by the **sefd** parameter; this is an update in place and applies to records with status only of the following: PENDING, MUST CHECK, INVALID, or SAVED. If only the **ed,et** parameters are present, SMS will use the record with the closest previous effective date and time in the SMS data base as the source to copy (if AC=C) to a new instance as specified in the **ed,et** parameters; and in this case, it will not matter what is the status of the source record because SMS will copy the 'closest previous' record version. If neither the **sefd** nor the **ed,et** parameters are present, and there is only one record with a status of the following in the SMS/800 system {PENDING, MUST CHECK, INVALID, or SAVED } then SMS will update that one record in place; yet if there is more than one record version, the update will be denied. For NOW processing, refer to notes 13 and 26. SEFD is optional for a disconnect request, because if SEFD is not sent, the system will disconnect the current Active version.
15. The following rules apply to disconnect a CR: Use **ac=D** to create a record with DISCONNECT status, either future pending or immediately (**ed=NOW**), or to change data (e.g., **eint**) associated with a record with DISCONNECT status. The **refer** and **num** parameters are required for disconnects. If more than one pending disconnect record exists, **sefd** should be transmitted. Use **ac=T** to transfer a “pending” disconnect record. **If the latest record has a status of DISCONNECT or PENDING for disconnection, and ac=C is used, SMS assumes that the service is to be restored, and will end the disconnect period by treating the request as a re-connect.** In a re-connect, the system will copy the appropriate information from the disconnected record to the reconnected record; in this way, service can be reactivated without any loss of service.
16. Area-of-Service labels will be supported over the interface; however, the specified AOS label must be an existing label. The OS will not have the ability to create or modify a label over the interface using the REQ-CRA command.
17. N/A
18. If call sampling is to be scheduled on a customer record, the default **rao** and **abn** cannot be used. Values for these fields must be input.

19. For **ac=R** (resend CR), the ET and ET values must match the active or sending version of a CR. If **ac=R** (resend) and **ed** and/or **et** are not used, SMS/800 will select the most recent customer record instance that has a status of active, disconnect, or sending, and resend that record instance to all the SCPs in the area of service. A record with a status of failed can be resent if it is the only record (not necessary to use **ed** and/or **et**), or if **ed** and/or **et** are used to provide a unique customer record key. In addition, a failed record can only be resent to an SCP if the cause of the failure was rejection at that SCP.
20. The **la**, **ln**, **ncon** and **notes** fields accept the following graphic characters if they are encapsulated within a text string, in addition to the alphanumerics, A-Z and 0-9:

<b>&lt;sp&gt;</b>	<b>HEX CODE</b>
#	HEX CODE 23
\$	HEX CODE 24
%	HEX CODE 25
&	HEX CODE 26
(	HEX CODE 28
)	HEX CODE 29
*	HEX CODE 2A
+	HEX CODE 2B
,	HEX CODE 2C
-	HEX CODE 2D
:	HEX CODE 2E
/	HEX CODE 2F
:	HEX CODE 3A
;	HEX CODE 3B
@	HEX CODE 40
!	HEX CODE 21
' (apostrophe, right single quote)	HEX CODE 27
' (left single quote)	HEX CODE 60
>	HEX CODE 3E
<	HEX CODE 3C
=	HEX CODE 3D
?	HEX CODE 3F
[	HEX CODE 5B
HEX CODE 5D	
{	HEX CODE 7B
}	HEX CODE 7D
\	HEX CODE 5C
-	HEX CODE 5F

21. The **refer** parameter is required for disconnects with a value of 'Y' or 'N'.
22. Effective Date **ed** and Effective Time **et** will be optional fields in the case that only one record exists for **ac=C**. For **ac=N**, **ed** is required. For **ac=T**, **sefd** will be required if more than one record exists.
23. To change customer record data other than the ED and ET, Action =C (change) should be used. SMS will replace the old data with the new data. If a user wishes to change the ED and/or ET, Action=T (transfer) should be used. Entire records can be transferred; however, they can only be transferred to the same number. When a transfer is initiated, customer record data can be changed simultaneously.
24. If Action=R (resend), SMS will select the most recent customer record instance that has a status of active, disconnect, sending, or failed, and resend that record instance to all the SCPs in the area of service. This assumes there is no active record following the record instance. A failed record will only be resent to an SCP if the cause of the failure was rejection at that SCP.
25. SMS/800 MGI doesn't support copying a CR to a different Dial#. To copy a record to a different number with a different ED/ET, the OS needs to perform the copy within their own system prior to launching any such request over the interface.
26. The copy or copy and change using **ed=NOW** is enhanced to assign the next or following 15-minute window when there is an existing record in the current 15-minute window and ALL of the following conditions are met:
  - The customer record status of the existing record in the current 15-minute window is ACTIVE, SENDING, or DISCONNECT.
  - There is no record in the next 15-minute window.
  - There is no existing record between the next 15-minute window and the effective date/time of the record being copied.
  - **ac=C, N, D, or T**. (NOTE: if **ac=C,D or T**, users should specify **sefd**).
27. Duplicate records and RCC records are no longer supported by SMS/800.
28. Records partially saved via on-line and then changed via MGI may result in errors related to optional parameters.
29. If a RESP ORG change is made on a record that is followed by future records, and the record is updated, all future records with a status of Pending will be changed to MUST CHECK. Future records with a status other than Pending will not be changed to MUST CHECK.
30. To change only the RESP ORG, users need only send in the following tags-values: **id, ro, ac, num, ed, and newro**.

## 7.2.2 Response to Update Customer Record [RSP-CRA]

### RESPONSE TO UPDATE CUSTOMER RECORD [RSP-CRA] CUSTOMER RECORD ADMINISTRATION

This message is the response to the command UPDATE CUSTOMER RECORD. Since the command has several purposes, i.e., add, change, delete, transfer, resend, this response message has the capability to return a variety of error conditions. It is possible to receive a success, failure, or warning. If the command was successfully processed, the response will contain COMPLD in the **term\_rept** field, **00** in the **error\_cd** field, and **err** will not be present. For failed updates, the response will contain DENIED in the **term\_rept** field, **01** in the **error\_cd** field, and one or more instances of **err**. Failed updates that do not pass SMS syntax checks on individual fields will not be stored in SMS; however, failed updates that pass the syntax checks but fail SMS validation checks will be stored in SMS with a status of INVALID. The latter can be corrected by using action code of 'C' or 'T' with the information necessary for correction.

For warnings, the response will contain COMPLD in the **term\_rept** field, and **11** in the **error\_cd** field. If future records exist following a RESP ORG change, the response message will include warning message 38.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-CRA
Route ID	RRU

**MESSAGE FORMAT**

- **Successful Update Response:**

**RSP-CRA:,date,time:::COMPLD,00::ID=id,RO=ro,NUM=num, ED=ed,ET=et,  
HCRUR=hcrur,CREN=cren;**

*Example of a Success Response message:*

RSP-CRA:,2003-10-16,13-49-22-CST:::COMPLD,00::ID=XXXXXX101,  
RO=XXXX1,NUM="8001231111",ED="10/16/03",ET="01:45P/C",  
HCRUR=009,CREN=XA;

- **Failed Update Response (No Record Stored in SMS):**

**RSP-CRA:,date,time:::DENIED,01::ID=id,RO=ro,NUM=num,  
ED=ed,ET=et,HCRUR=hcrur,CREN=cren:CNT=cnt:ERR=err,VERR=verr;**

*Example of a Response for Unsuccessful Request message with errors:*

RSP-CRA:,2003-10-16,13-49-22-CST:::DENIED,01::ID=XXXXXX101,  
RO=XXXX1,NUM="8001231112",ED="10/16/03",ET="01:45P/C",  
HCRUR=000,CREN=XB:CNT=01:ERR=92,  
VERR="EXCEEDS LIMIT";

*Example of a Response for Unsuccessful Request message with errors:*

RSP-CRA:,2003-10-16,13-49-22-CST:::DENIED,01::ID=XXXXXX101,  
RO=XXXX1,NUM="8001231112",ED="10/16/03",ET="01:45P/C":  
CNT=01:ERR=53,VERR="# OWNED BY \$\$\$\$";

- **Failed Update Response (Record Stored in SMS):**

**RSP-CRA:,date,time:::DENIED,10::ID=id,RO=ro,NUM=num,  
ED=ed,ET=et,HCRUR=hcrur,CREN=cren:CNT=cnt:ERR=err,VERR=verr;**

- **Update with Warning Response:**

**RSP-CRA:,date,time:::COMPLD,11::ID=id,RO=ro,NUM=num,  
ED=ed,ET=et,HCRUR=hcrur,CREN=cren:CNTA=cnta:  
ERR1=err1,VERR=verr;**

**PARAMETERS DESCRIPTION**

**date,time**      See Section 5.3

<b>term_rept</b>	Termination Report Code 6 byte identifier COMPLD - Update Request Accepted DENIED - Update Request Failed
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00 - No Error 01 - Error Present: No record stored in SMS (See err field) 10 - Error Present: Record stored in SMS (See err field) 11 - Warning (See err field)
<b>id</b>	Logon Id 8 bytes identifier identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier responsible organization for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.

<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94)
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)
<b>hcrur</b>	Remaining number of high priority customer record updates 3 bytes decimal numeral (optional) The remaining number of high priority customer record updates allowed for the customer record's entity. This tag is only returned if <b>priority=H</b> was received in the request message and user has customer record update permission for that entity.
<b>cren</b>	Entity of customer record 2 bytes identifier (optional) entity of the remaining high priority updates This tag is only returned if <b>priority=H</b> was received in the request message and user has customer record update permission for that entity.

<b>cnt</b>	Number of Error blocks 3 bytes decimal numeral Maximum value of 10 for errors
<b>cnta</b>	Number of Warning Blocks 3 bytes decimal numeral Maximum value of 10

<b>err</b>	Error Explanation 2 bytes decimal numeral there can be multiple errors 01 - Too many parameters (warning) 02 - Required parameter missing 03 - Unrecognized parameter 04 - Invalid parameter combination 05 - Syntax error 06 - Logon Id invalid  Logon ID must be 8 character identifier 07 - Number and effective date/time not recognized no action taken 08 - Number cannot be modified by specified Logon Id access denied 09 - Invalid Action Code: must be C, D, N, T, R or X 10 - Invalid Action Code: record already exists  12 - Transfer failed due to invalid record status 13 - Transfer failed due to unacceptable effective date/time  15 - TEL parameter invalid: must be standard phone# or dialed number 16 - CITY not allowed if TEL not specified 17 - LNS not allowed if TEL not specified 18 - LSIS not allowed if TEL not specified 19 - LSO not allowed if TEL not specified  20 - FSO not allowed if TEL not specified 21 - STN not allowed if TEL not specified 22 - SFG not allowed if TEL not specified 23 - HML not allowed if TEL not specified 24 - Referral is not allowed for an unavailable number that is disconnected 25 - Cannot create customer record while disconnect is still pending 26 - End intercept: date must be within industry-set time period from eff date.
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27 - Cannot update a copied customer record without making changes

28 - Cannot create administrative data:

    number reserved for another RESP ORG

29 - 1st and 13th character of SO must be alphabetic

30 - Minimum of 3 alphanumeric characters must follow first alpha  
    character of SO

31 - SO is limited to alphanumeric characters

32 - SF is limited to alphanumeric characters

33 - If TEL equals an 800 Data Base Service NPA, intraLATA carrier  
    cannot equal OTC

34 - OTC cannot be carrier for interLATA service

35 - Intralata carrier required

36 - Interlata carrier required

37 - Carrier entered is not a valid carrier or CIC

38 - (Warning) Future records exist for this DIAL # and should be  
    checked.

39 - Effective Date must be within industry-set time period from current  
    date.

40 - Effective Time must be specified as a quarter hour

41 - Number status is SPARE: reserve before using Action Code = N.

42 - Current RESP ORG must have update capabilities for the RESP  
    ORG that reserved the number that is having a customer record  
    created with Action Code = N.

Cannot process 'New' action because the Resp Org of this  
RESERVED, DISCONNECT or TRANSITIONAL number does  
not belong to your Logon ID.

*See NOTES FOR REQ-CRA #1 and #15 for further details.*

43 - A valid Area of Service is necessary

44 - If an 800 Data Base Service NPA is entered in TEL, it must equal  
    that in NUM

45 - This customer record requires more data that must be entered in

a CPR

- 46 - No such AOS label
- 47 - RESP ORG does not have permission to resend this number
- 48 - No record with status of active, disconnect, sending, or failed (because of SCP rejection) to resend
- 49 - dau must be 'N' if li is not = 'LI'
- 50 - Cannot find a unique record based on the ed, et, and/or sefd input
- 51 - Non-US country cannot be entered with a CCS network.
- 52 - Illegal value in Count field
- 53 - Permission denied: Action not allowed for this record
- 54 - Cannot delete: Record is past due
- 55 - Cannot delete: Record is not the latest instance
- 56 - Cannot delete: Record does not exist
- 57 - Cannot delete: Date and/or time is not specified
- 58 - Cannot resend: The specified record instance is not the latest ACTIVE, SENDING, DISCONNECT, or FAILED (rejected at all SCPs)
- 59 - Cannot resend: No working records at any SCP for this ACTIVE record
- 60 - Cannot transfer: Source record does not exist
- 61 - Cannot transfer: Target record already exists
- 62 - Cannot transfer: Other record(s) exist between source and target
- 63 - Cannot disconnect: No customer record exists
- 64 - Cannot disconnect or suspend: refer and/or eint not specified correctly.
- 65 - Cannot disconnect or change: The specified source record does not exist
- 66 - Cannot disconnect or change: Source date and/or time not specified and more than one record instance exists
- 67 - Cannot disconnect or change: Record instance exists between source and target date and/or time
- 68 - Cannot disconnect or change: Target date and/or time not specified and source record instance is past due
- 69 - Cannot 'add new' or change: refer and/or eint should not be used

- 70 - Cannot add 'new record': Target date and/or time not specified
- 71 - Cannot add 'new record': Target record instance exists
- 72 - Cannot add 'new record': The previous record instance is not a DISCONNECT record
- 73 - Input data is not known to SMS/800
- 74 - Inconsistent rao and abn values
- 75 - When changing data in a Destination Telephone Block (tel through uts), all data in all blocks must be resent
  
- 79 - No other Network AOS entries allowed with US, XA, XB, or XC
- 80 - No other AOS types allowed with the Network AOS entered
- 81 - eint (End Intercept): End Intercept of 'NOW' is allowed only when the record's effective date is current date or "NOW"
- 82 - (Warning) Approvals are required by at least one carrier (CIC) before record goes ACTIVE
  - Cannot use REQ-CRA message for Pointer records or Template records (example VERR="NO POINTER REC"). Use REQ-CRC for Pointer records. VERR will indicate "NO POINTER REC" or similar text if a Resp Org tries to update an existing Pointer record via REQ-CRA.
- 84 - Record is invalid. Cannot request effective date and time of NOW since at least one carrier approval is required
- 85 - Record is invalid. There is at least one CIC for which no RESP ORG-to-CIC arrangement has been defined.
- 86 - albl (AOS label) belongs to another network. Usage not allowed.
- 87 - Cannot insert a disconnect in front of a future change or disconnect.
- 88 - Cannot modify record, an on-line user is currently working on this #.
- 90 - Cannot transfer source: Target record already exists and it should be transferred
- 91 - Cannot process request: Target record should be transferred
  
- 92 - User is not allowed high priority update for this customer record.

The verr may contain the following possible text:

- **HPU NOT DEFINED**  
HPU screen has not been defined for the CR entity. Please contact the Help Desk to define the HPU screen within the system.
- **EXCEEDS LIMIT**  
Allowed number of high priority customer record updates is exceeded for the CR entity.
- **ID NOT LISTED**  
User is not listed on the SMS/800 HPU screen for the CR entity. Therefore user is not allowed to perform high priority customer record update for entity.
- **MUST BE TODAY**  
Effective date of the customer record must equal NOW or today's date when updating with high priority.
- **CANT DO HDD=Y**  
HDD=Y not allowed with high priority customer record update.

98 - Invalid or missing date and/or time in application message

99 - Other

**err1**      Warning Explanation  
                2 bytes decimal numeral

**verr**      Value of Field in Error  
                up to 16 bytes text string (optional)  
                returns original input where possible for each error

**Error code 99:**

Many customer record (CR) background validation error messages are returned via error code (err) 99; and the corresponding value in error is returned in the verr field.

VERR VALUE	ERROR DESCRIPTION
CLA npanxxxxx	The CR's Resp Org cannot use CIC 0110 with this POTS termination number per the CLA screen. The variable 'npanxxxxx' will contain the POTS termination number that was detected with this error.
CLE npanxxxxx	Cannot use this POTS termination number with CIC 0110 per the CLE screen. The variable 'npanxxxxx' will contain the POTS termination number that was detected with this error.
NLA npanxxxxx	The CR's Resp Org cannot use CIC 0110 with this POTS termination number per the NLA screen. The variable 'npanxxxxx' will contain the POTS termination number that was detected with this error.
NLE npanxxxxx	Cannot use this POTS termination number with CIC 0110 per the NLE screen. The variable 'npanxxxxx' will contain the POTS termination number that was detected with this error.
NCA npanxxxxx	Cannot use this POTS termination number with CIC 0110 per the NCA screen. The variable 'npanxxxxx' will contain the POTS termination number that was detected with this error.
NCA npanxxxxx	Cannot use thePOTS# with CIC 0110 per the network service provider's NCA screen does not list the LEC's OCN code that is on the RAC screen.  Note: This is error code 4647 in WBA and 3270.
NCA npanxxxxx	Cannot use thePOTS# with CIC 0110 per the network service provider's NCA screen does not list the LEC's OCN code that is on the RDC screen.  Note: This is error code 4648 in WBA and 3270.
NO SPLIT CARRIER	The CR uses 2 different CICs on the same Network (e.g., BX) yet the Network doesn't support 2 different CICs on the CR.  Note: This is error code 4649 in WBA and 3270.
NO POTS ALLOWED	The CR uses a POTS termination number on a Network (e.g., BX) that doesn't support POTS termination numbers. Note: This is error code 4650 in WBA and 3270.
INVALID CARRIER	The CR uses a CIC that is not supported by the Network (e.g., BX). Note: This is error code 4651 in WBA and 3270.

VERR VALUE	ERROR DESCRIPTION
EFF D/T:DOWNTIME	This error means the CR's Effective Date/Time is within the scheduled daily SMS/800 system downtime. CRs cannot have an Effective Date/Time that is within or on the boundary of the scheduled daily SMS/800 system downtime. Daily downtime is defined in the Down & Default Effective Time for CR (DDT) screen, which can be viewed and setup by the Help Desk and Site Support.
RO CHANGE NOW	A Resp Org Change takes effect immediately. Therefore, if a record is copied forward to do a Resp Org Change, then the Effective Date must be set to "NOW" (ED=NOW).

### 7.2.3 Update Complex Record [REQ-CRC]

#### UPDATE COMPLEX RECORD [REQ-CRC] CUSTOMER RECORD ADMINISTRATION

The REQ-CRC message supports both *simple customer records* (also called *basic customer records*) and *complex customer records*. In order to create, update, delete and disconnect a *complex customer record*, the Resp Org needs to send the REQ-CRC message to SMS/800. Parameters applicable only to complex customer records can be defaulted in order to satisfy simple or basic records.

The REQ-CRC message also supports *Pointer records* (i.e., customer records that use a *Routing Template* (Template record) for all of its Call Processing Record (CPR) data and Label Definition (LAD) data.

**NOTE** *Template records* are created and modified via the REQ-TRC message, not via REQ-CRC.

Resp Orgs will be permitted to use a Template Name, with their Pointer records via **CRC** message, if the Template Name is controlled by a Resp Org Entity of a Resp Org ID that is listed on the MGI Logon ID's MGI Security Administration (GSA) screen and provided the Pointer's control Entity matches the Template's control Entity. For example, an MGI Logon ID with GSA permission for Resp Org BR123 will be permitted to use, on their Pointer records controlled by Entity BR, Template Name \*BR99 because the Template Name's control Entity (BR) matches these security checks.

However, tighter security will be enforced by SMS/800 to create/delete/update Template Names, via **TRC** message, whereby the MGI Logon ID's permissions per their GSA must match the 5-character control Resp Org of the Template Name, not merely match the 2-character Entity of the Template Name.

The REQ-CRC command performs a host of Customer Record Administration functions for simple (basic) customer records, and complex customer records. Complex customer records support calls that can be carried by more than one IC and/or will terminate to more than one POTS number. New records can be created, changes to existing records can be made, entire records can be deleted, transferred, and resent. The command supports additions, changes, and deletions, one record at a time. That is, changes to multiple records cannot be handled in one REQ-CRC message; however, multiple changes to the same record can be handled in one REQ-CRC message. Several types of change and transfer are supported. The transfer to NOW capability allows an existing record to replace itself providing the record status is not ACTIVE, SENDING, or DISCONNECT, and the effective date/time of the source record equals the current 15-minute window. The change capability has two options. The first applies updates to an existing customer record, and updates the record. The second option copies the record (leaving the existing record intact) to a new effective date and time, applies any data changes, and updates the record.

The *NOTES* section at the end of the message description provides additional detailed information.

This command also supports the addition, deletion and modification of call processing labels, which are used to aggregate call processing criterion fields. These labels are applicable only to the customer record for which they are associated. Records can also be disconnected.

Emergency and immediate updates will be supported in this command. An emergency update is defined as an update on a customer record with an effective date/time less than 24 hours from the update time. A separate emergency update parameter for the interface is not needed since SMS will be able to infer from the effective date/time parameter value that the update is an emergency. An immediate update is one in which the effective date/time can be set equal to *NOW*. A separate parameter for the interface is not needed since SMS will be able to infer from the effective date parameter value of *NOW* that the update is immediate.

Authorized users will be provided the capability to update customer records with High Priority (so that the record will be sent to the SCPs with high priority) when the **priority=H** option is used. To become an authorized user of this feature, the user's logon id must be defined on the SMS/800 system's HPU screen. The High Priority CR Update capability will be allowed for customer records with effective date equal to *NOW* or today's date. Each Resp Org entity will be allowed up to 10 High Priority CR Updates per day per entity. This is tunable by Site Support.

To disconnect multiple Dial numbers, the user can use the **ac=D** option that contains the **qt** and **numl** tags. All numbers specified must have the same end intercept date and the same referral option. The associated response message will not be returned until the entire request has been fully processed. The UAL retry timer should be reset for automation requests as responses will take longer to be returned.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	<b>X3</b>
<b>Source</b>	<b>OS</b>
<b>Confirmation</b>	<b>A</b>
<b>Queuing</b>	<b>Optional</b>
<b>Response</b>	<b>RSP-CRC</b>
<b>Route ID</b>	<b>CXU</b>

## MESSAGE FORMAT

### 1. Action Code of N (New Customer Record):

For regular records, the TMPLTPTR tag is not applicable (N/A).

For Pointer records, the TMPLTPTR tag is required and routing tags are not allowed because all the routing is defined on the Template Name via the REQ-TRC message.

#### 1a) Example of creating a new Regular Customer Record on a Reserved Dial#:

```

REQ-CRC:,date,time:::::ID=id,RO=ro,AC=N,NUM=num,ED=ed,ET=et,
PRIORITY=priority:
IEC=iec:
IAC=iac:
ABN=abn,DAU=dau,
DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,NOTE=note,
AGENT=agent,TELCO=telco,CUS=cus,NEWRO=newro,LA=la,
CBI=cbi,NCON=ncon,CTEL=ctel:
ALBL=albl:
AAC=aac:
ALAT=alat:
ANET=anet:
ASTA=asta:
CNT8=cnt8:LN=ln:
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,HML=hml,LSIS=lsis,
LSO=lso,SFG=sfg,STN=stn,UTS=uts:
NODE=node:
CNT11=cnt11:
V=v1.c:
V=v2.c:
V=vr.c:
PEC=pec,PAC=pac,Z=z,DS=ds:
CNT12=cnt12:TYPE=type,LBL=lbl,SORT=sort,DEF=def;

```

**1b) Example of creating a new Pointer record on a Reserved Dial#:**

```
REQ-CRC:,date,time:::::ID=BROPR123,RO=BROPR,  
AC=N,NUM="8661234567",ED="NOW",  
TMPLTPTR="*BRSTATEROUTE",  
SO=N789789789:CNT9=01:TEL="8661234567",LNS=0003;
```

**1c) 2<sup>nd</sup> example of creating a new Pointer record for a Reserved Dial#:**

```
REQ-CRC:,2011-02-17,18-54-30-CST:::::ID=BRT01000,RO=BRU01,  
AC=N,NUM="8005557785",ED="04/25/11",ET="11:15A/C",  
TMPLTPTR="*BR-SSSS-TEMP06",  
SO=A5468321:CNT9=001:TEL="8005557785",LNS=9999;
```

```
RSP-CRC:,2011-02-18,14-23-50-CST:::COMPLD,00::ID=BRT01000,  
RO=BRU01,NUM="8005557785",ED="04/25/11",ET="11:15A/C";
```

**2. Action Code of C (Change a Customer Record):**

For regular records, the TMPLTPTR tag is not applicable (N/A).

For Pointer records, the TMPLTPTR tag is required and routing tags are not allowed because all the routing is defined on the Template Name via the REQ-TRC message.

**a) Example Updating a regular CR (also called a regular record):**

```
REQ-CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd,PRIORITY=priority:  
IEC=iec:  
IAC=iac:  
ABN=abn,DAU=dau,  
DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,NOTE=note,  
AGENT=agent,TELCO=telco,CUS=cus,NEWRO=newro,LA=la,  
CBI=cbi,NCON=ncon,CTEL=ctel:  
ALBL=albl:  
AAC=aac:  
ALAT=alat:  
ANET=anet:  
ASTA=asta:  
CNT8=cnt8:LN=ln:  
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,HML=hml,LSIS=lsis,  
LSO=lso,SFG=sfg,STN=stn,UTS=uts:  
NODE=node:  
CNT11=cnt11:  
V=v1.c:  
V=v2.c:  
V=vr.c:  
PEC=pec,PAC=pac,Z=z,DS=ds:  
CNT12=cnt12:TYPE=type,LBL=lbl,SORT=sort,DEF=def;
```

b) **Example Updating an Existing Pointer record:**

For example, to update the contact information of an existing Pointer record:

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd,NCON=ncon,CTEL=ctel,TMPLTPTR=tmplptr;**

Example:

REQ-CRC:,2011-02-17,18-54-30-CST:::::ID=SSSS1000,RO=BRU01,  
AC=C,NUM="8005557785",ED="05/25/11",ET="11:45A/C",  
SEFD="05/25/1107:15A/C",NCON="JQ PUBLIC",CTEL=7326990000,  
TMPLTPTR="\*BR-SSSS-TEMP11";

### 3. Replacing the Template on an Existing Pending Pointer record:

**REQ-**

**CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd,TMPLTPTR=tmplptr;**

Example:

REQ-CRC:,2011-02-17,18-54-30-CST:::::ID=SSSS1000,RO=BRU01,  
AC=C,NUM="8005557785",ED="04/25/11",ET="05:00P/C",  
TMPLTPTR="\*BR-SSSS-TEMP77";

- Note: Priority is optional. ET is optional. ED is needed if the Resp Org wants to copy the record to a later date. The changed record will use the routing information that is defined on the Template that is referenced in the TMPLTPTR tag.
- SEFD is optional and conditionally required when there is more than 1 record version for the Dial#.
- Requirement: **The CR Resp Org needs to first create an Active Routing Template via the TRC message before a Pointer record can be created in SMS/800.**

### 4. Replacing the Template on an Active Pointer record:

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd,TMPLTPTR=tmplptr;**

- Note: Priority tag is optional; ET is optional. The new record will use the routing information that is defined on the Template that is referenced in the TMPLTPTR tag.
- Note: The CR Resp Org needs to first create an Active Routing Template via the TRC message.
- SEFD is optional and conditionally required when there is more than 1 record version for the Dial#.

**NOTE:** For Template record Creation/Changes - use REQ-TRC message, not REQ-CRC.

## 5. Converting a regular CR to a Pointer record:

Rules for Conversion from regular CR to Pointer record:

- 5.1 - When a Resp Org creates a Pointer record that follows (comes after) a regular record in date/time or replaces an existing future regular record with the same date/time as the existing regular record, SMS/800 considers that a conversion from a regular CR to a Pointer CR.
- 5.2 – The purpose of Convert is not intended for Disconnect records, although SMS/800 will attempt to create or update a Disconnect record when a Resp Org requests to “Convert” a Disconnect record.
- 5.3 - When converting a Disconnect regular record to Pointer, the Resp Org must set Refer=Y, otherwise SMS/800 will block the convert (via error 1128) if the target Pointer record has Refer=N. This error occurs because SMS/800 doesn’t support this conversion scenario.

### 5a. Converting an existing Regular Pending CR to a Pointer record:

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd,TMPLTPTR=tmplptr;**

Example:

REQ-CRC:,2011-02-17,18-54-30-CST:::::ID=SSSS1000,RO=BRU01,  
AC=C,NUM="8005557785",ED="05/25/11",ET="11:45A/C",  
SEFD="05/25/1111:15A/C",TMPLTPTR="\*BR-SSSS-TEMP11";

- Note: Priority is optional. ED is optional and needed only if the Resp Org wants to copy the record to a later date. ET is optional. The converted record will use the routing information that is defined on the Template that is referenced in the TMPLTPTR tag.
- Note: The CR Resp Org needs to first create an Active Routing Template via the TRC message before any Pointer record can be created that uses that Template Name.
- Omit routing tags, except TMPLTPTR, because the system will use routing data based on the Template Name that the Pointer record points to in the TMPLTPTR tag.
- Note: When SMS/800 converts a CR to/from a Pointer record from/to a Regular record, the system will use the Active Template (or record version that will become Active prior to the Pointer going Active) data for the routing data.

### 5b. Converting an existing Active regular record to a Pointer record:

**REQ-**

**CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd,TMPLTPTR=tmpLptr;**

- Note: Priority is optional. ED is required when changing an Active record because a new version of the record needs to be created and then downloaded to the SCPs. ET is optional.
- Note: The CR Resp Org needs to first create an Active Routing Template via the TRC message before any Pointer record can be created that uses that Template Name.

### 5c. Automation Conversion: Multiple Conversion of regular CRs to Pointer Records (abbreviated MCP):

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=C:QT=qt:NUML=numl:  
ED=ed,ET=et,TMPLTPTR=tmpLptr;**

Example:

REQ-CRC:,2011-02-17,18-54-30-  
CST:::::ID=SSSS1000,RO=BRU01,AC=C:QT=02:  
NUML="8005557780,8005557781":ED="05/27/11",ET="11:15A/C",  
TMPLTPTR="\*BR-SSSS-TEMP06";

- Sending the TMPLTPTR tag will tell the SMS/800 system to create a Pointer record.
- Omit routing tags, except TMPLTPTR, because the system will use routing data based on the Template Name that the Pointer record points to in the TMPLTPTR tag.
- Note: The CR Resp Org needs to first create an Active Routing Template via the TRC message before any Pointer record can be created that uses that Template Name.
- Important note: Before converting multiple CRs to Pointer records, first make sure your source Template record is still valid at the SCPs by updating the Template record (via REQ-TRC message) to make sure it still passes all validations.
- MCP Automation supports converting a regular CR CAD to a Pointer record (PAD).
- MCP Automation does **not** support converting Pointer record(s) to regular CR(s).



**5d. MCP clarifications:**

- 1) The system will only convert 1 CR version per user-identified Dial#.
- 2) The system will attempt to convert only the 1 CR version that has an Effective Date/Time that is closest to before the target Eff. Date/Time (EFDT). The system will set the target EFDT for each target CR based on the Start Eff. Date/Time that the Resp Org entered on the MCP screen. Note: Factors that can impact the target EFDT are quantity of Dial#s sent via MCP and system load.
- 3) MCP does not consider (filter) the source record's CR Status when converting to Pointer records. Note: It's not possible to convert OLD records.
- 4) A new Pointer record will be created that will point to the user-specified Active Template Name.
- 5) If the future target record's Effective Date/Time already exists, the existing record will be replaced by the target Pointer record.
- 6) However, if the target record has a different Effective Date/Time than existing record versions, then the source CAD will be copied to the target PAD to a new Effective Date/Time, the source CAD (in this case) will still exist in the system as a regular CR.
- 7) Target CRs identified on MCP will go through CR validations. Note: It's theoretically possible that source records that are Invalid or Failed may result in target Pointer records that pass validation and go Pending because the target record uses a Routing Template for routing data, not the source's CPR or LAD.
- 8) Convert PAD to PAD different Template Name: Depending on the Start EFDT in MCP and the EFDT of the existing PAD, the system will either copy the existing PAD to a future version or will update the existing PAD in-place (i.e., update an existing PAD, not create a new version) if the target EFDT already exists.
- 9) Convert PAD to PAD same Template Name: If a CR in the MCP input list already is a Pointer (PAD) and already references the same Template Name that the user entered on the MCP input screen, the system will not error in this case and will copy the source PAD to another PAD version if the target EFDT is later than the existing PAD, otherwise, the system will update the existing PAD in-place (i.e., update an existing PAD, not create a new version) if the target EFDT already exists.

## 6. Converting an existing Pointer record to a regular record:

- Rule for Conversion from Pointer record to regular record: When a Resp Org creates a regular record that follows (comes after) a Pointer record in date/time or replaces an existing future Pointer record with the same date/time as the existing Pointer record, SMS/800 considers that a conversion from a Pointer CR to a regular CR.

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=C,NUM=num,ED=ed,ET=et,  
SEFD=sefd;**

- Use REQ-CRC message.
- Omit the TMPLTPTR tag when creating/updating a regular record or converting to a regular record because the presence of the TMPLTPTR tag tells SMS/800 to create/update a Pointer record.  
The presence of the TMPLTPTR tag tells SMS/800 to create/update a Pointer record.
- Set AC=C.
- ED is required when changing an Active record because a new version of the record needs to be created.
- ET is optional.
- Priority tag is optional.
- You can send all the routing tags for the target record if the values changed.
- Sending routing tags is optional when converting a Pointer record to a regular record because SMS/800 will use routing data from the Template Name that already is stored in the SMS/800 database that is mapped to this Pointer record when converting a Pointer record to a regular record.
- However, if any routing tags are sent in this scenario, the system will use those tags.

**CAUTION: If the TMPLTPTR tag is omitted for an existing Pointer record, then the system will convert the Pointer record to a regular record.**

- *The rules for creating/updating a regular record is changing in SMS/800 release 19.0 in that a Resp Org Change Effective Date/Time must be set to “NOW”.*

#### 7. Action Code of R (Resend Customer Record)

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=R,NUM=num,ED=ed,ET=et;**

— Resend Customer Record is applicable to regular CRs and Pointer records.

#### 8. Action Code of X (Delete Customer Record)

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=X,  
NUM=num,ED=ed,ET=et,DCSN=dcsn;**

— Delete Customer Record is applicable to regular CRs and Pointer records.

## 9. Action Code of D (Disconnect a Customer Record)

**REQ-CRC:,date,time:::::ID=id,RO=ro,AC=D,NUM=num,  
ED=ed,ET=et,REFER=refer,EINT=eint,NOTES=notes;**

— Disconnect Customer Record is applicable to regular CRs and Pointer records.

### Action Code of D (Disconnect) or T (Transfer):

REQ-CRC:,date,time:::::ID=id,RO=ro,AC=ac,NUM=num,ED=ed,ET=et,  
SEFD=sefd,PRIORITY=priority:  
IEC=iec:  
IAC=iac:  
ABN=abn,DAU=dau,  
DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,  
REFER=refer,EINT=eint,NOTE=note,AGENT=agent,TELCO=telco,  
CUS=cus,NEWRO=newro,LA=la,CBI=cbi,NCON=ncon,CTEL=ctel:  
TMPLTPTR=tmplptr:  
ALBL=albl:  
AAC=aac:  
ALAT=alat:  
ANET=anet:  
ASTA=asta:  
CNT8=cnt8:LN=ln:  
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,HML=hml,LSIS=lsis,  
LSO=lso,SFG=sfg,STN=stn,UTS=uts:  
NODE=node:  
CNT11=cnt11:  
V=v1.c:  
V=v2.c:  
V=vr.c:  
PEC=pec,PAC=pac,Z=z,DS=ds:  
CNT12=cnt12:TYPE=type,LBL=lbl,SORT=sort,DEF=def;

## 10. Automation Disconnect:

To disconnect multiple customer records via one message:

```
REQ-CRC:,date,time:::::ID=id,RO=ro,AC=D:QT=11:NUML=numl:  
ED=ed,ET=et,REFER=refer,EINT=eint,NOTES=notes;
```

- Automation Disconnect Customer Record is applicable to regular CRs and Pointer records.
- Important note: Before disconnecting multiple Pointer records with Referral set to Yes [i.e., “*refer*” tag is set to “Y” ], first make sure your source Template record is still valid at the SCPs by updating the Template record (via REQ-TRC message) to make sure it still passes all validations.

The automation message format can be presented two different ways, as seen in the examples below:

- **Automation Disconnect Example:** REQ-CRC multi-dial number disconnect example that follows the specification standard (one pair of double quotation marks surrounding all the numbers in the value portion of the NUML tag-value pair) is shown below.

```
REQ-CRC:,2003-05-05,12-00-00-CST:::::ID=XXXXXX101,RO=XXXX1,  
AC=D:QT=11:NUML="8001231111,8001231112,8001231113,8001231114,  
8001231115,8001231116,8001231117,8001231118,8001231119,8001231120,  
8001231121":ED="05/10/03",ET="03:15A/C",REFER=N,EINT="06/10/  
03",NOTES="TEST OF DISCONNECT";
```

- **Automation Disconnect Non-Standard Example:** REQ-CRC multi-dial number disconnect example that does not follow Specification Standard (pairs of double quotation marks, each pair surrounding a number in the value portion of the NUML tag-value pair):

```
REQ-CRC:,2003-05-05,12-0000-CST:::::ID=XXXXXX101,RO=XXXX1,  
AC=D:QT=11:NUML="8001231111","8001231112","8001231113",  
"8001231114","8001231115","8001231116","8001231117","8001231118",  
"8001231119","8001231120","8001231121":ED="05/10/03",ET="03:15A/  
C",REFER=N,EINT="06/10/03",NOTES="TEST OF DISCONNECT";
```

**NOTE** The “NOTE” tag is used for a single-record REQ-CRC message, whereas the “NOTES” tag is used for a multi-record (also referred to as an automation request) REQ-CRC message.

If a parameter is listed in a message format above, its presence is permitted. Both the following Parameters Description and Notes sections contain more detailed guidelines for each parameter. If a parameter is listed as optional in the Parameters Description section, its presence is not required all of the time in those message formats where it is permitted. If a default value is listed for a parameter, that value will be used by SMS/800 unless that parameter and its associated value are contained in a message instance. If the default value is desired, it is not necessary to specify the parameter in the message instance.

## 11. Key rules for Pointer records versus Regular records:

- **The absence of the TMPLTPTR tag tells SMS/800 that the Resp Org is trying to create/update/copy/transfer to a regular record.**
- **The presence of the TMPLTPTR tag populated with a Template Name tells SMS/800 that the Resp Org is trying to create/update/copy/transfer to a Pointer record.**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>ac</b>	Action Code (required) 1 byte identifier  N: New service; either (a) new CAD, or (b) new CAD and CPR, or (c) new CAD, CPR and LAD, or (d) new Pointer record. Note: A Pointer record points to a Template record for CPR and LAD data, and a <i>Template record</i> is created via the REQ-TRC message.  C: Change customer record (change CAD, CPR and/or LAD, or Pointer record)  D: Disconnect Service  T: Transfer the customer record to same number with different date/time  R: Resend the customer record  X: Delete the customer record
<b>num</b>	The Dialed Telephone Number not allowed for automation (that is, if qt is used), otherwise required 10 or 12 bytes text string (encapsulated in a pair of double-quotation marks) format is npanxxxxxx where npanxxxxxx=dialed number (required) Two blank spaces are allowed.

**qt**      Quantity of numbers to be disconnected  
 8 bytes decimal numeral (required to process multiple records (automation))  
 The maximum allowed can be obtained via the REQ-ASL message  
 To disconnect only one number, the **qt** tag is not required. To disconnect multiple numbers, the **qt** and **numl** tags are required and action code must be 'D'.

**numl**    The List of Dialed Telephone Numbers to disconnect for automation  
 A list of 10 or 12 bytes text string entries, separated by commas (required for automation). The number of entries must match the **qt** field.  
 format of each entry is npanxxxxxx  
 where npanxxxxxx=dialed number (required)

**ed**      Effective Date  
 8 bytes text string  
 For single number processing, **ed** (effective date) is optional for ac=C, D and R, otherwise required.  
 For automation processing, **ed** is required for ac=D. For automation processing, the **ed** represents the start effective date for the customer records.

Two Allowable Formats:

format #1: mm/dd/yy

where mm: month (allowable range: 01-12) dd:day (allowable range:01-31) yy:year (e.g., 94)  
 effective date and time combination can be up to x months into the future, where x is the industry set standard (currently x = 6 months).

format #2:

zzz (a 3 character code); supported value(s) are listed below.

Supported value: NOW

format #2 not allowed for ac=R or X

see notes 11 and 13 for further information

<b>et</b>	<p>Effective Time 8 bytes text string (optional)</p> <p>For single number processing, <b>et</b> (effective time) is required for ac=X, otherwise optional, except not allowed when ed=NOW.</p> <p>For automation processing, <b>et</b> is required for ac=D, except not allowed when ed=NOW.</p> <p>Format is hh:mmx/z, where</p> <p>hh:hour allowable range:01-12 mm:minute (allowable values: 00,15,30,45) x:am or pm (allowable values: A, P) z:time zone (allowable values: N-Newfoundland, A-Atlantic, E-Eastern, C-Central, M-Mountain, P-Pacific, Y-Alaska, H-Hawaiian-Aleutian, B-Bering)</p> <p>et can only exist when ed is present.</p> <p>See notes 11, 12 and 13 for further information.</p>
<b>sefd</b>	<p>Source Effective Date and Time Not allowed for automation. 16 bytes text string (optional)</p> <p>Effective date and/or time of the record to be changed or transferred.</p> <p>Used with AC = C, T, or D. Not applicable with AC=N.</p> <p>See notes 11,13,29,32 and 38 for further information.</p> <p>Allowable formats, 8 bytes and 16 bytes:</p> <p>format 1: mm/dd/yy format 2: mm/dd/yyhh:mmx/z, where</p> <p>mm:month (allowable range: 01-12) dd:day (allowable range: 01-31) yy:year (e.g., 94) hh:hour (allowable range:01-12) mm:minute (allowable values: 00,15,30,45) x:am or pm (allowable values: A,P) z:time zone (allowable values: N-Newfoundland, A-Atlantic, E-Eastern, C-Central, M-Mountain, P-Pacific, Y-Alaska, H-Hawaiian-Aleutian, B-Bering)</p>

<b>priority</b>	Priority of the Update (optional) Not allowed for automation 1 byte identifier H: High The value 'H' is the only allowed value at this time. When <b>priority</b> =H, then effective date of customer record must equal "NOW" or today's date, and your Logon ID must have high priority update permission defined within the SMS/800 system's HPU screen for the customer record's Resp Org Entity.
<b>iec</b>	InterLATA Carrier Not allowed for automation Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 107 bytes text string maximum (optional) First 5 bytes must be defined as: CNT1= followed by a 2-byte numeric count of the number of interLATA carriers contained herein. Allowable range of this count is 0-20. A comma follows this count. The next values to appear are the 3-letter (alpha) ACNA or 4-digit (numeric) CIC. A maximum of 20 carriers are supported. Each CIC must be separated by a comma. No embedded blanks are allowed. For ac=N, either one IEC or one IAC or TMPLTPTR is required, otherwise optional with other action codes (i.e., AC codes other than N).

<b>iac</b>	<p>IntraLATA Carrier</p> <p>Not allowed for automation</p> <p>Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent)</p> <p>107 bytes text string maximum (optional)</p> <p>first 5 bytes must be defined as CNT2= followed by a 2-byte numeric count of the number of intraLATA carriers contained herein.</p> <p>Allowable range of this count is 0-20.</p> <p>A comma follows this count.</p> <p>The next values to appear are the 3-letter (alpha) ACNA or 4-digit (numeric) CIC.</p> <p>A maximum of 20 carriers are supported.</p> <p>Each CIC must be separated by a comma.</p> <p>No embedded blanks are allowed.</p> <p>For ac=N, either one IEC or one IAC or TMPLTPTR is required, otherwise it is optional.</p>
<b>abn</b>	<p>Billing Telephone Number (Alternate Billing Number)</p> <p>Not allowed for automation</p> <p>10 bytes text string (optional)</p> <p>defaults to 9999999999 if the ABN tag is not sent.</p> <p>format is alphanumeric</p> <p>if rao=999,then abn must = 9999999999</p> <p>rao cannot equal 999 if record contains a CPR</p>
<b>dau</b>	<p>Directory Assistance Update</p> <p>Not allowed for automation</p> <p>1 byte identifier (optional)</p> <p>N:No (default)</p> <p>Y:Yes</p> <p>the default value of 'N' is the normal entry by a work center</p> <p>if li = 'BL' or 'NP', only 'N' is allowed</p> <p>a value of 'Y' could mean that the DA provider requested an edit change</p>

<b>dat</b>	Directory Assistance Type Not allowed for automation 1 byte identifier (optional) N:Normal (default) G:Government F:Frequently Called
<b>dd</b>	Due Date Not allowed for automation 8 bytes text string (optional) format is mm/dd/yy see ed format 1 for allowable ranges if not present, SMS will generate defaults to effective date of record
<b>hdd</b>	Hold Due Date Not allowed for automation 1 byte identifier (optional) N:No (default) Y:Yes
<b>li</b>	Listing (Directory Assistance) Not allowed for automation and not allowed for Pointer records. 2 bytes identifier (optional) if dat=F, value defaults to LI else defaults to BL BL:Blocked-not sent to DA LI:Published-sent to DA NP:Non-published-not sent to DA

<b>rao</b>	Revenue Accounting Office Not allowed for automation 3 bytes decimal numeral (optional) Defaults to 999 if the RAO tag is not sent. If abn=9999999999, rao must equal 999. Record cannot contain a CPR if rao=999.
<b>so</b>	Service Order Number Not allowed for automation 13 bytes identifier Width can be from 4-13 bytes First character must be alphabetic, and second thru twelfth characters must be alphanumeric, and thirteenth character must be alphabetic. Required unless sf field is used. Either sf or so is required.
<b>sf</b>	Supplemental Form Number Not allowed for automation 6 bytes text string Maximum of 6 bytes alphanumeric Required unless so field is used. Either sf or so is required.
<b>refer</b>	Referral Option 1 byte identifier (required for ac=D, otherwise optional) N:the terminating number is ignored and a recorded message that the number was disconnected is returned Y:a call to a disconnected number is directed to the appropriate carrier where a message refers the caller to a different number For automation requests, all DIAL #'s entered must utilize the same <b>refer</b> value.

**eint** End Intercept Date  
8 bytes text string (maximum) (required if ac=D)  
format is mm/dd/yy or NOW  
see ed format 1 for allowable ranges  
if not present, SMS/800 will generate a default date of an industry-set number of days from the effective date must be within industry-set time frame of effective date  
EINT can only be used with ac=D. This tag is not allowed with other action code (ac) values.

Represents the date of the industry-set number of days from the effective date

For automation requests, all DIAL #'s entered must utilize the same **eint** value.

**note** Notes  
151 bytes text string (optional)  
maximum of 151 bytes  
any notes on the Service Order or Supplemental Form which need to be stored and for which no specific field exists  
see note 19 for allowable characters  
**The NOTE tag is only applicable for single-record requests.**

**notes** Notes  
151 bytes text string (optional)  
maximum of 151 bytes  
any notes on the Service Order or Supplemental Form which need to be stored and for which no specific field exists  
see note 19 for allowable characters  
**The NOTES tag is only applicable for automation requests.**

<b>agent</b>	On-Line Agent for Customer Not allowed for automation. 5 bytes text string (optional). Only alphanumeric entries are allowed.
<b>telco</b>	Company that sold SMS access Not allowed for automation. 4 bytes text string (optional) If populated, must contain 4 alphanumerics. SMS generated on new service (action code N) if telco tag is not sent, then SMS defaults the value to the first 4 characters of the user's Resp Org ID.
<b>cus</b>	On-Line Access Customer not allowed for automation 5 bytes text string (optional) Only alphanumeric entries are allowed.
<b>newro</b>	New Responsible Organization Not allowed for automation. 5 bytes identifier (optional) new organization in charge of the record
<b>la</b>	Listing Address Not allowed for automation. Pointer record 75 bytes text string (optional) see note 19 for allowable characters max of 75 bytes
<b>cbi</b>	IC/EC Billing Indicator Not allowed for automation 4 bytes identifier (optional) if IC (Interexchange Carrier) then it is 3 alphabetic characters if EC (Exchange Carrier) then it is 4 alphabetic characters

<b>ncon</b>	Name of Contact Not allowed for automation 30 bytes text string (optional) max of 30 bytes see note 19 for allowable characters
<b>ctel</b>	Contact Phone Number Not allowed for automation 10 bytes decimal numeral (optional) format is npanxxxxx
<b>tmpltptr</b>	<p>Template Name that is referenced on (stored with) the Pointer record. 15 bytes text string (optional)</p> <p>Encapsulated in a pair of double-quotation marks.</p> <p>Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Dashes are optional in the 4th through 15th character positions. Minimum total data width is 4 characters and maximum total data width is 15 characters.</p> <p>Each Template Name must be unique within the entire system.</p> <p>If TMPLTPTR is present, then none of the other routing tags are allowed.</p> <p>If other routing tags are sent when the TMPLTPTR tag is sent, the system will return an error.</p> <p>When the tmpltptr tag is sent, that tells SMS/800 that the Resp Org wants to create/update a Pointer record.</p> <p>TMPLTPTR is required for a Pointer record. For example, TMPLTPTR is required when a Resp Org does any of the following: (1) create a new Pointer record, (2) convert a regular CR to a Pointer record, (3) replace a Pointer record's Template Name with a different Template Name, (4) copy Pointer record to same DIAL# (NUM tag) with different date/time, (5) transfer Pointer record to same DIAL# (NUM tag) to a different date/time.</p> <p>TMPLTPTR tag must be omitted when converting from a Pointer record to a regular CR.</p> <p>TMPLTPTR tag must be omitted when creating/updating a regular CR.</p> <ul style="list-style-type: none"> <li>○ The absence of the TMPLTPTR tag tells SMS/800 that the Resp Org is trying to create/update/copy/transfer to a regular record.</li> <li>○ The presence of the TMPLTPTR tag populated with a Template Name tells SMS/800 that the Resp Org is trying to create/update/copy/transfer to a Pointer record.</li> </ul>

<b>albl</b>	Areas of Service - Label  Not allowed for automation.  Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 135 bytes text string (maximum) (optional)  First 5 bytes must be: CNT3= followed by the 2-byte numeric count of the number of area-of-service labels contained within the message. The allowable range of this count is 0-16. If only one instance of albl exists, and CNT3 is not specified, CNT3 will default to one. (similar logic applies to the counts associated with aac, alat, anet, asta)  No embedded blanks are allowed.  This count is followed by a maximum of 16 existing labels, between 3-7 bytes in length. Commas separate labels.
<b>aac</b>	Areas of Service - Area Code  Not allowed for automation.  Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 143 bytes text string (maximum) (optional)  First 5 bytes must be: CNT4= followed by the 2-byte numeric count of the number of area codes contained within the message. The allowable range of this count is 0-34. The area code entries (maximum of 34) follow, separated by commas. No embedded blanks are allowed.
<b>alat</b>	Areas of Service - LATA  Not allowed for automation.  Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent). 143 bytes text string (maximum) (optional)  First 5 bytes must be: CNT5= followed by the 2-byte numeric count of the number of LATAs contained within the message. The LATA entries (maximum of 34) follow, separated by commas. No embedded blanks are allowed.

**anet** Areas of Service - network  
Not allowed for automation.  
Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent)  
76 bytes text string (maximum) (optional)  
First 5 bytes must be CNT6= followed by the 2-byte numeric count of the number of networks contained within the message. The network entries (maximum of 23) follow, separated by commas. No embedded blanks are allowed.  
Each entry must be 2 bytes alphabetic must be valid network codes

Examples of ANET include:

AM,BA,BS,GT,NX,PC,SH,UW, and

CN: Canada

CR: Caribbean

US: United States (50 states and D.C.)

XA: US and Canada

XB: US and Caribbean

XC: US and Canada and Caribbean

US, XA, XB, and XC cannot be combined with any other area-of-service type or with each other

**asta** Areas of Service - State  
Not allowed for automation.  
Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent).  
145 bytes text string (maximum) (optional)  
First 5 bytes must be: CNT7= followed by the 2-byte numeric count of the number of states contained within the message.  
The state entries (maximum of 46) follow, separated by commas.  
Each state entry must be 2 bytes alphabetic, must be valid state codes. No embedded blanks are allowed.

<b>cnt8</b>	Count of number of Listing Names Not allowed for automation. 2 bytes decimal numeral (optional) Allowable range: 1-9
<b>In</b>	Listing Name Not allowed for automation. 75 bytes text string (maximum of 75 bytes)  Can repeat up to 9 occurrences except only one instance is supported for Pointer records.  Optional.  See note 19 for allowable characters.
<b>cnt9</b>	Count of number of Destination Telephone Blocks (tel through uts) Not allowed for automation. When the CRC message is sent for a Pointer record (which means the TMPLTPTR tag was sent by the Resp Org), the CNT9 tag must be set to a value of 1. 3 bytes decimal numeral (optional) Allowable range: 0-999
<b>tel</b>	Destination Telephone Number Not allowed for automation. 10 bytes text string Format is npanxxxxxx where nxxxxxx is alphanumeric Required if ac =N, otherwise optional.  If a toll-free NPA is entered in TEL tag, it must equal NUM tag value. For Pointer records, the TEL tag value must match the NUM tag value. Pointer records can only have one TEL value.

<b>Ins</b>	<p>Number of Terminating Lines (i.e., count of destination phone numbers)  <u>not allowed for automation</u></p> <p>4 bytes decimal numeral (maximum of 4 bytes)  allowable range is 1 to 9999</p> <p>Value of 9999 will maximizes when regional network management controls are activated.</p> <p>To set a higher value than 9999 for a particular Dial#, the Resp Org needs to contact the Help Desk and request a Threshold Level Class Assignment (TLC) for the Dial#(s).</p> <p>Required if ac=N, otherwise optional.</p> <p>The LNS value on a Pointer record overrides the LNS value on a Template record at the newer SCPs that support the Template Feature according to <b>TM-STS-000798</b> issue 22 or higher document issue/version number.</p> <p>When a Resp Org converts a regular CR to a Pointer CR, if the source regular CR doesn't contain the Dial# in the Destination field (TEL tag), then SMS/800 will set the LNS value to 9999 and will set the Destination field (TEL tag) to the value of the CR's Dial# (NUM tag).</p>
<b>city</b>	<p>City</p> <p>Not allowed for automation</p> <p>16 bytes text string (optional)</p> <p>Maximum of 16 characters consisting of alphas, blanks, dashes, periods, and single quotes</p> <p>The value indicates where the Destination Telephone Number terminates.</p>
<b>fso</b>	<p>Foreign Serving Office</p> <p>not allowed for automation</p> <p>6 bytes decimal numeral (optional)</p> <p>format is NPANXX</p> <p>central office that terminates the service line if different from the LSO</p>
<b>hml</b>	<p>Multiline Hunt Group</p> <p>not allowed for automation</p> <p>4 bytes decimal numeral (optional)</p> <p>maximum of 4 bytes</p> <p>this is a code to identify a specific software arrangement of customer lines.  used to investigate maintenance problems.</p>

<b>Isis</b>	Lead SIS not allowed for automation 4 bytes decimal numeral (optional) this is the first number in the sequence of a customer service group for the number entered in the tel field
<b>Iso</b>	Local Serving Office not allowed for automation 6 bytes decimal numeral format is NPANXX required if tel entry is a POTS #
<b>sfg</b>	Simulated Facility Group not allowed for automation 5 bytes text string (optional) allowable range is 3-5 bytes used to investigate billing and maintenance problems
<b>stn</b>	Screening Telephone Number not allowed for automation 7 bytes decimal numeral (optional) format is NXXXXXX number recorded on terminating AMA tape can be used for billing inquiries
<b>uts</b>	Jurisdictional Billing Indicator not allowed for automation 3 bytes text string (optional) 1st char: A,B,C,D,E,F or blank 2nd char: C,W or blank 3rd char: J,N or blank Entries are at the discretion of the entity that controls the customer record.

<b>dcsn</b>	<p>Delete CR and Spare Number if this CR was the Last CR</p> <p>Not allowed for automation.</p> <p>Pointer record1 byte identifier;</p> <p>Optional, yet conditionally required.</p> <p>Valid entries: Y or N.</p> <p>Y = Yes (delete the CR and SPARE the number if this was the last CR for the number).</p> <p>N = No (don't spare the number if this was the last CR for the number, yet do delete the CR; and if the Reserved Until Date has <u>not</u> yet been reached, return the Dial# to RESERVED status).</p> <p>Conditionally required scenario - DCSN=Y is required in the following scenario: When AC=X and this is the last CR and the Reserved Until Date has past. Sending DCSN=Y tells SMS/800 to delete the CR and return the Dial# to SPARE in this scenario, and this informs the Resp Org that the number will be spared in addition to deleting the CR.</p>
<b>node</b>	<p>Name of Decision or Action Node (i.e., name of a CPR column)</p> <p>Not allowed for automation.</p> <p>Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent)</p> <p>88 bytes text string (maximum); optional.</p> <p>First 6 bytes must be: <b>CNT10=</b> followed by the 3-byte numeric count of the number of nodes (i.e., # of CPR columns) contained within the message.</p> <p>The allowable range for the count is: 0-20. The nodes follow, separated by commas.</p> <p>Each node entry is 2 or 3 bytes alphabetic of the form XX or XXZ (optional), where</p> <p>XX designates decision criteria or action node and Z designates associated time zone</p> <p>(only time, date, and day nodes can have XXZ format)</p> <p>allowable values for XX are: TI (time), DT (date), DA (Day), LT (LATA), ST (state), AC (area code), NX (NX), SW (switch), PC (percent), CA (carrier), AN (announcement), TE (terminating telephone number), SD (six-digit), TD (ten-digit)</p> <p>and allowable values for Z are: see z parameter</p> <p>For example, if there are 3 nodes (NPA, Carrier and Tel#), then the Node field would look like: NODE="CNT10=3,AC,CA,TE"</p>
<b>cnt11</b>	Count of number of distinct call routing paths/branches (i.e., CPR rows)

not allowed for automation

not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent)

3 bytes decimal numeral; optional.

allowable range: 0-999 CPR rows per CPR Section

<b>vr.c</b>	<p>Values associated with Row and Column Entries not allowed for automation not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 279 bytes text string; optional. Each instance of the parameter V indicates a row. Rows are one text field. Each instance of vr.c indicates a decision criteria value associated with column c. Commas separate row and column entries.</p> <p>Each entry can be a: single value, or start-range - end-range (dash between values indicates range), where allowed or multiple values (where allowed) separated by plus sign (+), or label name (where allowed), or "OTHER", or no entry, indicated by: ,, (comma comma). No entry means that the decision criteria is not applicable for this path of the call routing logic.</p> <p>TI (Time) node values: Format is: hh:mmx-hh:mmx where x can be A (am) or P (pm) Time is standard time and default is Central time</p> <p>DT (Date) node values: mm/dd (no year should be entered) Range may be entered in the form: mm/dd-mm/dd Multiple values can be specified using "+" (plus sign) as delimiters</p>
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DA (Day-of-Week) node values:

SU = Sunday

M = Monday

TU = Tuesday

W = Wednesday

TH = Thursday

F = Friday

SA = Saturday

Range may be entered, such as: SU-TU

Single value may also be entered, such as: TH

Multiple values may be entered (e.g., multiple single values, multiple ranges, or ranges combined with single values).

Multiple value entries can be specified using "+" (plus sign) as delimiters

LT (LATA) node values:

LT values must be numeric

More than one LATA can be entered with "+" (plus sign) as delimiters

Maximum of three LT values allowed

ST (State) node values:

More than one state code can be entered with "+" (plus sign) as delimiters

Maximum of four ST values allowed

AC (Area Code) node values:

AC values must be numeric

More than one Area Code can be entered with "+" (plus sign) as delimiters

Maximum of three AC values allowed

NXX (NX) node values:

Format is: nxx (numeric values only)

More than one NXX can be entered with "+" (plus sign) as delimiters

Maximum of three NXX values allowed

**SW (Switch) node values:**

ON or OFF. A maximum of one Switch value is allowed.

A numeric suffix should be used if needed. Valid entries on input are:

ONn, where n=0-9, ON n, and OFFn. "n" is used to designate each of the n branches that are derived from the same previous criteria.

A common suffix can link branches for SMS.

**PC (Percent Allocation) node values:**

allowable integer values are 1-99

An alphabetic suffix should be used if needed to link two branches derived from the same percent criteria.

**CA (Carrier) node values:**

valid entries are: ACNA, CIC, ACNA-CIC, ACNACIC (i.e., no space between ACNA and CIC)

Must be previously defined in the basic administrative portion of the customer record (CAD).

A maximum of one Carrier value is allowed.

**AN (Announcement) node values:**

OBA = Out of Band Announcement

VCA = Vacant Code Announcement

Aids in controlling announcement that should be returned to caller if caller is within the Area-of-Service but the call should not terminate. A CPR path cannot contain a populated AN and PC node.

**TE (Terminating Telephone Number) node values:**

Format is: npanxxxxx. Only alphanumeric values.

Must be previously defined in the basic administrative portion of the customer record (CAD)

**SD (Six-digit) node values:**

Format is: npanxx (numeric values only)

More than one entry can be entered with "+" (plus sign) as delimiters

**TD (Ten-Digit) node values:**

Format is: npanxxxxxx. Only alphanumeric values.

<b>pec</b>	<p>Primary InterLATA Carrier</p> <p>Not allowed for automation</p> <p>Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent).</p> <p>4 bytes text string (optional)</p> <p>Format is 3-letter Access Customer Name Abbreviation (ACNA) or 4-digit CIC.</p> <p>Entered carrier must have been previously defined on the associated basic customer record administration portion of the record.</p> <p>OTX can be used to indicate any client company or independent telco providing interLATA business services within their network</p> <p>This field is required only if the call is interLATA, which includes turnaround calls</p> <p>This field is not required if the call is intraLATA</p>
<b>pac</b>	<p>Primary IntraLATA Carrier</p> <p>Not allowed for automation</p> <p>Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent)</p> <p>4 bytes text string (optional)</p> <p>Format same as pec above</p> <p>Entered carrier must have been previously defined on the CAD-basic part of the customer record</p> <p>This field is required if the call is intraLATA only or interLATA, however, this field is not required if the call is turnaround</p>
<b>z</b>	<p>Time Zone</p> <p>not allowed for automation</p> <p>1 byte identifier (optional)</p> <p>allowable values are: A (Atlantic), B (Bering), C (Central), E (Eastern), H (Hawaiian-Aleutian), M (Mountain), N (Newfoundland), P (Pacific), or Y (Alaska)</p> <p>default value: C</p> <p>time zone indicator for entire call processing portion of the record or for specific value of node</p>

<b>ds</b>	Daylight Savings Not allowed for automation 1 byte identifier (optional) allowable values are: Y (Yes), or N (No) default value: Y
<b>cnt12</b>	Count of Number of Labels Not allowed for automation Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 3 bytes decimal numeral (optional) allowable range is: 0-999
<b>type</b>	Type of CPR LAD label Applicable to customer record Not allowed for automation Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 2 bytes identifier (optional) Allowable values are: AC (Area Code), LT (LATA), DT (Date), ST (State), NX (NXX), TI (Time), SD (Six-Digit), TD (Ten-Digit), TE (Telephone Number)
<b>lbl</b>	Label name Not allowed for automation Not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent) 8 bytes text string (optional) Field length 2-8 characters, first character must be * (asterisk) Cannot contain blanks or special symbols other than the start * label name Must be unique for given LAD type

<b>sort</b>	<p>Sort indicator</p> <p>not allowed for automation</p> <p>not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent).</p> <p>1 byte identifier (optional)</p> <p>allowable values: Y (yes) or N (no)</p> <p>Default Value: N</p> <p>The LAD label names that contain a value of Y will be sorted in the order that they are entered in the message. Sorting can only be done if TYPE=AC,LT,ST,NX,SD, or TD. See note 43 for more information.</p>
<b>def</b>	<p>Values associated with label name specified</p> <p>not allowed for automation</p> <p>not allowed with Pointer record (i.e., not allowed if TMPLTPTR is sent)</p> <p>1 byte identifier (optional)</p> <p>maximum of 3579 bytes</p> <p>First 6 bytes defined as: CNT13=, followed by the 3 byte count of number of subsequent values.</p> <p>The allowable range of the count is <a href="#">1-255</a>, except 1-256 for NXXs (see below).</p> <p>Subsequent fields are populated with values of one of the following entry types. Only one value can be specified for Telephone Number LAD labels. Exact formats are as defined in the vr.c parameter. Values are separated by commas. No embedded blanks are allowed.</p> <p>The maximum number of values that can be associated with a label is 255, except for when NXX labels are specified, in which case the maximum number is 256 to allow for the specification of the associated NPA as indicated below.</p> <ul style="list-style-type: none"> <li>• Area Codes: 3 bytes</li> <li>• NXXs: 3 bytes, values separated by commas. The first value is the associated NPA</li> <li>• LATAs: 3 bytes</li> <li>• States: 2 bytes</li> <li>• 6-digit numbers: 6 bytes</li> <li>• 10-digit numbers: 10 bytes</li> <li>• Dates: 5 or 11 bytes (mm/dd or mm/dd-mm/dd or mm/dd+mm/dd) Times: 13 bytes (hh:mmx-hh:mmx where x is A (am) or P (pm) )</li> <li>• Telephone number: 10 bytes</li> </ul>

## NOTES FOR REQ-CRC

1. **Permission for CRs:** The RESP ORG that reserved a number can create customer record (CR) administrative data for that number.
  - a. CR administrative data can be created for a **regular CR** or a ***Pointer record***.
  - b. Additionally, an OS will be able to create a new record (ac=N) for any RESP ORG that it has update capability, meaning the REQ-CRC message includes a Resp Org that is on the GSA screen for the Logon ID that sent the REQ-CRC message, **provided that Resp Org matches the number administration control Resp Org.**
  - c. CR administrative data for a regular CR and *Pointer record* can be modified/updated (ac=C) by any OS having update permission for the RESP ORG of the record as long as the Resp Org of the CR is on the GSA screen for the Logon ID that sent the REQ-CRC message.
2. A customer record can only be deleted (ac=X) if it has a future effective date/time. Furthermore, for ac=X, the **ed** and **et** fields must match what is stored in SMS; use of **ed=NOW** will result in an error.
3. Entire CR can be transferred; however, a transfer CR can only be performed to the same number (that is, the source Dial# must be the same as the target Dial#). Transferring only part of a CR (e.g., only the CPR component) is not supported in MGI. Changes to a future updateable record and its effective date can be made simultaneously via **ac=T**.
4. Any records with status of saved, pending, invalid, must check, failed, or hold may be transferred. Records with status of sending, active, old or disconnect cannot be transferred.
5. The following parameters are required when creating the first instance of the customer record:
 

**id ro**  
**ac=N**  
**num**  
**ed**  
 at least one area of service: **albl**, **aac**, **alat**, **anet** or **asta**  
 at least one carrier, intraLATA (**iac**) or interLATA (**iec**)  
**ln**  
**so** or **sf**  
**tel**  
 for each : **lns**, **lso** (if **tel=POTS#**)
6. N/A
7. N/A
8. If **city**, **lns**, **isis**, **lso**, **fso**, **stn**, **sfg**, **uts** and/or **hml** are populated, there must be a corresponding entry in **tel**.



## 9. N/A

10. If **ac=C, D or T** and administrative data is changing, only the changed parameters must be specified, with the exception of fields in the Destination Telephone Block (**tel** through **uts**). If there is more than one terminating telephone number, and any data in any block is changing, all data must be resent.
11. If **ac=C** or **T**, the **ed** and **et** parameters will be the new (target) effective date and time (required for transfer and optional for change). The existing effective date and time of the source record is specified in the **sefd** field (source effective date and time field). A record can be transferred forward up to an industry-set time period (providing no future records exist), or backward only as far as the effective date and time on the previous record. A record cannot be transferred backward to a date/time prior to **NOW**. A record with a future effective date and time can be changed without changing the effective date and time, or can be changed to a new effective date and time.
12. If **et** is not entered when **ac=N, C, T or D**, SMS/800 will assign an effective time from a range of times when SMS/800 has a lighter workload. The response message, RSP-CRC, will contain the time SMS/800 selected. Use of this capability is encouraged to distribute the workload evenly.
13. If **ed** is not entered when **ac=C**, SMS/800 will assume that the customer record is not to be copied to a new date and time, but that any changes are to be applied to the existing customer record with the effective date and time specified in the **sefd** field. SEFD field is required in this case. If only the **sefd** parameter is present when **ac=C**, SMS will update the record instance as specified by the sefd parameter; this is an update-in-place (also referred to as a *change-in-place*). In a change-in-place scenario, the system will change an existing future record (must be a future record in status of Pending, Must Check, Invalid or Saved) without creating a new version of the record.

14. The following rules apply to disconnect activity: Use **ac = D**, to create record with DISCONNECT status, either pending or immediate (**ed = NOW**), or change data (e.g., **eint**) associated with a record with DISCONNECT status.
  - a. When creating a Disconnect CR with Referral on, set “refer” tag to “Y” and set CNT10 to the count of CPR columns and set CNT12 to the count of LAD Labels.
  - b. The system will allow you to retrieve (via REQ-CRV) the CPR/LAD data for a Disconnect CR only if Referral is on [i.e., “refer” tag is set to “Y”] and CNT10 and CNT12 are greater than zero.
  - c. Conversely, the system will not allow you to retrieve the CPR/LAD data for a Disconnect CR with Referral off [i.e., “refer” tag set to “N”].
  - d. Although RSP-CRV will not show any CPR or LAD data for Disconnect CRs with Referral=N, restoring service with ac=C will copy any existing CPR or LAD information forward to the restored CR.
  - e. Use **ac = T** to transfer a “pending” Disconnect record.
  - f. If the latest record has a status of DISCONNECT or PENDING for Disconnection, and **ac = C** is used, SMS assumes that the service is to be restored, and will end the disconnect period by treating the request as a special case of **ac = N**, copying the appropriate information from the disconnected record. In this way, the service can be reactivated without any loss of service.
  - g. Similarly, if the number is to be reused for another customer, it would be more appropriate to use **ac=N**, although in this case, you need to use the Control Resp Org ID on the CR.
15. Area-of-Service (AOS) labels will be supported over the interface; however, the specified AOS label must be an existing label that belongs to the same Entity as the customer record or Pointer record. The OS will not have the ability to create or modify a label over the interface using the REQ-CRC command.
16. N/A
17. If call sampling is to be scheduled on a customer record, the default **rao** and **abn** cannot be used. Values for these fields must be input.
18. The **refer** parameter is required for disconnects with a value of 'Y' or 'N'.

19. The **la**, **ln**, **notes**, and **ncon** fields accept the following graphic characters (in addition to the alphanumerics, A-Z and 0-9): See the following list.

<sp>	HEX CODE 20
#	HEX CODE 23
\$	HEX CODE 24
%	HEX CODE 25
&	HEX CODE 26
(	HEX CODE 28
)	HEX CODE 29
*	HEX CODE 2A
+	HEX CODE 2B
,	HEX CODE 2C
-	HEX CODE 2D
.	HEX CODE 2E
/	HEX CODE 2F
:	HEX CODE 3A
;	HEX CODE 3B
@	HEX CODE 40
!	HEX CODE 21
' (apostrophe, right single quote)	HEX CODE 27
' (left single quote)	HEX CODE 60
>	HEX CODE 3E
<	HEX CODE 3C
=	HEX CODE 3D
?	HEX CODE 3F
[	HEX CODE 5B
]	HEX CODE 5D
{	HEX CODE 7B
}	HEX CODE 7D
\	HEX CODE 5C
-	HEX CODE 5F

**Figure 7-1.** UAL Message Header: ASCII Character Subset

20. Effective Date **ed** and Effective Time **et** will be optional fields in the case that only one record exists for **ac=C**. For **ac=N**, **ed** is required. For **ac=T**, **sefd** will be required if more than one record exists.
21. CPR LAD Labels will be supported for the following criteria:
  - Time
  - Date
  - LATA
  - State
  - Area Code
  - NNX
  - Six-Digit Number
  - Ten-Digit Number
  - Telephone Number
22. CPR LAD labels cannot be defined for Day, Carrier, Percent, or Switch criteria.
23. The GO TO decision node will not be supported since it is an aid to SMS/800 on-line data entry. GO TO is also used infrequently today.
24. If a user wishes to make a change to CAD data, only CAD data needs to be sent. That is, CPR or LAD data need not be sent since existing CPR/LAD data would be copied from the existing SMS record. Similarly, if CPR data is changing, CAD and LAD data need not be sent. Similarly, if LAD data is changing, CAD and CPR data need not be transmitted. If CAD data is sent, only those fields that are changing need be sent. If CPR and/or LAD data is sent, the entire CPR and/or LAD must be sent.
25. To change customer record data other than the ED and ET, Action=C (change) should be used. SMS will replace the old data with the new data. If a user wishes to change the ED and/or ET, Action=T (transfer) should be used. Entire records can be transferred; however, they can only be transferred to the same number. When a transfer is initiated, customer record data can be changed simultaneously.
26. If Action = R (resend), SMS will select the most recent customer record instance that has a status of active, disconnect, sending, or failed, and resend that record instance to all the SCPs in the area of service. This assumes there is no active record following the record instance. A failed record will only be resent to an SCP if the cause of the failure was rejection at that SCP. This same logic applies to basic as well as complex customer records.
27. If a user first creates a basic customer record using REQ-CRA, and later wishes to create a CPR or CPR and LAD, the user would launch a REQ-CRC message with Action=C to modify the CAD for complex data and add CPR data (or CPR and LAD data).

28. If a user wishes to change CPR and/or LAD data only, the REQ-CRC message with Action=C would be sent. REQ-CRC would consist of all required data, along with only the complete CPR and/or LAD portion of the message. SMS/800, when processing, should replace the old CPR data with the new CPR data, and carry forward CAD data (LAD data may or may not exist). Changes to CPR and/or LAD data can only be accommodated by transmitting the entire set of CPR and/or LAD data.

Note also that companies who will have entered their records using the copy CPR function over the load tape, may wish to modify their call routing. An example of such a modification is replacing one carrier to transport in a LATA with another. Action=C in the REQ-CRC message would essentially satisfy this requirement, since companies could simply replace one CPR for another. This is somewhat different than a straight *copy* function (available on-line) which is not supported via MGI (see note 31).

29. SMS/800 allows an existing record to replace itself by being transferred to NOW providing:

- The customer record status of the record being transferred is FAILED, SAVED, INVALID, MUST CHECK, PENDING, or HOLD.
- The **sefd** of the source record being transferred is equal to the current 15-minute window.
- **ac=T**.
- **ed=NOW**.

The same record can be transferred to "NOW" multiple times within the current 15-minute window as long as it doesn't go ACTIVE, SENDING, or DISCONNECT.

30. To add a label to a LAD or to add a type to a LAD, a user should launch a REQ-CRC message with Action=C. The new, as well as the existing, LAD data should be included in the message, will replace the old LAD data, and the CAD and CPR data will be copied from the existing record.
31. SMS/800 MGI doesn't support copying a CR to a different Dial#. To copy a record to a different number with a different ED/ET, the OS needs perform the copy within their own system prior to launching any such request over the interface.

32. The copy or copy and change using **ed=NOW** is enhanced to assign the following 15-minute window when there is an existing record in the current 15-minute window and ALL of the following conditions are met:
  - The customer record status of the existing record (specified by **sefd**) in the current 15-minute window is ACTIVE, SENDING or DISCONNECT. **Sefd** must be used (refer to note 29).
  - There is no record in the next 15-minute window.
  - There is no existing record between the next 15-minute window and the effective date/time of the record being copied.
  - **ac=C, N, D, or T.**
33. To delete a CAD associated with a complex record is not allowed. This would essentially mean that the customer record should be removed from the SMS customer record database. The ability to save (i.e., save only a CPR and/or LAD without a CAD) is not supported.
34. **CPR sections and subsections** are not supported via MGI because CPR sections and subsections they are vehicle for on-line data entry.  
To clarify: MGI only supports one CPR Section (i.e., one Main Section), and therefore, MGI does not support any CPR Subsections.
35. To change only the RESP ORG, users need only send in the following tags-values: **id, ro, ac, num, ed, and newro.**
36. To delete a CPR from a record, **CNT10** should be set to zero (0). To delete a LAD from a record, **CNT12** should be set to zero (0). If any part of a CPR is changing, the entire CPR must be transmitted.

37. Sample REQ-CRC Input Subset to primarily illustrate how CPR data can be specified:

```
REQ-CRC:,1992-04-25,10-43-59-CST::::ID=ZYXW3010,RO=ZYXW3,AC=C,
NUM="8887221222",ED="12/12/92",ET="12:15A/E":
```

```
IEC="CNT1=2,CAR,XXX":
```

```
NODE="CNT10=4,DAC,TIC,CA,TE":
CNT11=4:
V="M-F,09:00A-05:00P,0333,9086992392":
V="M-F,OTHER,,2012322222":
V="SA,,,4154456294":
V="SU,,0999,8887221222";
```

38. N/A

39. If ac=C, D or T and administrative data is changing, only the changed parameters must be specified, with the exception of fields in the Destination Telephone Block (tel through uts). If there is more than one terminating telephone number, and any data in any block is changing, all data must be resent. If ac=C or T, the ed and et parameters will be the new (target) effective date and time (required for transfer and optional for change). The existing effective date and time of the source record is specified in the sefd field (source effective date and time field). A record can be transferred forward up to an industry-set time period (providing no future records exist), or backward only as far as the effective date and time on the previous record. A record cannot be transferred backward to a date/time prior to NOW. A record with a future effective date and time can be changed without changing the effective date and time, or can be changed to a new effective date and time. If et is not entered when ac=N, C, T or D, SMS/800 will assign an effective time from a range of times when SMS/800 has a lighter workload. The response message, RSP- CRC, will contain the time SMS/800 selected. Use of this capability is encouraged to distribute the workload evenly. If ed is not entered when ac=C, SMS/800 will assume that the customer record is not to be copied to a new date and time, but that any changes are to be applied to the existing customer record with the effective date and time specified in the sefd field. SEFD field is required in this case. If only the sefd parameter is present when ac=C, SMS will update the record instance as specified by the sefd parameter; this is an update-in-place (also referred to as a change-in-place). In a change-in-place scenario, the system will change an existing future record (must be a future record in status of Pending, Must Check, Invalid or Saved) without creating a new version of the record. For information on NOW processing, refer to notes 29 and 32.

40. Duplicate records and RCC records are not supported in SMS/800.
41. Records with an **rao** of 999 cannot contain a CPR.
42. Records partially saved via on-line and then changed via MGI may result in errors related to optional parameters.
43. If a Resp Org Change is made on a record that is followed by future records, and the record is updated, all future records with a status of Pending will be changed to MUST CHECK. Future records with a status other than Pending will not be changed to MUST CHECK.
44. To sort LAD label entries, users may enter the SORT tag. The new tag is optional, however, if entered, it must have a value of 'Y' or 'N'. It can only be entered if the Action Code is NOT Delete or Resend. The LAD label name blocks that contain the SORT tag will be sorted in the order in which they are entered. Sorting can only be performed on the following LAD label types: Area Code, LATA, State, NXX, Six-Digit, or Ten-Digit. Contact the Help Desk for the maximum number of labels that can be sorted across all LAD types.
45. For automation requests, the only allowed tags are those specified in the message format above (**ac=D** with the **qt** tag present). The allowed tags for automation are: **id**, **ro**, **ac**, **qt**, **numl**, **ed**, **et**, **refer**, **eint**, and **notes**. The presence of other customer record tags will force a DENIED,01 response.  
The **ed** and **et** parameters will specify the scheduling start effective date/time for disconnecting the numbers. The effective date/time of the disconnect customer records will begin with the **ed/et** value and may be scheduled over the following quarter hours. The request may contain just the **ed** parameter, when **ed=NOW**. When creating a Disconnect record for a customer record containing CPR/LAD data, the CPR/LAD data will be copied.

46. Pointer record create/modify: REQ-CRC can be used to create and modify Pointer records. The tmpltprt tag is used for Pointer records, and if it is present, none of the other routing parameters may be entered. If an REQ-CRC message contains tmpltprt tag to update an existing regular record, then the routing fields, including CPR and LAD data, will be removed from the regular record and the record will be converted to a Pointer record that will use the Template record identified in the tmpltprt tag for its routing data (including CPR and LAD data). Pointer record

47. Pointer record's referenced Template: The Entity of the Pointer record must be the same as the Entity of the Template record. The presence of the tmpltprt tag indicates to the system that the message is for a Pointer record (e.g., to create a Pointer record, or update a Pointer record, or copy a Pointer record, or transfer a Pointer record, or disconnect a Pointer record, or convert to a Pointer record, etc.).

48. Pointer record Resp Org Change: REQ-CRC can be used to perform a Resp Org Change on a Pointer record but only as a "NOW" record Effective Date. If the newro tag is used, the effective date must be set to "NOW" (ED=NOW). The tmpltprt tag can be used with the newro tag. When the Resp Org Change is done, if the Template Name that is on the customer record does not belong to the new Entity of the customer record, then the customer record will be converted, by the system, to a regular record using the routing information of the original Template record.

An example of submitting a Resp Org change request on a Dial# via a Pointer REQ-CRC MGI message is provided below.

```
REQ-CRC;%%DATE%%,% %%TIME%%:::ID=BRTD0010,  
RO=BRX01,AC=C,NUM="8001002772",ED="NOW",NEWRO=BRZ99,  
SEFD="03/10/1109:15A/C";
```

If a Resp Org change on a Dial# was within the same Entity Code (Entity ID) as the source record, then the target record(s) will also be a Pointer CR(s) that uses the same Template Name as the source Pointer CR.

```
RSP-CRC:,2011-03-21,17-16-18-CST:::COMPLD,00::ID=BRTD0010,RO=BRX01,  
NUM="8001002772",ED="03/21/11",ET="05:15P/C";
```

However, if a Resp Org change on a Dial# was to a different Entity Code (Entity ID), then Pointer CRs for this Dial# will be converted by SMS/800 to regular CRs, and the response message in this scenario may look similar to the following example:

```
RSP-CRC:,2011-03-21,17-37-27-CST:::COMPLD,11::ID=BRTD0006,RO=BRU01,  
NUM="8001002776",ED="03/21/11",ET="05:30P/C":CNTA=01:ERR1=7742,  
VERR="POINTER CONVERTED TO REGULAR";
```

**49. Resp Org Change cannot be performed on Template records.**

**50. Regular record Resp Org Change:** REQ-CRC can be used to perform a Resp Org Change on a *regular* record but only with an Effective Date set to “NOW” or set to the current quarter hour. The reason for this change is because today Resp Org Changes occur immediately, and this change enforces an existing rule and makes the rule clear. If the **newro** tag is used, the effective date must be set to “NOW” (ED=NOW).

An example of submitting a Resp Org change request on a Dial# via a regular REQ-CRC MGI message is provided below.

```
REQ-CRC;%%%DATE%%%,%%%TIME%%%:::::ID=BRTD0010,  
RO=BRX01,AC=C,NUM="8001002782",ED="NOW",NEWRO=BRZ99,  
SEFD="03/10/1109:15A/C";
```

```
RSP-CRC:,2011-03-21,17-16-18-CST:::COMPLD,00::ID=BRTD0010,RO=BRX01,  
NUM="8001002782",ED="03/21/11",ET="05:15P/C";
```

## 7.2.4 Response to Update Complex Record [RSP-CRC]

### RESPONSE TO UPDATE COMPLEX RECORD [RSP-CRC] CUSTOMER RECORD ADMINISTRATION

This message is the response to the command REQ-CRC. This response message has the capability to return a variety of error conditions, since REQ-CRC supports multiple purposes. It is possible to receive a success, failure, or warning. If the command was successfully processed, the response will contain **COMPLD** in the **term\_rept** field, **00** in the **error\_cd** field, and **err** will not be present. For failed updates, the response will contain **DENIED** in the **term\_rept** field, **01** in the **error\_cd** field, and one or more instances of **err**. Failed updates that do not pass SMS syntax checks on individual fields will not be stored in SMS; however, failed updates that pass the syntax checks but fail SMS validation checks will be stored in SMS with a status of INVALID. The latter can be corrected by using action code of 'C' or 'T' with information necessary for correction.

For warnings, the response will contain **COMPLD** in the **term\_rept** field, and **11** in the **error\_cd** field. If future records exist following a Resp Org Change, the response message will include warning message 9000.

#### Automation:

A separate set of response formats support the automation requests. The automation response format depends on how the command REQ-CRC was processed.

For Automation: A response containing **COMPLD** in the **term\_rept** field and **00** in the **error\_cd** field will be returned when all dial numbers are processed successfully, with no warnings and no errors. The **qt** will contain the quantity of numbers successfully processed, and **numl** will contain the list of dialed numbers successfully processed.

For Automation: A response containing **COMPLD** in the **term\_rept** field and **10** in the **error\_cd** field will be returned when one or more dial numbers resulted in an error yet one or more other dial numbers were processed successfully with or without any warning(s). The **qt** will contain the quantity and **numl** will contain the list of dialed numbers successfully processed without warning and errors. There will be one or more instances of **errv** for the error(s). In addition, **errv1** may exist if there are any warning(s).

For Automation: A response containing **COMPLD** in the **term\_rept** field and **11** in the **error\_cd** field will be returned when at least one dial number is processed successfully and one or more numbers resulted in a warning(s) yet no errors were found. The **qt** will contain the quantity and **numl** will contain the list of dialed numbers successfully processed. There will be one or more instances of **errv1** for the warning(s).

For Automation: A response containing **DENIED** in the **term\_rept** field and **01** in the **error\_cd** field will be returned when the entire request message fails or every dial number fails to process resulting in error(s). The **qt** and **numl** will not be returned. There will be one or more instances of **errv** for the error(s).

Responses to automation requests are returned only when all processing has completed.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-CRC
Route ID	RXU

#### *MESSAGE FORMAT*

— **For single Dial Number (non-automation) requests:**

- **Successful Update Response:**

RSP-CRC:,date,time:::COMPLD,00::ID=id,RO=ro,NUM=num,  
ED=ed,ET=et,HCRUR=hcrur,CREN=cren;

*Example of a Success Response message:*

RSP-CRC:,2003-10-16,13-49-22-CST:::COMPLD,00::ID=XXXXXX101,  
RO=XXXX1,NUM="8001231111",ED="10/16/03",ET="01:45P/C",  
HCRUR=009,CREN=XA;

- **Failed Update Response (No Record Stored in SMS):**

RSP-CRC:,date,time:::DENIED,01::ID=id,RO=ro,NUM=num,  
ED=ed,ET=et,HCRUR=herur,CREN=cren:CNT=cnt:ERR=err,VERR=verr;

*Example of a Response for Unsuccessful Request message with errors:*

RSP-CRC:,2003-10-16,13-49-22-CST:::DENIED,01::ID=XXXXXX101,  
RO=XXXX1,NUM="8001231112",ED="10/16/03",ET="01:45P/C",  
HCRUR=000,CREN=XB:CNT=01:ERR=7561;

*Example of a Response for Unsuccessful Request message with errors:*

RSP-CRC:,2003-10-16,13-49-22-CST:::DENIED,01::ID=XXXXXX101,  
RO=XXXX1,NUM="8001231112",ED="10/16/03",ET="01:45P/C":  
CNT=01:ERR=0103,VERR="# OWNED BY \$\$\$\$";

- **Failed Update Response (Record Stored in SMS):**

RSP-CRC:,date,time:::DENIED,10::ID=id,RO=ro,NUM=num,  
ED=ed,ET=et,HCRUR=herur,CREN=cren:CNT=cnt:ERR=err,VERR=verr;

- **Update with Warning Response:**

RSP-CRC:,date,time:::COMPLD,11::ID=id,RO=ro,NUM=num,ED=ed,ET=et,  
HCRUR=hcrur,CREN=cren:CNTA=cnta:ERR1=err1,VERR=verr;

— For multiple DIAL # (Automation) Requests:

- Success Response

**RSP-CRC:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:NUML=numl;**

*Example of a Success Response message:*

RSP-CRC:,2003-03-25,17-49-22-CST:::COMPLD,00::ID=XXXXX101,  
RO=XXXX1:QT=00000011:NUML="8001231111,8001231112,8001231113,  
8001231114,8001231115,8001231116,8001231117,8001231118,8001231119,  
8001231120,8001231121";

- Success Response with Warnings

**RSP-CRC:,date,time:::COMPLD,10::ID=id,RO=ro:QT=qt:NUML=numl:  
WCNT=wcnt:ERRV1=errv1(1),ERRV1=errv1(2),...ERRV1=errv1(wcnt);**

*Example of a Success Response message with Warnings:*

RSP-CRC:,2003-03-25,17-49-22-CST:::COMPLD,10::ID=XXXXX101,  
RO=XXXX1:QT=00000007:NUML="8001231111,8001231112,8001231113,  
8001231114,8001231115,8001231116,8001231117":WCNT=00000003:ERRV1  
="9007,1,8001231118",ERRV1="9008,1,8001231119",ERRV1=  
"9010,1,8001231110";

- **Response for Partially Successful Request with Errors and/or Warnings**

**RSP-CRC:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:NUML=numl:  
WCNT=wcnt:ERRV1=errv1(1),ERRV1=errv1(2),...ERRV1=errv1(wcnt):  
ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),...ERRV=errv(ecnt);**

*Example of a Response for Partially Successful Request message with Errors and/or Warnings:*

RSP-CRC:,2003-03-25,17-49-22-CST:::COMPLD,11::ID=XXXXX101,  
RO=XXXX1:QT=00000004:NUML="8001231111,8001231112,8001231113,  
8001231114":WCNT=00000003:ERRV1="9007,1,8001231115",  
ERRV1="9008,1,8001231116",ERRV1="9010,1,8001231117":  
ECNT=00000002:ERRV="5636,1,8001231119",ERRV="5637,1,8001231110";

- **Response for Unsuccessful Request**

**RSP-CRC:,date,time:::DENIED,01::ID=id,RO=ro:ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),...ERRV=errv(ecnt);**

*Example of a Response for Unsuccessful Request message with Errors:*

RSP-CRC:,2003-03-25,17-49-22-CST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1:ECNT=00000002:ERRV="0108,0,ET TAG INVALID WITH  
ED=NOW",ERRV="1026,0,INVALID EINT";

*Example of a Response for Unsuccessful Request message with Errors:*

RSP-CRC:,2003-03-25,17-49-22-EST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1:ECNT=00000002:ERRV="5637,1,8001231001",ERRV="0130,1,8  
001231002";

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 4
<b>term_rept</b>	<p>Termination Report Code            6 byte identifier            COMPLD - Update Request Accepted            DENIED - Update Request Failed</p>
<b>error_cd</b>	<p>Error Code            2 bytes decimal numeral</p>

**For single number processing**

- 00 - No Error
- 01 - Error Present: No record stored in SMS (See err field)
- 10 - Error Present: Record stored in SMS (See err field)
- 11 - Warning (See err field)

**For automation processing**

- 00 - all dial numbers were processed successfully, with no warning and no errors.
- 10 - all dial numbers were processed successfully, but there was at least one warning found, and no errors.
- 11 - at least one dial number was processed successfully, there was at least one error found, and possibly warnings found.
- 01 - no dial numbers were processed successfully. Errors were found, either in the request message or for every dial number.

<b>id</b>	<p>Logon Id            8 bytes identifier            identifies sender of message</p>
<b>ro</b>	<p>Resp Org            5 bytes identifier            responsible organization for this message</p>

<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string format is npanxxxxxx where npanxxxxxx=dialed number Two blank spaces are allowed.
<b>qt</b>	Quantity of numbers successfully processed without warning and errors for COMPLD response for automation 8 bytes decimal numeral, fixed length Returned only on Automation requests
<b>numl</b>	The List of Dialed Telephone Number successfully processed without warnings and errors (for automation only) A list of 10 bytes text string entries, separated by commas format is npanxxxxxx where npanxxxxxx=dialed number (required)
<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 -12) dd : day (allowable range: 01-31) yy : year (e.g., 94)
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01-12) mm : minute (allowable values: 00,15,30,45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)

<b>hcrur</b>	Remaining number of high priority customer record updates 3 bytes decimal numeral (optional) The remaining number of high priority customer record updates allowed for the customer record's entity. This tag is only returned if <b>priority=H</b> was received in the request message and user has customer record update permission for that entity.
<b>cren</b>	Entity of customer record 2 bytes identifier (optional)  entity of the remaining high priority updates This tag is only returned if <b>priority=H</b> was received in the request message and user has customer record update permission for that entity.
<b>cnt</b>	Number of Error blocks for DENIED,01 or DENIED,10 response for single number processing 2 bytes decimal numeral Maximum value of 20

**err****Error Explanation**

4 bytes decimal numeral (optional- for single number only)

there can be multiple errors

0001 - MML message format error. Needs , : \; symbols in proper location.

0002 - Message syntax: too many parameters

0003 - Unrecognized tag name

0004 - Invalid parameter combination

For example, both TMPLTPTR and another routing tag(s) was sent to SMS/800. For a Pointer record, routing tags are not allowed because all routing data for a Pointer record is stored with the Template Name that the Pointer record references.

0005 - Syntax error

0006 - Required parameter missing

0007 - Required COUNT missing

0008 - Input data length exceeds maximum field size.

0009 - Need tag name. Cannot process data value without a tag name.

0010 - The # of entries in a CPR row (vr.c) does NOT match the # of CPR nodes. Make sure to use + (not comma) as delimiter if multiple values are included in a vr.c.

0011 - The COUNT and actual number of values do not match.

0012 - vr.c: Maximum of 3 values allowed for a LT (LATA), AC (Area Code), NX (NXX) node.

0013 - cnt8 (LN): Maximum of 9 LN values are supported for a regular CR except only one LN value is supported for a Pointer CR.

0014 - cnt3 (AOS - Label): Maximum of 16 allowed.

0015 - cnt1 (InterLATA Carrier), cnt2 (IntraLATA Carrier), cnt10 (CPR Nodes): Maximum of 20 allowed.

0016 - cnt6 (AOS-Network): Maximum of 23 allowed.

0017 - cnt4 (AOS-Area Code), cnt5 (AOS-LATA): Maximum of 34 allowed.

0018 - cnt7 (AOS-State): Maximum of 46 allowed.

0019 - cnt13 (LAD Definition): # of definitions must be 1-255. Use a new label or remove extras.

- 0020 - cnt9 (Tel#), cnt11 (CPR paths): Maximum of 999 allowed.
- 0021 - id (Logon ID): Required message sender's Logon ID missing.
- 0022 - ro (Resp Org): Required message sender's Resp Org missing.
- 0023 - ac (Action Code): Required Action Code missing.
- 0024 - num (dialed number): Required number missing.
- 0025 - cnt12 (CPR Label): Maximum of 999 allowed.
- 0026 - cnt8, cnt9, cnt11, cnt12: COUNT field must precede all repeating data values.
- 0027 - vr.c: Maximum of 4 values allowed for a ST (STATE) node.
- 0028 - node (CPR Node): CPR Node specifications are required if CPR rows are entered, vice versa.
- 0029 - Duplicate tags within a message are not allowed.
- 0030 - This text string contains a wrong COUNT tag. Proper combinations are:  
CNT1 for IEC, CNT2 for IAC, CNT3 for ALBL, CNT4 for AAC, CNT5 for ALAT,  
CNT6 for ANET, CNT7 for ASTA, CNT13 for DEF.
- 0031 - This tag-value pair must appear WITHIN its own data block.
- 0097 - Request message is ignored, since the message time stamp is earlier than the Last Update time of the record.
- 0098 - Invalid or missing date and/or time in application message.
- 0099 – Other
- 0100 - ac (Action Code): Must be N (new), C (change), D (disconnect), T (transfer), X (delete), or R (resend).
- 0101 - Permission denied. Logon ID must be an 8-alphanumeric logon id known to SMS.
- 0102 - Permission denied. The Resp Org does not belong to this Logon ID.
- 0103 - Permission denied. Your Logon ID cannot update this Resp Org's records.
- 0104 - Only HelpDesk can create the initial test customer record when Number status is UNAVAILABLE.

0106 - ed (Target Effective Date): Must be a calendar date (in 'mm/dd/yy' form).

Must be a date in the future but within the industry-set time period from current date, except for Resend action.

Can also be 'NOW' for New, Change, Disconnect, or Transfer action.

0108 - ed & et (Effective Date & Time): If Effective Date is 'NOW', Effective Time should NOT be used.

0130 - Cannot process request: Target record should be transferred.

0200 - To process 'New' action, you must specify a Target Effective Date.

0201 - Cannot process 'New' action, since Target record already exists.

0202 - To process 'New' action for an existing record, its previous record must be in DISCONNECT or PENDING disconnect status.

0203 - To process 'New' action, the sefd (Source Eff Date&Time), refer (Referral) and eint (End Intercept) should not be used.

0204 - Cannot process 'New' action because the Resp Org of this RESERVED, DISCONNECT or TRANSITIONAL number does not belong to your Logon ID.

Current RESP ORG must have update capabilities for the RESP ORG that reserved the number that is having a customer record created with Action Code = N

*See NOTES FOR REQ-CRC #1 and #14 for further details.*

0205 - Cannot process 'New' action, since number status is SPARE. If spare, reserve this number before issuing the 'New' action.

0206 - Cannot process 'New' action for SUSPEND number.

0207 - To process 'New' action, you must input at least one Tel#.

0208 - To process "New, Change, Disconnect, or Transfer" action, this message must have at least one Area of Service (albl, aac, alat, asta or anet) or TMPLTPTR

0209 - Cannot create new service (with AC=N or C), since other records exist beyond the Effective Date of the new service.

0300 - To process 'Change' action, you must have a record associated with this number.

0301 - Cannot process 'Change' action, since this number does not have a record that matches the Effective Date and Effective Time you specified.

0302 - To process 'Change' action, you must specify Source Effective Date and/or Time if more than 1 record exists for the specified number.

0303 - Cannot process 'Change' action, since other record exists between Source and Target.

0304 - Cannot process 'Change' action, since only 1 record exists for this 800# but the record is past due.

0305 - To process 'Change' action, refer (Referral) and eint (End Intercept) must not be used.

0306 - Cannot process 'Change' action, since you cannot copy or copy+change a new record backward.

0307 - Cannot process 'Change' action, since the Source and Target have the same Effective Date and Effective Time.

0308 - Cannot process 'Copy+Change' action, since Target record already exists.

0309 - To modify a PENDING non disconnect record, you must use the 'Change' action.

0310 - Cannot process request: Target record should be transferred.

0400 - To process "Disconnect" action, you must have a record associated with this number.

0401 - Cannot process 'Disconnect' action, since this number does not have a record that matches the Effective Date and Effective Time you specified.

0402 - To process 'Disconnect' action, you must specify Source Effective Date and Time if more than 1 record exists for the specified number.

0403 - Cannot process 'Disconnect' action, since other record exists between Source and Target.

0404 - Cannot process 'Disconnect' action, since only 1 record exists for this number but the record is past due.

0405 - To process 'Disconnect' action, refer (Referral) must be 'Y' or 'N'.

0406 - Cannot process 'Disconnect' action, since you cannot copy or copy+change a PENDING disconnect record backward.

0407 - Cannot process 'Disconnect' action, since Source and Target have the same Effective Date and Effective Time.

0409 - Cannot process 'Disconnect' action, since Target record already exists.

0410 - To modify a PENDING disconnect record, you must use 'Disconnect' action.

0420 To process 'Convert' action to a Pointer record (AC=C and TMPLTPTR sent), you must have a record associated with this Dial#. This error means no Customer Record exists in SMS/800 for this Toll Free number (Dial#). This error is also supported for MCP automation.

- 0500 - To process 'Transfer' action, you must have a record associated with this number.
- 0501 - Cannot process 'Transfer' action, since this number does not have a record that matches the Effective Date and Effective Time you specified.
- 0502 - Cannot process 'Transfer' action, since Target record already exists.
- 0503 - Cannot transfer an OLD, SENDING, ACTIVE, or DISCONNECT customer record.
- 0504 - Cannot process 'Transfer' action, since Source and Target have the same Effective Date and Effective Time.
- 0505 - To process 'Transfer' action, you must specify Source Effective Date and Time if more than one record exists for the specified number.
- 0506 - Cannot process 'Transfer' action, since other record exists between Source and Target.
- 0507 - To process 'Transfer' action, you must specify a Target Effective Date.
- 0510 - Cannot process 'Transfer'. Target record already exists and should be transferred.
- 0600 - Cannot process 'Delete' action, since the Target record does not exist.
- 0601 - Cannot process 'Delete' action, since the Target record is past due.
- 0602 - Only the record with the latest Effective Date and Effective Time can be deleted.
- 0603 - To process 'Delete' action, you must specify Target Date and Time.
- 0604 - To process 'Delete' action, you should not specify Source Date and Time.
- 0605 - For 'Delete' or 'Resend' action, the Effective Date cannot be 'NOW'
- 0700 - Cannot process 'Resend' action, since no record exists.
- 0701 - To process 'Resend' action, if no Target is specified, you must have an ACTIVE, SENDING, or DISCONNECT record for this number.
- 0702 - To process 'Resend' action, the specified Target record must be an ACTIVE, SENDING, DISCONNECT, or FAILED (rejected by all SCP) record.
- 0703 - Cannot process 'Resend' action, since a later SENDING record exists.
- 0704 - Cannot process "Resend" action, since no working records exist at any SCP for this ACTIVE or DISCONNECT record.

1000 - num (dialed #): Must be in 'NPANXXXXXX' format. NXX-XXXX can be numeric (0-9) or alpha (A-Z).

1001 - ed (Effective Date): Enter in 'mm/dd/yy' format. Must be a future calendar date within the industry-set time period from current date, except for Resend action.

1002 - et or sefd (Effective Time): Enter like '10:45A/C'. Use 'hh:mmA(orP)/z' form where A=Am (or P=Pm) and z is for Time Zone (e.g., C=central).

Minutes part must be in quarter hours (00, 15, 30, 45).

1005 - iac or pac (IntraLATA Carrier): Must be 3-alpha ACNA (like 'OTC') or 4-digit CIC (like '0110').

1006 - iec or pec (InterLATA Carrier): Must be 3-alpha ACNA (like 'ATX') or 4-digit CIC (like '0128').

1008 - iac or iec (Carrier): Entry is required in either the intraLATA tag or interLATA tag otherwise the TMPLTPTR tag must be sent.

1009 - pec or iec (InterLATA Carrier): 'OTC' cannot be an interLATA carrier.

1010 - pac or iac (IntraLATA Carrier): 'OTX' cannot be an intraLATA carrier.

1011 - abn (BILLTN): Must be in 'NPANXXXXXX' or 10-char misc # format.

1012 - rao & abn (RAO & BILLTN): If RAO=999, BILLTN must be 9999999999, and vice versa.

1013 - dau & li (DAU & Listing): DAU must be 'N' if Listing is 'NP' or 'BL'. DAU tag and LI tag are not applicable for Pointer records and will be ignored if sent for a Pointer record, yet if sent and the system doesn't recognize the value, then the system may return this error.

1014 - dat (DATYPE): Must be 'N', 'G', or 'F' or may be empty. DAT tag is not applicable for Pointer records and will be ignored if sent for a Pointer record, yet if sent and the system doesn't recognize the value, then the system may return this error.

1015 - dd (DD): Must be prior to or equal to the Effective Date. Cannot be blank.

1016 - tag: value entered: Must be 'Y' or 'N'. Cannot be blank. For instance, 'hdd' tag (Hold-DD field) supports valid values of 'Y' (yes put the CR in HOLD status) or 'N' (no). The 'dcsn' tag supports valid values of 'Y' or 'N'.

1017 - li & dat (Listing & DATYPE): Must be 'LI' when DATYPE is 'F'.

1018 - li (Listing): Must be 'LI', 'NP', or 'BL' or may be empty. LI tag is not applicable for Pointer records and will be ignored if sent for a Pointer record, yet if sent and the system doesn't recognize the value, then the system may return this error.

1019 - eint (End Intercept): End Intercept of 'NOW' is allowed only when the record's effective date is current date or 'NOW'.

1020 = RAO code is not known to SMS/800. Please enter an RAO code known to SMS/800 or you can omit sending the RAO tag because RAO is an optional tag.

1021 - rao (RAO) or abn (ABN): Cannot set RAO tag to 999 because this CR has CPR. Cannot set ABN tag (Billing Telephone number) to 9999999999 because this CR has CPR.

1022 - so (SO): Must be 4-13 alphanumerics. 1st char: Must be alpha.

2nd-12th char: Must be alphanumerics. 13th char: Must be alpha.

1023 - sf (SF): Must be 1-6 alphanumerics.

1024 - so & sf: Either SO or SF entry is required.

1025 - refer (Referral): Must be 'Y' or 'N'.

1026 - eint (End Intercept): Must be a calendar date in 'mm/dd/yy' format.

1027 - eint (End Intercept): Date must be within industry-set time frame from the original disconnect effective date. It cannot be earlier than the Eff Date of this disconnect record.

1028 - agent (Agent): Must be 5 alphanumerics.

1029 - telco (TELCO): Must be either 4 alphanumerics or empty.

- 1030 - cus (CUST): Must be 5 alphanumerics.
- 1031 - newro or ro (RESP ORG): Must be a Resp Org known to SMS.
- 1032 - la (LA): Max 75 alphanumerics or special characters. See REQ-CRC for list of special characters.
- 1033 - cbi (IC/EC BI): Must be 3 or 4 alpha or blank.
- 1034 - ncon: Max 30 alphanumerics of special characters.
- 1035 - ctel (NPHONE): The first 6# must be a NPA-NXX combination known to SMS.
- 1036 - albl (AOS Label): Must be an existing AOS label name in SMS.
- 1037 - aac or def or vr.c (NPA or Area Code): Must be an existing 3-digit Area Code known to SMS, like "201".
- 1038 - alat or def or vr.c (LATA): Must be an existing 3-digit LATA code known to SMS.
- 1039 - anet (Network): Must be an existing 2 alpha network code known to SMS, like 'AM'.
- 1040 - No other AOS entries are allowed if anet (Network) is US, XA, XB, or XC OR Non-US country cannot be entered with a CCS network.
- 1041 - asta or def or vr.c : Must be a 2-alpha standard state abbreviation known to SMS, like 'NJ'.
- 1042 - ln (LN): Max 75 alphanumerics or special characters. See REQ-CRC for list of special characters.
- 1043 - ln (LN): Required for 'New' action. Input customer's list name.
- 1044 - tel or vr.c (Tel#): Must be a standard phone# (e.g., 2015550000) or a turnaround #. The 1st 6 characters must be a NPANXX known to SMS.  
(e.g., 80055520000).  
The last 7 characters (NXXXXXX) can be alpha or numeric.
- 1045 - tel (Tel#): if a turnaround # is entered, it must be the same as the num. Error 1045 will also be returned if the REQ-CRC message was sent for a Pointer record where the TEL tag (Destination Number) does not match the NUM tag (Dial#) of the Pointer record.
- For Pointer records, the TEL tag value must match the NUM tag value. Pointer records can only have one TEL value.

- 1055 - lns (#LNS): Must be 4 numerics (normally 1-9999).
- 1056 - lns & tel (#LNS & Tel#): #LNS is required if Tel# is entered.
- 1057 - lns & tel (#LNS & Tel#): If Tel# is blank, #LNS must be blank.
- 1058 - city (City): Must be 1-16 alpha (A-Z), special char (-.) or blank.
- 1059 - city & tel (City & Tel#): If Tel# is blank, City must be blank.
- 1060 - fso (FSO): Must be a 'NPANXX' known to SMS.
- 1061 - fso & tel (FSO & Tel#): If Tel# is blank, FSO must be blank.
- 1062 - hml & tel (HML & Tel#): If Tel# is blank, HML must be blank.
- 1063 - lsis & tel (LSIS & Tel#): If Tel# is blank, LSIS must be blank.
- 1064 - lso (LSO): Must be a 'NPANXX' known to SMS.
- 1065 - lso & tel (LSO & Tel#): If Tel# is blank, LSO must be blank.
- 1066 - lso & tel (LSO & Tel#): LSO is required if Tel# is a POTS#.
- 1067 - sfg & tel (SFG & Tel#): If Tel# is blank, SFG must be blank.
- 1068 - stn & tel (STN & Tel#): If Tel# is blank, STN must be blank.
- 1069 - uts & tel (UTS & Tel#): If Tel# is blank, UTS must be blank.
- 1070 - Duplicate entries found. Please remove duplicate.
- 1071 - This customer record requires more data that must be entered in a CPR.
- 1072 - ds (Daylight Savings): Must be 'Y' or 'N'. Cannot be blank.
- 1073 - node (CPR Node): Must be AC (Area Code), AN (Announcement), CA (Carrier), DA (Day), DT (Date), LT (LATA), NX (NXX), PC (%), SD (6-Digit), ST (State), SW (Switch), TE (Tel#), TD (10-Digit), TI (Time). Time sensitive nodes like:  
DA, DT, and TI may include a time zone suffix, like: 'DAC' for 'DA' (Day) node with Central time.
- 1074 - vr.c (Time): Must be a time range like '10:30A-06:30P'. Range cannot cross midnight. Minutes part must be in quarter hours (00, 15, 30, 45).

- 1075 - z or et or node (Time Zone): Must be A (Atlantic), B (Bering), C (Central), E (Eastern), H (Hawaiian-Aleutian), M (Mountain), N (Newfoundland), P (Pacific), Y (Alaska).
- 1076 - vr.c or def (6-Digit): Must be the first 6 digits of a standard phone #, like '201555'.
- 1077 - vr.c or def (10-Digit, Tel#): Must be a standard phone #, like '9086991234'.
- 1078 - vr.c (%): Must be a whole number greater than 0 but less than 100.
- 1079 - vr.c (Time): Must specify 'A' (AM) or 'P' (PM). Midnight=12:00A, Noon=12:00P.
- 1080 - vr.c (Day): Must be a day of the week (M,TU,W,TH,F,SA,SU) or a range (e.g., M-TH).
- 1081 - vr.c (%): If a suffix is used, it must be a single alpha (A-Z), like '25 A'.
- 1082 - vr.c (Switch): If a suffix is used, it must be a single digit (0-9), like 'ON 1'.
- 1083 - vr.c: Cannot use labels in: Carrier, Day, %, Switch, and Announcement.
- 1084 - vr.c (Date): Enter a valid date (01/01) or a range (01/01-07/04). Do not specify year.
- 1085 - lbl (Label Name): must start with the \* symbol, followed by 1 to 7 alphanumerics.
- 1086 - lbl (Label Name): cannot contain blanks or special symbols other than the start \*.
- 1087 - def (Label Definition): Must specify a specific value. Cannot enter "OTHER".
- 1087 for a Template record: TEL# can only be the following value: #DIAL or may be empty if the call terminates to an Announcement node.
- 1088 - vr.c (Carrier): Enter exactly 1 value. Can't have multiple carriers in a CPR path.
- 1089 - vr.c (%): Must be an integer. Cannot have multiples (10+20) or ranges (25-30).

1090 - lbl (Label Name): Duplicate LAD label name exists. Use another label name.

1091 - node (CPR Node): Cannot have more than 20 CPR node names in a complete CPR path.

1092 - def (Label Definition): A definition can be used only once within a label.

Remove the duplicate entry.

1093 - node (CPR Node): The last (rightmost) CPR value must be a Tel# or an Announcement.

1094 - vr.c: Carrier value can only be used once in a complete CPR row.

1095 - node (CPR Node): The 1st CPR node can NOT be: Carrier (CA), Tel# (TE), Announcement (AN).

1096 - vr.c: Cannot use 'OTHER' value in CA (Carrier), SW (Switch), PC (%), AN (Announcement), or TE (Tel#).

1097 - def (LAD Definition): Must be a value, cannot use a label name.

1098 - node (CPR Node): NXX node entries can be a label or values. If NXX values are entered, they must be preceded by an Area Code node with a single area code value.

1099 - node (CPR Node): NXX node and 6-Digit node cannot be used together.

1100 - vr.c (NXX): Must be a 3-digit NXX code or an NXX label name.

1101 - vr.c or def (NXX): Entered NXX must match the Area Code that precedes it. i.e., the 'NPANXX' combination must be known to SMS.

1102 - def (LAD Definition): When defining an NXX type of label in LAD, you must provide an Area Code (NPA) after CNT13.

1103 - vr.c (Announcement): Must be 'OBA' or 'VCA'.

1105 - vr.c or def (Day, Date or Time): For range entries, the Start and End values cannot be the same.

1106 - vr.c: 1st column of all rows must contain data. Blanks can't be in the 1st column.

1107 - vr.c or def (6-Digit, 10-Digit, Tel): The 6-Digit (NPANXX) combination must be known to SMS, like '908699'.

1108 - type (LAD Label Type): Must be Area Code (AC), Date (DT), LATA (LT), NXX (NX), 6-Digit (SD), State (ST), 10-Digit (TD), Time (TI), and Telephone (TE).

- 1112 - dau (DAU): Must be 'Y' or 'N'. Cannot be blank.
- 1113 - hml (HML): Must be 1-4 numerics. Value must be > 0.
- 1114 - sfg (SFG): Input 3-5 numerics, or 1 alpha + 4 numerics.
- 1115 - stn (STN): Must be a 'NPANXX' known to SMS.
- 1116 - uts (UTS): 3 characters. 1st char: A,B,C,D,E,F or blank. 2nd char: C,W or blank. 3rd char: J,N or blank.
- 1117 - vr.c: Use + as delimiter to separate multiple values in a CPR node.  
e.g., NY+NJ (State), M+W+F (Day), 01/01+07/04 (Date).
- 1118 - Cannot enter multiple values in: Announcement, Carrier, Switch, Tel#, Time,10-Digit,%
- 1119 - sefd (Source Effective Date Time): Must be in 'mm/dd/yy' (like 12/31/92) or 'mm/dd/yyhh:mmx/z' (like 12/31/9208:00A/C) format.
- 1120 - Isis (LSIS): Must be 4 numerics.
- 1121 - type & lbl & def: If any one field is entered, all 3 should be entered.
- 1122 - albl (AOS label) belongs to another network. Usage not allowed.
- 1123 - sort (SORT): Must be 'Y' or 'N'. Cannot be blank.

1124 – TMPLTPTR: Template Name used on a Pointer record must be in a valid format and refer to a Template record that is Active.

1125 – TMPLTPTR: Template Name used on a Pointer record must exist and the Entity of the Template record must match the Entity of the Pointer record. This error can occur when TEMPLATE NAME DOES NOT BELONG TO POINTER RECORD OWNER'S ENTITY.

This error can also occur when the Template Name on the Pointer record doesn't exist in SMS/800.

1126 - if TMPLTPTR (Template Name of a Pointer record) is present and CNT9 is > 1, SMS/800 will return this error. For Pointer records, no other routing related tags may be entered, except for CNT9=1.

A related error message is 0004.

For example, if the Resp Org sent a Pointer record to SMS/800 using the REQ-CRC message and populated routing tags, that will result in error 0004 because the Resp Org needs to leave the routing tags empty and instead, identify the Template (TMPLTPTR tag) that contains the routing data.

When a Resp Org creates a Pointer record that follows a regular record in date/time or replaces an existing future regular record with the same date/time as the existing regular record, SMS/800 considers that a conversion from a regular CR to a Pointer CR.

1128 – When trying to convert a Disconnect Regular record to a Pointer record (via AC=D and TMPLTPTR tag sent), Referral (**refer** tag) must be set to ‘Y’, not ‘N’. If a Resp Org is trying to Convert a Disconnect Regular record to a Pointer record with Refer=N, that will be blocked via error 1128 because that scenario isn’t supported in SMS/800. This error is also supported for MCP automation.

1603 - When \$\$\$ node is first column, CPR is limited to 200 rows. CPR has \$\$\$\$ rows. This limit pertains to the first node in the CPR if it is set to 6-digit (SD), 10-digit (TD) or NXX (NX). The variable \$\$\$ contains the node name (e.g., SD, TD or NX). The variable \$\$\$\$ contains the number of rows in the CPR.

2000 - IntraLATA Carriers: Required. Enter Carrier or CIC, like 'OTC' or '0110'.

2001 - InterLATA Carriers: Required. Enter Carrier or CIC, like 'ATX' or '0288'.

2005 - vr.c (Carrier): Must be an existing 3-alpha carrier name or CIC known to SMS, like 'ATX' or '0128'.

2517: Listing: Required Field - Enter “LI”, “NP” or “BL”.

3726 - Switch value must be either 'ON' or 'OFF'. Only 1 condition can be chosen.

- 4000 - iec (InterLATA Carrier): invalid entry
  - 4525 - OTC required for this Tel# - Enter 'Y' or 'N'.
  - 4545 - Cannot use CIC 0110 without a POTS# for 'EAG' (Entity Agreements with Carrier) verification.
  - 4549 Pointer is invalid due to Template's CPR/LAD has invalid data. You will need to fix and update the Template record and then re-update the Pointer record.
  - 4705 - Area of service is not purchased in CAD. Check your CAD.
  - 4706 - Label is not defined. Must add label name and definitions in LAD.
  - 4708 - Switch: Must contain at least 1 'ON' condition.
- 
- 4710 - To use 'OTHER', you must specify some other possibilities.
  - 4711 - Telephone # is not listed in CAD. Check terminating Tel# information.
  - 4712 - CPR value occurs more than once. Please remove the duplicate.
  - 4713 - Entries in a CPR node must include all possible cases.
  - 4714 - "OTHER" must be entered so that all possibilities are covered.
  - 4715 - %: Total % values must add up to 100.
  - 4716 - Carrier is not listed in CAD. Check carrier information.
  - 4717 - 2 CPR rows contain exactly the same data. Remove the duplicate.
  - 4719 - Since all possible cases are covered, the 'OTHER' value is not needed.
  - 4721 - Switch: Cannot have more than 1 'ON'. Check the use of common suffix.
  - 4722 - Switch: Cannot have more than 10 'OFF'. Check the use of common suffix.
  - 4724 - Can't have CPR rows differ only in Action node (Carrier, AN, Tel#) values.
  - 4725 - There are overlaps of Day, Date, or Time ranges. Check possible cases entered.
  - 4726 - tel (Tel#): An 800 Data Base Service # is expected by this carrier. (Not a standard phone #).

4727 - tel (Tel#): A standard phone # is expected by this carrier. (Not an 800 Data Base Service #).

4729 - Current AOS related node contains value that does not match the preceding area of service.

4733 - This customer record requires more information that must be input in CPR.

4735 - Label contains definitions that cannot be recognized. Check the LAD.

4737 - Tel# (TE) or Announcement (AN) must be last node. Nothing can follow it.

4738 - Carrier serving this Tel# is not an intraLATA carrier. Check carrier info.

4739 - Carrier serving this Tel# is not an interLATA carrier. Check carrier info.

4742 - Fields with the same preceding entry must be all filled or all blank.

4746 - You may not need to use this CPR node. No differences detected.

4751 - Record cannot contain a CPR if rao equals 999.

4765 - A CPR row exists with no data in the first column.

4768 - A CPR can contain a maximum of 775 consecutive 'OTHER' rows in any CPR column. It is recommended that CPRs stay below 675 consecutive 'OTHER' rows.

4773 - Column has no data under it. Check if column is needed.

4775 - This CPR row requires a Tel# or Announcement entry to complete the row.

4940 - A CPR path cannot have data in both a percent node and announcement node.

5008 - The first 6 digits (NPA-NXX) is not valid in SMS/800.

5013 = RAO code is not known to SMS/800. Please enter an RAO code known to SMS/800 or you can omit sending the RAO tag because RAO is an optional tag.

5015 No such AOS Label exists. Please enter another AOS Label value.

5506 - The AOS Label does not belong to the Entity on the CR, so using this Label on this CR is not allowed.

5631 - POTS# required, else intra & interLATA carriers must be the same.

5632 - Record is invalid. Cannot request effective date and time of NOW because one or more carrier approvals is required.

5633 - Record is invalid. There is at least one CIC for which no RESP ORG-to-CIC arrangement has been defined.

5634 - Warning: Record contains one or more unused LAD labels.

5635 - Warning: Over 1000 LAD labels. Unused LAD label check cannot be done.

5636 - Cannot modify record. An on-line (WBA or 3270) user is currently working on this number. This error is also supported for MCP automation.

5637 - Cannot insert a Disconnect record in front of a future change record or future Disconnect. Cannot copy the Customer Record backwards to an earlier date/time.

5638 - Check record's Area-of-Service. At least one SCP operator does not allow your RESP ORG to load records into its SCPs.

5640 - Intra & InterLATA Carriers must be the same for a TAD-only Template record that the Pointer record points to, where TAD is Template Administrative Data, and TAD-only means TAD without CPR or LAD.

5700 - The 6 digit NPA-NXX is not known to SMS/800.

5814 Listing field (LI): If "LI" is entered, the Resp Org's ORG screen needs more data in the Directory Assistance (DA) field on ORG. Please contact the Help Desk to update the ORG screen.

6056 – The NPA-NXX for the Customer Record is currently locked via the SMS/800 WBA/3270 Customer Record Protection Feature (CPF). Note: CPF is normally 'OFF'.

7001 - The Template record version that the Pointer record points-to has invalid data and needs to be corrected by the control Resp Org of the Template (via REQ-TRC message) and then the Resp Org needs to re-submit their Pointer record update (via REQ-CRC message with TMPLTPTR tag populated). Note: This error is supported by the Automation feature titled Multiple Convert to Pointer Records (MCP). This MCP error means the Template Record that the Pointer Record is pointing to had failed validation earlier this day. The Resp Org of the Template Record needs to fix Template Record and then resubmit MCP again to convert regular CRs to Pointer Records. Code 7001 is enforced in MCP because, with MCP, multiple CRs could become 'Invalid' if the Template has invalid data. Therefore SMS/800 MCP blocks the conversion in this case. This error requires the Resp Org to first correct their Template data and then update their Template and then resubmit the MCP request. Note that even if the Template Name has an Active version, network data (such as 6-digit (NPA-NXX)) could have changed after the Template went Active.

7007 - Referral is not allowed for an UNAVAILABLE number that is being disconnected.

7559 - priority (PRIORITY): Must be 'H'.

7560 - HPU screen has not been defined for the CR entity. Please contact the Help Desk to define the HPU screen within the system.

7561 - Allowed number of high priority customer record updates is exceeded for the CR entity.

7562 - Effective date of the customer record must equal NOW or today's date when updating with high priority.

7563 - User is not listed on the SMS/800 HPU screen for the CR entity. Therefore user is not allowed to perform high priority customer record update for entity.

7564 - HDD=Y not allowed with high priority customer record update.

7615 - Resp Org Change not allowed, except when Eff Date/Time ="NOW".

7710 Template Name is not Active status; enter an Active Template Name. When creating a Pointer CR or converting a regular CR to a Pointer CR, the Pointer CR must reference a Template Name that is in 'Active' status.

7611 Template name does not exist in SMS/800. Note: This error is supported by Automation MCP.

7711 Template Name does not belong to Pointer Record owner's Entity. Note: This error is supported by Automation MCP.



**WARNING MESSAGES:**

4728 - Over 2000 entries per CPR path. Some duplicates may have been missed.

7742 – Warning: Pointer converted to regular CR. The CR was converted to a regular CR (e.g., CAD, LAD, CPR) because the New Resp Org doesn't control the Template that is used on the Pointer CR.

9000 - Warning: Future records exist for this DIAL# and should be checked.

9001 - Warning: For 'Resend' or 'Delete' action, message contains extra fields that are ignored by the system.

9002 - Warning: City is required for DA if Listing=LI and Tel# is entered.

9003 - Warning: 'OTC' is not used as the intraLATA carrier in this record.

9004 - Warning: Label contains Definitions that are duplicated in another label.

9005 - Warning: telco & rao: The values for TELCO and RAO should belong to the same TELCO.

9007 - Warning: NPA Split in your area of service is coming soon.

9008 - Warning: Approvals are required by at least one carrier (CIC) before record goes ACTIVE.

9072 - Warning: Not all labels indicated were sorted. The 'type' does not allow sorting or total number of labels exceed LAD limit.

9073 - Warning: Sorting was not done as the LAD sort limit was equal to zero.

9074 - Warning: Since entity of Template record does not match the Entity of the new Resp Org for the Pointer record, the Pointer record will be expanded to a Regular record. This warning can occur in a Resp Org Change of a Pointer record whereby the Entity changed. This warning will not occur if the Resp Org Change is within the same Entity.

9120 – Warning: Pointer Converted to a regular CR for Disconnect with Referral=N. A Disconnect CR with Referral=N doesn't use the Template and as a result, SMS/800 converted the Pointer CR to a regular CR.

Note regarding warning 9120: When a Resp Org Disconnects a Pointer record, (a) if Referral=Y, then the system will use the routing data of the Active Template record (which may be the record that will become Active prior to the Pointer record being downloaded to the SCPs if there is a newer record version of the Active Template); however, (b) if Referral=N, then the system will not use the Template and instead will convert the Pointer CR to a regular CR with AOS and CICs copied from the Template to the regular CR. (c) When the system converts a Pointer record because it was changed to Disconnect with Referral=N, then the system will display a warning message 9120.

<b>cnta</b>	Number of Warning Blocks for COMPLD,11 response for single number processing 2 bytes decimal numeral Maximum value of 20
<b>err1</b>	Warning Explanation (optional - single number only) 4 bytes decimal numeral there can be multiple warnings. See err field
<b>verr</b>	Value of Field in Error up to 240 bytes text string (optional) returns original input where possible for each error Example VERR values are documented at the end of the RSP-CRC section.
<b>wcnt</b>	Number of Warning Sets for Automation 8 bytes decimal numeral, fixed length (optional)
<b>errv1</b>	Warning Code, Type Code, and Value of Field that Results in a Warning for Automation Responses entries are of the form err, etyp, verr where: err - the 4-byte warning code etyp - the 1-byte type code specifying the type of verr verr - up to 30 byte value of field with a warning.  Err is required, Etyp is optional, Verr is optional. The number of err,etyp,verr sets must match the value of <b>wcnt</b> and sets are separated by commas. Each are defined below:

**err values:**

5634 - Warning: Record contains one or more unused LAD labels.

5635 - Warning: Over 1000 LAD labels. Unused LAD label check cannot be done.

9000 - Warning: Future Pending records changed to Must Check status.

9002 - Warning: City is required for DA if Listing=LI and Tel# is entered.

9003 - Warning: 'OTC' is not used as the intraLATA carrier in this record.

9005 - Warning: telco & rao: The values for TELCO and RAO should belong to the same TELCO.

9007 - Warning: NPA Split in your area of service is coming soon.

9008 - Warning: Approvals are required by at least one carrier (CIC) before record goes ACTIVE.

9010 - There are multiple validation warnings for this DIAL#. The Customer Record status is Pending. Re-submit using a non-automation REQ-CRC format to obtain all warnings, if desired.

**etyp values:**

0 - verr is a text string which includes original input if possible

1 - verr is a valid dial number format (10 or 12 bytes text string)

**verr values:**

returns original input in error where possible

<b>ecnt</b>	Number of Error Sets for Automation 8 bytes decimal numeral, fixed length (optional)
<b>errv</b>	<p>Error Code, Type Code, and Value of Field that Results in an Error for Automation Responses</p> <p>entries are of the form err,etyp,verr where:</p> <p>err - the 4-byte error code</p> <p>etyp - the 1-byte type code specifying the type of verr</p> <p>verr - up to 30 byte value of field in error.</p> <p>Err is required, Etyp is optional, Verr is optional. The number of err,etyp,verr sets must match the value of <b>ecnt</b> and sets are separated by commas. Each are defined below:</p> <p><b>err values:</b></p> <ul style="list-style-type: none"> <li>0003 - Unrecognized parameter</li> <li>0004 - Invalid parameter combination</li> <li>0005 - Syntax error</li> <li>0006 - Required parameter missing</li> <li>0008 - Input data length exceeds maximum field size.</li> <li>0009 - Need tag name. Cannot process data value without a tag name.</li> <li>0021 - id (Logon ID): Required message sender's Logon ID missing.</li> <li>0022 - ro (Resp Org): Required message sender's Resp Org missing.</li> <li>0023 - ac (Action Code): Required Action Code missing.</li> <li>0029 - Duplicate tags within a message are not allowed.</li> <li>0090 - Number specified in qt (quantity) does not match the number of entries in the numl.</li> <li>0091 - Effective Date must be &lt;= the previous record's end intercept date.</li> </ul>

0101 - Permission denied. Logon ID must be an 8-alphanumeric logon id known to SMS.

0102 - Permission denied. The Resp Org does not belong to this Logon ID.

0103 - Permission denied. Your Logon ID cannot update this Resp Org's records.

0106 - ed (Start effective date) - Must be a date in the future but within the industry-set time period from the current date. Can also be 'NOW'.

0108 - ed/et (Start Effective date/time) - If effective date is 'NOW', effective time (et) should not be used.

0310 - Cannot process request: Target record should be transferred.

0400 - To process "Disconnect" action, you must have a record associated with this number.

0405 - To process 'Disconnect' action, refer (Referral) must be 'Y' or 'N'.

0406 - Cannot process 'Disconnect' action, since you cannot copy or copy+change a PENDING disconnect record backward.

0409 - Cannot process 'Disconnect' action, since Target record already exists.

1000 - numl (dialed #): Must be in 'NPANXXXXXX' or 'NPANXXXXXX' format. NXX-XXXX can be numeric (0-9) or alpha (A-Z).

1001 - ed (Start Effective Date): Enter in 'mm/dd/yy' format. Must be a future calendar date within the industry-set time period from current date.

1002 - et (Effective Time): Enter like '10:45A/C'. Use 'hh:mmA(orP)/z' form where A=Am (or P=Pm) and z is for Time Zone (e.g., C=central).

1019 - Eint (end intercept) of 'NOW' is allowed only when the ed (effective date) is current date or 'NOW'.

1026 - Eint (end intercept) must be a calendar date in 'mm/dd/yy' format.

1027 - Eint (end intercept) date must be within industry-set time frame from the original disconnect date. It cannot be earlier than the effective date of this disconnect record.

5636 - Cannot disconnect record. An on-line user is currently working on this number.

5637 - Cannot insert disconnect in front of a future change or disconnect.

6000 - Quantity exceeds system automation limit. Verify limit using **REQ-ASL**

7000 - There are at least one or more validation errors for this DIAL#. The Customer Record status is Invalid. Re-submit using a non-automation REQ-CRC format to obtain the error(s). This error code is also supported for MCP Automation.

**etyp values:**

0 - verr is a text string which includes original input if possible

1 - verr is a valid dial number format (10 or 12 bytes text string)

**verr values:**

returns original input in error where possible

**Error code 0099:**

Many customer record (CR) background validation error messages are returned via error code (err) 0099; and the corresponding value in error is returned in the VERR field.

<b>VERR Values in Error Code 0099</b>
4640 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER ENTITY \$\$ CLA SCREEN.  Note: The variable ‘\$\$’ will contain the Resp Org Entity code or CCS Network code of the referenced screen that blocked the use of CIC 0110; and the variable ‘npanxxxxx’ will contain the POTS termination number (Tel#) that was detected with this error.
4641 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER ENTITY \$\$ CLE SCREEN.
4642 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER CCS NETWORK \$\$ NLA SCREEN.
4643 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER CCS NETWORK \$\$ NLE SCREEN.
4644 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER NCA SCREEN \$\$.
4645 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER RDC SCREEN.
4646 CANNOT USE TEL# npanxxxxx WITH CIC 0110 PER RAC SCREEN.
4647 Cannot use npanxxxxx with CIC 0110 per NCA \$\$ blocks RAC OCN.  Cannot use this POTS termination number with CIC 0110 per the NCA screen. The variable ‘npanxxxxx’ will contain the
4648 Cannot use npanxxxxx with CIC 0110 per NCA \$\$ blocks RDC OCN.  Cannot use the POTS# with CIC 0110 per the network service provider’s NCA screen does not list the LEC’s OCN code that is on the RAC screen.
SPLIT CARRIERS \$\$\$\$ & \$\$\$\$ ARE NOT SUPPORTED BY NETWORK \$\$.  Note: This is error 4649 in WBA and 3270. The variables \$\$\$\$ & \$\$\$\$ will contain the 2 CICs that are not support by the Network specified in the variable \$\$.
POTS# npanxxxxx IS NOT SUPPORTED BY NETWORK \$\$.  Note: This is error 4650 in WBA and 3270. The variable npanxxxxx will contain the POTS number that is not support by the Network specified in the variable \$\$.
CARRIER \$\$\$\$ IS NOT SUPPORTED BY NETWORK \$\$.  Note: This is error 4651 in WBA and 3270. The variable \$\$\$\$ will contain the CIC that is not support by the Network specified in the variable \$\$.

**VERR Values in Error Code 0099****EFF D/T:DOWNTIME**

Note: This error means the CR's Effective Date/Time is within the scheduled daily SMS/800 system downtime. CRs cannot have an Effective Date/Time that is within or on the boundary of the scheduled daily SMS/800 system downtime. Daily downtime is defined in the Down & Default Effective Time for CR (DDT) screen, which can be viewed and setup by the Help Desk and Site Support.

**RESP ORG CHANGE MUST BE NOW**

A Resp Org Change takes effect immediately. Therefore, if a record is copied forward to do a Resp Org Change, then the Effective Date must be set to "NOW" (ED=NOW).

### 7.2.5 Request Template record List [REQ-TRL]

#### REQUEST TEMPLATE Record LIST [REQ-TRL] CUSTOMER RECORD ADMINISTRATION

This command allows an OS to query SMS/800 for all ***Template records*** that exist for a queried Resp Org at the time the request was received by SMS/800.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queueing	Optional
Response	RSP-TRL
Route ID	CTL

#### *MESSAGE FORMAT*

**REQ-TRL:,date,time:::::ID=id,RO=ro,TREN=tren,STMPLTNM=stmpltnm;**

#### *EXAMPLE OF REQ-TRL MESSAGE:*

REQ-TRL:,2003-10-05,12-00-00-  
CST:::::ID=XXXXX101,RO=XXXX1,TREN=XX,STMPLTNM=\*XXXX;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>tren</b>	Entity that controls the Template records. 2 bytes identifier (required) Entity ID for which the list of Template records will be returned.
<b>stmpltnm</b>	Starting Template Name 15 bytes text string (optional) The starting Template Name value to retrieve. Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Dashes are optional in the 4th through 15th character positions. Minimum total data width is 4 characters and maximum total data width is 15 characters.

## 7.2.6 Response to Template Record List Request [RSP-TRL]

### RESPONSE TO TEMPLATE RECORD LIST REQUEST [RSP-TRL] CUSTOMER RECORD ADMINISTRATION

This message is the response to the command REQ-TRL (Request Template record List). The response message contains a list of all *templates* that exist for the queried Resp Org at the time the request was received. Two versions are supported: successful request and unsuccessful request.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queueing	Yes
Command	REQ-TRL
Route ID	RTL

#### MESSAGE FORMAT

##### Success Response:

```
RSP-TRL:,date,time:::COMPLD,00::ID=id,RO=ro,TREN=tren,  
STMLPTNM=stmltnm:LCNT=lcnt:  
TMPLTNM=tmpltnm,DESCRIP=descrip,ED=ed,ET=et;
```

##### *Example of a Success Response message:*

```
RSP-TRL:,2003-10-25,17-49-22-CST:::COMPLD,00::ID=XXXXX101,  
RO=XXXX1,TREN=XX,STMLPTNM=*XXA:LCNT=0002:  
TMPLTNM="*XXAREA1",DESCRIP="ALL OF USA",ED="08/10/11",  
ET="03:15A/C": TMPLTNM="*XXAREA2",DESCRIP="SOUTHWEST REGION",  
ED="09/10/11",ET="03:15A/C";
```

**Response for Unsuccessful Request:**

RSP-TRL:,date,time:::DENIED,01::ID=id,RO=ro,TREN=tren,  
STMPLTNM=stmpltnm:CNT=cnt:ERR=err,VERR=verr;

*Example of a Response for an Unsuccessful Request message:*

RSP-TRL:,2003-10-25,17-49-22-CST:::DENIED,01::ID=XXXXXX101,  
RO=XXXX1,TREN=99:  
CNT=01:ERR=11,VERR="99";

*Example of a Response for a Request message that didn't find any matching data:*

RSP-TRL:,2010-12-14,18-09-13-CST:::COMPLD,11::ID=XXXXXX102,  
RO=XXXX1,TREN=XX,STMPLTNM=\*HHH01:  
CNTA=01:ERR1=12,VERR="NO MATCHING DATA";

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code</p> <p>6 bytes identifier</p> <p>COMPLD - Entire Request completed</p> <p>DENIED - Entire Request denied</p>
<b>error_cd</b>	<p>Error Code</p> <p>2 bytes decimal numeral</p> <p>00 - No Error</p> <p>01 - Error Present (see err field)</p>
<b>id</b>	<p>Logon Id</p> <p>8 bytes identifier (required)</p> <p>identifies sender of message</p>
<b>ro</b>	<p>Resp Org</p> <p>5 bytes identifier (required)</p> <p>responsible organization for this message</p>
<b>tren</b>	<p>Entity ID</p> <p>2 bytes identifier (required)</p> <p>Queried Entity ID that is the control Entity ID of the returned Template records.</p>
<b>stmpltnm</b>	<p>Starting Template Name that was sent in the request message.</p> <p>15 bytes (optional); only returned if sent in the request message.</p> <p>Minimum of 4 characters must be entered if this tag is sent.</p> <p>May be a partial Template Name.</p>

<b>cnt</b>	Count of Error Blocks 2 bytes decimal numeral The number of repeating error blocks (optional)
<b>cnta</b>	Count of Warning Blocks 2 bytes decimal numeral The number of repeating warning blocks (optional)
<b>lcnt</b>	Count of Template List Data Blocks 4 bytes decimal numeral Count of Template records with errors or warnings. The number of repeating data blocks (optional).
<b>tmpltnm</b>	Template Name; Template record Name.  15 bytes text string  (optional) Optional because the Resp Org Entity might not have any templates.  (encapsulated in a pair of double-quotation marks).  Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then optionally followed by 1-12 alphanumerics or dashes. Dashes are optional in the 4th through 15th character positions. Minimum total data width is 4 characters and maximum total data width is 15 characters.  Example Template Name: *BRBISMARCK-14

<b>ed</b>	Effective Date 8 bytes text string mm/dd/yy, where mm: month (allowable range: 01-12) dd:day (allowable range:01-31) yy:year (e.g., 11)
<b>et</b>	Effective Time 8 bytes text string hh:mmx/z, where hh:hour (allowable range:01-12) mm:minute (allowable values: 00,15,30,45) x:am or pm (allowable values: A, P) z:time zone (Central Time)
<b>descrip</b>	Description of the Template Name; Template Description. 40 bytes text string (optional) maximum of 40 bytes see note 19 in REQ-CRC for allowable characters

<b>err</b>	Error Code  2 bytes decimal numeral (optional) 01 - too many parameters (warning) 02 - required parameter missing 03 - unrecognized parameter 04 - invalid parameter combination 05 - syntax error 06 - invalid Resp Org 07 - permission denied.
	An MGI user will only be allowed to retrieve TRL data for the Entities that match any of the Resp Org IDs that are listed on the MGI user's (MGI Logon ID's) MGI Security Administration (GSA) screen.
	 11 - invalid Entity ID 13 - invalid Starting Template Name 98 - Invalid or missing date and/or time in application message. Refer to Section 5.3 for further details. 99 - Other. Refer to the verr for details of the error.
<b>err1</b>	Warning Code  12 - Warning: No Template records exist for the requested keys (Entity ID and Starting Template Name if the STMPLTNM tag was populated in the REQ-TRL message).
<b>verr</b>	Value of Field in Error  1-16 bytes text string (optional) returns original input in error where possible.  For example: "NO MATCHING DATA" is returned when err1 warning code 12 is returned.

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**NOTE** Prior to the November 22, 2015 release of SMS/800, whenever the control Resp Org of a Toll-Free Number is changed to a different Resp Org Entity (e.g., from XX123 to ZZ999), SMS/800 automatically converts all the Pointer records for that number to regular Customer Records (i.e., a CR with a CAD or a CAD plus a CPR/LAD if the record contains complex routing). The cloned Template Name will begin with an asterisk followed by the two-character Entity ID of the new Resp Org Entity of the Toll-Free Number. The reason for this conversion of Pointer records to regular records is because only the old Resp Org Entity is permitted to use the Template record that is referenced on Pointer records that had a Resp Org change. With SMS/800 Release 22.0.x that introduces the Multi-Dial Number Resp Org Change (MRO) Template enhancement, whenever the control Resp Org Entity of a Toll-Free Number is changed to a different Resp Org Entity via the MRO Automation function, SMS/800 no longer converts the associated Pointer records to regular records. This enhancement involves SMS/800 cloning the Template records that are referenced on the Pointer records that had the control Resp Org Entity changed to a different Resp Org Entity, and the cloned Template records will be controlled by the new Resp Org Entity. The original (source) Template records will remain under the control of the old Resp Org Entity.

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### 7.2.7 Update Template Record [REQ-TRC]

#### UPDATE TEMPLATE RECORD [REQ-TRC] CUSTOMER RECORD ADMINISTRATION

This command performs a host of Customer Record Administration functions for ***Template records*** (also called ***Routing Templates***). A ***Template record*** is a routing record that contains the data of a call processing record (CPR) and label definition (LAD). A ***Template record*** purposefully doesn't contain the Toll-Free Number (dial#) or any customer/subscriber information. ***Template records*** purposefully support only turnaround records in order to be compatible with the ***template*** capability in SCPs that can support the ***Template Feature***. Turnaround records terminate at the toll-free Dial#.

**NOTE** A ***Template record*** contains routing data that can be used by multiple customer records that use that ***template*** (by pointing multiple ***Pointer records*** to the same ***Template record*** for routing information to be used by these Dial Numbers).

**NOTE** The Toll-Free Number (dial#) and customer/subscriber information is stored in a ***Pointer record***. ***Pointer records*** are created and modified via the REQ-CRC message. Multiple ***Pointer records*** can point to (map to) the same ***Template record***.

This message supports the creation of a new ***Template record***, changing/updating an existing ***Template record***, validating an existing template, deleting a future ***template***, transferring a ***template*** to a future date/time, disconnecting a ***template***, and resending a template to the SCPs. This command supports additions, changes, and deletions of a ***template***, one ***Template record*** per request message. Changes to multiple ***Template records*** cannot be handled in one REQ-TRC message.

Resp Org Change is not permitted on ***Template records***.

Validation of a ***template*** should be used before converting multiple regular records to ***Pointer records*** to make sure the ***template*** is in valid (e.g., user has permission to use it, it is Active in SCP and passes all system validations based on the latest system tables) in order to avoid large quantities of ***Pointer records*** becoming Invalid after the conversion process of regular records to ***Pointer records***.

A transfer of a ***template*** to ‘NOW’ capability allows an existing ***Template record*** to replace itself, provided the record’s status is not ACTIVE, SENDING, or DISCONNECT. Setting the effective date/time to ‘NOW’ sets the time of that record to the current 15-minute window.

Updating a ***template*** via REQ-TRC automatically results in all the existing ***Pointer records***

that use that *template* to use the revised *template*. However, if a Resp Org needs to keep some of their *Pointer records* to still use the original version of the *template* and update their other existing *Pointer records* to using the revised (updated) *template* version, the Resp Org needs to copy the original *template* version to a new *Template Name* (i.e., create a new Template record); and then the Resp Org needs to update the applicable *Pointer records* (via REQ-CRC message) to use the new *Template record*. Refer to the REQ-CRC message for details on creating/modifying *Pointer records*.

See the NOTES section at the end of the message description for additional details.

This command also supports the addition, deletion and modification of ***call processing labels***, which are used to aggregate call processing criterion fields. These labels are applicable only to the *Pointer records* that use a *template* that uses labels.

Emergency and immediate updates to *Template records* will be supported in this command. An emergency update is defined as an update on a Template record with an effective date/ time less than 24 hours from the update time. A separate emergency update parameter for the interface is not needed since SMS will be able to infer from the effective date/time parameter value that the update is an emergency. An immediate update is one in which the effective date/time can be set equal to *NOW*. A separate parameter for the interface is not needed since SMS will be able to infer from the effective date parameter value of *NOW* that the update is immediate.

Authorized users will be provided the capability to update *Template records* with High Priority (so that the record will be sent to the SCPs with high priority) when the **priority=H** option is used. To become an authorized user of this feature, the user's logon id must be defined on the SMS/800 system's HPU screen. The High Priority *template* capability will be allowed for templates with effective date equal to *NOW* or today's date. Each Resp Org Entity will be allowed up to 10 High Priority Updates (regular records plus Pointer records plus Template records) per day per Entity. This limit will be tunable by authorized system administrators.

To disconnect multiple Template records, the user can use the **ac=D** option that contains the **qt** and **tmpLtnml** tags. The associated response message will not be returned until the entire request has been fully processed. The UAL retry timer should be reset for automation requests as responses will take longer to be returned.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	X3
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queuing</b>	Optional
<b>Response</b>	RSP-TRC
<b>Route ID</b>	CTP

*MESSAGE FORMAT***1. Action Code of N (New Template), C (Change Template) and T (Transfer Template):**

REQ-TRC:,date,time:::::ID=id,RO=ro,TRO=tro,AC=ac,

TMPLTNM=tmplnm,ED=ed,ET=et,SEFD=sefd,

PRIORITY=priority:

IEC=iec:

IAC=iac:

DESCRIP=descrip,NOTE=note,NCON=ncon,CTEL=ctel:

ALBL=albl:

AAC=aac:

ALAT=alat:

ANET=anet:

ASTA=asta:

LNS=lns:

NODE=node:

CNT11=cnt11:

V=v1.c:

V=v2.c:

.

.

V=vr.c:

PEC=pec,PAC=pac,Z=z,DS=ds:

CNT12=cnt12:TYPE=type,LBL=lbl,SORT=sort,DEF=def;

- Rule: SEFD is only applicable for action code (AC) of C (change existing record), T (transfer) and D (disconnect).

**Example of Creating a new Template Name:**

```
REQ-TRC:,2011-02-17,18-54-30-CST::::ID= SSSS1000,  
RO=BRU01,AC=N,TMPLTNM="*BR-SSSS-TEMP9",ED="03/22/11",ET="04:00P/C":  
IEC="CNT1=02,8100,8101":IAC="CNT2=02,8100,8101":  
DESCRIP="THIS IS MY TEMPLATE":  
ANET="CNT6=01,US":LNS=0300:  
NODE="CNT10=004,LT,CA,TE,AN":CNT11=003:V="222,TEF8101,#DIAL,":  
V="224,SYY8100,#DIAL,":V="OTHER,,OBA":  
PEC="8100",PAC="8100",Z=C,DS=Y;
```

Note:

In the above example, the routing data uses the following 4 call processing nodes:

- LT (LATA)
- CA (Carrier)
- TE (terminating telephone#)
- AN (Announcement)

*Key rule: The TE (terminating telephone#) node must for a Template be set to #DIAL*

**Example response message for creating a new Template Name:**

```
RSP-TRC:,2011-02-17,18-54-37-CST:::COMPLD,00::ID= SSSS1000,  
RO=BRU01,TMPLTNM="*BR-SSSS-TEMP9",TMPLTID=0000000263,  
ED="03/22/11",ET="04:00P/C";
```

**2. Action Code of D (Disconnect):**

REQ-TRC:,date,time:::::ID=id,RO=ro,AC=D,  
TMPLTNM=tmpltnm,ED=ed,ET=et,SEFD=sefd,  
  
PRIORITY=priority:  
IEC=iec:  
IAC=iac:  
  
DESCRIP=descrip,NOTE=note,NCON=ncon,CTEL=ctel:  
  
ALBL=albl:  
AAC=aac:  
ALAT=alat:  
ANET=anet:  
ASTA=asta:  
  
NODE=node:  
CNT11=cnt11:  
V=v1.c:  
V=v2.c:  
. V=vr.c:  
PEC=pec,PAC=pac,Z=z,DS=ds:  
  
CNT12=cnt12:TYPE=type,LBL=lbl,SORT=sort,DEF=def;

**3. Action Code of D via Automation (To Disconnect Multiple Template records):**

REQ-TRC:,date,time:::::ID=id,RO=ro,AC=D:QT=qt:TMPLTNML=tmpltnml:  
ED=ed,ET=et,NOTES=notes;

The automation message format can be presented two different ways, as seen in the following examples:

- **Multi-Disconnect Templates Example that Follows Specification Standard**  
(one pair of double quotation marks surrounding all the numbers in the value portion of the tmpltnmL tag-value pair):

REQ-TRC:,2003-05-05,12-00-00-CST:::::ID=BRXXX101,RO=BRXX1,  
AC=D:QT=11:TMPLTNML="\*BRTEMPLATE1,\*BRTEMPLATE2,  
\*BRTEMPLATE3,\*BRTEMPLATE4,\*BRTEMPLATE5,\*BRTEMPLATE6,  
\*BRTEMPLATE7,\*BRTEMPLATE8,\*BRTEMPLATE9,\*BRTEMPLATE10,  
\*BRTEMPLATE11": ED="09/10/09",ET="03:15A/C", NOTES="TEST OF  
DISCONNECT";

**NOTE** The “NOTE” tag in the REQ-TRC message is used for a single-record REQ-TRC message, whereas the “NOTES” tag in the REQ-TRC message is used for a multiple records (also referred to as an automation request).

**4. Action Code of R (Resend Template record):**

REQ-TRC:,date,time:::::ID=id,RO=ro,AC=R,TMPLTNM=tmpltnm,ED=ed,ET=et;

**5. Action Code of X (Delete Template record):**

REQ-TRC:,date,time:::::ID=id,RO=ro,AC=X,TMPLTNM=tmpltnm,ED=ed,ET=et;

**NOTE** If a parameter is listed in a message format above, its presence is permitted. Both the Parameters Description and Notes sections, which are provided later in this document, contain more detailed guidelines for each parameter. If a parameter is listed as optional in the Parameters Description section, that means its presence is not required all of the time in those message formats where it is listed. If a default value is listed for a parameter, that value will be used by SMS/800 unless that parameter and its associated value are contained in the request message. If the default value is desired, it is not necessary to specify the parameter in the request message.

***PARAMETERS DESCRIPTION***

<b>date,time</b>	See Section 5.3
<b>id</b>	<p>Logon Id 8 bytes identifier (required) identifies sender of message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier (required) responsible organization for this message</p> <p>The Resp Org value of the RO tag must match one of the Resp Org IDs that is listed in the MGI Logon ID's GSA screen.</p> <p>If the TRO tag is not sent, then the Entity ID contained within the RO tag (that is, the first 2 characters in the RO tag) must be identical to the Entity ID within the Template Name tag (<b>tmpItnm</b>) in the REQ-TRC message.</p>
<b>tro</b>	<p>Resp Org of the Routing Template 5 bytes identifier</p> <p>Optional because if left empty or omitted, SMS/800 will use the value in the RO tag as the Resp Org of the Routing Template.</p> <p>Responsible Organization (Resp Org) that created or controls the Routing Template.</p> <p>The Resp Org value of the TRO tag must match one of the Resp Org IDs that is listed in the MGI Logon ID's GSA screen.</p> <p>The Entity ID contained within the TRO tag (that is, the first 2 characters in the TRO tag) must be identical to the Entity ID within the Template Name tag (<b>tmpItnm</b>) in the REQ-TRC message. However, if the TRO tag is not sent, then the Entity ID within the RO tag must be identical to the Entity ID within the Template Name tag (<b>tmpItnm</b>) in the REQ-TRC message.</p> <p>An MGI Logon ID may use any one of their Resp Org ID that's on their MGI Logon ID's GSA table as the RO tag value and update any records controlled by any one of the Resp Org IDs on their GSA table.</p> <p>The RO tag value and the record's control RO do not need to be the same value and that's the reason for a TRO tag, so that way an MGI company can set the TRO tag to the control Resp Org of the record (Template Name in this message) to another Resp Org ID that's in their GSA table.</p>

<b>ac</b>	Action Code 1 byte identifier (required) N:New Template record; either (a) new Template record (TAD screen), or (b) new TAD and CPR, or (c) new TAD, CPR and LAD. C:Change Template record (change Template Administrative Data (TAD) and Call Processing Routing (CPR) and/or Label Definitions (LAD)) D:Disconnect Template record T:Transfer the Template record to same number with different date/time R:Resend the Template record X:Delete the Template record
<b>tmpltnm</b>	Template record Name 15 bytes text string. Required, except not allowed for Automation because Automation uses the TMPLTNML tag. TMPLTNM tag is required for all Action Codes (AC) with an exception noted above. Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code (Entity ID) of the Template Name) and then followed by 1-12 alphanumerics or dashes. Dashes are optional in the 4th through 15th character positions. Minimum total data width is 4 characters and maximum total data width is 15 characters. Each Template Name must be unique within the entire system. Example Template Name: *BRBISMARCK-14 Note: In a successful response message, a Template ID will be generated by the SMS/800 system when a Resp Org creates a new Template record.

**qt**      Quantity of Template records to be disconnected

8 bytes decimal numeral. R

Required for automation (e.g., disconnecting multiple records).

The maximum allowed can be obtained via the REQ-ASL message

To disconnect only one Template record, the **qt** tag is not required.

To disconnect multiple Template records, the **qt** tag is required.

**tmpltnml**      The List of Template records for automation

A list of Template Names. It's a list of multiple text string entries. Each Template Name is a 15-byte text string. Each Template Name entry is separated by a comma.

Required for automation.

The quantity of entries must match the **qt** field.

Format of each entry is in accordance with the format of a Template Name per the definition of the **tmpltnm** tag.

Refer to the automation rules, in this document section, for automation capabilities that are supported for Template record via the TRC message.

**ed**

Effective Date

8 bytes text string

For single record processing, **ed** (effective date) is optional for ac=C, D and R, otherwise required.

For automation processing, **ed** is required for ac=D. For automation processing, the **ed** represents the start effective date for the Template records.

Two Allowable Formats:

format 1:mm/dd/yy, where

mm: month (allowable range:

01-12) dd:day (allowable

range:01-31) yy:year (e.g., 94)

effective date and time combination can be up to x months into the future, where x is the industry set standard (currently x = 6 months).

format

2:zzz

zzz:NO

W

format 2 not allowed for ac=R or X

see notes 11 and 13 for further information

<b>et</b>	<p>Effective Time 8 bytes text string (optional)</p> <p>For single number processing, <b>et</b> (effective time) is required for ac=X, otherwise optional, except not allowed when ed=NOW.</p> <p>For automation processing, <b>et</b> is required for ac=D, except not allowed when ed=NOW.</p> <p>format is hh:mmx/z, where</p> <p>hh:hour (allowable range:01-12)</p> <p>mm:minute (allowable values: 00,15,30,45)</p> <p>x:am or pm (allowable values: A, P)</p> <p>z:time zone (allowable values: N-Newfoundland, A-Atlantic, E-Eastern, C-Central, M-Mountain, P-Pacific, Y-Alaska, H-Hawaiian-Aleutian, B-Bering)</p> <p>et can only exist when ed is present.</p> <p>see notes 11, 12 and 13 for further information</p>
<b>sefd</b>	<p>Source Effective Date and Time not allowed for automation</p> <p>16 bytes text string (optional)</p> <p>effective date and/or time of the record to be changed or transferred</p> <p>used with ac = C, T, or D</p> <p>see notes 11,13,29,32 and 38 for further information</p> <p>two allowable formats, 8 bytes and 16 bytes:</p> <p>format 1: mm/dd/yy</p> <p>format 2: mm/dd/yyhh:mmx/z, where</p> <p>mm:month (allowable range: 01-12)</p> <p>dd:day (allowable range: 01-31)</p> <p>yy:year (e.g., 94)</p> <p>hh:hour (allowable range:01-12)</p> <p>mm:minute (allowable values: 00,15,30,45)</p> <p>x:am or pm (allowable values: A,P)</p> <p>z:time zone (allowable values: N-Newfoundland, A-Atlantic, E-Eastern, C-Central, M-Mountain, P-Pacific, Y-Alaska, H-Hawaiian-Aleutian, B-Bering)</p>

<b>priority</b>	Priority of the Update (optional) not allowed for automation  1 byte identifier H: High  The value 'H' is the only allowed value at this time.  When <b>priority</b> =H, then effective date of customer record must equal "NOW" or today's date, and your Logon ID must have high priority update permission defined within the SMS/800 system's HPU screen for the customer record's Resp Org Entity.
<b>iec</b>	InterLATA Carrier  not allowed for automation  107 bytes text string maximum (optional) first 5 bytes must be defined as: CNT1= followed by a 2-byte numeric count of the number of interLATA carriers contained herein. The allowable range of this count is 0-20. A comma follows this count.  the next values to appear are the 3-letter (alpha) ACNA or 4-digit (numeric) CIC. A maximum of 20 carriers are supported, with CIC separated by a comma.  No embedded blanks are allowed. For ac=N, either one iec or one iac or tmpltm required, otherwise optional.
<b>iac</b>	IntraLATA Carrier  not allowed for automation  107 bytes text string maximum (optional) first 5 bytes must be defined as CNT2= followed by a 2-byte numeric count of the number of intraLATA carriers contained herein. The allowable range of this count is 0-20. A comma follows this count.  the next values to appear are the 3-letter (alpha) ACNA or 4-digit (numeric) CIC. A maximum of 20 carriers are supported, with each CIC separated by a comma.  No embedded blanks are allowed. For ac=N, either one iec or one iac or tmpltm required, otherwise optional.

<b>descrip</b>	Description of the Template Name; Template Description. 40 bytes text string (optional) maximum of 40 bytes see note 18 for allowable characters
<b>note</b>	Comments from the Resp Org for the Template record 151 bytes text string (optional) maximum of 151 bytes see note 18 for allowable characters <b>NOTE tag is only applicable for single-record requests.</b>
<b>notes</b>	Comments from the Resp Org for a Template Automation request 151 bytes text string (optional) maximum of 151 bytes For example, the notes field can be used to store any brief information for which no specific field exists. see note 18 for allowable characters <b>NOTES tag is only applicable for automation requests.</b>
<b>ncon</b>	Name of Contact not allowed for automation 30 bytes text string (optional) max of 30 bytes see note 18 for allowable characters
<b>ctel</b>	Contact Phone Number not allowed for automation 10 bytes decimal numeral (optional) format is npanxxxxxx

<b>albl</b>	Areas of Service - Label not allowed for automation 135 bytes text string (maximum) (optional) First 5 bytes must be: CNT3= followed by the 2-byte numeric count of the number of area-of-service labels contained within the message. The allowable range of this count is 0-16. If only one instance of albl exists, and CNT3 is not specified, CNT3 will default to one. (similar logic applies to the counts associated with aac, alat, anet, asta) No embedded blanks are allowed. This count is followed by a maximum of 16 existing labels, between 3-7 bytes in length. Commas separate labels.
<b>aac</b>	Areas of Service - Area Code not allowed for automation 143 bytes text string (maximum) (optional) First 5 bytes must be: CNT4= followed by the 2-byte numeric count of the number of area codes contained within the message. The allowable range of this count is 0-34. The area code entries (maximum of 34) follow, separated by commas. No embedded blanks are allowed.
<b>alat</b>	Areas of Service - LATA not allowed for automation 143 bytes text string (maximum) (optional) First 5 bytes must be: CNT5= followed by the 2-byte numeric count of the number of LATAs contained within the message. The LATA entries (maximum of 34) follow, separated by commas. No embedded blanks are allowed.

<b>anet</b>	<p>Areas of Service - network not allowed for automation 76 bytes text string (maximum) (optional)</p> <p>First 5 bytes must be CNT6= followed by the 2-byte numeric count of the number of networks contained within the message. The network entries (maximum of 23) follow, separated by commas. No embedded blanks are allowed.</p> <p>Each entry must be 2 bytes alphabetic valid network codes (a network country code or network region code or CCS Network codes).</p> <p>Examples of CCS Networks are: BA,BS, UW.</p> <p>Examples of network country codes:</p> <ul style="list-style-type: none"> <li>CN: Canada</li> <li>US: United States (includes all 50 states and D.C.).</li> </ul> <p>Examples of network region codes:</p> <ul style="list-style-type: none"> <li>CR: Caribbean</li> <li>XA: US and Canada</li> <li>XB: US and Caribbean</li> <li>XC: US and Canada and Caribbean</li> </ul> <p>US, XA, XB, and XC cannot be combined with any other area-of-service type or with each other.</p> <p>Template records will <u>not</u> support AOS set to a specific CCS Network (e.g., BA, BS, UW, etc.) but will support AOS Networks set to any one of the following values: US, XA, XB, XC, CN and CR. Error 4548 will be given when any <u>CCS network</u> is entered in REQ-TRC message anet tag.</p>
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<b>asta</b>	<p>Areas of Service - State not allowed for automation 145 bytes text string (maximum) (optional)</p> <p>First 5 bytes must be: CNT7= followed by the 2-byte numeric count of the number of states contained within the message.</p> <p>The state entries (maximum of 46) follow, separated by commas.</p> <p>Each state entry must be 2 bytes alphabetic, must be valid state codes. No embedded blanks are allowed.</p>
-------------	---

<b>Ins</b>	Number of Terminating Lines (i.e., count of destination phone numbers). Allowable range of values is 1 through 9999. Not allowed for automation. required if ac=N, otherwise optional. 4 bytes decimal numeral (maximum of 4 bytes) Value of 9999 will maximize the time at which regional network management controls are activated. To set a higher value than 9999 for a particular Dial#, the Resp Org needs to contact the Help Desk and request a Threshold Level Class Assignment (TLC) for the Dial#(s). The LNS value on a Pointer record overrides the LNS value on a Template record at the newer SCPs that support the Template Feature according to TM-STS-000798 issue 22 and higher.
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<b>node</b>	Name of Decision or Action Node (i.e., name of a CPR column) <u>not allowed for automation</u> 88 bytes text string (maximum) (optional) First 6 bytes must be: <b>CNT10=</b> followed by the 3-byte numeric count of the number of nodes (i.e., # of CPR columns) contained within the message. The allowable range for the count is: 0-20. The nodes follow, separated by commas.  Each node entry is 2 or 3 bytes alphabetic of the form XX or XXZ (optional), where XX designates decision criteria or action node and Z designates associated time zone (only time, date, and day nodes can have XXZ format)  allowable values for XX are: TI (time), DT (date), DA (Day), LT (LATA), ST (state), AC (area code), NX (NXX), SW (switch), PC (percent), CA (carrier) AN (announcement), TE (terminating telephone number), SD (six-digit), TD (ten-digit) and allowable values for Z are: see z parameter  For example, if there are 3 nodes (NPA, Carrier and Tel#), then the Node field would look like: NODE="CNT10=3,AC,CA,TE"
<b>cnt11</b>	Count of number of distinct call routing paths/branches (i.e., CPR rows) <u>not allowed for automation</u> 3 bytes decimal numeral (optional) allowable range: 0-999 CPR rows per CPR Section

**vr.c**      Values associated with Row and Column Entries  
not allowed for automation  
279 bytes text string (optional)

Each instance of the parameter V indicates a row. Rows are one text field.

Each instance of vr.c indicates a decision criteria value associated with column c.

Commas separate row and column entries.

Each entry can be a:

single value, or

start-range - end-range (dash between values indicates range),  
where allowed or

multiple values (where allowed) separated by plus sign

(+), or label name (where allowed), or

"OTHER", or

no entry, indicated by: ,, (comma comma). No entry means that the decision criteria is not applicable for this path of the call routing logic.

**TI** (Time) node values:

Format is: hh:mmx-hh:mmx where x can be A (am) or P

(pm) Time is standard time and default is Central time

**DT** (Date) node values:

mm/dd (no year should be entered)

Range may be entered in the form: mm/dd-mm/dd

Multiple values can be specified using "+" (plus sign) as delimiters

**DA** (Day-of-Week) node values:

SU = Sunday

M = Monday

TU = Tuesday

W = Wednesday

TH = Thursday

F = Friday

SA = Saturday

Range may be entered, such as: SU-TU

Single value may also be entered, such as: TH

Multiple values may be entered (e.g., multiple single values, multiple ranges, or ranges combined with single values)

Multiple value entries can be specified using "+" (plus sign) as delimiters

**LT** (LATA) node values:

LT values must be numeric

More than one LATA can be entered with "+" (plus sign) as delimiters

Maximum of three LT values allowed

**ST** (State) node values:

More than one state code can be entered with "+" (plus sign) as delimiters

Maximum of four ST values allowed

**AC** (Area Code) node values:

AC values must be

numeric

More than one Area Code can be entered with "+" (plus sign) as delimiters

Maximum of three AC values allowed

**NXX** (NX) node values:

Format is: nxx (numeric values only)

More than one NXX can be entered with "+" (plus sign) as delimiters

Maximum of three NXX values allowed

**SW** (Switch) node values:

ON or OFF. A maximum of one Switch value is allowed.

A numeric suffix should be used if needed. Valid entries on input are:

ONn, where n=0-9, ON n, and OFFn. "n" is used to designate each of the

n branches that are derived from the same previous criteria.

A common suffix can link branches for SMS.

**PC** (Percent Allocation) node values:

allowable integer values are 1-99

An alphabetic suffix should be used if needed to link two branches derived from the same percent criteria.

**CA** (Carrier) node values:

valid entries are: ACNA, CIC, ACNA-CIC, ACNACIC (i.e., no space between ACNA and CIC)

Must be previously defined in the basic administrative portion of the Template record (Template Administrative Data (TAD)).

A maximum of one Carrier value is allowed.

**AN** (Announcement) node values:

OBA = Out of Band

Announcement

VCA = Vacant Code

Announcement

Aids in controlling announcement that should be returned to caller if caller is within the Area-of-Service but the call should not terminate. A CPR path cannot contain a populated AN and PC node.

**TE** (Terminating Telephone Number) node:

Allowed value for a Template record TEL# node (TE tag): #DIAL or may be left empty if the call terminates to an Announcement node.

**SD** (Six-digit) node values:

Format is: npanxx (numeric values only)

More than one entry can be entered with "+" (plus sign) as delimiters

**TD** (Ten-Digit) node values:

Format is: npanxxxxx. Only alphanumeric values.

<b>pec</b>	<p>Primary InterLATA Carrier</p> <p>not allowed for automation</p> <p>4 bytes text string (optional)</p> <p>format is 3-letter Access Customer Name Abbreviation (ACNA) or 4-digit CIC</p> <p>entered carrier must already be defined on the Template Administrative Data (TAD) part of the Template record</p> <p>this field is required only if the call is interLATA, which includes turnaround calls</p> <p>this field is not required if the call is intraLATA</p>
<b>pac</b>	<p>Primary IntraLATA Carrier</p> <p>not allowed for automation</p> <p>4 bytes text string (optional)</p> <p>format same as pec above</p> <p>entered carrier must have been previously defined on the Template Administrative Data (TAD) part of the Template record</p> <p>this field is required if the call is intraLATA only or interLATA, however, this field is not required if the call is turnaround</p>
<b>z</b>	<p>Time Zone</p> <p>not allowed for automation</p> <p>1 byte identifier (optional)</p> <p>allowable values are: A (Atlantic), B (Bering), C (Central), E (Eastern), H (Hawaiian-Aleutian), M (Mountain), N (Newfoundland), P (Pacific), or Y (Alaska)</p> <p>default value: C</p> <p>time zone indicator for entire call processing portion of the record or for specific value of node</p>
<b>ds</b>	<p>Daylight Savings</p> <p>not allowed for automation</p> <p>1 byte identifier (optional)</p> <p>allowable values are: Y (Yes), or N (No)</p> <p>default value: Y</p>

<b>cnt12</b>	Count of Number of Labels not allowed for automation 3 bytes decimal numeral (optional) allowable range is: 0-999
<b>type</b>	Type of CPR LAD label.  Applicable to customer records.  not allowed for automation  2 bytes identifier (optional) allowable values are: AC (Area Code), LT (LATA), DT (Date), ST (State), NX (NXX), TI (Time), SD (Six-Digit), TD (Ten-Digit), TE (Telephone Number)
<b>lbl</b>	Label name not allowed for automation 8 bytes text string (optional) field length 2-8 characters, first character must be * (asterisk) cannot contain blanks or special symbols other than the start * label name must be unique for given LAD type
<b>sort</b>	Sort indicator not allowed for automation 1 byte identifier (optional) allowable values: Y (yes) or N (no) Default Value: N  The LAD label names that contain a value of Y will be sorted in the order that they are entered in the message. Sorting can only be done if TYPE=AC,LT,ST,NX,SD, or TD. See note 43 for more information.

**def** Values associated with label name specified  
not allowed for automation  
3579 bytes text string (optional)  
maximum of 3579 bytes

First 6 bytes defined as: CNT13=, followed by the 3 byte count of number of subsequent values. The allowable range of the count is 1-255, except 1-256 for NXXs (see below).

Subsequent fields are populated with values of one of the following entry types. Only one value can be specified for Telephone Number LAD labels. Exact formats are as defined in the vr.c parameter. Values are separated by commas. No embedded blanks are allowed.

the maximum number of values that can be associated with a label is 255, except for when NXX labels are specified, in which case the maximum number is 256 to allow for the specification of the associated NPA as indicated below.

Area Codes: 3 bytes

NXXs: 3 bytes, values separated by commas. The first value is the associated NPA

LATAs: 3 bytes

States: 2 bytes

6-digit numbers: 6 bytes

10-digit numbers: 10 bytes

Dates: 5 or 11 bytes (mm/dd or mm/dd-mm/dd or mm/dd+mm/dd)

Times: 13 bytes (hh:mmx-hh:mmx where x is A (am) or P (pm) )

Telephone number: 10 bytes

## NOTES FOR REQ-TRC

**NOTE** These notes are based on the notes for REQ-CRC message, and changes for Templates are included herein. Where a note for REQ-CRC doesn't apply to Templates, that note is marked as "N/A" and the note number is still included herein for Resp Orgs that are very familiar with the REQ-CRC notes.

1. **Permission for Templates:** The RESP ORG on the *Template record* will be the Resp Org that was in the RO tag of the REQ-TRC with AC=N (new) when creating a new Template record (*Routing Template*).
  - a. *Template record* can be modified/updated (ac=C) by any OS having update permission for the RESP ORG of the record as long as the Resp Org of the *Template record* is on the GSA screen for the Logon ID that sent the REQ-TRC message.
  - b. Permission for resending (AC=R) a *Template record* follows the same rule as with action code C.
  - c. Permission for deleting (AC=X) a *Template record* follows the same rule as with action code C.
  - d. Permission for disconnecting (AC=D) a *Template record* follows the same rule as with action code C.
2. A Template record can only be deleted (ac=X) if it has a future effective date/time. Furthermore, for ac=X, the **ed** and **et** fields must match what is stored in SMS; use of **ed=NOW** will result in an error.
3. Entire Template record can be transferred; however, they can only be transferred to the same Template Name. Changes to the record and transfers can be made simultaneously (ac=T).
4. Any records with status of saved, pending, invalid, must check, or failed may be transferred. Records with status of sending, active, old or disconnect cannot be transferred.
5. The following parameters are required when creating the first instance of the customer record:

**id ro**

**ac=N**

**ed**

at least one area of service: **albl**, **aac**, **alat**, **anet** or **asta**

at least one carrier, intraLATA (**iac**) or interLATA (**iec**)

6. N/A for Template records.
7. N/A for Template records.
8. N/A for Template records.
9. A Template record cannot use **CIC 0110** and therefore the carrier tags (intraLATA (**iac**) and interLATA (**iec**)) cannot have a value of "0110" or "OTC" or "OTX".
10. If **ac=C, D or T** and administrative data is changing, only the changed parameters must be specified.
11. If **ac=C or T**, the **ed** and **et** parameters will be the new (target) effective date and time (required for transfer and optional for change). The existing effective date and time is specified in the **sefd** field (source effective date and time field). A record can be transferred forward up to an industry-set time period (providing no future records exist), or backward only as far as the effective date and time on the previous record. A record cannot be transferred backward to a date/time prior to *NOW*. A record with a future effective date and time can be changed without changing the effective date and time, or can be changed to a new effective date and time.
12. If **et** is not entered when **ac=N, C, T or D**, SMS/800 will assign an effective time from a range of times when SMS/800 has a lighter workload. The response message, RSP-TRC, will contain the time SMS/800 selected. Use of this capability is encouraged to distribute the workload evenly.
13. If **ed** is not entered when **ac=C**, SMS/800 will assume that the Template record is not to be copied to a new date and time, but that any changes are to be applied to the existing Template record with the effective date and time specified in the **sefd** field.
14. The following rules apply to disconnect activity: Use **ac = D**, to create record with DISCONNECT status, either pending or immediate (**ed = NOW**), or change data associated with a record with DISCONNECT status.
  - a. Use **ac = T** to transfer a "pending" Disconnect record.
15. Area-of-Service (**AOS**) labels will be supported over the interface; however, the specified AOS label must be an existing label that belongs to the same Entity as the **Template record**. The OS will not have the ability to create or modify a label over the interface using the REQ-TRC command.

16. N/A for Template records.
  17. N/A for Template records.
  18. N/A for Template records.
  19. The **descrip**, **note**, **notes**, and **ncon** fields accept the following graphic characters (in addition to the alphanumerics, A-Z and 0-9): See [Figure 7-1](#) (in the **REQ-CRC** message) for the list of special graphic characters that are supported in these fields.
  20. Effective Date **ed** and Effective Time **et** will be optional fields in the case that only one record exists for **ac=C**. For **ac=N**, **ed** is required and **et** is optional. For **ac=T**, **sefd** will be required if more than one record exists.
21. CPR LAD Labels will be supported for the following criteria: Time
- Date  
LATA  
State  
Area Code  
NNX  
Six-Digit Number  
Ten-Digit Number  
Telephone Number

22. CPR LAD labels cannot be defined for Day, Carrier, Percent, or Switch criteria.
23. The GO TO decision node will not be supported since it is an aid to SMS/800 on-line data entry. GO TO is also used infrequently today.
24. If a user wishes to make a change to TAD data, only TAD data needs to be sent. That is, CPR or LAD data need not be sent since existing CPR/LAD data would be copied from the existing SMS record. Similarly, if CPR data is changing, TAD and LAD data need not be sent. Similarly, if LAD data is changing, TAD and CPR data need not be transmitted. If TAD data is sent, only those fields that are changing need be sent. If CPR and/or LAD data is sent, the entire CPR and/or LAD must be sent.

25. To change Template record data other than the ED and ET, Action=C (change) should be used. SMS will replace the old data with the new data. If a user wishes to change the ED and/or ET, Action=T (transfer) should be used. Entire records can be transferred; however, they can only be transferred to the same number. When a transfer is initiated, Template record data can be changed simultaneously.
26. If Action = R (resend), SMS will select the most recent Template record instance that has a status of active, disconnect, sending, or failed, and resend that record instance to all the SCPs in the area of service. This assumes there is no active record following the record instance. A failed record will only be resent to an SCP if the cause of the failure was rejection at that SCP.
27. N/A for Template records.
28. If a user wishes to change CPR and/or LAD data only, the REQ-TRC message with Action=C would be sent. REQ-TRC would consist of all required data, along with only the complete CPR and/or LAD portion of the message. SMS/800, when processing, should replace the old CPR data with the new CPR data, and carry forward TAD data (LAD data may or may not exist). Changes to CPR and/or LAD data can only be accommodated by transmitting the entire set of CPR and/or LAD data.

Note also that companies who will have entered their records using the copy CPR function over the load tape, may wish to modify their call routing. An example of such a modification is replacing one carrier to transport in a LATA with another. Action=C in the REQ-TRC message would essentially satisfy this requirement, since companies could simply replace one CPR for another. This is somewhat different than a straight *copy* function (available on-line) which is not supported in this interface.

29. SMS/800 allows an existing record to replace itself by being transferred to NOW providing:
  - The customer record status of the record being transferred is FAILED, SAVED, INVALID, MUST CHECK, or PENDING.
  - The **sefd** of the source record being transferred is equal to the current 15-minute window.
  - **ac=T**.
  - **ed=NOW**.

The same record can be transferred to "NOW" multiple times within the current 15-minute window as long as it doesn't go ACTIVE, SENDING, or DISCONNECT.

30. To add a label to a LAD or to add a type to a LAD, a user should launch a REQ-TRC message with Action=C. The new, as well as the existing, LAD data should be included in the message, will replace the old LAD data, and the TAD and CPR data will be copied from the existing record.
31. To copy a record to a different number with a different ED/ET, the OS should perform the copy within their own system prior to launching any such request over the interface.
32. The copy or copy and change using **ed=NOW** is enhanced to assign the following 15-minute window when there is an existing record in the current 15-minute window and ALL of the following conditions are met:
  - The customer record status of the existing record (specified by **sefd**) in the current 15-minute window is ACTIVE, SENDING or DISCONNECT. **Sefd** must be used (refer to note 29).
  - There is no record in the next 15-minute window.
  - There is no existing record between the next 15-minute window and the effective date/time of the record being copied.
  - **ac=C, N, D, or T.**
33. To delete a TAD associated with a complex record is not allowed. This would essentially mean that the Template record should be removed from the SMS customer record database.
34. **CPR subsections** are not supported since they are more a vehicle for on-line data entry. To clarify: MGI only supports one CPR Section (i.e., one Main Section), and therefore, MGI does not support any CPR Subsections.
35. N/A for Template records.
36. To delete a CPR from a record, **CNT10** should be set to zero (0). To delete a LAD from a record, **CNT12** should be set to zero (0). If any part of a CPR is changing, the entire CPR must be transmitted.

37. Sample REQ-TRC Input Subset to primarily illustrate how CPR data can be specified:  
REQ-TRC:,1992-04-25,10-43-59-CST:::::ID=ZYXW3010,RO=ZYXW3,AC=C,

TMPLTNM="\*ZYTEMPLATE1",ED="12/12/09",ET="12:15A/E":

```
IEC="CNT1=2,CAR,XXX":  
NODE="CNT10=4,DAC,TIC,CA,TE":  
CNT11=4:  
V="M-F,09:00A-05:00P,0333,9086992392":  
V="M-F,OTHER,,2012322222":  
V="SA,,4154456294":  
V="SU,,0999,8887221222";
```

38. N/A for Template records.

39. For Action Code = "C" or "D", the following rules apply to the usage of the sefd and ed,et parameters. If the sefd and ed and et parameters are present, SMS will use the record instance as specified by the sefd parameter to copy to a new instance with the target date/time as specified in the ed,et parameters. If only the sefd parameter is present, SMS will update the record instance as specified by the sefd parameter; this is an update in place and applies to records with status only of the following: PENDING, MUST CHECK, INVALID, or SAVED. If only the ed,et parameters are present, SMS will use the record with the closest previous effective date and time in the SMS data base as the source to copy to a new instance as specified in the ed,et parameters; and in this case, it will not matter what is the Template record Status of the source record because SMS will copy the 'closest previous' record version. If neither the sefd nor the ed,et parameters are present, and there is only one record with a status of the following in the SMS/800 system {PENDING, MUST CHECK, INVALID, or SAVED } then SMS will update in place that one instance; yet if there is more than one record version, the update will be denied. For information on NOW processing, refer to notes 29 and 32.

40. N/A for Template records.
41. N/A for Template records.
42. Records partially saved via on-line and then changed via MGI may result in errors related to optional parameters.
43. N/A for Template records.
44. To sort LAD label entries, users may enter the SORT tag. The new tag is optional, however, if entered, it must have a value of 'Y' or 'N'. It can only be entered if the Action Code is NOT Delete or Resend. The LAD label name blocks that contain the SORT tag will be sorted in the order in which they are entered. Sorting can only be performed on the following LAD label types: Area Code, LATA, State, NXX, Six-Digit, or Ten-Digit. Contact the Help Desk for the maximum number of labels that can be sorted across all LAD types.
45. For automation requests, the only allowed tags are those specified in the message format above (**ac=D** with the **qt** tag present). The allowed tags for automation are: **id**, **ro**, **ac**, **qt**, **tmpltnml**, **ed**, **et**, and **notes**. The presence of other templaterecord tags will force a DENIED,01 response.  
The **ed** and **et** parameters will specify the scheduling start effective date/time for disconnecting the numbers. The effective date/time of the disconnect Template records will begin with the **ed/et** value and may be scheduled over the following quarter hours. The request may contain just the **ed** parameter, when **ed=NOW**. The Template records will be deleted when all responses are received from the SCPs.

## 7.2.8 Response to Update Template Record [RSP-TRC]

### RESPONSE TO UPDATE TEMPLATE RECORD [RSP-TRC] CUSTOMER RECORD ADMINISTRATION

This message is the response to the command REQ-TRC. This response message has the capability to return a variety of error conditions, since REQ-TRC supports multiple purposes. It is possible to receive a success, failure, or warning. If the command was successfully processed, the response will contain **COMPLD** in the **term\_rept** field, **00** in the **error\_cd** field, and **err** will not be present. For failed updates, the response will contain **DENIED** in the **term\_rept** field, **01** in the **error\_cd** field, and one or more instances of **err**. Failed updates that do not pass SMS syntax checks on individual fields will not be stored in SMS; however, failed updates that pass the syntax checks but fail SMS validation checks will be stored in SMS with a status of INVALID. The latter can be corrected by using action code of 'C' or 'T' with information necessary for correction.

For warnings, the response will contain **COMPLD** in the **term\_rept** field, and **11** in the **error\_cd** field. If future records exist following a change, the response message will include warning message 9000.

#### Automation:

A separate set of response formats support the automation requests. The automation response format depends on how the command REQ-TRC was processed.

For Automation: A response containing **COMPLD** in the **term\_rept** field and **00** in the **error\_cd** field will be returned when all dial numbers are processed successfully, with no warnings and no errors. The **qt** will contain the quantity of numbers successfully processed, and **numl** will contain the list of dialed numbers successfully processed.

For Automation: A response containing **COMPLD** in the **term\_rept** field and **10** in the **error\_cd** field will be returned when one or more dial numbers resulted in an error yet one or more other dial numbers were processed successfully with or without any warning(s). The **qt** will contain the quantity and **numl** will contain the list of dialed numbers successfully processed without warning and errors. There will be one or more instances of **errv** for the error(s). In addition, **errv1** may exist if there are any warning(s).

For Automation: A response containing **COMPLD** in the **term\_rept** field and **11** in the **error\_cd** field will be returned when at least one dial number is processed successfully and one or more numbers resulted in a warning(s) yet no errors were found. The **qt** will contain the quantity and **numl** will contain the list of dialed numbers successfully processed. There will be one or more instances of **errv1** for the warning(s).

For Automation: A response containing **DENIED** in the **term\_rept** field and **01** in the **error\_cd** field will be returned when the entire request message fails or every dial number fails to process resulting in error(s). The **qt** and **numl** will not be returned. There will be one or more instances of **errv** for the error(s).

Responses to automation requests are returned only when all processing has completed.

<b>Message Type</b>	<b>Response</b>
<b>Logical Channel</b>	X4
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queuing</b>	Yes
<b>Command</b>	REQ-TRC
<b>Route ID</b>	RTP

**MESSAGE FORMAT****— For single Template record(non-automation) requests:**

- **Successful Update Response:**

**RSP-TRC:,date,time:::COMPLD,00::ID=id,RO=ro,TMPLTNM=tmpltnm,  
TMPLTID=tmpltid,ED=ed,ET=et,HCRUR=hcrur,CREN=cren;**

*Example of a Success Response message:*

RSP-TRC:,2010-10-16,13-49-22-CST:::COMPLD,00::ID=BRXX101,  
RO=BRXX1,TMPLTNM="\*BR001231111",TMPLTID=0000001776,ED="10/  
16/03",ET="01:45P/C";

- **Failed Update Response (No Record Stored in SMS):**

**RSP-TRC:,date,time:::DENIED,01::ID=id,RO=ro,TMPLTNM=tmpltnm,  
ED=ed,ET=et,HCRUR=hcrur,CREN=cren:CNT=cnt:ERR=err,VERR=verr;**

*Example of a Response for Unsuccessful Request message with errors:*

RSP-TRC:,2010-10-16,13-49-22-CST:::DENIED,01::ID=BRXX101,  
RO=BRXX1,TMPLTNM="\*BR001231112",ED="10/16/03",ET="01:45P/C":  
CNT=01:ERR=7561;

*Example of a Response for Unsuccessful Request message with errors:*

RSP-TRC:,2010-10-16,13-49-22-CST:::DENIED,01::ID=BRXX101,  
RO=BRXX1,TMPLTNM="\*BR001231112",ED="10/16/03",ET="01:45P/C":  
CNT=01:ERR=0103,VERR="# OWNED BY ABC01";

- Failed Update Response (Record Stored in SMS):

**RSP-TRC:,date,time:::DENIED,10::ID=id,RO=ro,TMPLTNM=tmpltnm,  
TMPLTID=tmpltid,ED=ed,ET=et,HCRUR=hcrur,CREN=cren:CNT=cnt:  
ERR=err,VERR=verr;**

- Update with Warning Response:

**RSP-TRC:, date,time:::COMPLD,11::ID=id,RO=ro,TMPLTNM=tmpltnm,  
TMPLTID=tmpltid,ED=ed,ET=et,HCRUR=hcrur,CREN=cren:CNTA=cnta:  
ERR1=err1,VERR=verr;**

*Example of a response of a denied request due to an invalid Template Name:*

RSP-TRC:,2011-03-21,16-21-31-CST:::DENIED,01::ID=BRT01000,  
RO=BRU01,TMPLTNM="\*BR#SSU-TEMP11",ED="04/20/11",ET="05:00P/C":  
CNT=01:ERR=0800,VERR="TMPLTNM:INVALID";

*Example of a response of a denied request due to Template Name not sent in the request:*

RSP-TRC:,2010-12-16,16-21-31-CST:::DENIED,01::ID=BRT01000,  
RO=BRU01,TMPLTNM="",ED="01/20/11",ET="05:00P/C":  
CNT=01:ERR=0024,VERR="TMPLTNM:MISSING";

*Example of a response of a denied request due to Template Name's 1<sup>st</sup> 2 letters (after the asterisk) aren't two letters:*

RSP-TRC:,2011-03-21,11-03-45-CST:::DENIED,01::ID=BRTMGI01,RO=BRU01,  
TMPLTNM="\*B1AAAA2 ",ED="04/01/11",ET="10:00P/C":CNT=01:  
ERR=0800,VERR="TMPLTNM:INVALID";

— For multiple Template record (Automation) Requests:

- Success Response:

RSP-TRC:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:  
TMPLTNML=tmpltnml;

*Example of a Success Response message:*

RSP-TRC:,2010-08-25,17-49-22-CST:::COMPLD,00::ID=BRXX101,  
RO=BRXX1:QT=00000011:TMPLTNML="8001231111,8001231112,  
8001231113,8001231114,8001231115,8001231116,8001231117,8001231118,  
8001231119,8001231120,8001231121";

- Success Response with Warnings:

RSP-TRC:,date,time:::COMPLD,10::ID=id,RO=ro:QT=qt:  
TMPLTNML=tmpltnml:WCNT=wcnt:ERRV1=errv1(1),ERRV1=errv1(2),  
...ERRV1=errv1(wcnt);

*Example of a Success Response message with Warnings:*

RSP-TRC:,2010-08-25,17-49-22-CST:::COMPLD,10::ID=BRXX101,  
RO=BRXX1:QT=00000007:TMPLTNML="8001231111,8001231112,  
8001231113,8001231114,8001231115,8001231116,8001231117":  
WCNT=00000003:ERRV1="9007,1,8001231118",  
ERRV1="9008,1,8001231119",ERRV1="9010,1,8001231110";

— For multiple Template record (Automation) Requests: [continued]

- Response for Partially Successful Request with Errors and/or Warnings”

RSP-TRC:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:  
TMPLTNML=tmpltnml:WCNT=wcnt:ERRV1=errv1(1),ERRV1=errv1(2),  
...ERRV1=errv1(wcnt):ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),  
...ERRV=errv(ecnt);

*Example of a Response for Partially Successful Request message with Errors and/or Warnings:*

RSP-TRC:,2010-08-25,17-49-22-CST:::COMPLD,11::ID=BRXX101,  
RO=BRXX1:QT=00000004:TMPLTNML="8001231111,8001231112,  
8001231113,8001231114":WCNT=00000003:ERRV1="9007,1,8001231115",  
ERRV1="9008,1,8001231116",ERRV1="9010,1,8001231117":  
ECNT=00000002:ERRV="5636,1,8001231119",ERRV="5637,1,8001231110";

- Response for Unsuccessful Request:

RSP-TRC:,date,time:::DENIED,01::ID=id,RO=ro:ECNT=ecnt:  
ERRV=errv(1),ERRV=errv(2),...ERRV=errv(ecnt);

*Example of a Response for Unsuccessful Request message with Errors:*

RSP-TRC:,2010-08-25,17-49-22-EST:::DENIED,01::ID=BRXX101,  
RO=BRXX1:ECNT=00000002:ERRV="5637,1,8001231001",  
ERRV="0130,1,8001231002";

*PARAMETERS DESCRIPTION*

**date,time** See Section 4

**term\_rept** Termination Report Code  
 6 byte identifier  
 COMPLD - Update Request Accepted  
 DENIED - Update Request Failed

**error\_cd** Error Code  
 2 bytes decimal numeral

**For single number processing**

00 - No Error  
 01 - Error Present: No record stored in SMS (See err field)  
 10 - Error Present: Record stored in SMS (See err field)  
 11 - Warning (See err field)

**For automation processing**

00 - all Template records were processed successfully, with no warning and no errors.  
 10 - all Template records were processed successfully, but there was at least one warning found, and no errors.  
 11 - at least one Template record was processed successfully, there was at least one error found, and possibly warnings found.  
 01 - no Template records were processed successfully. Errors were found, either in the request message or for every dial number.

**id** Logon Id  
 8 bytes identifier  
 identifies sender of message

**ro** Resp Org  
 5 bytes identifier  
 responsible organization for this message

<b>tmpltnm</b>	The Template record Name 15 bytes text string Format is in accordance with the definition of the tmpltnm tag in the REQ-TRC message.
<b>tmpltid</b>	Template ID A Template ID will be generated by the SMS/800 system when a Resp Org creates a new Template record. 10 bytes (numerics only); exactly 10 numerics; starts with a zero.
<b>qt</b>	Quantity of Template records successfully processed without warning and errors for COMPLD response for automation 8 bytes decimal numeral, fixed length Returned only on Automation requests.
<b>tmpltnml</b>	The List of Template records by Template record Name (ref. tmpltnm field) successfully processed without warnings and errors. A list of 15 bytes text string entries, separated by commas. Returned only on Automation requests.
<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 -12) dd : day (allowable range: 01-31) yy : year (e.g., 94)
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01-12) mm : minute (allowable values: 00,15,30,45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)

<b>hcrur</b>	Remaining number of high priority customer record updates 3 bytes decimal numeral (optional) The remaining number of high priority customer record updates allowed for the customer record's entity. This tag is only returned if <b>priority=H</b> was received in the request message and user has customer record update permission for that entity.
<b>cren</b>	Entity of customer record 2 bytes identifier (optional) entity of the remaining high priority updates This tag is only returned if <b>priority=H</b> was received in the request message and user has customer record update permission for that entity.
<b>cnt</b>	Number of Error blocks for DENIED,01 or DENIED,10 response for single number processing 2 bytes decimal numeral Maximum value of 20

**err****Error Explanation**

4 bytes decimal numeral (optional- for single number only)

there can be multiple errors

0001 - MML message format error. Needs , : \; symbols in proper location.

0002 - Message syntax: too many parameters

0003 - Unrecognized tag name

0004 - Invalid parameter combination

0005 - Syntax error

0006 - Required parameter missing. See error 0024 if TMPLTNM was not sent.

0007 - Required COUNT missing

0008 - Input data length exceeds maximum field size.

0009 - Need tag name. Cannot process data value without a tag name.

0010 - The # of entries in a CPR row (vr.c) does NOT match the # of CPR nodes.

Make sure to use + (not comma) as delimiter if multiple values are included in a vr.c.

0011 - The COUNT and actual number of values do not match.

0012 - vr.c: Maximum of 3 values allowed for a LT (LATA), AC (Area Code), NX (NXX) node.

0014 - cnt3 (AOS - Label): Maximum of 16 allowed.

0015 - cnt1 (InterLATA Carrier), cnt2 (IntraLATA Carrier), cnt10 (CPR Nodes):

Maximum of 20 allowed.

0016 - cnt6 (AOS-Network): Maximum of 23 allowed.

0017 - cnt4 (AOS-Area Code), cnt5 (AOS-LATA): Maximum of 34 allowed.

0018 - cnt7 (AOS-State): Maximum of 46 allowed.

0019 - cnt13 (LAD Definition): # of definitions must be 1-255. Use a new label or remove extras.

- 0021 - id (Logon ID): Required message sender's Logon ID missing.
- 0022 - ro (Resp Org): Required message sender's Resp Org missing.
- 0023 - ac (Action Code): Required Action Code missing.
- 0024 - tmpltNm (template name): Required. TMPLTNM is missing.
- 0025 - cnt12 (CPR Label): Maximum of 999 allowed.
- 0026 - cnt11, cnt12: COUNT field must precede all repeating data values.
- 0027 - vr:c: Maximum of 4 values allowed for a ST (STATE) node.
- 0028 - node (CPR Node): CPR Node specifications are required if CPR rows are entered, vice versa.
- 0029 - Duplicate tags within a message are not allowed.
- 0030 - This text string contains a wrong COUNT tag. Proper combinations are:  
CNT1 for IEC, CNT2 for IAC, CNT3 for ALBL, CNT4 for AAC, CNT5 for ALAT,  
CNT6 for ANET, CNT7 for ASTA, CNT13 for DEF.
- 0031 - This tag-value pair must appear WITHIN its own data block.
- 0097 - Request message is ignored, since the message time stamp is earlier than the Last Update time of the record.
- 0098 - Invalid or missing date and/or time in application message.
- 0099 - Other
- 0100 - ac (Action Code): Must be N (new), C (change), D (disconnect), T (transfer), X (delete), or R (resend).
- 0101 - Permission denied. Logon ID must be an 8-alphanumeric logon id known to SMS.
- 0102 - Permission denied. The Resp Org does not belong to this Logon ID.
- 0103 - Permission denied. Your Logon ID cannot update this Resp Org's records.
- Error code 0102 or 0103 will be returned when the Resp Org field (TRO tag or RO tag if TRO tag isn't sent) of Template Name doesn't belong to the MGI Logon ID's GSA screen View/Update List.

0106 - ed (Target Effective Date): Must be a calendar date (in 'mm/dd/yy' form).

Must be a date in the future but within the industry-set time period from current date, except for Resend action.

The date can also be 'NOW' for New, Change, Disconnect, or Transfer action.

0108 - ed & et (Effective Date & Time): If Effective Date is 'NOW', Effective Time should NOT be used.

0130 - Cannot process request: Target record should be transferred.

0200 - To process 'New' action, you must specify a Target Effective Date.

0201 - Cannot process 'New' action (AC=N), since Target record already exists.

0202 - To process 'New' action (AC=N) for an existing record, its previous record must be in DISCONNECT or PENDING disconnect status.

0203 - To process 'New' action, the sefd (Source Eff Date&Time) should not be used.

0208 - To process "New, Change, Disconnect, or Transfer" action, you must have at least one Area of Service (albl, aac, alat, asta or anet).

0300 - To process 'Change' action, you must have a record associated with this tmpltm.

0301 - Cannot process 'Change' action, since this number does not have a record that matches the Effective Date and Effective Time you specified.

0302 - To process 'Change' action, you must specify Source Effective Date and/or Time if more than 1 record exists for the specified number.

0303 - Cannot process 'Change' action, since other record exists between Source and Target.

0304 - Cannot process 'Change' action, since only 1 record exists for this Template record but the record is past due.

0306 - Cannot process 'Change' action, since you cannot copy or copy+change a new record backward.

0307 - Cannot process 'Change' action, since the Source and Target have the same Effective Date and Effective Time.

0308 - Cannot process 'Copy+Change' action, since Target record already exists.

0309 - To modify a PENDING non disconnect record, you must use the 'Change' action.

0310 - Cannot process request: Target record should be transferred.

- 0400 - To process "Disconnect" action, you must have a Template record associated with this number.
- 0401 - Cannot process 'Disconnect' action, since this number does not have a record that matches the Effective Date and Effective Time you specified.
- 0402 - To process 'Disconnect' action, you must specify Source Effective Date and Time if more than 1 record exists for the specified number.
- 0403 - Cannot process 'Disconnect' action, since other record exists between Source and Target.
- 0404 - Cannot process 'Disconnect' action, since only 1 record exists for this number but the record is past due.
- 0406 - Cannot process 'Disconnect' action, since you cannot copy or copy+change a PENDING disconnect record backward.
- 0407 - Cannot process 'Disconnect' action, since Source and Target have the same Effective Date and Effective Time.
- 0409 - Cannot process 'Disconnect' action, since Target record already exists.
- 0410 - To modify a PENDING disconnect record, you must use 'Disconnect' action.
- 0500 - To process 'Transfer' action, you must have a record associated with this number.
- 0501 - Cannot process 'Transfer' action, since this number does not have a record that matches the Effective Date and Effective Time you specified.
- 0502 - Cannot process 'Transfer' action, since Target record already exists.
- 0503 - Cannot transfer an OLD, SENDING, or ACTIVE templaterecord.
- 0504 - Cannot process 'Transfer' action, since Source and Target have the same Effective Date and Effective Time.
- 0505 - To process 'Transfer' action, you must specify Source Effective Date and Time if more than one record exists for the specified number.
- 0506 - Cannot process 'Transfer' action, since other record exists between Source and Target.
- 0507 - To process 'Transfer' action, you must specify a Target Effective Date.
- 0510 - Cannot process 'Transfer'. Target record already exists and should be transferred.

0600 - Cannot process 'Delete' action, since the Target record does not exist.

0601 - Cannot process 'Delete' action, since the Target record is past due.

0602 - Only the record with the latest Effective Date and Effective Time can be deleted.

0603 - To process 'Delete' action, you must specify Target Date and Time.

0604 - To process 'Delete' action, you should not specify Source Date and Time.

0605 - For 'Delete' or 'Resend' action, the Effective Date cannot be 'NOW'

0700 - Cannot process 'Resend' action, since no record exists.

0701 - To process 'Resend' action, if no Target is specified, you must have an ACTIVE or SENDING Template record for this number.

0702 - To process 'Resend' action, the specified Target record must be an ACTIVE, SENDING, or FAILED (rejected by all SCP) record.

0703 - Cannot process 'Resend' action, since a later SENDING record exists.

0704 - Cannot process "Resend" action, since no working records exist at any SCP for this ACTIVE record.

0800 - tmpltNm (Template Name):

Invalid format of tmpltNm.

Length is 4-15 characters.

Template Name must start with an asterisk \* followed by 2 alphabetic characters (i.e., the control Entity Code (Entity ID) of the Template Name) and then followed by 1-12 alphanumeric or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters when counting the leading asterisk. Dashes are optional and allowed only in character positions 4-15.

A Template Name is specified by the user when creating a new Routing Template (Template record).

Example Template Name:

\*BRBISMARCK015. Each Template Name must be unique within the entire system, not merely unique within an Entity. This is a required field when creating a Routing Template.

1001 - ed (Effective Date): Enter in 'mm/dd/yy' format. Must be a future calendar date within the industry-set time period from current date, except for Resend action.

1002 - et or sefd (Effective Time): Enter like '10:45A/C'. Use 'hh:mmA(orP)/z' form where A=Am (or P=Pm) and z is for Time Zone (e.g., C=central).

Minutes part must be in quarter hours (00, 15, 30, 45).

1005 - iac or pac (IntraLATA Carrier): Must be 3-alpha ACNA or 4-digit CIC.

1006 - iec or pec (InterLATA Carrier): Must be 3-alpha ACNA or 4-digit CIC.

1008 - iac or iec (Carrier): Entry is required in either the intraLATA or interLATA field or tmpltlnm.

1009 - pec or iec (InterLATA Carrier) and/or pac or iac (IntraLATA Carrier): 'OTC' cannot be an interLATA carrier or intraLATA carrier with Template record. 'OTX' cannot be an interLATA carrier or intraLATA carrier with Template record.

1010 - pec or iec (InterLATA Carrier) and/or pac or iac (IntraLATA Carrier): '0110' cannot be an interLATA carrier or intraLATA carrier with Template record.

1034 - ncon: Max 30 alphanumerics or special characters.

1035 - ctel (NPHONE): The first 6# must be a NPA-NXX combination known to SMS.

1036 - albl (AOS Label): Must be an existing AOS label name in SMS.

1037 - aac or def or vr.c (NPA or Area Code): Must be an existing 3-digit Area Code known to SMS, like "201".

1038 - alat or def or vr.c (LATA): Must be an existing 3-digit LATA code known to SMS.

1039 - anet (Network): Must be an existing 2 alpha network code known to SMS, like 'AM'.

1040 - No other AOS entries are allowed if anet (Network) is US, XA, XB, or XC OR Non-US country cannot be entered with a CCS network.

1041 - asta or def or vr.c : Must be a 2-alpha standard state abbreviation known to SMS, like 'NJ'.

1055 - lns (#LNS): Must be 4 numerics (normally 1-9999).

1070 - Duplicate entries found. Please remove duplicate.

1071 - This Template record requires more data that must be entered in a CPR.

1072 - ds (Daylight Savings): Must be 'Y' or 'N'. Cannot be blank.

1073 - node (CPR Node): Must be AC (Area Code), AN (Announcement), CA (Carrier), DA (Day), DT (Date), LT (LATA), NX (NXX), PC (%), SD (6-Digit), ST (State), SW (Switch), TE (Tel#), TD (10-Digit), TI (Time). Time sensitive nodes like:

DA, DT, and TI may include a time zone suffix, like: 'DAC' for 'DA' (Day) node with Central time.

1074 - vr.c (Time): Must be a time range like '10:30A-06:30P'. Range cannot cross midnight. Minutes part must be in quarter hours (00, 15, 30, 45).

1075 - z or et or node (Time Zone): Must be A (Atlantic), B (Bering), C (Central), E (Eastern), H (Hawaiian-Aleutian), M (Mountain), N (Newfoundland), P (Pacific), Y (Alaska).

1076 - vr.c or def (6-Digit): Must be the first 6 digits of a standard phone #, like '201555'.

1077 - vr.c or def (10-Digit): Must be a standard phone #, like '9086991234'.

1078 - vr.c (%): Must be a whole number greater than 0 but less than 100.

1079 - vr.c (Time): Must specify 'A' (AM) or 'P' (PM). Midnight=12:00A, Noon=12:00P.

1080 - vr.c (Day): Must be a day of the week (M,TU,W,TH,F,SA,SU) or a range (e.g., M-TH).

1081 - vr.c (%): If a suffix is used, it must be a single alpha (A-Z), like '25 A'.

1082 - vr.c (Switch): If a suffix is used, it must be a single digit (0-9), like 'ON 1'.

1083 - vr.c: Cannot use labels in: Carrier, Day, %, Switch, and Announcement.

1084 - vr.c (Date): Enter a valid date (01/01) or a range (01/01-07/04). Do not specify year.

1085 - lbl (Label Name): must start with the \* symbol, followed by 1 to 7 alphanumerics.

1086 - lbl (Label Name): cannot contain blanks or special symbols other than the start \*.

1087 - def (Label Definition): Must specify a specific value. Cannot enter "OTHER".

1087 for a Template record: TEL# can only be the following value:  
**#DIAL or may be empty if the call terminates to an Announcement node.**

1088 - vr.c (Carrier): Enter exactly 1 value. Can't have multiple carriers in a CPR path.

1089 - vr.c (%): Must be an integer. Cannot have multiples (10+20) or ranges (25-30).

1090 - lbl (Label Name): Duplicate LAD label name exists. Use another label name.

1091 - node (CPR Node): Cannot have more than 20 CPR node names in a complete CPR path.

1092 - def (Label Definition): A definition can be used only once within a label.

Remove the duplicate Label.

1093 - node (CPR Node): The last (rightmost) CPR value must be a Tel# or an Announcement.

1094 - vr.c: Carrier value can only be used once in a complete CPR row.

1095 - node (CPR Node): The 1st CPR node can NOT be: Carrier (CA), Tel# (TE), Announcement (AN).

1096 - vr.c: Cannot use 'OTHER' value in CA (Carrier), SW (Switch), PC (%), AN (Announcement), or TE (Tel#).

1097 - def (LAD Definition): Must be a value, cannot use a label name.

1098 - node (CPR Node): NXX node entries can be a label or values. If NXX values are entered, they must be preceded by an Area Code node with a single area code value.

1099 - node (CPR Node): NXX node and 6-Digit node cannot be used together.

- 1100 - vr.c (NXN): Must be a 3-digit NXX code or an NXX label name.
- 1101 - vr.c or def (NXN): Entered NXX must match the Area Code that precedes it. i.e., the 'NPANXX' combination must be known to SMS.
- 1102 - def (LAD Definition): When defining an NXX type of label in LAD, you must provide an Area Code (NPA) after CNT13.
- 1103 - vr.c (Announcement): Must be 'OBA' or 'VCA'.
- 1105 - vr.c or def (Day, Date or Time): For range entries, the Start and End values cannot be the same.
- 1106 - vr.c: 1st column of all rows must contain data. Blanks can't be in the 1st column.
- 1107 - vr.c or def (6-Digit, 10-Digit, Tel): The 6-Digit (NPANXX) combination must be known to SMS, like '908699'.
- 1108 - type (LAD Label Type): Must be Area Code (AC), Date (DT), LATA (LT), NXX (NX), 6-Digit (SD), State (ST), 10-Digit (TD), Time (TI). LAD Label Type of Telephone (TE) is not applicable (not allowed) for a Routing Template.
- 1117 - vr.c: Use + as delimiter to separate multiple values in a CPR node.  
e.g., NY+NJ (State), M+W+F (Day), 01/01+07/04 (Date).
- 1118 - Cannot enter multiple values in: Announcement, Carrier, Switch, Tel#, Time, 10-Digit, %
- 1119 - sefd (Source Effective Date Time): Must be in 'mm/dd/yy' (like 12/31/92) or 'mm/dd/yyhh:mmx/z' (like 12/31/9208:00A/C) format.
- 1121 - type & lbl & def: If any one field is entered, all 3 should be entered.
- 1122 - albl (AOS label) belongs to another network. Usage not allowed.
- 1123 - sort (SORT): Must be 'Y' or 'N'. Cannot be blank.

1603 - When \$\$\$ node is first column, CPR is limited to 200 rows. CPR has \$\$\$\$ rows. This limit pertains to the first node in the CPR if it is set to 6-digit (SD), 10-digit (TD) or NXX (NX). The variable \$\$\$ contains the node name (e.g., SD, TD or NX). The variable \$\$\$\$ contains the number of rows in the CPR.

2000 - IntraLATA Carriers: Required. Enter 3-alpha Carrier or 4-digit CIC.

2001 - InterLATA Carriers: Required. Enter 3-alpha Carrier or 4-digit CIC.

2005 - vr.c (Carrier): Must be an existing 3-alpha carrier name or CIC known to SMS/800.

3726 - Switch value must be either 'ON' or 'OFF'. Only 1 condition can be chosen.

4000 - iec (InterLATA Carrier): invalid entry

4548 – anet (Area of Service Network): invalid entry because Template records will not support AOS set to a specific CCS Network (e.g., BA, BS, UW, etc.) but will support AOS Networks set to any one of the following values: US, XA, XB, XC, CN and CR.

4549 - Template's CPR/LAD has invalid data.

4705 - Area of service is not purchased in TAD. Check your TAD.

4706 - Label is not defined. Must add label name and definitions in LAD.

4708 - Switch: Must contain at least 1 'ON' condition.

4710 - To use 'OTHER', you must specify some other possibilities.

4712 - CPR value occurs more than once. Please remove the duplicate.

4713 - Entries in a CPR node must include all possible cases.

4714 - "OTHER" must be entered so that all possibilities are covered.

4715 - %: Total % values must add up to 100.

4716 - Carrier is not listed in TAD. Check carrier information.

4717 - 2 CPR rows contain exactly the same data. Remove the duplicate.

4719 - Since all possible cases are covered, the 'OTHER' value is not needed.

- 4721 - Switch: Cannot have more than 1 'ON'. Check the use of common suffix.
- 4722 - Switch: Cannot have more than 10 'OFF'. Check the use of common suffix.
- 4724 - Can't have CPR rows differ only in Action node (Carrier, AN, Tel#) values.
- 4725 - There are overlaps of Day, Date, or Time ranges. Check possible cases entered.
- 4726 - tel (Tel#): An 800 Data Base Service # is expected by this carrier. (Not a standard phone #).
- 4727 - tel (Tel#): A standard phone # is expected by this carrier. (Not an 800 Data Base Service #).
- 4729 - Current AOS related node contains value that does not match the preceding area of service.
- 4733 - This customer record requires more information that must be input in CPR.
- 4735 - Label contains definitions that cannot be recognized. Check the LAD.
- 4737 - Tel# (TE) or Announcement (AN) must be last node. Nothing can follow it.
- 4738 - Carrier serving this Tel# is not an intraLATA carrier. Check carrier info.
- 4739 - Carrier serving this Tel# is not an interLATA carrier. Check carrier info.
- 4742 - Fields with the same preceding entry must be all filled or all blank.
- 4746 - You may not need to use this CPR node. No differences detected.
- 4765 - A CPR row exists with no data in the first column.
- 4768 - CPR cannot have more than 775 uninterrupted (consecutive) 'OTHER' values in any column. Suggestion: Try to avoid more than 675 consecutive 'OTHER' values in any CPR column.
- 4773 - Column has no data under it. Check if column is needed.
- 4775 - This CPR row requires a Tel# or Announcement entry to complete the row.

4940 - A CPR path cannot have data in both a percent node and announcement node.

5008 - The first 6 digits (NPA-NXX) is not valid in SMS/800.

5011 - Telco: \$\$\$\$ is not known to SMS. Please enter another value.

5506 - The AOS Label does not belong to the Entity on the CR, so using this Label on this CR is not allowed.

5631 - POTS# required, else intra & interLATA carriers must be the same.

5632 - Record is invalid. Cannot request effective date and time of NOW because one or more carrier approvals is required.

5633 - Record is invalid. There is at least one CIC for which no RESP ORG-to-CIC arrangement has been defined.

5634 - Warning: Record contains one or more unused LAD labels.

5635 - Warning: Over 1000 LAD labels. Unused LAD label check cannot be done.

5636 - Cannot modify record. An on-line user is currently working on this #.

5637 - Cannot insert disconnect in front of a future change or disconnect.

5638 - Check record's Area-of-Service. At least one SCP operator does not allow your RESP ORG to load records into its SCPs.

5640 - Intra & InterLATA Carriers must be the same for TAD-only Template record, where TAD is Template Administrative Data, and TAD-only means TAD without CPR or LAD.

5700 - The 6 digit NPA-NXX is not known to SMS/800.

7559 - priority (PRIORITY): Must be 'H'.

7560 - HPU screen has not been defined for the CR entity. Please contact the Help Desk to define the HPU screen within the system.

7561 - Allowed number of high priority updates is exceeded for the CR entity.

7562 - Effective date of the Template record must equal NOW or today's date when updating with high priority.

7563 - User is not listed on the SMS/800 HPU screen for the CR entity. Therefore user is not allowed to perform high priority Template record update for entity.

7571 - Entity \$\$ Template Allocation Limit isn't set. Contact SMS/800 Help Desk.

Note: This error can only occur when installing the CR Template Feature and Site Support or Help Desk didn't create a TAD record for default Entity \*\*.

7572 – Template limit reached: Entity's Template Allocation Limit has already been reached. See the REQ/RSP-GSL message for the Template Allocation Limit (TAL) for an Entity.

7616 - Control Resp Org of a Template Name (i.e., TRO tag or RO tag if TRO tag isn't sent since TRO tag is optional): 1st 2 alphas of control Resp Org (i.e., the Entity Code (Entity ID)) must match the 1st 2 alphas of Template Name (TMPLTNM tag in REQ-TRC) when creating a new Template Name. For example, if a new Template Name is being created with a value of \*BR001, then the Resp Org Entity in RO or TRO (if TRO is sent) must be set to BR.

**Warnings:**

9000 - Warning: Future records exist for this Template ID and should be checked.

9001 - Warning: For 'Resend' or 'Delete' action, message contains extra fields that are ignored by the system.

9004 - Warning: Label contains Definitions that are duplicated in another label.

9007 - Warning: NPA Split in your area of service is coming soon.

9008 - Warning: Approvals are required by at least one carrier (CIC) before record goes ACTIVE.

9072 - Warning: Not all labels indicated were sorted. The 'type' does not allow sorting or total number of labels exceed LAD limit.

9073 - Warning: Sorting was not done as the LAD sort limit was equal to zero.

<b>cnta</b>	Number of Warning Blocks for COMPLD,11 response for single number processing 2 bytes decimal numeral Maximum value of 20
<b>err1</b>	Warning Explanation (optional - single number only) 4 bytes decimal numeral there can be multiple warnings. See err field
<b>verr</b>	Value of Field in Error up to 240 bytes text string (optional) returns original input where possible for each error Example VERR values are documented at the end of the RSP-CRC section.
<b>wcnt</b>	Number of Warning Sets for Automation 8 bytes decimal numeral, fixed length (optional)
<b>errv1</b>	Warning Code, Type Code, and Value of Field that Results in a Warning for Automation Responses entries are of the form err, etyp, verr where: err - the 4-byte warning code etyp - the 1-byte type code specifying the type of verr verr - up to 30 byte value of field with a warning. Err is required, Etyp is optional, Verr is optional. The number of err,etyp,verr sets must match the value of <b>wcnt</b> and sets are separated by commas. Each are defined below:

**err warning values:**

4728 - Over 2000 entries per CPR path. Some duplicates may have been missed.

5634 - Warning: Record contains one or more unused LAD labels.

5635 - Warning: Over 1000 LAD labels. Unused LAD label check cannot be done.

9000 - Warning: Future Pending records changed to Must Check status.

9003 - Warning: 'OTC' is not used as the intraLATA carrier in this record.

9007 - Warning: NPA Split in your area of service is coming soon.

9008 - Warning: Approvals are required by at least one carrier (CIC) before record goes ACTIVE.

9010 - There are multiple validation warnings for this DIAL#. The Customer Record status is Pending. Re-submit using a non-automation REQ-CRC format to obtain all warnings, if desired.

**etyp values:**

0 - verr is a text string which includes original input if possible

1 - verr is a valid dial number format (10 or 12 bytes text string)

**verr values:**  
returns original input in error where possible

<b>ecnt</b>	Number of Error Sets for Automation 8 bytes decimal numeral, fixed length (optional)
<b>errv</b>	Error Code, Type Code, and Value of Field that Results in an Error for Automation Responses entries are of the form err,etyp,verr where: err - the 4-byte error code etyp - the 1-byte type code specifying the type of verr verr - up to 30 byte value of field in error. Err is required, Etyp is optional, Verr is optional. The number of err,etyp,verr sets must match the value of <b>ecnt</b> and sets are separated by commas. Each are defined below:

**err values:**

- 0003 - Unrecognized parameter
- 0004 - Invalid parameter combination
- 0005 - Syntax error
- 0006 - Required parameter missing
- 0008 - Input data length exceeds maximum field size.
- 0009 - Need tag name. Cannot process data value without a tag name.
- 0021 - id (Logon ID): Required message sender's Logon ID missing.
- 0022 - ro (Resp Org): Required message sender's Resp Org missing.
- 0023 - ac (Action Code): Required Action Code missing.
- 0029 - Duplicate tags within a message are not allowed.
- 0090 - Number specified in QT (quantity) does not match the number of entries in the TMPLTNML.
- 0091 - Effective Date must be <= the previous record's end intercept date.

0101 - Permission denied. Logon ID must be an 8-alphanumeric logon id known to SMS.

0102 - Permission denied. The Resp Org does not belong to this Logon ID.

0103 - Permission denied. Your Logon ID cannot update this Resp Org's records.

0106 - ed (Start effective date) - Must be a date in the future but within the industry-set time period from the current date. Can also be 'NOW'.

0108 - ed/et (Start Effective date/time) - If effective date is 'NOW', effective time (et) should not be used.

0310 - Cannot process request: Target record should be transferred.

0400 - To process "Disconnect" action, you must have a record associated with this number.

0406 - Cannot process 'Disconnect' action, since you cannot copy or copy+change a PENDING disconnect record backward.

0409 - Cannot process 'Disconnect' action, since Target record already exists.

1001 - ed (Start Effective Date): Enter in 'mm/dd/yy' format. Must be a future calendar date within the industry-set time period from current date.

1002 - et (Effective Time): Enter like '10:45A/C'. Use 'hh:mmA(orP)/z' form where A=Am (or P=Pm) and z is for Time Zone (e.g., C=central).

5636 - Cannot disconnect record. An on-line user is currently working on this number.

5637 - Cannot insert disconnect in front of a future change or disconnect.

6000 - Quantity exceeds system automation limit. Verify limit using REQ-ASL.

7000 - There are at least one or more validation errors for this DIAL#. The Customer Record status is Invalid. Re-submit using a non-automation REQ-TRC format to obtain the error(s).

7624 - Cannot disconnect template. At least one Pointer record is still associated with this template. If a Resp Org creates a Pointer record using an Active Template that also has a future Pending Disconnect version, SMS/800 will FAIL the Pointer record at the time of download to the SCPs if the system didn't detect this error when the Pointer record was being created.

**etyp values:**

- 0 - verr is a text string which includes original input if possible
- 1 - verr is a valid dial number format (10 or 12 bytes text string)

**verr values:**

returns original input in error where possible

**Error code 0099:**

Many customer record (CR) background validation error messages are returned via error code (err) 0099; and the corresponding value in error is returned in the verr field.

Verr Values in Error Code 0099
SPLIT CARRIERS \$\$\$\$ & \$\$\$\$ ARE NOT SUPPORTED BY NETWORK \$\$. Note: This is error 4649 in WBA and 3270. The variables \$\$\$\$ & \$\$\$\$ will contain the 2 CICs that are not support by the Network specified in the variable \$\$.
CARRIER \$\$\$\$ IS NOT SUPPORTED BY NETWORK \$\$. Note: This is error 4651 in WBA and 3270. The variable \$\$\$\$ will contain the CIC that is not support by the Network specified in the variable \$\$.
EFF D/T:DOWNTIME Note: This error means the CR's Effective Date/Time is within the scheduled daily SMS/800 system downtime. CRs cannot have an Effective Date/Time that is within or on the boundary of the scheduled daily SMS/800 system downtime. Daily downtime is defined in the Down & Default Effective Time for CR (DDT) screen, which can be viewed and setup by the Help Desk and Site Support.

### 7.2.9 Customer Record Status Query [REQ-CRQ]

#### CUSTOMER RECORD STATUS QUERY [REQ-CRQ] CUSTOMER RECORD ADMINISTRATION

This command provides the capability to query for the status of a *customer record (CR)*. REQ-CRQ can be used for both *regular* (standard) *customer records*, *Pointer records* and *Template records*. The state of a record in SMS/800 is reflected by one of several possible status values that are automatically generated by SMS. The values are shown in the response message, RSP-CRQ.

If no effective date and time is requested, SMS/800 will return up to 10 versions of the customer record. The version status data will be in increasing effective date and time sequence, beginning with the earliest version. If there are more than 10 versions, an indicator will be returned informing the OS that more version(s) exist.

If an effective date without an effective time is requested, the response message will contain status information on up to 10 versions with effective dates equal to or greater than that specified. If more than 10 versions meet the criterion, an indicator will be returned informing the OS that more version(s) exist.

If both an effective date and an effective time are specified, the response message will return the status information on up to 10 versions with effective dates and times equal to or greater than that specified. If more than 10 versions meet the criterion, an indicator will be returned informing the OS that more version(s) exist.

If an effective date and/or effective time are specified, and all the versions in SMS/800 have earlier effective dates and times, SMS/800 will return the most recent version(s), up to a maximum of 10 versions. If there are more than 10 versions of the number, an indicator will be returned informing the OS that more version(s) exist.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queuing	Optional
Response	RSP-CRQ
Route ID	CRQ

*MESSAGE FORMAT***1. To Query a regular CR or a Pointer record:**

REQ-CRQ:,date,time::::ID=id,RO=ro,NUM=num,ED=ed,ET=et;

**2. To Query a Template record:**

REQ-CRQ:,date,time::::ID=id,RO=ro,TMPLTNM=tmpltnm,ED=ed,ET=et;

*PARAMETERS DESCRIPTION***date,time** See Section 5.3**id** Logon Id  
8 bytes identifier  
identifies sender of message**ro** Resp Org  
5 bytes identifier  
responsible organization for this message**num** The Dialed Telephone Number  
10 or 12 bytes text string (optional); required when querying a Customer Record (CR) [a regular CR or a Pointer record]  
format is npanxxxxxx  
where npanxxxxxx = dialed number  
Two blank spaces are allowed.

<b>tmpltnm</b>	The Template Name 15 bytes text string (optional); When querying a Template record, the TMPLTNM tag must be populated. Format is in accordance with the definition of the tmpltnm tag in the REQ-CRQ message.
	Either the NUM tag or the TMPLTNM tag must be populated, depending on whether you are querying a CR or a template, respectively. Populating both of these tags is incorrect.
<b>ed</b>	<b>Effective Date</b> 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94)
<b>et</b>	<b>Effective Time</b> 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable values: N - Newfoundland, A - Atlantic, E - Eastern, C - Central, M - Mountain, P - Pacific, Y - Alaska, H – Hawaiian-Aleutian, B - Bering)

### 7.2.10 Response to Customer Record Status Query [RSP-CRQ]

#### **RESPONSE TO CUSTOMER RECORD STATUS QUERY [RSP-CRQ] CUSTOMER RECORD ADMINISTRATION**

This message is the response to the command REQ-CRQ. It contains the status information for up to ten version(s) of a number. Only if more than 10 versions satisfy the request, will the **more** indicator (with a value of 'Y') be returned, along with the 10 versions.

<b>Message Type</b>	<b>Response</b>
<b>Logical Channel</b>	X4
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queuing</b>	Yes
<b>Command</b>	REQ-CRQ
<b>Route ID</b>	RRQ

#### *MESSAGE FORMAT*

##### 1. Successful Query Response for regular CR and Pointer record:

```
RSP-CRQ:,date,time:::COMPLD,00::ID=id,RO=ro,
NUM=num,RED=red,RET=ret,RONUM=ronum,MORE=more:
CNT=cnt:ED=ed,ET=et,STAT=stat, APP=app;
```

##### 2. Failed Query Response for regular CR and Pointer record:

```
RSP-CRQ:,date,time:::DENIED,01::ID=id,RO=ro,
NUM=num,RED=red,REQ=ret:_CNT=cnt:ERR=err,VERR=verr;
```

**3. Successful Query Response for a Template record:**

RSP-CRQ:,date,time:::COMPLD,00::ID=id,RO=ro,

TMPLTNM=tmpltnm,

RED=red,RET=ret,RONUM=ronum,MORE=more: CNT=cnt:ED=ed,ET=et,  
STAT=stat, APP=app;

**4. Failed Query Response for a Template record:**

RSP-CRQ:,date,time:::DENIED,01::ID=id,RO=ro, TMPLTNM=tmpltnm,

RED=red,RET=ret:CNT=cnt:ERR=err,VERR=verr;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	Termination Report Code 6 byte identifier COMPLD - Query Request Successful DENIED - Query Request Failed
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00 - No Error 01 - Error Present (see err field)
<b>id</b>	Logon Id 8 bytes identifier identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier responsible organization for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed. num is returned in response if num was sent in the request

<b>tmpltnm</b>	The Template Name 15 bytes text string Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters. Each Template Name must be unique within the entire system. tmpltnm is returned in response if tmpltnm was sent in the request.
<b>red</b>	Requested Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94)
<b>ret</b>	Requested Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable values: N - Newfoundland, A - Atlantic, E - Eastern, C - Central, M - Mountain, P - Pacific, Y - Alaska, H - Hawaiian-Aleutian, B - Bering)
<b>ronum</b>	Resp Org for this Dialed Number 5 bytes identifier identifies the responsible organization of the number that was queried

<b>more</b>	More Indicator 1 byte identifier (optional) N : No more versions (default) Y : More versions exist that satisfy this request
<b>cnt</b>	Count 2 bytes decimal numeral the number of repeating data blocks successful response: number of record blocks (maximum of 10) failed response: number of error blocks (optional)
<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94)
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)

<b>stat</b>	Status of the Customer Record 2 bytes decimal numeral (optional)
	01 - SAVED
	02 - PENDING
	03 - SENDING
	04 - ACTIVE
	05 - OLD
	06 - INVALID
	07 - DISCONNECT
	08 - MUST CHECK
	09 - FAILED
	10 - HOLD

<b>app</b>	Approval Indicator 2 bytes identifier (required) specifies the approval status, and is associated with all customer records. Valid entries include: NA - not applicable (approval is irrelevant due to customer record status, i.e., SAVED,INVALID,HOLD, or approvals do not apply to transaction) OK - all required carrier approvals are received by SMS/800 AW - SMS is awaiting one or more carrier approvals DN - at least one affected carrier denied the approval request NR - approvals are not required for this record RJ - record is rejected due to effective date of NOW
<b>err</b>	Error Explanation  2 bytes decimal numeral there can be multiple errors 01 - Too many parameters (warning) 02 - Required parameter missing For example, NUM and TMPLTNM are missing, yet NUM or TMPLTNM must be sent. 03 - Unrecognized parameter 04 - Invalid parameter combination For example, both NUM and TMPLTNM tags were sent to SMS/800. 05 - Syntax error 06 - Permission Denied: Not allowed to perform this function 07 - No record exists for this input 98 - Invalid or missing date and/or time in application message 99 - Other Error

**VERR**      Value of Field in Error  
                8 bytes text string (optional)  
                returns original input in error where possible

### 7.2.11 Customer Record Activation Notification [UNS-CRA]

#### CUSTOMER RECORD ACTIVATION NOTIFICATION [UNS-CRA] CUSTOMER RECORD ADMINISTRATION

This message is sent from SMS to an OS at download time of a *customer record* or *Template record* indicating whether or not the download attempt was successful or not. The *Customer record* sent in the UNS-CRA message can be a *regular* (standard) *customer record*, *Pointer record* or a *Template record*. There are several reasons why a customer record is downloaded from SMS to the SCPs.

The CR download can be initiated by OS input responding to a customer request for service, initiated by a customer record resend to correct a problem, initiated by a system event within SMS, e.g., NPA split, initiated by a request from an SCP to retransmit all the customer record updates from a specific date and time, etc. With the exception of SCP Load, whenever the status of the customer record changes to ACTIVE or DISCONNECT from some other status, this message will be returned to the OS. This message will not be returned if an SCP Load was the cause of the download.

Also, this message will be returned in the event of a download failure that resulted from the *initial* download attempt of a unique customer record instance. This message will not be returned for download failures in any other case. A customer record instance is identified by the dialed number, effective date and effective time values.

Once all the affected SCPs have responded to SMS downloading a customer record, or the number of attempts to contact the SCPs have expired, nominally within 15 minutes after first attempting to send the record to the SCPs, SMS will send this message to the OS according to the Control RESP ORG of the record. The information in the message will contain the overall status of the customer record, as well as the status at each available SCP. For each SCP that responded, the date and time of the response is provided.

In the event of a download failure, this message can aid the receiving organization to choose an appropriate action. When the record is accepted successfully in all the affected SCPs, this message will be sent (even if it was sent previously as a failure notification).

To receive this message, an OS must make arrangements with the Help Desk to have the on-line GAN screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>URD</b>

### *MESSAGE FORMAT*

#### **1. For regular CR and Pointer record:**

UNS-CRA:,date,time:::::RO=ro,ORIGRO=origro,MID=mid,NUM=num,ED=ed, ET=et,  
STAT=stat,APP=app,CRMGSIZE=crmgszsize:CNT=cnt:SCP=scp,RES=res,DT=dt;

#### **2. For Template record:**

UNS-CRA:,date,time:::::RO=ro,ORIGRO=origro,MID=mid,  
TMPLTNM=tmpltnm,ED=ed, ET=et,  
STAT=stat,APP=app,CRMGSIZE=crmgszsize:CNT=cnt:SCP=scp,RES=res,DT=dt;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	Resp Org 5 bytes identifier responsible organization of the customer record (CR)
<b>origro</b>	Originating Resp Org ID 5 bytes identifier The Resp Org that originated the transaction. For records updated via Batch Update, this field will be populated with the control RO. For records updated via MGI or on-line (3270 or WBA), this field will be populated with the first 5 characters of the logon ID that is contained in the BY: field on the CAD. If the transaction was caused by a mass change, origro is defined as follows: *NPAx = NPA Split ('x' is a variable defined as the first digit of old NPA) *NXXD = NPA-NXX Deletion *LATA = NPA-NXX LATA Move **MCC = Mass Carrier Change *OPNx = NPA Code Opening ('x' is a variable defined as the first digit of new NPA) *SCPA = SCP Area-of-Service Expansion *NXXM = NXX Move *CCSA = New CCS Network **SCP = SCP Incremental Load/Response (large record resend from an SCP load)

<b>mid</b>	Originating Message ID 10 bytes text string (optional) Message identifier that exactly maps the originating REQ-CRA or REQ-CRC message to this UNS-CRA message. Not present if originating transaction was generated from an on-line (3270 or WBA) or Batch Update user, or any mass change.
<b>num</b>	The Dialed Telephone Number This tag is returned for regular CRs and Pointer records 10 or 12 bytes text string format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.
<b>tmpltnm</b>	The Template Name 15 bytes text string (optional); optional because this tag is returned only for Template records Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters. Each Template Name must be unique within the entire system.

<b>ed</b>	Effective Date 8 bytes text string format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94)
<b>et</b>	Effective Time 8 bytes text string format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)
<b>stat</b>	Status of the Customer Record 1 byte decimal numeral 1 - SENDING 2 - ACTIVE 3 - DISCONNECT 4 - FAILED (SCP Rejection) 5 - FAILED (SMS Revalidation) 6 - FAILED (Incorrect SMS Status) 7 - FAILED (NOW reject since approvals required)

<b>app</b>	<p>Approval Indicator 2 bytes identifier (required) specifies the approval status, and is associated with all customer records. Valid entries include: NA - not applicable (approval is irrelevant due to customer record status, i.e., SAVED, INVALID, HOLD, or approvals do not apply to transaction) OK - all required approvals received by SMS AW - SMS is awaiting at least one carrier approval DN - at least one affected carrier denied the approval request NR - approvals are not required for this record RJ - record is rejected due to effective date of NOW</p>
<b>crmsgsize</b>	<p>Size of the download message to the SCP. 7 bytes decimal numeral (optional)</p> <p>The CRMSGSIZE tag will only be included in the UNS-CRA message if a CR was actually downloaded to an SCP or it was either too large for an SCP before it was downloaded (i.e., &gt; 170KBytes) or CR failed at an SCP. If a CR download attempt to SCPs failed due to the CR status being incorrect for download or a CR revalidation error occurs at the time of a CR being processed for download to the SCPs (note: this SMS/800 process is called CR Output (CRO)) or a “NOW” update was rejected by CRO, then the CRMSGSIZE tag will not be included. In these cases where CRMSGSIZE tag is not sent in this message, that is because SMS/800 does not know what size the download record would be because SMS/800 does not download a CR in these cases. Some examples of a CR status being incorrect for being downloaded to SCPs are: the CR status is Saved or Invalid or Must Check and it reaches its Effective Date/Time.</p> <p>The CRMSGSIZE value for a Pointer record will be either (a) only the size of the Pointer record if ALL SCPs support the Templates Feature, otherwise (b), if a Pointer record was downloaded to one or more SCPs that don't support the Template Feature, then the size will be the expanded message size (which includes the entire routing tree data (CPR and LAD) that the pointer points to for routing).</p> <p>Note: This tag was introduced in issue 15 of the MGI Specification.</p>

<b>cnt</b>	Number of SCP data blocks 3 bytes decimal numeral (optional)
<b>scp</b>	SCP Id 4 bytes identifier (optional) the name of an affected SCP (in the Area of Service)
<b>res</b>	Result 2 bytes decimal numeral (optional) the result of the send request to the affected SCP 01 : Accepted: Record is loaded in the SCP 02 : Rejected: Syntax error 03 : Rejected: Record doesn't exist in SCP: can't change 04 : Rejected: Record too large for SCP 05 : Rejected: SCP - 800 application problem 06 : Rejected: Inconsistent effective date 07 : Rejected: UAL Header not recognized 08 : Queued: SCP is overloaded 09 : Queued: SCP is unavailable 10 : Queued: No Response from SCP 11 : Not Queued: SCP is overloaded 12 : Not Queued: SCP is unavailable 13 : Not Queued: No Response from SCP 99 : Other (including Area-of-Service changes)

**dt**

Date and Time

17 bytes text string (optional)

the date and time the response was received from the SCP

if response is QUEUED, this field is not present

format is mm/dd/yy hh:mmx/z, where

mm : month (allowable range: 01 - 12)

dd : day (allowable range: 01 - 31)

yy : year (e.g., 94)

hh : hour (allowable range: 01 - 12)

mm : minute (allowable values: 00-59)

x : am or pm (allowable values: A, P)

z : time zone (allowable value: C - Central)

there is a blank character between year and hour

*NOTES*

1. The **cnt** field contains the number of SCPs which should receive this record. If the **cnt** field is not present, the record was not sent to any SCPs.
2. If the **stat** returned = 1 (sending) or 4 (failed - SCP rejection), the **scp**, **res**, and **dt** will contain for each SCP that should receive this record, the current result and the date and time of the result.
3. If the **stat** returned = 2 (active) or 3 (disconnect), the **scp**, **res**, and **dt** fields will contain the final information for this customer record instance.
4. The crmsgsize tag (field) will always be returned when the stat = 1 (Sending), 2 (Active), 3 (Disconnect) or 4 (Failed - SCP Rejection). For stat = 5 (Failed - SMS Revalidation) the crmsgsize field will be returned if failure of the record is due to the download message being too large. All other cases for stat = 5 and stat = 6 (Failed - Incorrect SMS status) or 7 (Failed - NOW reject) will not have the crmsgsize field. For stat = 6, some examples of a CR status being incorrect for being downloaded to SCPs are: the CR status is Saved or Invalid or Must Check and it reaches its Effective Date/ Time. For stat=7, an example is when a Resp Org sends a CR 'NOW' update and the CR needs Carrier Approval, then the CR initially goes INVALID and then goes FAILED when it gets processed for CR download.

### 7.2.12 Customer Record Query [REQ-CRV]

#### CUSTOMER RECORD QUERY [REQ-CRV] CUSTOMER RECORD ADMINISTRATION

This command allows an OS to request data associated with a particular customer record and can be launched at any time. It can be used for regular (standard) *customer records*, *Pointer records* and *Template records*. If the OS corresponds to the control RESP ORG of the record or to a RESP ORG with full view capability as defined by SMS security, full record view will be provided.

Additionally, Resp Orgs will be allowed to view (via CRV message) any Template record that they are permitted to use on their Dial# Pointer records.

If the OS corresponds to a carrier (CIC) listed on the record (Involved Carrier), SMS will provide all Area-of-Service and Routing data for which the CIC is responsible for routing, along with the following CAD data: number, effective date/time, action, due date, referral information (when appropriate), control RESP ORG, record status, and applicable terminating telephone number information. Call processing record (CPR) data in the RSP-CRV message will include all CPR data for Involved Carriers, except for the CIC and terminating tel# data if the user does not have permission to view this data.

If the OS requesting the data is in no way involved in the record, no AOS or routing data will be returned. Such information can be useful for auditing purposes, as well as for trouble investigation. The OS can request this at any time, and must provide the number and, optionally, the effective date and time. If the effective date and time are not provided, and multiple records exist for the specified number, the most recent SENDING, ACTIVE, or DISCONNECT record will be returned if one exists.

Users may also specify both the effective date and time, or just the effective date. If just the effective date is specified, i.e., without an effective time, SMS will return customer record data for the SENDING, ACTIVE, or DISCONNECT record with the most recent time (i.e., closest to the present). If the effective date and time do not match any occurrences in the SMS database, SMS will return the most recent SENDING, ACTIVE, or DISCONNECT record. If such a record does not exist, the first future record will be returned. If the control RESP ORG makes the request, the first future record regardless of status is returned. If an involved carrier makes the request, the first future pending record is returned. If an involved carrier makes the request, and the record found is a disconnect without referral, the involved carrier is treated like a non-involved carrier.

Users may also specify whether they wish to see the ACTIVE, SENDING, or DISCONNECT version of a record without specifying the effective date and time. If the date and time are specified along with the desired record status, an error will result.

To successfully launch this message and receive useful data in return, an OS must make arrangements with the Help Desk to have the on-line ROC screen properly formatted.

Message Type	Command
--------------	---------

<b>Logical Channel</b>	X3
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queuing</b>	Optional
<b>Response</b>	RSP-CRV
<b>Route ID</b>	CRV

### *MESSAGE FORMAT*

#### **1. To Retrieve a regular CR or a Pointer record:**

REQ-CRV:,date,time:::::ID=id,RO=ro,NUM=num,  
ED=ed, ET=et,RSTAT=rstat,SIZE=size;

NOTE For regular CR and Pointer record: The Resp Org needs to populate the NUM tag in REQ-CRV, but don't send the TMPLTNM tag in REQ-CRV.

#### **2. To Retrieve a Template record:**

REQ-CRV:,date,time:::::ID=id,RO=ro,TMPLTNM=tmpltnm,  
ED=ed, ET=et,RSTAT=rstat,SIZE=size;

NOTE For Template record:The Resp Org needs to populate the TMPLTNM tag in REQ-CRV, but don't send the NUM tag in REQ-CRV.

#### **3. To Retrieve a CR's Pointer record Data and Template record Data:**

To retrieve a customer record (CR) that is built as a Pointer record that points to a routing template (Template record), the Resp Org needs to send in two REQ-CRV requests:

(3A) send REQ-CRV to retrieve the Pointer record, and

(3B) send REQ-CRV to retrieve the Template record. The order of sending these two messages doesn't matter for SMS/800.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	<p>Logon Id 8 bytes identifier identifies sender of message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier responsible organization for this message</p>
<b>num</b>	<p>The Dialed Telephone Number 10 or 12 bytes text string(optional) format is npanxxxxxx where npanxxxxxx=dialed number Two blank spaces are allowed. Either num tag and templtnm tag must be sent.</p>
<b>templtnm</b>	<p>The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message. Either num tag and templtnm tag must be sent.</p>
<b>ed</b>	<p>Effective Date 8 bytes text string (optional) format is: mm/dd/yy, where mm: month (allowable range: 01-12) dd: day (allowable range: 01-31) yy: year (e.g., 94)</p>

<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh: hour (allowable range: 01-12) mm: minute (allowable values: 00,15,30,45) x: am or pm (allowable values: A,P) z:time zone (allowable values: N-Newfoundland, A-Atlantic, E-Eastern, C-Central, M-Mountain, P-Pacific, Y-Alaska, H-Hawaiian-Aleutian, B-Bering)
<b>rstat</b>	Requested Record Status 2 bytes decimal numeral (optional) Valid entries: 03 = SENDING 04 = ACTIVE 07 = DISCONNECT
<b>size</b>	A Resp Org can request receiving the CR size and estimated CR Update Rate, one CR at a time, by sending the tag named SIZE in the REQ-CRV message and setting its value to 'Y'. If SIZE tag is set to 'Y', SMS/800 will return CR Size data in the tag CRSIZE in the RSP-CRV message and SMS/800 will return CR Update Rate data in a new tag CRUR in the RSP-CRV message. If the SIZE tag is set to 'N' or if this tag is omitted, then the SMS/800 system won't return CR Size data (i.e., crsize tag) in the response message RSP-CRV and SMS/800 won't return CR Update Rate data (i.e., crur tag) in the response message RSP-CRV. Note: Quotes are <u>not</u> allowed in or around the size tag/value. The tag size is used to request both CR Size and CR Update Rate data and this data is returned in 2 separate tags in the RSP-CRV message. 1 byte identifier; optional Valid entries: Y = Yes N = No.

### 7.2.13 Response to Customer Record Query [RSP-CRV]

#### **RESPONSE TO CUSTOMER RECORD QUERY [RSP-CRV] CUSTOMER RECORD ADMINISTRATION**

This message is the response to REQ-CRV and supports both basic records as well as complex records. It can be used for regular (standard) ***customer records***, ***Pointer records*** and ***Template records***.

Only the RESP ORG for a record can successfully view the entire record. If a record does not exist, an error will result. If the query is from the control RESP ORG, the full set of data will be returned. If the query is from a carrier listed on the record, only control RESP ORG, due date, referral (when appropriate), action record status, terminating telephone number, routing and Area-of-Service data applicable to that carrier will be returned. If the query is from an entity with no record involvement, no record data other than the transmitted data (i.e., number, effective date and time, or record status if provided) will be returned. If more than one record exists for the number, and the effective date and time or record status are not supplied in REQ-CRV, SMS will return record data for the most recent SENDING, ACTIVE, or DISCONNECT record.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-CRV
Route ID	RRV

**MESSAGE FORMAT**

- **Fully Successful Query Response:**

*The requester is the control RESP ORG or has view capability for the record. Full record data is provided, including record status.*

*The tags CRSIZE and CRUR are returned only if requested, meaning, only if the SIZE tag is set to Y and sent in the REQ-CRV message.*

*Several RSP-CRV tags are not returned for a Template record. See the PARAMETERS DESCRIPTION section for details regarding which tags are and aren't supported for Template records.*

```
RSP-CRV:,date,time:::COMPLD,00::ID=id,RO=ro,CRO=cro,NUM=num,
TMPLTNM=tmplnm,TMPLTID=tmplid,DESCRIP=descrip,
ED=ed,ET=et,RSTAT=rstat,STAT=stat,APP=app,RED=red,RET=ret,
CRSIZE=crsize,CRUR=crur:
IEC=iec: IAC=iac:
ABN=abn,DAU=dau, DAT=dat,
DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,REFER=refer,EINT=eint,
NOTE=note,
AGENT=agent,TELCO=telco,CUS=cus,LA=la,
CBI=cbi,NCON=ncon,CTEL=ctel:
CNT3=cnt3:ATYPE=atype,ALBL=albl,ADEF=adef: AAC=aac:
ALAT=alat: ANET=anet: ASTA=asta: TMPLTPTR=tmplptr:
CNT8=cnt8:LN=ln:
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,HML=hml,LSIS=lsis,
LSO=lso,SFG=sfg,STN=stn,UTS=uts:
NODE=node: CNT11=cnt11:
V=v1.c: V=v2.c:
V=vr.c:
PEC=pec,PAC=pac,Z=z,DS=ds: CNT12=cnt12:TYPE=type,LBL=lbl,DEF=def;
```

- **Partial Successful Query Response with Warning**

*The requester is the control RESP ORG and there are warnings, or the requester is not the control RESP ORG, but is an involved carrier. The record involves multiple carriers: area-of-service, control RESP ORG, record status, carrier, terminating telephone number, and routing information only is provided; however, only the requester's data is transmitted. A warning may also be sent if more than one record exists, and the effective date and time are not specified. If the requester is the control RESP ORG, then all COMPLD,00 tags can be returned.*

**NOTE** Additional tags (that are defined in the RSP-CRV message) may be returned in a partial successful query response.

```
RSP-CRV:,date,time:::COMPLD,11::ID=id,RO=ro,CRO=cro,NUM=num,
TMPLTNM=tmpltnm,TMPLTID=tmpltid,DESCRIP=descrip,
ED=ed,ET=et,RED=red,RET=ret:
STAT=stat, APP=app:
IEC=iec: IAC=iac: DD=dd,REFER=refer,EINT=eint,
TMPLTPTR=tmplptr:CNT3=cnt3:ATYPE=atype,ALBL=albl,ADEF=adef: AAC=aac:
ALAT=alat: ANET=anet: ASTA=asta:
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,HML=hml,LSIS=lsis,
LSO=lso,SFG=sfg,STN=stn,UTS=uts:
NODE=node: CNT11=cnt11: V=v1.c: V=v2.c:
vr.c: PEC=pec,PAC=pac,Z=z,DS=ds:
CNT12=cnt12:TYPE=type,LBL=lbl,DEF=def: CNT14=cnt14:
OTH=oth: CNT=cnt:ERR=err,VERR=verr;
```

*If a customer record contains multiple call processing record (CPR) sections, the response message will return only one main section, with references to subsections via the GO TO node. An error code will accompany the response, indicating that the record contains more sections that are viewable on-line.*

*If a customer record contains more than 999 LAD entries, the response message will return only the first 999 entries. An appropriate error code will accompany the response.*

*If a customer record contains more than 999 CPR rows, a COMPLD,11 will be returned with an warning code of 11.*

- **Failed Query Response:**

*The request to perform the query has failed. One reason may be that the requestor has no involvement with the number. Another reason may be that no record exists for the input provided.*

**For a Dial Number:**

```
RSP-CRV:,date,time:::DENIED,01::ID=id,RO=ro,CRO=cro,  
NUM=num,TMPLTNM=tmpltnm,ED=ed,ET=et,RSTAT=rstat,STAT=stat,  
APP=app,RED=red,  
RET=ret:CNT=cnt:ERR=err,VERR=verr;
```

**For Template record:**

SMS/800 sends the TMPLTNM tag, but doesn't send the NUM tag.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code 6 byte identifier COMPLD - Query Request Successful DENIED - Query Request Failed</p>
<b>error_cd</b>	<p>Error Code 2 bytes decimal numeral (required) 00 - No Error 01 - Error Present (see err field) 11 - Warning (see err field)</p>
<b>id</b>	<p>Logon Id 8 bytes identifier (required) identifies sender of message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier (required) responsible organization for this message</p>
<b>cro</b>	<p>Control RESP ORG 5 bytes identifier (optional) Control RESP ORG for the requested customer record Returned only if the requesting RESP ORG is not the control RESP ORG</p>
<b>num</b>	<p>The Dialed Telephone Number 10 or 12 bytes text string format is npanxxxxxx where npanxxxxxx=dialed number Two blank spaces are allowed. NUM will be returned in response if sent in request. Not returned for a Template record.</p>

<b>tmpltnm</b>	The Template Name 15 bytes text string  Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters. Each Template Name must be unique within the entire system.  If you are querying a Template record, the tmpltnm tag will be returned in the RSP-CRV message as the key field of the Template record that you are querying.  tmpltnm will be returned in the response message if sent in the request message (REQ-CRV)
<b>tmpltid</b>	Template ID  A Template ID will be generated by the SMS/800 system when a Resp Org creates a new Template record.  10 bytes (numerics only); exactly 10 numerics; starts with a zero.
<b>descrip</b>	Description of the Template 40 bytes text string (optional) maximum of 40 bytes  Applicable only for Template records.

<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm: month dd:day yy:year
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh:hour mm:minute x:am or pm z:time zone (default is SMS/800 system time zone - central time)
<b>rstat</b>	Requested Record Status 2 bytes decimal numeral (optional)
<b>stat</b>	Status of the Customer Record 2 bytes decimal numeral (optional) 01 - SAVED 02 - PENDING 03 - SENDING 04 - ACTIVE 05 - OLD 06 - INVALID 07 - DISCONNECT 08 - MUST CHECK 09 - FAILED 10 - HOLD

<b>app</b>	Approval Indicator 2 bytes identifier (required) specifies the approval status and is associated with all customer records. Valid entries include:  NA - not applicable (approval is irrelevant due to customer record status, i.e., SAVED,INVALID,HOLD, or approvals do not apply to transaction) OK - all required approvals received by SMS AW - SMS is awaiting at least one carrier approval DN - at least one affected carrier denied the approval request NR - approvals are not required for this record RJ - record is rejected due to effective date of NOW
<b>iec</b>	InterLATA Carrier 107 bytes text string maximum (optional) first 5 bytes defined as: CNT1= followed by a 2-byte numeric count of the number of interLATA carriers contained herein. The range of this count is 00-20. A comma follows this count.  The next values to appear are the 4-digit (numeric) CICs , with each CIC separated by a comma.
<b>iac</b>	IntraLATA Carrier 107 bytes text string maximum (optional) first 5 bytes defined as CNT2= followed by a 2-byte numeric count of the number of intraLATA carriers contained herein. The range of this count is 00-20. A comma follows this count.  The next values to appear are the 4-digit (numeric) CICs with each CIC separated by a comma.
<b>abn</b>	Bill To Number (Alternate Billing Number) 10 bytes text string (optional) format is alphanumeric Not returned for a Template record.

<b>dau</b>	Directory Assistance Update 1 byte identifier (optional) N:No Y:Yes Not returned for a Template record or Pointer record.
<b>dat</b>	Directory Assistance Type 1 byte identifier (optional) N:Normal G:Government F:Frequently Called Not returned for a Template record or Pointer record.
<b>dd</b>	Due Date 8 bytes text string (optional) format is mm/dd/yy Not returned for a Template record.
<b>hdd</b>	Hold Due Date 1 byte identifier (optional) N:No Y:Yes Not returned for a Template record.
<b>li</b>	Listing (Directory Assistance) 2 bytes identifier (optional) BL:Blocked-not sent to DA LI:Published-sent to DA NP: Non-published; not sent to DA. Not returned for a Template record or Pointer record.
<b>rao</b>	Revenue Accounting Office 3 bytes decimal numeral (optional) Not returned for a Template record.

<b>so</b>	Service Order Number 13 bytes identifier (optional) range is from 4-13 bytes Not returned for a Template record.
<b>sf</b>	Supplemental Form Number 6 bytes text string (optional) maximum of 6 bytes alphanumeric Not returned for a Template record.
<b>refer</b>	Referral Option 1 byte identifier (optional) N:the terminating number is ignored and a recorded message that the number was disconnected is returned Y:a call to a disconnected number is directed to the appropriate carrier where a message refers the caller to a different number Not returned for a Template record.
<b>eint</b>	End Intercept Date 8 bytes text string (optional) format is mm/dd/yy Not returned for a Template record.
<b>note</b>	Notes 151 bytes text string (optional) maximum of 151 bytes any notes on the Service Order or Supplemental Form which need to be stored and for which no specific field exists
<b>agent</b>	On-Line Agent for Customer 5 bytes text string (optional) only alphanumeric entries are allowed Not returned for a Template record.

<b>telco</b>	Company that sold SMS access 4 bytes text string (optional) Not returned for a Template record.
<b>cus</b>	On-Line Access Customer 5 bytes text string (optional) Not returned for a Template record.
<b>la</b>	Listing Address  75 bytes text string (optional) max of 75 bytes Not returned for a Template record. Pointer record
<b>cbi</b>	IC/EC Billing Indicator 4 bytes identifier (optional) if IC (Interexchange Carrier) it is 3 alphabetic characters, if EC (Exchange Carrier) it is 4 alphabetic characters. Not returned for a Template record.
<b>ncon</b>	Name of Contact 30 bytes text string (optional) max of 30 bytes
<b>ctel</b>	Contact Phone Number 10 bytes decimal numeral (optional); only digits are allowed. format is npanxxxxxx, 000nxxxxxx 000nxxxxxx is returned when a 7-digit number exists (000 is added for padding)

<b>tmplptr</b>	<p>The Template Name of the Template record that is used on the Pointer record.</p> <p>15 bytes text string</p> <p>tmplptr value must be an existing Template record, which means tmplptr must already map to an existing tmpltm value.</p> <p>If you are querying a Pointer record, the num tag will be returned in the RSP-CRV message as the key field of the Pointer record that you are querying.</p> <p>format is the same as for tmpltm field.</p> <p>Tmplptr tag refers to a data field on a Pointer record, indicating the Template record that the Pointer record is pointing to.</p> <p>Tmplptr tag is populated only for a Pointer record when the record that was queried in the REQ-CRV message is a Pointer record.</p>
----------------	--

**Note:**

Although both tmpltm and tmplptr tags are in the RSP-CRV message, both of these tags would never be returned in the same response message.

Tmpltm tag refers to the key of the Template record that is in the SMS/800 Template Database.

<b>cnt3</b>	<p>Count of number of AOS Labels</p> <p>2 bytes decimal numeral (optional)</p> <p>Range: 00-16</p>
<b>atype</b>	<p>Type of AOS Label</p> <p>3 bytes identifier (optional)</p> <p>LAT: LATA</p> <p>NPA: Area Code</p> <p>STA: State</p> <p>SIX: npanxx</p>

<b>albl</b>	Label Name 7 bytes text string (maximum) (optional)
<b>adef</b>	Values Associated with Label Name 1793 bytes text string (maximum) (optional) First 5 bytes defined as CNTA=, followed by the 3-byte count of number of subsequent values. Subsequent fields are populated with values of one of the following entry types. Entries are separated by commas. Exact formats are as follows: LATAs: 3 bytes NPAs: 3 bytes States: 2 bytes NPA-NXXs: 6 bytes
<b>aac</b>	Areas of Service - Area Code 143 bytes text string (maximum) (optional) First 5 bytes defined as: CNT4= followed by the 2-byte numeric count of the number of area codes contained within the message. The range of this count is 00-34. The area code entries (maximum of 34) follow, separated by commas.
<b>alat</b>	Areas of Service - LATA 143 bytes text string (maximum) (optional) First 5 bytes defined as: CNT5= followed by the 2-byte numeric count of the number of LATAs contained within the message. The LATA entries (maximum of 34) follow, separated by commas.

<b>anet</b>	<p>Areas of Service - network</p> <p>76 bytes text string (maximum) (optional)</p> <p>First 5 bytes defined as CNT6= followed by the 2-byte numeric count of the number of networks contained within the message. The network entries (maximum of 23) follow, separated by commas.</p> <p>Each entry must be 2 bytes alphabetic must be valid network codes</p> <p>examples include AM,BA,BS,GT,NX,PC,SH,UW, and</p> <p>CN: Canada</p> <p>CR: Caribbean</p> <p>US: United States (50 states and D.C.)</p> <p>XA: US and Canada</p> <p>XB: US and Caribbean</p> <p>XC: US and Canada and Caribbean</p> <p>US, XA, XB, XC cannot be combined with any other area-of-service type or with each other</p>
<b>asta</b>	<p>Areas of Service - State</p> <p>145 bytes text string (maximum) (optional)</p> <p>First 5 bytes defined as: CNT7= followed by the 2-byte numeric count of the number of states contained within the message.</p> <p>The state entries (maximum of 46) follow, separated by commas.</p>
<b>cnt8</b>	<p>Count of Number of Listing Names</p> <p>2 bytes decimal numeral (optional)</p> <p>range: 01-09</p> <p>Not returned for a Template record.</p> <p>Only 1 Listing Name is supported for Pointer records.</p>
<b>In</b>	<p>Listing Name</p> <p>75 bytes text string (optional)</p> <p>maximum of 75 bytes</p> <p>Can repeat up to 9 occurrences except only the 1<sup>st</sup> instance is supported for a Pointer record.</p> <p>Not returned for a Template record.</p>

<b>cnt9</b>	Count of number of Destination Telephone Blocks (tel thru uts) 3 bytes decimal numeral (optional) Range: 000-999  Not returned for Template records.
<b>tel</b>	Destination Telephone Number 10 bytes text string (optional) format is npanxxxxxx where nxxxxxx is alphanumeric Not returned for a Template record.  When using a Template record for routing information, the Destination Telephone Number is stored with the Pointer record, not with the Template record.
<b>lns</b>	Number of Terminating Lines 4 bytes decimal numeral (optional) maximum of 4 bytes Range is 0000-9999 LNS tag is returned for all CR record types (that is, regular CR, Pointer record, and Template record).
<b>city</b>	City 16 bytes text string (optional) maximum of 16 characters consisting of alphas, blanks, dashes, periods, and single quotes where the Destination Telephone Number terminates Not returned for a Template record.
<b>fso</b>	Foreign Serving Office 6 bytes decimal numeral (optional) format is NPANXX central office that terminates the service line, if different from the Iso Not returned for a Template record.

<b>hml</b>	Multiline Hunt Group 4 bytes decimal numeral (optional) maximum of 4 bytes this is a code to identify a specific software arrangement of customer lines. used to investigate maintenance problems. Not returned for a Template record.
<b>Isis</b>	Lead SIS 4 bytes decimal numeral (optional) This is the first number in the sequence of a customer service group for the number entered in the tel field. Not returned for a Template record.
<b>Iso</b>	Local Serving Office 6 bytes decimal numeral (optional) Format is NPANXX Not returned for a Template record.
<b>sfg</b>	Simulated Facility Group 5 bytes text string (optional) range is 3-5 bytes Used to investigate billing and maintenance problems. Not returned for a Template record.
<b>stn</b>	Screening Telephone Number 7 bytes decimal numeral (optional) format is NXXXXXX Not returned for a Template record.
<b>uts</b>	Jurisdictional Billing Indicator 3 bytes text string (optional) Not returned for a Template record.

<b>cnt11</b>	Count of number of distinct call routing paths/branches (CPR rows) 3 bytes decimal numeral (optional) Range: 000-999 CPR rows per CPR Section
<b>node</b>	Name of Decision or Action Node 88 bytes text string (maximum) (optional) First 6 bytes defined as: CNT10= followed by the 3-byte numeric count of the number of nodes contained within the message. The range for the count is: 001-020. The nodes follow, separated by commas.  Each node entry is 2 or 3 bytes alphabetic of the form XX or XXZ (optional), where XX designates decision criteria or action node and Z designates associated time zone (only time, date, and day nodes can have XXZ format) Possible values for XX are: TI (time), DT (date), DA (Day), LT (LATA), ST (state), AC (area code), NX (NX) SW (switch), PC (percent), CA (carrier), AN (announcement), TE (terminating telephone number), SD (six-digit), TD (ten-digit), GT (go to). Possible values for Z are: see z parameter.

**vr.c**

Values associated with Row and Column Entries

279 bytes text string (optional)

Each instance of the parameter V indicates a row. Rows are one text string field.

Each instance of vr.c indicates a decision criteria value associated with column c.

Commas separate row and column entries.

Each entry can be:

single value, or

start-range - end-range (dash between values indicates range), where appropriate or

multiple values (where appropriate) separated by plus sign (+), or

label name (where appropriate), or

"OTHER", or

no entry, indicated by: ,, (comma comma). No entry means that the decision criteria is not applicable for this path of the call routing logic.

TI (Time) node values:

Format is: hh:mmx-hh:mmx where x can be A (am) or P (pm)

Time is standard time and default is Central time

DT (Date) node values:

mm/dd (no year should be entered)

Range may be returned in the form: mm/dd-mm/dd

Multiple values are returned using "+" (plus sign) as delimiters

DA (Day-of-Week) node values:

SU = Sunday

M = Monday

TU = Tuesday

W = Wednesday

TH = Thursday

F = Friday

SA = Saturday

Range may be returned, such as: SU-TU

Single value may also be returned, such as: TH

Multiple values may be returned (e.g., multiple single values, multiple ranges, or ranges combined with single values)

Multiple value entries are returned using "+" (plus sign) as delimiters

LT (LATA) node values:

LT values must be numeric

More than one LATA is specified with "+" (plus sign) as delimiters

Maximum of three LT values

ST (State) node values:

More than one state code is returned with "+" (plus sign) as delimiters

Maximum of four ST values

AC (Area Code) node values:

AC values must be numeric

More than one Area Code is returned with "+" (plus sign) as delimiters

Maximum of three AC values

NXX (NX) node values:

Format is: nxx (numeric values only)

More than one NXX is returned with "+" (plus sign) as delimiters

Maximum of three NXX values

**SW (Switch) node values:**

ON or OFF. A maximum of one Switch value is allowed.

A numeric suffix is returned if needed, e.g., ONn, where n=0-9 to designate each of the n branches that are derived from the same previous criteria.

On output, the following entries are returned: ONn or OFFn.

A common suffix can link branches for SMS.

**PC (Percent Allocation) node values:**

allowable integer values are 1-99

An alphabetic suffix is returned if needed to link two branches derived from the same percent criteria.

**CA (Carrier) node values:**

format is: ACNACIC (i.e., no space between ACNA and CIC)

**AN (Announcement) node values:**

OBA = Out of Band Announcement

VCA = Vacant Code Announcement

Aids in controlling announcement that should be returned to caller if caller is within the Area-of-Service but the call should not terminate.

**TE (Terminating Number) node values:**

Format is: npanxxxxx. Only alphanumeric values.

**SD (Six-digit) node values:**

Format is: npanxx (numeric values only)

More than one entry is returned with "+" (plus sign) as delimiters

**TD (Ten-Digit) node values:**

Format is: npanxxxxx. Only alphanumeric values.

**GT (Go To) node values:**

Format is: 6-character identifier, with the first character as "S".

This parameter specifies the name of a subsection used in the call processing section of the customer record.

<b>pec</b>	Primary InterLATA Carrier 8 bytes text string (max) format is ACNACIC (i.e., no space between ACNA and CIC)
<b>pac</b>	Primary IntraLATA Carrier 8 bytes text string (max) format same as pec above
<b>z</b>	Time Zone 1 byte identifier (optional) possible values are: A (Atlantic), B (Bering), C (Central), E (Eastern), H (Hawaiian-Aleutian), M (Mountain), N (Newfoundland), P (Pacific), or Y (Alaska) time zone indicator for entire call processing portion of the record or for specific value of node
<b>ds</b>	Daylight Savings 1 byte identifier (optional) Values are: Y (Yes), or N (No)
<b>cnt12</b>	Count of Number of Labels 3 bytes decimal numeral (optional) Range is: 000-999
<b>type</b>	Type of CPR LAD label, applicable to customer record 2 bytes identifier (optional) Possible values are: AC (Area Code), LT (LATA), DT (Date), ST (State), NX (NX), TI (Time), SD (Six-Digit), TD (Ten-Digit), TE (Telephone Number)
<b>lbl</b>	Label name 8 bytes text string (optional)

**def** Values associated with label name specified  
3579 bytes text string (optional)  
maximum of 3579 bytes

First 6 bytes defined as: CNT13=, followed by the 3-byte count of the number of subsequent values. The range of the count is 1-255, except 1-256 for NXXs (see below).

Subsequent fields are populated with values of one of the following entry types. Exact formats are as defined in the vr.c parameter. Values are separated by commas.

the maximum number of values that can be associated with a label is 255, except for when NXX labels are specified, in which case the maximum number is 256 to allow for the specification of the associated NPA as indicated below.

Area Codes: 3 bytes

NXXs: 3 bytes, values separated by commas. The first value is the associated NPA

LATAs: 3 bytes

States: 2 bytes

6-digit numbers: 6 bytes

10-digit numbers: 10 bytes

Dates: 5 or 11 bytes (mm/dd or mm/dd-mm/dd or mm/dd+mm/dd)

Times: 13 bytes (hh:mmx-hh:mmx where x is A (am) or P (pm) )

Telephone Numbers: 10 bytes (only 1 value can be specified)

<b>cnt14</b>	Count of Number of CPR OTHER (OTH) entries 3 bytes decimal numeral (optional) Range is: 000-500 The 'cnt14' tag is only applicable for Involved Carrier View.
<b>oth</b>	Definition of CPR OTHER entries 700 bytes text string per block (optional) (up to 500 blocks) format is of the form: OTH=text block:OTH=text block: ... :OTH=text block text block is of the form: "OTHER-nnn: (definition of OTHER entry)" (range of nnn is 001-500) The 'oth' tag is only applicable for Involved Carrier View.
<b>red</b>	Requested Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm: month dd: day yy: year
<b>ret</b>	Requested Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh: hour mm: minute x: am or pm z: time zone (all time zones)

<b>crsize</b>	<p><b>CR Size</b></p> <p>Storage size (in bytes) of this CR in the SMS/800 database.</p> <p>9 bytes decimal numeral (numerics), fixed length, padded with leading zeros, when necessary, to form a 9-byte value</p> <p>The crsize tag is returned only if the 'size' tag was sent in the REQ-CRV message.</p> <p>Note: Quotes are <u>not</u> allowed in or around the crsize tag/value.</p>
<b>crur</b>	<p><b>CR Update Rate</b></p> <p>System-calculated estimated maximum count of CRs of equivalent size as this CR that can be 'updated' in the SMS/800 system per hour while staying below 5% CPU usage for the CR's control Resp Org Entity. The CR Update Rate assumes the Entity places no other significant load on the system.</p> <p>5 bytes decimal numeral (numerics), fixed length, padded with leading zeros, when necessary, to form a 5-byte value</p> <p>The CRUR tag is returned only if the SIZE tag was sent in the REQ-CRV message.</p>
<b>cnt</b>	<p><b>Number of Error blocks</b></p> <p>1 byte decimal numeral (optional)</p> <p>maximum value of 5</p>

**err**

Error explanation

2 bytes decimal numeral (optional)

02 - Required parameter missing

For example, NUM and TMPLTNM are missing, yet NUM or TMPLTNM must be sent.

03 - Unrecognized parameter

04 - Invalid parameter combination

For example, both NUM and TMPLTNM tags were sent to SMS/800.

05 - Syntax error

06 - Permission Denied (not allowed to perform this function)

07 - No record exists for this input

08 - Requester has no involvement with the number

09 - Warning - Requester has involvement with the number but is not the Control RESP ORG

10 - Warning - More than one record exists. ACTIVE, SENDING, DISCONNECT, or most recent pending record version is returned.

11 - Warning - Record data returned is incomplete due to CR size is too large.

12 - NO ACTIVE, SENDING, DISCONNECT, or future records exist to be sent.

13 - Warning - Record contains more sections not supported by REQ-CRC. MGI supports only 1 CPR Section, which means MGI supports only 1 CPR Main Section.

14 - Warning - CR CTEL tag (Contact Telephone field) contains data in an invalid format, yet the system was able to retrieve the CR. If this warning is sent, the CR Resp Org should correct the Contact Telephone value (in the CTEL tag) and update the CR (e.g., via REQ- CRC or REQ-CRA). The Contact Telephone (CTEL tag) should be a valid 10-digit (numerics only) telephone number.

16 - Only ACTIVE, SENDING, DISCONNECT, and future pending records can be viewed.

17 - Invalid record status. Only ACTIVE, SENDING, and DISCONNECT records can be explicitly requested.

98 - Invalid or missing date and/or time in application message

99 - Other Error

<b>VERR</b>	Value of Field in Error 16 bytes text string (optional) returns original input in error where possible
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**Error code 99 unique to Pointer records:**

<b>VERR</b>	<b>Description</b>
<b>POINTER RECORD</b>	If this is a <b>Pointer record</b> and the MGI Resp Org's CLLI code is <u>not</u> on a Template Feature issue of the MGI Specification (SR-4592), this error indicates that the MGI Resp Org doesn't support the Template Feature; and as a result, SMS/800 will return err=99 and verr="Pointer record" when the record requested via the REQ-CRV message is a <b>Pointer record</b> . If the Resp Org does support the Template Feature, then the solution is for the Resp Org to send in the REPT-ASI MGI message with the <b>vers</b> tag set to a value of: <b>GR-1247-CORE-1600</b> , or set to a higher MGI issue number that supports the Template Feature. However, if the Resp Org doesn't support the Template Feature, then a workaround is for the Resp Org to retrieve the record via <b>Web Based Access (WBA)</b> user-interface.

## 7.2.14 SMS Carrier Notification/Approval [UNS-SNA]

### SMS CARRIER NOTIFICATION/APPROVAL [UNS-SNA] CUSTOMER RECORD ADMINISTRATION

This message is initiated by a control Resp Org-initiated change resulting in new or changed service potentially affecting another OSs number routing. The control Resp Org change may be a result of on-line, mechanized interface, or batch input. The SMS Resp Org initiating the change and the OS to-be-notified could be a LEC or IC. This message could also be sent by SMS if a new customer record involves a shared service arrangement between a LEC and an IC and the IC must be notified. The customer record (CR) change may be for a regular (standard) ***customer record***, ***Pointer record*** or ***Template record***. For a change to a Template record that has Pointer records pointing to it, the count of the number of Pointer records will be returned on the UNS-SNA.

This message supports several types of record changes, among them: CIC Addition, CIC Routing Changes, CIC Deletion, record deletions (notification only), control Resp Org change (notification only), and cancellations of previous routing additions or possible routing changes. Changes to CAD or CPR data could cause this message to be sent. Changes to a record which could trigger this message include changes to decision and action criteria change of Resp Org (coordinated conversion), record transfer, area-of-service, among others.

If the change is a CIC addition or a CIC routing change, the data returned to the user is their carrier view portion. (*See RSP-CRV*). If the change is CIC deletion, then minimal data is returned. In order to correlate the notification with specific record activity, two parameters are introduced: **lued** and **luet**. These correspond to the effective date and time of the applicable record update. Call processing record (CPR) data in the UNS-SNA message will include all CPR data for Involved Carriers, except for the CIC and terminating tel# data if the user does not have permission to view this data.

If approval is required of the CIC corresponding to the OS, the **ap** parameter is set to "Y". In order to respond over the interface, the **REPT-APR** message must be launched by the OS to SMS and must contain the **lued** and **luet** parameters supplied in the UNS-SNA message.

To receive the UNS-SNA message, an OS must have the on-line **GNA** screen properly setup for their CICs.

An OS may optionally also set up the **ENA** screen for their CICs to receive the UNS-SNA message for specific Resp Org Entities that use the carrier's CIC. Prior to setting-up the ENA screen for their CIC, the carrier must first setup the GNA screen for that CIC.

For instructions to setup the GNA screen and ENA screen, refer to the [SMS/800 WBA User Guide](#) (BR 780-004-280) or the [3270 User Guide: 800 Service Management](#) (BR 780-004-221).

If a carrier wants to be able to setup the GNA screen and ENA screen for their own CICs, they may ask the Help Desk to be granted carrier table setup permission and carrier approval permission.

<b>Message Type</b>	Unsolicited
<b>Logical Channel</b>	X5
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queuing</b>	Yes
<b>Command</b>	N/A
<b>Route ID</b>	UNA

*MESSAGE FORMAT***1. regular CR or Pointer record:**

UNS-SNA:,date,time::::error\_cd:RO=ro,OLDRO=oldro,  
NUM=num,ED=ed,ET=et,STAT=stat,APP=app,  
LUED=lued,LUET=luet:  
CHG=chg,  
IEC=iec: IAC=iac:  
ABN=abn,DAU=dau,DAT=dat,DD=dd,HDD=hdd,LI=li,RAO=rao,SO=so,SF=sf,  
REFER=refer,EINT=eint,NOTE=note,AGENT=agent,TELCO=telco,CUS=cus,  
LA=la,CBI=cbi,NCON=ncon,CTEL=ctel:  
CNT3=cnt3:ATYPE=atype,ALBL=albl,ADEF=adef:  
AAC=aac:  
ALAT=alat:  
ANET=anet:  
ASTA=asta:  
CNT8=cnt8:  
LN=ln:  
CNT9=cnt9:TEL=tel,LNS=lns,CITY=city,FSO=fso,HML=hml,LSIS=lsis,  
LSO=lsq,SFG=sfg,STN=stn,UTS=uts:  
NODE=node:  
CNT11=cnt11:  
V=v1.2:  
V=v2.c:  
V=vr.c:  
PEC=pec,PAC=pac,Z=z,DS=ds,CIC=cic,AP=ap:  
CNT12=cnt12:TYPE=type,LBL=lbl,DEF=def:  
CNT14=cnt14:  
OTH=oth:  
CNT=cnt:ERR=err,VERR=verr;

**2. Template record:**

UNS-SNA:,date,time::::error\_cd:RO=ro,OLDRO=oldro,  
TMPLTNM=tmpltnm,ED=ed,ET=et,STAT=stat,APP=app, LUED=lued,LUET=luet:  
CHG=chg, PTRCNT=ptrcnt: IEC=iec: IAC=iac:  
NCON=ncon,CTEL=ctel:  
CNT3=cnt3:ATYPE=atype,ALBL=albl,ADEF=adef: AAC=aac:  
ALAT=alat:  
ANET=anet: ASTA=asta:  
LNS=lns: NODE=node: CNT11=cnt11: V=v1.2: V=v2.c: V=vr.c:  
PEC=pec,PAC=pac,Z=z,DS=ds,CIC=cic,AP=ap:  
CNT12=cnt12:TYPE=type,LBL=lbl,DEF=def: CNT14=cnt14:  
OTH=oth:  
CNT=cnt:ERR=err,VERR=verr;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>error_cd</b>	<p>Error Code 2 bytes decimal numeral 00 = No error 01 = Error present (see err field) 11 = Warning (see err field)</p>
<b>ro</b>	<p>New Resp Org 5 bytes identifier new responsible organization for this 800 number</p>
<b>oldro</b>	<p>Old Resp Org 5 bytes identifier (optional) old responsible organization for this 800 number</p>
<b>num</b>	<p>The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx=dialed number Two blank spaces are allowed.</p>
<b>tmpltnm</b>	<p>The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message.</p> <p style="text-align: center;">Either NUM or TMPLTNM will be returned, but not both.</p>

<b>ed</b>	Effective Date 8 bytes text string (required) format is mm/dd/yy, where mm: month dd: day yy: year
<b>et</b>	Effective Time 8 bytes text string (required) format is hh:mmx/z, where hh:hour mm:minute x: am or pm (A,P) z:time zone (C)
<b>stat</b>	Status of Customer Record 2 bytes decimal numeral (required) 01 - SAVED 02 - PENDING 03 - SENDING 04 - ACTIVE 05 - OLD 06 - INVALID 07 - DISCONNECT 08 - MUST CHECK 09 - FAILED 10 – HOLD

<b>app</b>	<p>Approval Indicator (<i>Approval Status</i>)      2 bytes identifier (required)      Specifies the approval status and is associated with all customer records. Valid entries include:</p> <ul style="list-style-type: none"> <li>NA - not applicable (approval is irrelevant due to customer record status, i.e., SAVED, INVALID, HOLD, or approvals do not apply to transaction)</li> <li>OK - all required approvals received by SMS</li> <li>AW - SMS is awaiting at least one carrier approval</li> <li>DN - at least one affected carrier denied the approval request</li> <li>NR - approvals are not required for this record</li> <li>RJ - record is rejected due to effective date of NOW</li> </ul>
<b>lued</b>	<p>Last SMS Notification/Approval Message Received Date Stamp      8 bytes text string (required, except for CIC deletions)      format is mm/dd/yy, where      mm: month      dd: day      yy: year      corresponds to the date when SMS last received a response from a Carrier (CIC)</p>
<b>luet</b>	<p>Last SMS Notification/Approval Message Received Time Stamp      10 bytes text string (required, except for CIC deletions)      format is hh:mmssx/z where      hh: hour      mm: minute      ss: second      x: am or pm (A or P)      z: time zone (C)      corresponds to the time when SMS last received a response from a Carrier (CIC)</p>

<b>chg</b>	Record Activity which Triggered Notification/Approval 2 bytes decimal numeral (required) 01 = CIC addition; added CIC (added your CIC on a CR) 02 = possible CIC routing change; routing change on a CR that uses your CIC 03 = CIC deletion; deleted CIC (removed your CIC from a CR) 05 = Cancel CIC addition 06 = Cancel routing change; cancel CIC change 07 = Approval resend - previous pending record, with approval status of denied or awaiting, was copied and no record change was made; ungranted like record 08 = Record deletion 09 = Cancel approval resend; cancelled like record (similar CR) 99 = Other
<b>ptrcnt</b>	Count of number of <b>Pointer records</b> for the <b>Template record</b> 6 bytes decimal numeral (optional)
	ptrcnt will always be given if tmplttnm is used
<b>iec</b>	InterLATA Carrier 107 bytes text string maximum (optional) first 5 bytes defined as: CNT1= followed by a 2-byte numeric count of the number of interLATA carriers contained herein. The allowable range of this count is 0-20. A comma follows this count.  the next values to appear are the 4-digit (numeric) CICs. A maximum of 20 carriers are supported, separated by commas.

<b>iac</b>	IntraLATA Carrier 107 bytes text string maximum (optional) first 5 bytes defined as CNT2= followed by a 2-byte numeric count of the number of intraLATA carriers contained herein. The allowable range of this count is 0-20. A comma follows this count.  the next values to appear are the 4-digit (numeric) CICs. A maximum of 20 carriers are supported, separated by commas.
<b>dd</b>	Due Date 8 bytes text string (optional) format is mm/dd/yy
<b>refer</b>	Referral Option 1 byte identifier (optional) N:the terminating number is ignored and a recorded message that the number was disconnected is returned Y:a call to a disconnected number is directed to the appropriate carrier where a message refers the caller to a different number
<b>eint</b>	End Intercept Date 8 bytes text string (optional) format is mm/dd/yy
<b>cnt3</b>	Count of Number of Area-of-Service (AOS) labels 2 bytes decimal numeral (maximum) (optional) allowable range: 0-16
<b>atype</b>	Type of AOS Label 3 bytes identifier (optional) allowable values: LAT (LATA), NPA (NPA), STA (State), SIX (NPA-NXX)
<b>albl</b>	AOS Label Name 7 bytes text string (maximum) (optional)

<b>adef</b>	Values Associated with AOS Label Name 1793 bytes text string (maximum) (optional)
	first 5 bytes are defined as CNTA=, followed by the 3-byte count of the number of subsequent values. Subsequent fields are populated with values of the following entry types. Entries separated by commas. Exact formats are defined in the applicable fields below:
	LATAs: 3 bytes
	NPAs: 3 bytes
	States: 2 bytes
	NPA-NXXs: 6 bytes
<b>aac</b>	Areas of Service - Area Code 143 bytes text string (maximum) (optional)
	First 5 bytes defined as: CNT4= followed by the 2-byte numeric count of the number of area codes contained within the message. The allowable range of this count is 0-34. The area code entries (maximum of 34) follow, separated by commas.
<b>alat</b>	Areas of Service - LATA 143 bytes text string (maximum) (optional)
	First 5 bytes defined as: CNT5= followed by the 2-byte numeric count of the number of LATAs contained within the message. The LATA entries (maximum of 34) follow, separated by commas.

<b>anet</b>	Areas of Service - network 76 bytes text string (maximum) (optional) First 5 bytes defined as CNT6= followed by the 2-byte numeric count of the number of networks contained within the message. The network entries (maximum of 23) follow, separated by commas. examples include AM,BA,BS,GT,NX,PC,SH,UW, and CN: Canada CR: Caribbean US: United States (50 states and D.C.) XA: US and Canada XB: US and Caribbean XC: US and Canada and Caribbean US,XA,XB, and XC cannot be combined with any other area-of-service type or with each other
<b>asta</b>	Areas of Service - State 145 bytes text string (maximum) (optional) First 5 bytes defined as: CNT7= followed by the 2-byte numeric count of the number of states contained within the message. The state entries (maximum of 46) follow, separated by commas.

<b>cnt8</b>	Count of Number of Listing Names 2 bytes decimal numeral (optional) range: 01-09
<b>In</b>	Listing Name 75 bytes text string (optional) maximum of 75 bytes can repeat up to 9 occurrences except only 1 occurrence for a Pointer record.
<b>cnt9</b>	Count of number of Destination Telephone Blocks (tel through uts) 3 bytes decimal numeral (optional)
<b>tel</b>	Destination Telephone Number 10 bytes text string (optional) format is npanxxxxxx where nxxxxxx is alphanumeric
<b>Ins</b>	Number of Terminating Lines 4 bytes decimal numeral (optional) maximum of 4 bytes value of 9999 will maximize the time at which regional network management controls are activated
<b>city</b>	City 16 bytes text string (optional) maximum of 16 characters consisting of alphas, blanks, dashes, periods, and single quotes where the Destination Telephone Number terminates
<b>fso</b>	Foreign Serving Office 6 bytes decimal numeral (optional) format is NPANXX central office that terminates the service line, if different from the Iso

<b>hml</b>	Multiline Hunt Group 4 bytes decimal numeral (optional) maximum of 4 bytes this is a code to identify a specific software arrangement of customer lines. used to investigate maintenance problems.
<b>Isis</b>	Lead SIS 4 bytes decimal numeral (optional) this is the first number in the sequence of a customer service group for the number entered in the tel field
<b>Iso</b>	Local Serving Office 6 bytes decimal numeral (optional) format is NPANXX
<b>sfg</b>	Simulated Facility Group 5 bytes text string (optional) allowable range is 3-5 bytes used to investigate billing and maintenance problems
<b>stn</b>	Screening Telephone Number 7 bytes decimal numeral (optional) format is NXXXXXX number recorded on terminating AMA tape can be used for billing inquiries
<b>uts</b>	Jurisdictional Billing Indicator 3 bytes text string (optional) 1st char: A,B,C,D,E,F or blank 2nd char: C,W or blank 3rd char: J,N or blank entries are at the discretion of the entity that controls the customer record.
<b>cnt11</b>	Count of number of distinct call routing paths/branches 3 bytes decimal numeral (optional)

<b>node</b>	<p>Name of Decision or Action Node 88 bytes text string (maximum) (optional)</p> <p>First 6 bytes defined as: CNT10= followed by the 3-byte numeric count of the number of nodes contained within the message.</p> <p>The range for the count is: 1-20. The nodes follow, separated by commas.</p> <p>Each node entry is 2 or 3 bytes alphabetic of the form XX or XXZ (optional), where XX designates decision criteria or action node and Z designates associated time zone</p> <p>(only time, day and date nodes can have XXZ format)</p> <p>values for XX are: TI (time), DT (date), DA (Day), LT (LATA), ST (state), AC (area code), NX (NX) SW (switch), PC (percent), CA (carrier), AN (announcement), TE (terminating telephone number), SD (six-digit), TD (ten-digit), GT (go to)</p> <p>and allowable values for Z are: see z parameter</p>
<b>vr.c</b>	<p>Values associated with Row and Column Entries 279 bytes text string (optional)</p> <p>Each instance of the parameter V indicates a row. Rows are one text string field.</p> <p>Each instance of vr.c indicates a decision criteria value associated with column c.</p> <p>Commas separate row and column entries.</p> <p>Each entry is either a:</p> <p>single value, or</p> <p>start-range - end-range (dash between values indicates range), where allowed or</p> <p>multiple values (where allowed) separated by plus sign (+), or</p> <p>label name (where allowed), or</p> <p>"OTHER", or</p> <p>no entry, indicated by: ,, (comma comma). No entry means that the decision criteria is not applicable for this path of the call routing logic.</p>

TI (Time) node values:

Format is: hh:mmx-hh:mmx where x can be A (am) or P (pm)

Time is standard time and default is Central time

DT (Date) node values:

mm/dd (no year should be entered)

Range is returned in the form: mm/dd-mm/dd

Multiple values are specified using "+" (plus sign) as delimiters

DA (Day-of-Week) node values: SU = Sunday

M = Monday

TU = Tuesday

W = Wednesday

TH = Thursday

F = Friday

SA = Saturday

Range returned as: SU-TU

Single value returned as: TH

Multiple values can be returned (e.g., multiple single values, multiple ranges, or ranges combined with single values)

Multiple value entries are specified using "+" (plus sign) as delimiters

LT (LATA) node values:

LT values must be numeric

More than one LATA returned with "+" (plus sign) as delimiters

Maximum of three LT values returned

ST (State) node values:

More than one state code returned with "+" (plus sign) as delimiters

Maximum of four ST values returned

AC (Area Code) node values:

AC values must be numeric

More than one Area Code returned with "+" (plus sign) as delimiters

Maximum of three AC values returned

NX (NX) node values:

Format is: nxx (numeric values only)

More than one NX returned with "+" (plus sign) as delimiters

Maximum of three NX values returned

SW (Switch) node values:

ON or OFF. A maximum of one Switch value is supported.

A numeric suffix is returned if needed, e.g., ONn, where n=0-9 to designate each of the n branches that are derived from the same previous criteria. On output, the following entries are returned: ON n, or OFFn.

A common suffix can link branches for SMS.

PC (Percent Allocation) node values:

allowable integer values are 1-99

An alphabetic suffix is returned if needed to link two branches derived from the same percent criteria.

CA (Carrier) node values:

format is: ACNACIC (i.e., no space between ACNA and CIC)

A maximum of one Carrier value is returned.

AN (Announcement) node values:

OBA = Out of Band Announcement

VCA = Vacant Code Announcement

Aids in controlling announcement that should be returned to caller if caller is within the Area-of-Service but the call should not terminate.

TE (Terminating Number) node values:

Format is: npanxxxxx. Only alphanumeric values.

SD (Six-digit) node values:

Format is: npanxx (numeric values only)

More than one entry can be returned with "+" (plus sign) as delimiters

TD (Ten-Digit) node values:

Format is: npanxxxxx. Only alphanumeric values.

GT (Go To) node value:

Format is: 6-character identifier, with the first character as "S"

This parameter specifies the name of a subsection used in the call processing section of the customer record.

**pec** Primary InterLATA Carrier  
8 bytes text string (optional)  
format is ACNA-CIC

**pac** Primary IntraLATA Carrier  
8 bytes text string (optional)  
format same as pec above

<b>z</b>	Time Zone 1 byte identifier (optional) allowable values are: A (Atlantic), B (Bering), C (Central), E (Eastern), H (Hawaiian-Aleutian), M (Mountain), N (Newfoundland), P (Pacific), or Y (Alaska) default value: C time zone indicator for entire call processing portion of the record or for specific value of node
<b>ds</b>	Daylight Savings 1 byte identifier (optional) allowable values are: Y (Yes), or N (No) default value: Y
<b>cnt12</b>	Count of Number of Labels 3 bytes decimal numeral (optional) allowable range is: 000-999
<b>type</b>	Type of CPR LAD label, applicable to customer record 2 bytes identifier (optional) allowable values are: AC (Area Code), LT (LATA), DT (Date), ST (State), NX (NXN), TI (Time), SD (Six-Digit), TD (Ten-Digit), TE (telephone number)
<b>lbl</b>	Label name 8 bytes text string (optional) field length 2-8 characters, first character must be * (asterisk) will not contain blanks or special symbols other than the start * label name must be unique for given LAD type

**def** Values associated with label name specified  
3579 bytes text string (optional)  
maximum of 3579 bytes  
first 6 bytes defined as: CNT13=, followed by the 3-byte count of  
number of subsequent values. The range of the count is 1-255,  
except 1-256 for NXXs  
(see below).  
Subsequent fields are populated with values of one of the following  
entry types. Exact formats are as defined in the vr.c parameter.  
Values are separated by commas.  
the maximum number of values that can be associated with a label is  
255, except for when NXX labels are specified, in which case the  
maximum number is 256 to allow for the specification of the  
associated NPA as indicated below.

Area Codes: 3 bytes

NXXs: 3 bytes, values separated by commas. The first value is the  
associated NPA  
LATAs: 3 bytes  
States: 2 bytes  
6-digit numbers: 6 bytes  
10-digit numbers: 10 bytes  
Dates: 5 or 11 bytes (mm/dd or mm/dd-mm/dd or mm/dd+mm/dd)  
Times: 13 bytes (hh:mmx-hh:mmx where x is A (am) or P (pm) )  
Telephone Numbers: 10 bytes (only 1 value can be specified)

**cic** Carrier Identification Code  
6 bytes text string maximum (required)  
4 bytes supported for the CIC, and 2 bytes supported for the network  
identifier (such as BA, PC, etc.)  
indicates the CIC listed on the customer record, to whom the  
message applies  
All CICs except 0110 are candidates for approval requests.

<b>cnt14</b>	Count of Number of CPR OTHER entries 3 bytes decimal numeral (optional) Range is: 00-99
<b>oth</b>	Definition of CPR OTHER entries 700 bytes text string per block (optional) (up to 500 blocks) format is of the form: OTH=text block:OTH=text block: ...:OTH=text block text block is of the form: "OTHER-nnn: (definition of OTHER entry)" (range of nnn is 001-500)
<b>cnt</b>	Number of error blocks 1 byte decimal numeral maximum value of 5

<b>err</b>	Error explanation 2 bytes decimal numeral 01 = Warning - Record data returned is incomplete due to size 02 = Warning - Record contains more sections not supported by UNS-SNA 99 = Other error
<b>verr</b>	Value of Field in Error 16 bytes text string returns description of error  If UNS-SNA is being issued for a Template record and the CLLI code is not at this issue of the SR, then error_cd=01, err=99, and verr="CHECK APR SCREEN"
<b>ap</b>	Approval Flag ( <i>Carrier Approval Request Flag</i> ) 1 byte identifier (optional) possible values: Y (yes) or N (no) default value: N indicates that approval is requested of carrier prior to SCP record download  If approval is required of the CIC corresponding to the OS, the <b>ap</b> parameter is set to "Y". In order to respond over the interface, the <b>REPT-APR</b> message must be launched by the OS to SMS and must contain the <b>lued</b> and <b>luet</b> parameters supplied in the UNS-SNA message. (ref. the first paragraph of this section).

The following UNS-SNA tags are defined in **REQ-CRC** message:

**ABN, DAU, DAT, DD, HDD, LI, RAO, SO, SF, REFER, EINT, NOTE, AGENT, TELCO, CUS, LA, CBI, NCON, CTEL.**

**Error code 99 unique to Pointer records:**

VERR	Description
<b>CHECK APR/NOF</b>	If this is a Template record and the MGI Carrier's CLLI code is not on a Template Feature issue of the MGI Specification (SR-4592), this error indicates that the MGI Carrier doesn't support the Template Feature; and as a result, SMS/800 will return err=99 and verr="CHECK APR/NOF" when the record sent via the UNS-SNA message is a Template record. If the Carrier does support the Template Feature, then the solution is for the Carrier to send in the REPT-ASI MGI message with the vers tag set to a value of: GR-1247-CORE-1500 , or set to a higher MGI issue number that supports the Template Feature. However, if the Carrier doesn't support the Template Feature, then a workaround is for the Carrier to use the APR screen and NOF screen via Web Based Access (WBA) user-interface.

A mapping of UNS-SNA CHG tag to GNA screen fields and ENA screen fields is provided below.

**Table 7-1. Mapping of UNS-SNA CHG Tag to GNA & ENA Screens**

UNS-SNA message CHG tag codes	GNA screen field and ENA screen field
01 - CIC addition	Added to Routing
02 - possible CIC routing change	Possible Routing Change
03 - CIC deletion. CIC removed from routing at SCP for Working# and Disconnect CR.	Deleted from Routing at SCP (Working#) Deleted from Routing at SCP (Disconnect#)
04 - Resp Org Change	this maps to MGI-CLLI Notify field selected and an MGI-CLLI(s) is entered
05 - Cancel CIC addition. This is a cancellation of code 01.	Added to Routing
06 - Cancel routing change	Possible Routing Change
07 - Approval resent of 'like' ungranted CR	Possible Routing Change and/or Added to Routing  (this is applicable to GNA screen, not ENA)
08 - Pending CR deleted	Possible Routing Change and/or Added to Routing
09 - Cancel approval resend. This is a cancellation of code 07.	Possible Routing Change and/or Added to Routing  (this is applicable to GNA screen, not ENA)
99 - this code is reserved for future use	N/A

**NOTE** When a CR is Disconnected and a carrier's CIC is on that CR and this carrier requested (via GNA or ENA screens) to receive a notification, the UNS-SNA message is set by the SMS/800 system when the CR is deleted from the SCPs. For example, If the CR is disconnected with Referral set to Yes, then the UNS-SNA message is sent when the End Intercept Date of the CR is reached, because that's the date when this example CR is deleted from the SCPs (so it will no longer be routing calls).

### 7.2.15 Report Approval [REPT-APR]

**REPORT APPROVAL [REPT-APR]  
CUSTOMER RECORD ADMINISTRATION**

This message is launched from an OS (specifically, a **carrier**) to SMS/800 and indicates whether CIC approval is granted or denied. Specifically, a carrier which is listed on a **customer record** (a regular customer record or a **Pointer record**) or **Template record** and which requires approval prior to download, sends this message to SMS/800.

This message is sent by the carrier in response to SMS/800 sending to the carrier a **UNS-SNA** message (SMS Carrier Notification/Approval) when CIC approval for the carrier's CIC is required on a customer record or Template record and the carrier is set up for MGI.

The OS indicates via the **OK** flag whether approval is Granted (Y) or Denied (N). The **lued** and **luet** parameters must be supplied from the corresponding **UNS-SNA** message in order to correlate the approval response with the record update corresponding to the approval request. This message can be used to approve requests previously denied.

Carrier approval applies to regular customer record, **Pointer record** and **Template record**. Refer to the [\*\*SMS/800 Template Feature Requirements\*\*](#) document for additional details regarding the carrier approval process for **Template records** and **Pointer records**.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	X1
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queuing</b>	Optional
<b>Response</b>	RSP-APR
<b>Route ID</b>	CPT

*MESSAGE FORMAT***1. Regular CR and Pointer record:**

```
REPT-APR:,date,time::::ID=id,RO=ro,NUM=num,ED=ed,ET=et,  
LUED=lued,LUET=luet,CIC=cic,OK=ok,WHY=why;
```

**2. Template record:**

```
REPT-APR:,date,time::::ID=id,RO=ro,TMPLTNM=tmpltnm,ED=ed,ET=et,  
LUED=lued,LUET=luet,CIC=cic,OK=ok,WHY=why;
```

**NOTE** Carriers that use MGI will need to add the template name tag in the REPT-APR and RSP-APR message.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	<p>Login Id 8 bytes identifier identifies sender of message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier responsible organization for this message</p>
<b>num</b>	<p>The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed. Required to send either NUM or TMPLTNM, but don't send both.</p>
<b>tmpltnm</b>	<p>Template Name - The Template record Name 15 bytes text string (optional) Optional because it's only applicable for Template records. Format is in accordance with the definition of this field (tag) in the REQ-TRC message.  Required to send either NUM or TMPLTNM, but don't send both.</p>
<b>ed</b>	<p>Effective Date 8 bytes text string (required) format is mm/dd/yy, where mm: month (allowable range: 01-12) dd: day (allowable range: 01-31) yy: year (e.g., 95)</p>

<b>et</b>	<p>Effective Time 8 bytes text string (required) format is hh:mmx/z, where hh: hour (allowable range: 01-12) mm: minute (allowable values: 00,15,30,45) x: am or pm (allowable values: A,P) z: time zone (allowable values: all time zones)</p>
<b>lued</b>	<p>Last SMS Notification/Approval Message Received Date Stamp 8 bytes text string (required) format is mm/dd/yy, where mm: month dd: day yy: year this is the date stamp corresponding to when SMS last received a response from a carrier (CIC)</p>
<b>luet</b>	<p>Last SMS Notification/Approval Message Received Time Stamp 10 bytes text string (required) format is: hh:mmssx/z where hh: hour mm: minute ss: second x: am or pm (A or P) z: time zone (N,A,E,C,M,P,Y,H,B) this is the time stamp corresponding to when SMS last received a response from a carrier (CIC)</p>
<b>cic</b>	<p>Carrier Identification Code 6 bytes text string (required) 4 bytes are supported for the CIC, and 2 bytes are supported for the network identifier (such as BA, PC, etc.) identifies the carrier corresponding to the entity approving or denying the approval request</p>

<b>ok</b>	Approval Response 1 byte text string (required) allowable values: Y (Yes), N (No), or "" (Blank)
<b>why</b>	Reason for Approval or Denial 2 bytes decimal numeral (optional) valid entries: 00-99 this field has a maximum size of 2 bytes this field can be used to specify why the OS is approving or denying the approval request

### 7.2.16 Response to Report Approval [RSP-APR]

#### **RESPONSE TO REPORT APPROVAL [RSP-APR] CUSTOMER RECORD ADMINISTRATION**

This message is the response to REPT-APR. It is sent from SMS to an OS, and indicates to the OS whether or not the REPT-APR message was successfully received. This message will serve as confirmation of acceptance or denial of REPT-APR, so that corrective action can be taken if necessary. There are several reasons why an unsuccessful message may be indicated. If the record does not exist or has been changed after transmittal of REPT-APR, an unsuccessful attempt will be indicated. If the record is past due, the REPT-APR will also not be accepted.

This message applies to customer records (regular customer record or Pointer record) and Template records.

<b>Message Type</b>	<b>Response</b>
<b>Logical Channel</b>	X4
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queueing</b>	Yes
<b>Command</b>	REPT-APR
<b>Route ID</b>	RPR

*MESSAGE FORMAT*

## 1. SUCCESSFUL APPROVAL RESPONSE

• **regular CR or Pointer record:**

RSP-APR:,date,time:::COMPLD,00::ID=id,RO=ro,  
NUM=num,ED=ed,ET=et,  
CIC=cic,OK=ok,WHY=why;

• **Template record:**

RSP-APR:,date,time:::COMPLD,00::ID=id,RO=ro,  
TMPLTNM=tmpltnm,ED=ed,ET=et, CIC=cic,OK=ok,WHY=why;

## 2. DENIED (FAILED) APPROVAL RESPONSE

• **regular CR or Pointer record:**

RSP-APR:,date,time:::DENIED,01::ID=id,RO=ro,  
NUM=num,ED=ed,ET=et:  
CNT=cnt:ERR=err,VERR=verr;

• **Template record:**

RSP-APR:,date,time:::DENIED,01::ID=id,RO=ro,  
TMPLTNM=tmpltnm,ED=ed,ET=et:  
CNT=cnt:ERR=err,VERR=verr;

**NOTE** Carriers that use MGI will need to add the template name tag in the REPT-APR and RSP-APR message.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00 - No Error 01 - Error Present (see err field)
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>num</b>	The dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number, Two blank spaces are allowed. Required to send either NUM or TMPLTNM, but don't send both.
<b>tmpltnm</b>	The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message.
	Either num or tmpltnm, but not both, will be returned

<b>ed</b>	Effective Date 8 bytes text string (required) format is mm/dd/yy, where mm: month (01-12) dd: day (01-31) yy: year
<b>et</b>	Effective Time 8 bytes text string (required) format is hh:mmx/C, where hh: hour (01-12) mm: minute (00,15,30,45) x: am or pm (A,P) time zone is returned as Central
<b>cic</b>	Carrier Identification Code 6 bytes text string (required) 4 bytes are supported for the CIC, and 2 bytes are supported for the network identifier (such as BA, PC, etc.) identifies the carrier corresponding to the entity approving or denying the approval request
<b>ok</b>	Approval Response 1 byte text string (required) values: Y (Yes), N (No), or "" (Blank)
<b>why</b>	Reason for Approval or Denial 2 bytes decimal numeral (optional) specifies why the carrier approved or denied the approval request
<b>cnt</b>	Count of Error Blocks 1 byte decimal numeral (optional) maximum value of 5

<b>err</b>	Error Code at application level 2 bytes decimal numeral (optional) 01: Too many parameters (warning) 02: Required parameter missing  For example, NUM and TMPLTNM are missing, yet NUM or TMPLTNM must be sent. 03: Unrecognized parameter 04: Invalid parameter combination  For example, <u>both</u> NUM and TMPLTNM tags were sent to SMS/800. 05: Syntax error 06: RESP ORG invalid 07: No record exists for this request 08: Record is past due 09: Record has been changed - verify and re-send a new REPT-APR 10: No approvals are required for this record 11: ed: (Effective date) must be a calendar date in mm/dd/yy form (also, entry of NOW is not allowed) 12: et: (Effective time) must be of the form hh:mmx/z  15: Invalid CIC 16: Invalid OK parameter 17: Invalid WHY parameter 18: Permission Denied: RESP ORG does not have permission for this record 19: Invalid LUED parameter 20: Invalid LUET parameter 21: Cannot change approval response from Y to N or Blank 22: Invalid CIC-to-RESP ORG relationship 98: Invalid or missing date and/or time in application message 99: Other
<b>verr</b>	Value of Field in Error 16 bytes text string (optional) returns original input in error where possible

### 7.2.17 Unsolicited Approval Status [UNS-APP]

#### UNSOLICITED APPROVAL STATUS [UNS-APP] CUSTOMER RECORD ADMINISTRATION

This message is sent from SMS to all affected carriers at download time, whenever any affected carrier denies or does not respond to an approval request for a particular **customer record** (regular customer record or *Pointer record*) or *Template record*. This message is sent so that all Resp Org Entities that are associated with a customer record (regular customer record or *Pointer record*) change/new service or *Template record* change/new service are informed that the record will not go into the ACTIVE/DISCONNECT status as desired. The communication that takes place following this SMS message to affected carriers is beyond the scope of SMS/800.

To receive this message, an OS must make arrangements with the Help Desk to have the on-line **GNA** screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Y</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>UPP</b>

#### MESSAGE FORMAT

1. **regular CR of Pointer record:**

UNS-APP:,date,time:::::RO=ro,NUM=num,  
ED=ed,ET=et, CIC=cic,WHY=why;

2. **Template record:**

UNS-APP:,date,time:::::RO=ro,TMPLTNM=tmpltnm,  
ED=ed,ET=et, CIC=cic,WHY=why;

#### PARAMETERS DESCRIPTION

<b>date,time</b>	See Section 5.3
<b>ro</b>	RESP ORG 5 bytes identifier responsible organization for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed. either num or tmpltNm, but not both, is sent from SMS
<b>tmpltNm</b>	The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message.
	Either num or tmpltNm, but not both, is sent from SMS
<b>ed</b>	Effective Date 8 bytes text string (required) format is mm/dd/yy, where mm: month (allowable range: 01-12) dd: day (allowable range: 01-31) yy: year (e.g., 95)

<b>et</b>	Effective Time 8 bytes text string (required) format is hh:mmx/z, where hh: hour (allowable range: 01-12) mm: minute (allowable values: 00,15,30,45) x: am or pm (allowable values: A,P) z: time zone (allowable values: C-Central)
<b>cic</b>	Carrier Identification Code 6 bytes text string (optional) format is: CICXX, where CIC=4 bytes, and XX=network identifier (e.g., BA, PC, etc.) identifies the affected carrier to whom this message applies required only if message is not sent to the control RESP ORG
<b>why</b>	Reason for approval or denial 2 bytes decimal numeral (required) 01 - at least one carrier explicitly denied an approval request - at least one carrier explicitly denied an approval request, AND at least one carrier did not respond to an approval request 02 - at least one carrier did not respond to an approval request

### 7.2.18 Unsolicited Approval Control [UNS-ACT]

#### UNSOLICITED APPROVAL CONTROL [UNS-ACT] CUSTOMER RECORD ADMINISTRATION

This message is sent from SMS to the control RESP ORG when all approvals are received for a customer record (regular customer record or Pointer record) or Template record, or when an involved carrier has denied an approval request. Non-response by a carrier will not trigger this message. The timing of this message is variable. That is, this message may be sent out shortly after a RESP ORG-initiated change, or very close to download time, depending upon the time of the approval or denial by the involved routing carriers. This message provides useful approval status information that the control RESP ORG can use for tracking purposes. Users should also recognize that if this message contains denial information, the denial may later be changed to an approval. More current approval information can be obtained using REQ-DAP. There is no on-line equivalent to this message.

To receive this message, an OS must make arrangements with the Help Desk to have the on-line **GUN** screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Y</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>UAC</b>

*MESSAGE FORMAT***1. regular CR or Pointer record:**

UNS-ACT:,date,time:::::RO=ro,NUM=num,  
ED=ed,ET=et, INFO=info,CIC=cic,  
TI=ti,WHY=why;

**2. Template record:**

UNS-ACT:,date,time:::::RO=ro,TMPLTNM=tmpltnm,  
ED=ed,ET=et, INFO=info,CIC=cic,  
TI=ti,WHY=why;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	RESP ORG 5 bytes identifier (required) responsible organization for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.
	Either num or tmpltNm, but not both, is sent from SMS
<b>tmpltNm</b>	The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message.
	Either num or tmpltNm, but not both, is sent from SMS/800.
<b>ed</b>	Effective Date 8 bytes text string (required) format is mm/dd/yy, where mm: month (01-12) dd: day (01-31) yy: year (e.g., 96)

<b>et</b>	Effective Time 8 bytes text string (required) format is hh:mmx/C, where hh: hour (01-12) mm: minute (00,15,30,45) x: am or pm (A,P) time zone is specified as central time
<b>info</b>	Approval Information 2 bytes decimal numeral (required) 01 = all approvals have been received by SMS 02 = an involved routing carrier has denied an approval request identifies useful approval information for use by the control RESP ORG
<b>cic</b>	Carrier Identification Code 4 bytes text string (optional) identifies the involved routing carrier that has denied an approval request sent only if info=02
<b>ti</b>	Time of Response Receipt by SMS from CIC 17 bytes text string (optional) format is mm/dd/yy hh:mmx/z see ed and et parameters for exact format returned only if info=02 time is returned as central time note that there is a space between the date and time
<b>why</b>	Reason for Denial 2 bytes text string (optional) specifies why the carrier denied the approval request returned only if info=02

### 7.2.19 Request Detail Approval Status [REQ-DAP]

#### REQUEST DETAIL APPROVAL STATUS [REQ-DAP] CUSTOMER RECORD ADMINISTRATION

This command allows a control Resp Org to request detail carrier approval status information for a customer record (regular Customer Record or Pointer record) or Template record. The on-line equivalent to this function is the DAP screen. The OS must specify the Toll Free number, and optionally, the effective date and effective time. Users may specify both the effective date and time, or just the effective date.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	X3
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queuing</b>	Optional
<b>Response</b>	RSP-DAP
<b>Route ID</b>	CDA

#### *MESSAGE FORMAT*

##### 1. Regular CR or Pointer record:

REQ-DAP:,date,time::::ID=id,RO=ro,NUM=num,ED=ed,ET=et;

##### 2. Template record:

REQ-DAP:,date,time::::ID=id,RO=ro,TMPLTNM=tmpltnm,ED=ed,ET=et;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Login Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Responsible Organization 5 bytes identifier (required) identifies the RESP ORG for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed. Required to send either NUM or TMPLTNM, but do not send both.
<b>tmpltnm</b>	The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message. Required to send either NUM or TMPLTNM, but do not send both.
<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm: month (01-12) dd: day (01-31) yy: year (e.g., 96)

**et**

Effective Time

8 bytes text string (optional)

format is hh:mmx/z, where hh: hour (01-12)

mm: minute (00,15,30,45)

x: am or pm (A,P)

z: time zone (N=Newfoundland, A=Atlantic, E=Eastern, C=Central,  
M=Mountain, P=Pacific, Y=Alaska, H=Hawaiian-Aleutian,  
B=Bering)

## 7.2.20 Response to Detail Approval Status [RSP-DAP]

### RESPONSE TO DETAIL APPROVAL STATUS [RSP-DAP] CUSTOMER RECORD ADMINISTRATION

This message is the response to **REQ-DAP** and provides detailed information on the approval responses received from involved routing carriers. If the effective date and time are not provided in the request message, the record with the closest future effective date and time to the request time for which DAP data exists will be returned. This means that if there is only one record for the specified number, and the record's effective date and time are prior to the request date and time, the RSP-DAP will not return any data. If just the effective date is specified (i.e., no effective time), SMS will return approval status data on the earliest record of that day for which DAP data exists. If the effective date and time are provided, but do not match any occurrences in the SMS database, SMS will return an error.

The RSP-DAP message applies to *customer records* (regular CRs and *Pointer records*) and *Template records*.

Two message formats are provided: fully successful response and failed response. For each fully successful response, the number, effective date and time, customer record status, approval status indicator, the responding carrier with their response, reason for approval or denial is provided, along with the receipt time stamp from SMS/800. Responses are provided in ascending numerical order by the carrier identification code (CIC). A failed response returns the number, effective date and time if specified, and error information. If a record exists, but no DAP data exists, the request will fail.

<b>Message Type</b>	<b>Response</b>
<b>Logical Channel</b>	X4
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queuing</b>	Yes
<b>Command</b>	REQ-DAP
<b>Route ID</b>	RDA

*MESSAGE FORMAT***1. FULLY SUCCESSFUL RESPONSE**

- Regular CR or Pointer record:

RSP-DAP:,date,time:::COMPLD,00::ID=id,RO=ro,  
NUM=num,ED=ed,ET=et,  
STAT=stat, APP=app:CNT=cnt:CIC=cic,OK=ok,WHY=why,TI=ti;

- Template record:

RSP-DAP:,date,time:::COMPLD,00::ID=id,RO=ro, TMPLTNM=tmpltnm,ED=ed,ET=et,  
STAT=stat, APP=app:CNT=cnt:CIC=cic,OK=ok,WHY=why,TI=ti;

**2. DENIED (FAILED) RESPONSE**

- Regular CR or Pointer record:

RSP-DAP:,date,time:::DENIED,01::ID=id,RO=ro, NUM=num,ED=ed,ET=et:CNT=cnt:  
ERR=err,VERR=verr;

- Template record:

RSP-DAP:,date,time:::DENIED,01::ID=id,RO=ro,  
TMPLTNM=tmpltnm,ED=ed,ET=et:CNT=cnt: ERR=err,VERR=verr;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	Termination Report Code 6 bytes identifier COMPLD - Query Request Successful DENIED - Query Request Failed
<b>error_cd</b>	Error Code 2 bytes decimal numeral (required) 00 - No Error 01 - Error Present (see err field)
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number, Two blank spaces are allowed. either num or tmpltlnm, but not both, is sent from SMS

<b>tmpltnm</b>	The Template record Name 15 bytes text string (optional) Format is in accordance with the definition of this field (tag) in the REQ-TRC message.
Either num or tmpltnm, but not both, is sent from SMS/800.	
<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm: month (01-12) dd: day (01-31) yy: year (e.g., 96)
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/C, where hh: hour (01-12) mm: minute (00,15,30,45) x: am or pm (A,P) time zone is returned as Central
<b>stat</b>	Status of the Customer Record 2 bytes decimal numeral (optional) 01 - ACTIVE 02 - SENDING 03 - PENDING 04 - DISCONNECT 05 - OLD 06 - FAILED

<b>app</b>	Approval Indicator 2 bytes identifier (optional) NA - not applicable OK - all required approvals received by SMS AW - SMS is awaiting at least one approval DN - at least one affected carrier denied the approval request NR - approvals are not required for this record RJ - record is rejected due to effective date of NOW specifies the overall approval status of the customer record
<b>cnt</b>	Count of Number of Approval or Error Blocks 2 bytes decimal numeral (optional) the maximum number of CICs for which approval data can be returned is 40
<b>cic</b>	Carrier Identification Code 4 bytes decimal numeral (optional) identifies the involved routing carrier for which approval information is provided
<b>ok</b>	Approval Response 1 or 3 bytes text string (optional) Values: Y (Yes), N (No), or TBD (to be determined)
<b>why</b>	Reason for Approval or Denial 2 bytes text string (optional) specifies why the carrier approved or denied the approval request
<b>ti</b>	Time of Response Receipt by SMS from CIC 17 bytes text string (optional) format is: mm/dd/yy hh:mmx/C where: mm/dd/yy is defined as above in ed and hh:mmx is defined as above in et time is returned as central time note that there is a space between the date and time

<b>err</b>	Error Code at application level 2 bytes decimal numeral (optional) 01:Too many parameters (warning) 02:Required parameter missing  For example, NUM and TMPLTNM are missing, yet NUM or TMPLTNM must be sent. 03:Unrecognized parameter 04:Invalid parameter combination  For example, both NUM and TMPLTNM are sent is error 04. 05:Syntax error 06:RESP ORG invalid 08:Permission denied - not the control RESP ORG for this number 09:No approvals are required for this record 10:This record status does not support approvals 11:ed (Effective Date) must be a calendar date in mm/dd/yy format; and an entry of “NOW” is not allowed. 12: et (Effective Time) must be in hh:mmx/z format.  15: No future record exists for this # for which DAP data exists. However, a past record may exist. 16: No record exists for this request. 98:Invalid or missing date and/or time in application message 99:Other
<b>verr</b>	Value of Field in Error 20 bytes text string (optional) returns original input in error where possible

**NOTES:**

1. RCC records and duplicate records are no longer supported in SMS/800.
2. Error code 15 will be returned if a user sent a **REQ-DAP** request for a number without an effective date and time, and the search for a future record with DAP data failed.
3. Error code 16 will be returned if a user sent a **REQ-DAP** request for a number with an effective date, but without an effective time, and no customer record was found on that effective date with DAP data.

### 7.2.21 Trouble Referral Number Query [REQ-TRN]

#### TROUBLE REFERRAL NUMBER QUERY [REQ-TRN] CUSTOMER RECORD ADMINISTRATION

This command allows an OS to query SMS/800 for the trouble referral number associated with a specific RESP ORG or number(s). Users can request up to ten (10) dial numbers in a single REQ-TRN. This function provides information only and cannot be used to change the trouble referral number associated with a RESP ORG.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queuing	Optional
Response	RSP-TRN
Route ID	CTR

#### *MESSAGE FORMAT*

- PROVIDE A RESP ORG AS INPUT:

**REQ-TRN:,date,time:::::ID=id,RO=ro,ROTRN=rotrn;**

- PROVIDE NUMBER(S) AS INPUT:

**REQ-TRN:,date,time:::::ID=id,RO=ro:QT=qt:NUM=num;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Login Id 8 bytes identifier identifies sender of message
<b>ro</b>	responsible organization (RESP ORG) 5 bytes identifier identifies RESP ORG for this message
<b>rotrn</b>	responsible organization (RESP ORG) 5 bytes identifier identifies RESP ORG for which trouble referral number is requested
<b>qt</b>	Quantity of dialed numbers 2 bytes decimal numeral (optional) the user-specified number of trouble referral numbers desired allowable range (01-10) required only if NUM is entered
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.

## 7.2.22 Response to Trouble Referral Number Query [RSP-TRN]

### RESPONSE TO TROUBLE REFERRAL NUMBER QUERY [RSP-TRN] CUSTOMER RECORD ADMINISTRATION

This message serves as the response to the command REQ-TRN. The response contains the trouble referral number associated with the RESP ORG. If a RESP ORG has been entered, the trouble referral number is returned. If a number has been entered, the trouble referral number and the RESP ORG are returned.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-TRN
Route ID	RTR

#### MESSAGE FORMAT

- *Successful Queries:*

1. RESP ORG as Input

```
RSP-TRN:,date,time:::COMPLD,00::ID=id,RO=ro,ROTRN=rotrn,  
RONM=ronm,TRN=trn;
```

2. Number(s) as Input

```
RSP-TRN:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:ROTRN=rotrn,  
RONM=ronm,NUM=num,TRN=trn;
```

- *Partially Successful Queries: (For Number input only)*

```
RSP-TRN:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:ROTRN=rotrn,  
RONM=ronm,NUM=num, TRN=trn:CNT=cnt:ERR=err,VERR=verr;
```

- *Unsuccessful Query(ies):*

1. Number(s) as Input

**RSP-TRN:,date,time:::DENIED,01::ID=id,RO=ro:QT=qt:ROTRN=rotrn,  
RONM=ronm,NUM=num:CNT=cnt:ERR=err,VERR=verr;**

NOTE: If the query is unsuccessful for any reason, the system will not return the Resp Org for each user-input DIAL #.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	Termination Report Code 6 bytes identifier COMPLD - Entire Request Completed DENIED - Entire Request Denied
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00: no error 11: partial completion 01: error present (see err field)
<b>id</b>	Login Id 8 bytes identifier identifies sender of message
<b>ro</b>	Responsible Organization (RESP ORG) 5 bytes identifier RESP ORG for this message
<b>rotrn</b>	Responsible Organization (RESP ORG) 5 bytes identifier (optional) RESP ORG for which trouble referral number is requested
<b>ronm</b>	Resp Org Company Name 1-30 bytes text string (optional) identifies the company name of the Resp Org returned only if entered into the system by the Help Desk

<b>qt</b>	Quantity of Successful Queries (COMPLD,00) or Quantity of Partial or Fully Successful Queries (COMPLD,11) or Quantity of Unsuccessful Queries (DENIED,01) 2 bytes decimal numeral (optional) allowable range (01-10)
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.
<b>trn</b>	Trouble Referral Number 10 bytes text string (optional)
<b>cnt</b>	Count of number of unsuccessful queries 2 bytes decimal numeral (optional)
<b>err</b>	Error Code at application level per number 2 bytes decimal numeral (optional) 01: Too many parameters (warning) 02: Required parameter missing 03: Unrecognized parameter 04: Invalid parameter combination 05: Syntax error 06: RESP ORG invalid 07: RESP ORG has no trouble referral number 08: number is invalid 09: No trouble referral number available for this number 10: Permission denied 98: Invalid or missing date and/or time in application message 99: Other
<b>verr</b>	Value of Field in Error 16 bytes text string (optional) returns original input in error where possible, including the dial number where appropriate

## 7.2.23 Request Multiple Dial Number Resp Org Change [REQ-MRO]

### REQUEST MULTIPLE DIAL NUMBER RESP ORG CHANGE [REQ-MRO] CUSTOMER RECORD ADMINISTRATION

This command will allow an OS to change the Resp Org ID on multiple Toll Free numbers through a single request message (also referred to as an automation request). This message can be used for **Reserved** numbers, **Transitional** numbers, numbers with regular (standard) **Customer Records** and numbers with **Pointer Records**.

When an existing regular CR (that is, a CR that at a minimum contains a CAD) is moved to another Resp Org via MRO, SMS/800 will update the existing CR in-place; and CRs with status “Pending” will be changed to “Must Check”.

Toll Free numbers in the request message may belong to different Resp Orgs; however, all the numbers in a specific request message can only be changed to the same new Resp Org ID.

**NOTE** The REQ-MRO message applies to Dial Numbers yet not to Templates because Templates purposefully don't contain a Dial Number.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queuing	Optional
Command	RSP-MRO
Route ID	CRO

---

**NOTE** When an existing Pointer record (that is, a CR that points to a Routing Template) is moved to another Resp Org via MRO, SMS/800 will check to see if the new Resp Org is within the same Entity as the source CR. If the new Resp Org is within the same Entity as the source CR, SMS/800 will update the existing Pointer record in-place and the new Resp Org will be permitted to update its Routing Template. However, if the new Resp Org is within a different Entity than the control Entity of the source CR, SMS/800 will create a copy of the source Routing Template under the control of the gaining Entity; and subsequently, SMS/800 will move the Pointer record to the new Resp Org Entity.

Cross Entity Resp Org changes on a Pointer record will result in the Pointer record being copied by SMS/800 from the Active/Sending instance of the record to the next 15 minute window; and Pointer records with status “Pending” will be changed to “Must Check”.

Because a Routing Template is controlled by one Entity, when a Toll-Free Number is moved to another Entity, SMS/800 will copy the source Routing Template to the new Resp Org Entity. The copied Routing Template will not show the Template Description field or Notes field from the source (copied) record.

The new Resp Org can be notified when the change is complete and/or the old Resp Org can be notified when the number has been changed to the new Resp Org. Notification can be set up using the Resp Org Control (ORC) screen and/or the MGI Unsolicited Notice Control (GUN).

---

*MESSAGE FORMAT***REQ-MRO:,date,time::::ID=id,RO=ro,NEWRO=newro:QT=qt:NUML=numl;**

This message format can be presented two different ways, as seen in the examples below:

**1. Resp Org Change using Standard Method:**

REQ-MRO example that follows specification standard (one pair of double quotation marks surrounding all the numbers in the value portion of the NUML tag-value pair):

```
REQ-MRO:,2002-06-05,12-00-00-CST::::ID=XXXXX101,  
RO=XXXX1,NEWRO=XXXXX:QT=13:NUML="8001231111,8001231112,  
8001231113,8001231114,8001231115,8001231116,  
8001231117,8001231118,8001231119,8001231120,8001231121,8001231122,  
8001231123";
```

**2. Resp Org Change using Non-Standard Method:**

REQ-MRO example that does not follow specification standard (pairs of double quotation marks, each pair surrounding a number in the value portion of the NUML tag-value pair):

```
REQ-MRO:,2002-06-05,12-00-00-CST::::ID=XXXXX101,  
RO=XXXX1,NEWRO=XXXXX:QT=13:  
  
NUML="8001231111","8001231112","8001231113",  
"8001231114","8001231115","8001231116",8001231117,"8001231118",  
"8001231119","8001231120","8001231121","8001231122","8001231123";
```

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	Logon ID 8 bytes identifier (required) identifies sender of this message
<b>ro</b>	Resp Org 5 bytes identifier (required) Resp Org ID (RO) of the message (note: the MGI Logon ID that sent the message must have this Resp Org ID defined on their MGI Security Administration (GSA) screen)
<b>newro</b>	New Resp Org 5 bytes identifier (required) new Responsible Organization for all the Toll Free numbers in the request message
<b>qt</b>	Quantity of numbers 8 bytes decimal numeral (required) the maximum number allowed can be obtained via the REQ-ASL message
<b>numl</b>	The list of dial Telephone Numbers A series of 10 or 12 bytes text string entries, separated by commas. (required) The number of entries must match the qt field. format of each entry is npanxxxxxx where npanxxxxxx = dial number (required), Two blank spaces are allowed.

## 7.2.24 Response to Multiple Dial Number Resp Org Change [RSP-MRO]

### RESPONSE TO MULTIPLE DIAL NUMBER REQUEST ORG CHANGE REQUEST [RSP-MRO]

#### CUSTOMER RECORD ADMINISTRATION

This message is the response to the command REQ-MRO. It contains a count of Toll Free numbers that had the Resp Org successfully changed, unsuccessfully changed, or a combination thereof.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queuing	Yes
Command	REQ-MRO
Route ID	RRO

#### MESSAGE FORMAT

- *Successful Request*

**RSP-MRO:,date,time:::COMPLD,00::ID=id,RO=ro,NEWRO=newro: QT=qt:  
NUML=numl;**

*Example of a Successful Request message:*

RSP-MRO:,2003-03-25,17-49-22-CST:::COMPLD,00::ID=XXXXXX101,  
RO=XXXX1,NEWRO=XXXXX:QT=00000013:NUML="8001231111,  
8001231112,8001231113,8001231114,8001231115,8001231116,8001231117,  
8001231118,8001231119,8001231120,8001231121,8001231122,8001231123";

- *Successful Request with Warnings*

**RSP-MRO:,date,time:::COMPLD,10::ID=id,RO=ro,NEWRO=newro:  
QT=qt:NUML=numl:WCNT=wcnt:ERRV1=errv1(1),ERRV1=errv1(2),...ERRV  
1=errv1(wcnt);**

*Example of a Successful Request with Warnings message:*

RSP-MRO:,2003-03-25,17-49-22-CST:::COMPLD,10::ID=XXXXX101,  
RO=XXXX1,NEWRO=XXXXX:QT=00000009:NUML="8001231111,8001231112,  
8001231113,8001231114,8001231115,8001231116,8001231117,8001231121,80012  
31122":WCNT=00000004:ERRV1="51,1,8001231118",ERRV1="51,1,8001231119"  
,ERRV1="51,1,8001231120",ERRV1="51,1,8001231123";

- *Partially Successful Request with Errors and/or Warnings*

**RSP-MRO:,date,time:::COMPLD,11::ID=id,RO=ro,NEWRO=newro:  
QT=qt:NUML=numl:WCNT=wcnt:ERRV1=errv1(1),ERRV1=errv1(2),...ERRV  
1=errv1(wcnt):ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),...ERRV=errv(ecnt);**

*Example of a Partially Successful Request with Errors and/or Warnings message:*

RSP-MRO:,2003-03-25,17-49-22-CST:::COMPLD,11::ID=XXXXX101,  
RO=XXXX1,NEWRO=XXXXX:QT=00000004:NUML="8001231111,8001231112,  
8001231113,8001231114":WCNT=00000006:ERRV1="51,1,8001231115",ERRV1=  
"51,1,8001231116",ERRV1="51,1,8001231117",ERRV1="51,1,8001231118",ERRV  
1="51,1,8001231119",ERRV1="51,1,8001231120":ECNT=00000003:ERRV="07,1,  
8001231121",ERRV="12,1,8001231122",ERRV="12,1,8001231123";

- *Unsuccessful Request*

**RSP-MRO:,date,time:::DENIED,01::ID=id,RO=ro,NEWRO=newro:  
ECNT=ecnt:ERRV=errv(1),ERRV=errv(2),...ERRV=errv(ecnt);**

*Example of an Unsuccessful Request message:*

RSP-MRO:,2003-03-25,17-49-22-CST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1,NEWRO=XXXXX:ECNT=00000002:ERRV="05,0,XXXX1",ERRV=  
"06,0,XXXX";

*Example of an Unsuccessful Request message:*

RSP-MRO:,2003-03-25,17-49-22-CST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1,NEWRO=XXXXX:ECNT=00000013:ERRV="07,1,8001231111",ERR  
V="07,1,8001231112",ERRV="07,1,8001231113",ERRV="07,1,8001231114",ERR  
V="07,1,8001231115",ERRV="07,1,8001231116",ERRV="07,1,8001231117",ERR  
V="07,1,8001231118",ERRV="12,1,8001231119",ERRV="12,1,8001231120",ERR  
V="07,1,8001231121",ERRV="07,1,8001231122",ERRV="07,1,8001231123"

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code 6 bytes identifier COMPLD - All or part of the request was completed successfully DENIED - Entire request was denied</p>
<b>error_cd</b>	<p>Error Code 2 bytes decimal numeral 00: all dial numbers were processed successfully, with no warnings and no errors found. 10: all numbers were processed successfully, with some warnings and no errors found. 11: at least one dial number was processed successfully, there may be warnings and there was at least one error found. 01: no dial numbers processed successfully. Errors were found, either in the request message or for every dial number.</p>
<b>id</b>	<p>Logon ID 8 bytes identifier (required) identifies sender of this message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier (required) Resp Org ID (RO) of the message</p>
<b>newro</b>	<p>New Resp Org 5 bytes identifier (required) new Responsible Organization for all the changed Toll Free numbers</p>

**qt**      Quantity of numbers for which the Resp Org change has successfully completed  
          8 bytes decimal numeral, fixed length (required)  
          the maximum number allowed can be obtained via the REQ-ASL message

**numl**     The list of dial Telephone Numbers for which a Resp Org change has successfully completed  
          set of 10 or 12 bytes text string entries, separated by commas (required)  
          The number of entries must match the qt field.  
          format of each entry is is npanxxxxxx  
          where npanxxxxxx = dial number,  
          Two blank spaces are allowed.

<b>wcnt</b>	Number of Warning sets 8 bytes decimal numeral, fixed length (optional)
<b>errv1</b>	Warning code, error type and value of field that results in a Warning. entries are text string fields, of the form err,etyp,verr where: err is the 2-byte warning code, etyp is the 1-byte type code specifying the type of verr and verr is the 1-30 byte value of field with a warning. err is required, etyp is optional, verr is optional. The number of err,etyp,verr sets must match the value of wcnt and sets are separated by commas. Each are defined below:

**err values:**

51 - Warning: Completed - Future Pending records changed to Must Check status.

52 - Warning: Completed - Pointer record converted to regular Customer Record.

When performing a Resp Org change on a Pointer record: If the Template Name on a Pointer record is not controlled by the new Entity, then the SMS/800 system will copy the Pointer record to NOW and change the record in place and convert the Pointer record to a regular customer record using the routing information from the Template record that the Pointer record was using; and warning 52 will be returned in this case. In this case, the (copied-forward) regular customer record will be re-sent to the SCP.

99 - Warning: Other

**etyp values:**

0 - verr is a text string, will include the original input if possible.

1 - verr is a valid dial number format (10 bytes)

**verr values:**

returns original input in error where possible

<b>ecnt</b>	Number of Error Sets 8 bytes decimal numeral, fixed length (optional)
<b>errv</b>	Error code, error type, and value of field that results in an Error. entries are text string fields of the form err,etyp,verr where: err is the 2-byte error code, etyp is the 1-byte type code specifying the type of verr and verr is the 1-30 byte value of field in error. err is required, etyp is optional, verr is optional. The number of err,etyp,verr sets must match the value of ecnt and sets are separated by commas. Each are defined below:

**err values:**

- 01 - Required parameter missing
- 02 - Unrecognized parameter
- 03 - Invalid parameter combination
- 04 - Syntax error
- 05 - Unrecognized current Resp Org (ro)
- 06 - Unrecognized new Resp Org (newro)
- 07 - Dial Number does not belong to Resp Org
- 09 - Invalid Dial Number
- 10 - Quantity exceeds system automation limit. Verify limit using REQ-ASL
- 11 - Permission denied
- 12 - Invalid number status
- 13 - Reservation limit exceeded
- 14 - Cannot modify record. An on-line user is currently working on this DIAL #.
- 15 - Number specified in qt does not match the quantity in numl.
- 99 - Other

**etyp values:**

0 - verr is a text string, will include the original input if possible.

1 - verr is a valid dial number format (10 bytes)

**verr values:**

returns original input in error where possible

### 7.2.25 SCP Status Query/Resend/Audit [REQ-SCP]

#### **SCP STATUS QUERY/RESEND/AUDIT [REQ-SCP] CUSTOMER RECORD ADMINISTRATION**

This message provides the following capabilities:

- Query the status of an SCP(s) for one customer record (CR),
- Query the status of an SCP(s) for one Pointer record,
- Query the status of an SCP(s) for one Template record,
- Resend one customer record (CR) to an SCP(s),
- Resend one Pointer record to an SCP(s),
- Resend one Template record to an SCP(s),
- Audit one customer record (CR) at the SCPs,
- Audit one Pointer record at the SCPs,
- Audit one Template record at the SCPs,
- Delete one customer record (CR) at an SCP(s),
- Delete one Pointer record at an SCP(s),
- Delete one Template record at an SCP(s),

The status of an SCP in SMS/800 is reflected by one of several possible status values that are automatically generated by SMS or returned by SCP. The SCP status values for the requestset record are shown in the response message, RSP-SCP.

Template records can only be audited and resent to SCPs that support the Template Feature.

Customer records (CRs) and Pointer records can be audited and resent to SCPs that do and don't support the Template Feature.

Only In AOS SCPs are applicable for resend. Only Out of AOS SCPs are applicable for delete. Both In AOS SCPs and Out of AOS SCPs are applicable for audit and query.

For audit and delete, only the dial# needs to be specified because only the latest Active, Disconnect or Sending version of the record can be audited or deleted. If effective date/time of the record is entered, then SMS/800 will ignore the entered date/time and send an audit or delete request to SCPs for the latest version of the record.

For query and resend, an effective date and/or time may be entered by the user as optional tags because there can be maximum of two versions of the customer record/template that can be queried or resent if an Active/Disconnect record is followed by a Failed record (when a Sending record exist, an error will be returned if the eff. date/time entered matches the Active/Disconnect/Failed record).

If no effective date and time is requested, SMS/800 will process the latest version of the record, which is the Sending version if it exists, otherwise the Active/Disconnect/Failed (failed at SCP) version whichever is the latest.

If an effective date without an effective time is requested, SMS/800 will process the latest version of the customer record/template matches the requested date if applicable for the requested action. Otherwise, SMS/800 will process the latest version of the customer record/template with a warning.

If both an effective date and an effective time are specified, SMS/800 will process the requested version of the customer record/template if applicable for the requested action. If no match is found, SMS/800 will process the latest version of the customer record/template with a warning.

<b>Message Type</b>	<b>Command</b>
<b>Source</b>	<b>OS</b>
<b>Confirmation</b>	<b>A</b>
<b>Queuing</b>	<b>Optional</b>
<b>Response</b>	<b>RSP-SCP</b>
<b>Route ID</b>	<b>CRR</b>

*MESSAGE FORMAT*

1. For regular or Pointer records:

**REQ-SCP:,date,time:::::ID=id,RO=ro,AC=ac,NUM=num,  
ED=ed,ET=et,CRITICAL=critical:CNT=cnt:SCP=scp;**

2. For Template records:

**REQ-SCP:,date,time:::::ID=id,RO=ro,AC=ac,TMPLTNM=tmpltnm,  
ED=ed,ET=et,CRITICAL=critical:CNT=cnt:SCP=scp;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3 optional (may be omitted)
<b>id</b>	Logon Id 8 bytes identifier identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier responsible organization (Resp Org) that sent the REQ-SCP message
<b>ac</b>	Action Code 1 byte identifier 'Q' for query 'R' for resend 'A' for audit 'D' for delete
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string (optional); only used for regular customer records (regular records) and Pointer records. format is npanxxxxxx where npanxxxxxx = dialed number Two blank spaces are allowed.
<b>tmpltnm</b>	The Template Name 15 bytes text string (optional); optional because this tag is used only for Template records Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters.
<b>ed</b>	Effective Date (optional) 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12)

dd : day (allowable range: 01 - 31)

yy : year (e.g., 10)

If the date (ed) and time (et) are omitted, the system will determine which record to process because there can be only 1 record that is applicable to being audited/resent/deleted/queried at the SCP, except for one case. The exception case is for a query/resend where there is an Active and Failed record and the Resp Org wants to query or resend the Active record instead of the Failed record. In this case, if the date/time tags are omitted, the system will process the latest Failed record (because it has a more recent date than the Active record); therefore, in this case, if the Resp Org wants to query/resend the Active record instead of the Failed record, the Resp Org needs to populate the date (ed) and time (et) tags.

**et**

Effective Time (optional)

8 bytes text string (optional)

format is hh:mmx/z, where

hh : hour (allowable range: 01 - 12)

mm : minute (allowable values: 00, 15, 30, 45)

x : am or pm (allowable values: A, P)

z : time zone (allowable values: N - Newfoundland,

A - Atlantic, E - Eastern, C - Central, M - Mountain,

P - Pacific, Y - Alaska, H – Hawaiian-Aleutian, B - Bering)

If the time (et) tag is omitted, the system will determine which record to process according to the rules specified above for the date (ed) tag.

<b>critical</b>	Critical Resend/Audit/Delete Indicator 1 byte identifier (optional) Y : Critical  N : Not critical  If the ‘critical’ indicator is set to ‘Y’ for a CR, then when that CR resend/audit/delete request is sent to an SCP(s), if any SCP is in ‘overload’ condition (meaning, an SCP is too busy processing calls and cannot process incoming messages from SMS/800), then SMS/800 will tell the SCPs to process the critical CR even if an SCP is in ‘overload’ condition.
<b>cnt</b>	count 2 bytes decimal numeral (optional) Number of requested SCPs
<b>scp</b>	SCP ID (optional) 4 bytes identifier the requested SCP ID. Only In AOS SCPs are applicable for resend. Only Out of AOS SCPs are applicable for delete. Both In AOS SCPs and Out of AOS SCPs are applicable for audit and query.  If SCP ID is omitted, SMS/800 will return the statuses for all the SCPs that are applicable for the requested action of the requested record (regular customer record or Pointer record or Template record that was sent in the REQ-SCP message).

## 7.2.26 Response to Customer Record Status Query [RSP-SCP]

### RESPONSE TO SCP STATUS QUERY [RSP-SCP] CUSTOMER RECORD ADMINISTRATION

This message is the response to the command REQ-SCP. For query, it contains the latest or the requested SCP status information for the requested customer record. For resend/audit/delete, the RSP-SCP only indicates the system has received the REQ-SCP, the result will be sent via UNS-SCP when the requested SCPs have responded with the requested actions.

<b>Message Type</b>	<b>Response</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>REQ-SCP</b>
<b>Route ID</b>	<b>RRR</b>

#### *MESSAGE FORMAT*

1. Successful Query Response for Regular Customer Record (CR) or Pointer record:

RSP-SCP:,date,time:::COMPLD,00::ID=id,RO=ro,CRO=cro,NUM=num:  
ED=ed,ET=et,CRSTAT=crstat:SCNT=scnt:SCP=scp,SCPSTAT=scpstat,  
INAOS=ina os:LCNT=lcnt:LED=led,LET=let,LSTAT=lstat;

2. Successful Query with Warning for Template record:

RSP-SCP:,date,time:::COMPLD,11::ID=id,RO=ro,CRO=cro,TMPLTNM=tmpltnm,  
ED=ed,ET=et,CRSTAT=crstat:SCNT=scnt:SCP=scp,SCPSTAT=scpstat,INAOS=ina  
os:LCNT=lcnt:LED=led,LET=let,LSTAT=lstat:CNTA=cnta:ERR1=err1,VERR=verr;

3. Failed Query Response:

RSP-SCP:,date,time:::DENIED,01::ID=id,RO=ro,CRO=cro,NUM=num:  
CNT=cnt:ERR=err,VERR=verr;

4. Successful Resend Response:

RSP-SCP:,date,time:::COMPLD,00::ID=id,RO=ro,CRO=cro,NUM=num,  
ED=ed,ET=et,CRSTAT=crstat;

5. Successful Resend with Warning:

RSP-SCP:,date,time:::COMPLD,11::ID=id,RO=ro,CRO=cro,NUM=num,  
ED=ed,ET=et,CRSTAT=crstat:CNTA=cnta:ERR1=err1,VERR=verr;

6. Failed Resend Response:

RSP-SCP:,date,time:::DENIED,01::ID=id,RO=ro,CRO=cro,NUM=num,  
ED=ed,ET=et,CRSTAT=crstat:CNT=cnt:ERR=err,VERR=verr;

7. Successful Audit Response:

RSP-SCP:,date,time:::COMPLD,00::ID=id,RO=ro,CRO=cro,NUM=num,  
ED=ed,ET=et,CRSTAT=crstat;

8. Failed Audit Response:

RSP-SCP:,date,time:::DENIED,01::ID=id,RO=ro,CRO=cro,NUM=num:  
CNT=cnt:ERR=err,VERR=verr;

9. Successful Delete Response:

RSP-SCP:,date,time:::COMPLD,00::ID=id,RO=ro,CRO=cro,NUM=num,  
ED=ed,ET=et,CRSTAT=crstat;

10. Failed Delete Response:

RSP-SCP:,date,time:::DENIED,01::ID=id,RO=ro,CRO=cro,NUM=num:  
CNT=cnt:ERR=err,VERR=verr;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code</p> <p>6 byte identifier</p> <p>COMPLD - Query Request Successful</p> <p>DENIED - Query Request Failed</p>
<b>error_cd</b>	<p>Error Code</p> <p>2 bytes decimal numeral</p> <p>00 - No Error</p> <p>11 - Warning Present (see err field)</p> <p>01 - Error Present (see err field)</p>
<b>id</b>	<p>Logon Id</p> <p>8 bytes identifier</p> <p>identifies sender of message</p>
<b>ro</b>	<p>Resp Org</p> <p>5 bytes identifier</p> <p>responsible organization (Resp Org) that sent the REQ-SCP message</p>
<b>cro</b>	<p>Control Resp Org of the record</p> <p>5 bytes identifier</p> <p>responsible organization for the customer record</p>
<b>num</b>	<p>The Dialed Telephone Number</p> <p>10 or 12 bytes text string (optional);</p> <p>Optional because this tag is only sent by SMS/800 if the record requested is either a regular customer record or a Pointer record.</p> <p>Format is npanxxxxxx</p> <p>where npanxxxxxx = dialed number</p> <p>Two blank spaces are allowed.</p>

<b>tmpltnm</b>	The Template Name 15 bytes text string (optional); optional because this tag is only sent by SMS/800 if the record requested is a Template record. Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters.
<b>ed</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 10)
<b>et</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable values: N - Newfoundland, A - Atlantic, E - Eastern, C - Central, M - Mountain, P - Pacific, Y - Alaska, H - Hawaiian-Aleutian, B - Bering)
<b>crstat</b>	Customer Record Status 2 bytes decimal numeral 01 : SENDING 02 : ACTIVE 03 : DISCONNECT 04 : FAILED (at SCP)

<b>scnt</b>	SCP Count 3 bytes decimal numeral the number of repeating scp data blocks (maximum of 150)
<b>scp</b>	SCP ID 4 bytes identifier the requested SCP ID
<b>scpstat</b>	SCP status for the latest customer record 2 bytes decimal numeral 00: record is outside the Area of Service (AOS) of this SCP 01 : Accepted: Record is loaded in the SCP 02 : Rejected: Syntax error 03 : Rejected: Record doesn't exist in SCP: can't change 04 : Rejected: Record too large for SCP 05 : Rejected: SCP - 800 application problem 06 : Rejected: Inconsistent effective date 07: <note: this status code is reserved for future use> 08 : Queued: SCP is overloaded 09 : Queued: SCP is unavailable 10 : Queued: No Response from SCP 11: Sending: Still awaiting response from SCP 12: Loading: SCP being loaded 13: Rejected: Rejected by SCP Load 99 : Other (e.g., SCP status of NN (No Queue No Response))

<b>inaos</b>	In/Out AOS Indicator 1 byte identifier (optional) Y : In AOS N : Out of AOS
<b>lcnt</b>	Count of effective date/time 1 byte decimal numeral The number of repeating date/time data blocks. In a successful response: number of date/time blocks (maximum of 2). In general, LCNT is set to 1. LCNT count may be set to 2 when there is both an Active CR and another version of that CR that was downloaded to an SCP yet became Failed at an SCP (in contrast with going Failed at SMS/800 prior to download to SCPs). LCNT count may also be set to 2 when there is both a Disconnect CR and another version of that CR that was downloaded to an SCP yet became Failed at an SCP (in contrast with going Failed at SMS/800 prior to download to SCPs). A CR that is Failed at an SCP means an SCP rejected the CR due to reasons specific to that SCP and outside the control of SMS/800.

<b>led</b>	Effective Date 8 bytes text string (optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 10)
<b>let</b>	Effective Time 8 bytes text string (optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)
<b>Istat</b>	Customer Record Status 2 bytes decimal numeral 01 : SENDING 02 : ACTIVE 03 : DISCONNECT 04 : FAILD
<b>cnt</b>	Count of errors 2 bytes decimal numeral the number of repeating error blocks (maximum of 20)
<b>cnta</b>	Count of warnings 2 bytes decimal numeral the number of repeating warning blocks (maximum of 20)

<b>err</b>	Error Code 2 bytes decimal numeral there can be multiple errors (max 20) 01 - Invalid request message 02 - Required parameter missing 03 - Unrecognized parameter 04 - Invalid parameter combination 05 - Syntax error 06 - Logon ID is not known to SMS 07 - Resp org does not belong to the logon ID 08 - Permission Denied: record belongs to another Resp Org XXXXX 09 - Invalid action requested  11 - Invalid critical value, must be Y or N  13 - No record exists for this input (e.g., the Dial# is Spare, Reserved, or Transitional status or the Template Name doesn't exist). 14 - Record never sent to SCP (e.g., the record exists in SMS/800 yet none of the records for the Dial# or Template Name are Active/Sending/Disconnect) 15 - Invalid Time Zone 16 - CRDB problem or Unavailable 17 - SCP ID not known to SMS 18 - CNT and number of SCP ID do not match 19 - CNT exceeds the maximum (150) 20 - Duplicate CNT 21 - CNT is not within its own block 22 - CNT and SCP ID in wrong order 23 - Can't delete record that is In-AOS SCP 24 - Can't delete record because Call Sampling is in progress 25 - Can't resend record to Out-of-AOS SCP 26 - Can't resend this record version because a more recent record version exists in SMS/800. 28 – <note: this error code is reserved for future use> 98 - Invalid or missing date and/or time in application message 99 - Other Error
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<b>err1</b>	Warning Code 10 - Warning, entered eff. date/time is not valid for the action or no customer record exists for the entered date/time.
<b>verr</b>	Value of Field in Error 16 bytes text string (optional) returns original input in error where possible

### 7.2.27 Customer Record Resend/Audit Results [UNS-SCP]

#### CUSTOMER RECORD RESEND/AUDIT RESULTS[UNS-SCP] CUSTOMER RECORD ADMINISTRATION

This message is sent from SMS to an OS when results of a customer record resend or customer record audit is available from one or more SCPs. The resend or audit must be initiated via the REQ-SCP message in order to receive this UNS-SCP message.

This message will support the following types of customer records:

- Regular customer record.
- Pointer record.
- Template record.

The results will include indication of whether or not the resend or audit succeeded or will include indication that the resend or audit is queued and still waiting for a response from the SCP. This message will usually be sent within 15 minutes of the time the resend or audit was initiated. The information in the message will contain the overall status of the customer record, as well as the status at each SCP which responds. This message will be sent as each group of SCPs respond. Because SCPs may respond at different times, this message may be sent multiple times to the OS as each different set of SCPs respond to the request. If the resend is queued at the SCP, whenever the SCP responds, a new UNS-SCP will be sent indicating the success or failure of the resend/audit.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>URR</b>

*MESSAGE FORMAT***1. For regular CR and Pointer record:**

UNS-SCP:,date,time:::::RO=ro,NUM=num,ED=ed, ET=et:CNT=cnt:SCP=scp,RES=res;

**2. For Template record:**

UNS-SCP:,date,time:::::RO=ro,TMPLTNM=tmpltnm,ED=ed,  
ET=et:CNT=cnt:SCP=scp,RES=res;

**3. Example successful message:**

UNS-SCP:,2010-11-04,12-19-40-CST::::: RO=BRNJ1,NUM="8005550000",  
ED="10/31/10",ET="09:00A/C":  
CNT=003:SCP=ZZ03,RES=01:SCP=ZZ02,RES=01:SCP=ZZ04,RES=01;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	<p>Resp Org 5 bytes identifier responsible organization (Resp Org) that sent the corresponding REQ-SCP message that this UNS-SCP message was triggered by</p>
<b>num</b>	<p>The Dialed Telephone Number 10 bytes text string (optional); only used if the record is a regular or Pointer record. format is npanxxxxx where npanxxxxx = dialed number</p>
<b>tmpltnm</b>	<p>The Template Name 15 bytes text string (optional); optional because this tag is used only for Template records Format: Template Name must start with an asterisk * followed by 2 alphas (i.e., the control Entity Code) and then followed by 1-12 alphanumerics or dashes. Minimum total data width is 4 characters and maximum total data width is 15 characters.</p> <p><b>ed</b> Effective Date 8 bytes text string(optional) format is mm/dd/yy, where mm : month (allowable range: 01 - 12) dd : day (allowable range: 01 - 31) yy : year (e.g., 94)</p>

<b>et</b>	Effective Time 8 bytes text string(optional) format is hh:mmx/z, where hh : hour (allowable range: 01 - 12) mm : minute (allowable values: 00, 15, 30, 45) x : am or pm (allowable values: A, P) z : time zone (allowable value: C - Central)
<b>cnt</b>	Number of SCP data blocks 3 bytes decimal numeral (required)
<b>scp</b>	SCP Id 4 bytes identifier (required) The name of the SCP being audited or the SCP that the CR is being resent to.

res	Result
	2 bytes decimal numeral (required).
	the result of the resend/audit request to the affected SCP.
01:	Resend update completed.
02:	Audit or Resend update/delete failed. Rejected: Syntax error.
03:	Resend delete failed. Record doesn't exist in SCP.
04:	Resend update or delete failed. Record too large for SCP.
05:	Resend update or delete failed. SCP application problem.
06:	Resend update or delete failed. Inconsistent effective date.
07:	Resend delete completed.
08:	Resend update or delete queued. SCP is overloaded.
09:	Resend update or delete queued. SCP is unavailable.
10:	Resend update or delete queued. No Response from SCP.
11:	Resend update or delete failed. SCP does not support Templates.
12-13:	Unused. {these SCP-related error codes are not applicable to UNS-SCP}
14:	Audit completed. Records match.
15:	Audit completed. Record does not exist in SCP.
16:	Audit completed. Record does not match SMS version.
17:	Audit completed. No match in memory data base.
18:	Audit completed. In disk but not memory database.
19:	Audit completed. No entry/match in memory database.
20:	Audit completed. Mis-matched Resp Org.
21:	Audit completed. Inconsistent effective date.
22:	Audit failed. SCP is overloaded.
23:	Audit failed. SCP is unavailable.
24:	Audit failed. No Response from SCP.
25:	Audit failed. SCP does not support Templates.
99:	Audit/Resend Update/Delete Failed. Other error.

*NOTES*

1. The **cnt** field contains the number of SCP responses that are included in this message. Additional UNS-SCP messages may be sent later for other SCPs that have not yet responded.
2. The **scp**, and **res** will be reported as each SCP (or group of SCPs) responds.
3. The **ed** and **et** will only be reported for resend updates and resend deletes for existing CRs.

## 7.3 Miscellaneous

This section contains miscellaneous interface messages that do not neatly fall under either number administration or customer record administration. **MGI users are responsible for supporting all error messages in all application messages.**

- CR7-3** [31] Companies wishing to utilize this interface to receive miscellaneous bulletin board messages relating to various aspects of the SMS/800 system must implement the message in this section. However, companies may choose not to implement this message depending upon specific business needs.

### 7.3.1 Unsolicited Bulletin Board Message [UNS-BBM]

#### UNSOLICITED BULLETIN BOARD MESSAGE [UNS-BBM] MISCELLANEOUS

This unsolicited message is sent from SMS to an OS in order to convey information pertaining to the operation of SMS/800. Such information may be of a purely informational nature, or of a problem nature, such as unanticipated down time. All MGI users will receive the same messages. It is recommended that this message replace FAX messages received by MGI users today.

To receive this message, an OS must make arrangements with the Help Desk to have the on-line GUN screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Y</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>UBB</b>

#### *MESSAGE FORMAT*

**UNS-BBM:,date,time:::::MC=mc,TOPIC=topic,MSG=msg;**

*PARAMETERS DESCRIPTION*

**date,time** See Section 5.3

**mc** Message Class

2 bytes decimal numeral (required)

identifies criticality of information

format is: 0X or 1X, where X = 0-9

0X = system-generated bulletin board

1X = Help Desk-generated bulletin board

00 = Notification of NPA-NXX-LATA moves - date occurred

01 = Notification that the "Affected Customer Record by NPA-NXX-LATA

Activity" report is available via "RRR"

02 = Notification that the "Failed Customer Record by NPA-NXX-LATA Move"

report for specific NPA-NXXs is available, providing any affected records failed validation

03 = Notification of Network Creation

04-09 = Undefined

10 = SMS/800 or SCP scheduled unavailability

11 = SMS/800 or SCP unscheduled unavailability

12 = Description of enhancement or modification (fix) for software feature

13 = Announcement and description of software features for new release

14 = New or modification to existing Help Desk procedure

15 = Work around for SMS/800 software problem

16-18 = Undefined

19 = Strictly informational

<b>topic</b>	Topic of Message 39 bytes text string (required) high-level summary of bulletin board message
<b>msg</b>	Message to MGI users up to 1185 bytes text string (optional) free format text block containing more detailed message to MGI users

### 7.3.2 Unsolicited RESP ORG Change [UNS-RCH]

#### **UNSOLICITED RESP ORG CHANGE [UNS-RCH] CUSTOMER RECORD ADMINISTRATION**

The purpose of the UNS-RCH message is to inform the new RESP ORG that a RESP ORG change has occurred, provided the new RESP ORG has already specified (via the on-line GUN screen) that they request such notification over MGI.

The UNS-RCH unsolicited message is sent from SMS/800 to an OS when a Resp Org change occurs on a Toll Free number (abbreviated “Dial#”) in the following cases:

<b>ID</b>	<b>Initiator of the Resp Org Change</b>	<b>Interface Used for the Resp Org Change</b>	<b>Scenario When the MGI Unsolicited Message UNS-RCH is Sent</b>
1	Old Resp Org	MGI	If a Resp Org change is initiated via MGI, both the old and new Resp Orgs will receive the UNS-RCH message, provided they are MGI Resp Orgs with their GUN screens setup requesting to receive this notification.
2	Old Resp Org	WBA	If a Resp Org change is initiated via WBA, both the old and new Resp Orgs will receive the UNS-RCH message, provided they are MGI Resp Orgs with their GUN screens setup requesting to receive this notification.
3	Old Resp Org	3270	If a Resp Org change is initiated via 3270, both the old and new Resp Orgs will receive the UNS-RCH message, provided they are MGI Resp Orgs with their GUN screens setup requesting to receive this notification.
4	Old Resp Org	MGI Automation (MGI MRO)	If a Resp Org change is initiated via MGI Automation, both the old and new Resp Orgs will receive the UNS-RCH message, provided they are MGI Resp Orgs with their GUN screens setup to receive this notification.
5	Old Resp Org	WBA Automation (WBA MRO)	If a Resp Org change is initiated via WBA Automation, both the old and new Resp Orgs will receive the UNS-RCH message, provided they are MGI Resp Orgs with their GUN screens setup to receive this notification.

**Notes:**

- a) The 3270/WBA Resp Org Control (“ORC”) screen controls notifying 3270/WBA Resp Orgs of changes to the Control Resp Org of Toll-Free Numbers.
- b) The 3270/WBA *Resp Org Change Notification* will be sent to the new Resp Org when a Resp Org change is done via MGI or 3270 or WBA or Automation.

To receive this message, an OS must make arrangements with the Help Desk to have the on-line MGI Unsolicit Notice Control (“GUN”) screen setup.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>URC</b>

*MESSAGE FORMAT*

**UNS-RCH:;date,time:::::RO=ro,NUM=num,OLDRO=oldro,NEWRO=newro,  
STAT=stat;**

**NOTE** The UNS-RCH message applies to dial numbers yet not to Template records because Template records purposefully don't contain a dial number.

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	RESP ORG 5 bytes identifier responsible organization for this message
<b>num</b>	The Dialed Telephone Number 10 or 12 bytes text string format is npanxxxxx where npanxxxxx = dialed number Two blank spaces are allowed.
<b>oldro</b>	Old RESP ORG 5 bytes identifier the old RESP ORG for the record
<b>newro</b>	New control RESP ORG 5 bytes identifier (required) the new RESP ORG for the record
<b>stat</b>	Status of the Number 7 bytes text string allowable values: UNAVAIL, RESERVE, ASSIGNE, SUSPEND, WORKING, DISCONN, TRANSIT

### 7.3.3 Request Resp Org Change [REQ-RCH]

#### **REQUEST RESP ORG CHANGE [REQ-RCH] MISCELLANEOUS**

This command allows an OS to request or cancel a RESP ORG change on up to 48 dial numbers. The requesting RESP ORG is identified by the **ro** parameter. Six data elements are required for a RESP ORG change request for each dial number: customer name, customer contact name, customer address, customer contact telephone number, customer signature date, and past due date. Optionally, a reseller name can be specified in a request. To cancel a RESP ORG change request, it must be in an open/reopen status.

<b>Message Type</b>	<b>Command</b>
<b>Logical Channel</b>	X3
<b>Source</b>	OS
<b>Confirmation</b>	A
<b>Queueing</b>	Optional
<b>Response</b>	RSP-RCH
<b>Route ID</b>	CCH

#### *MESSAGE FORMAT*

- REQUEST ONE OR MORE RESP ORG CHANGES

```
REQ-RCH:,date,time:::::ID=id,RO=ro,AC=ac:QT=qt:NUM=num,PDD=pdd,
CNAME=cname,ADD=add,CCON=ccon,CCTEL=cctel,DATE=date,RN=rn;
```

- CANCEL ONE OR MORE RESP ORG CHANGE REQUESTS

```
REQ-RCH:,date,time:::::ID=id,RO=ro,AC=ac:QT=qt:NUM=num;
```

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	<p>Logon Id</p> <p>8 bytes identifier (required)</p> <p>identifies sender of message</p>
<b>ro</b>	<p>Resp Org</p> <p>5 bytes identifier (required)</p> <p>responsible organization for this message</p>
<b>ac</b>	<p>Action Code</p> <p>1 byte identifier (required)</p> <p>valid entries:</p> <p>R = RESP ORG change request</p> <p>C = Cancel RESP ORG change request</p>
<b>qt</b>	<p>Quantity of Dial Numbers</p> <p>2 bytes decimal numeral (required)</p> <p>range: 01-48</p>
<b>num</b>	<p>The dial Telephone Number</p> <p>10 or 12 bytes text string (required)</p> <p>format is npanxxxxxx</p> <p>where npanxxxxxx = dial number,</p> <p>Two blank spaces are allowed.</p> <p>All numbers within this message must be in the same NPA</p>
<b>pdd</b>	<p>Past Due Date</p> <p>8 bytes text string (optional)</p> <p>format is: mm/dd/yy</p> <p>where mm: month (allowable range: 01-12)</p> <p>dd: day (allowable range: 01-31)</p> <p>yy: year (e.g., 98)</p> <p>This date is used to determine when an open or reopen request is past due.</p> <p>required only if AC=R</p>

<b>cname</b>	Customer Name 30 bytes text string (optional) maximum of 30 bytes required only for AC=R
<b>add</b>	Customer Address 75 bytes text string (optional) maximum of 75 bytes customer (or alternate) address required only for AC=R
<b>ccon</b>	Customer Contact Name 30 bytes text string (optional) max of 30 bytes required only for AC=R
<b>cctel</b>	Customer Contact Phone Number 10 bytes decimal numeral (optional) format is npanxxxxxx required only for AC=R
<b>date</b>	Customer Signature Date 8 bytes text string (optional) Format is mm/dd/yy, where: mm: month (allowable range: 01-12) dd: day (allowable range: 01-31) yy: year (last 2 digits of year, e.g., 98) required only for AC=R
<b>rn</b>	Reseller Name 1-30 bytes text string (optional) Can be entered only if AC=R

### 7.3.4 Response to Request Resp Org Change [RSP-RCH]

#### RESPONSE TO REQUEST RESP ORG CHANGE [RSP-RCH] MISCELLANEOUS

This message is the response to the command REQUEST RESP ORG CHANGE. The response can be fully successful, partially successful, or failed. For any successful dial number request, the control RESP ORG is returned. The control RESP ORG is returned only in successful and partially successful responses. The actual RESP ORG change is a separate process. If multiple DIAL number NPAs are entered within a single REQ-RCH message, the entire message will be denied.

<b>Message Type</b>	<b>Response</b>
<b>Logical Channel</b>	X4
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queueing</b>	Yes
<b>Command</b>	REQ-RCH
<b>Route ID</b>	RCH

#### *MESSAGE FORMAT*

- SUCCESSFUL RESPONSE

**RSP-RCH:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:NUM=num,  
CRO=cro;**

- PARTIALLY SUCCESSFUL RESPONSE

**RSP-RCH:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:NUM=num,  
CRO=cro:CNT=cnt:ENUM=enum,ERR=err,VERR=verr;**

- FAILED RESPONSE

**RSP-RCH:,date,time:::DENIED,01::ID=id,RO=ro,  
AC=ac:QT=qt:NUM=num:CNT=cnt:ENUM=enum,ERR=err,VERR=verr;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00 - No Error 01 - Error Present (see err field) 11 - Partial Completion
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>ac</b>	Action Code 1 byte identifier (required) valid entries: R = RESP ORG change Request C = Cancel RESP ORG change Request
<b>qt</b>	Quantity of Dial Numbers 2 bytes decimal numeral (required) (allowable range: 01-48) reflects the number of successful requests/cancellations in COMPLD,00 and COMPLD,11 and the number of unsuccessful requests/cancellations in DENIED,01

<b>num</b>	The dial Telephone Number 10 or 12 bytes text string (required) format is npanxxxxxx where npanxxxxxx = dial number.  Two blank spaces are allowed.
<b>cro</b>	Control RESP ORG 5 bytes identifier (optional) responsible organization for the dial number
<b>cnt</b>	Count of Unsuccessful Requests or Error Blocks 2 bytes decimal numeral (optional) maximum value of 50 returned only if COMPLD,11 or DENIED,01
<b>enum</b>	Unsuccessful DIAL# request 10 bytes text string (optional) format is npanxxxxxx where npanxxxxxx = dial number,  the DIAL# of an unsuccessful DIAL# RESP ORG change request returned only in the COMPLD,11 and DENIED,01 messages

<b>err</b>	Error Code at application level 2 bytes decimal numeral (optional) 01: Too many parameters (warning) 02: Required parameter missing 03: Unrecognized parameter 04: Invalid parameter combination 05: Syntax error 06: Invalid RESP ORG 07: Invalid quantity 11: Invalid customer contact phone 12: Invalid dial number 13: Invalid action code 14: Invalid date 15: Cannot cancel request. No open or reopen request exists 16: Request crosses multiple NPAs - not allowed 17: Control RESP ORG does not participate electronically. 18: Incorrect number status - status cannot be unavailable. 19: The same DIAL# cannot be repeated in a single request message 20: Cannot resubmit request for a number with a request status of open or reopen 21: The exact same RESP ORG must cancel a request that originally submitted it 24: Invalid contact telephone number 25: Cannot cancel request. No RESP ORG change request was submitted. 26: Past due date must be greater than current date 27: Customer signature date must be less than or equal to current date AND 30 days or less in the past 28: Requesting RESP ORG and control RESP ORG cannot be the same 98: Invalid or missing date and/or time in application message 99: Other error
------------	---

**VERR**      Value of Field in Error  
                16 bytes text string (optional)  
                returns original input in error where possible

### 7.3.5 Unsolicited Resp Org Change Request Notification [UNS-CRO]

#### **UNSOLICITED RESP ORG CHANGE REQUEST NOTIFICATION [UNS-CRO] MISCELLANEOUS**

This message is sent from SMS to a control RESP ORG following a successful RESP ORG change request or cancellation of a RESP ORG change request. This request may have been initiated via MGI or on-line. When an MGI user receives this message, it means that another RESP ORG has placed a successful request to obtain control of one or more dial numbers.

To receive this message, an OS must make arrangements with the Help Desk to have the GUN screen formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queueing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>UCO</b>

#### *MESSAGE FORMAT*

**UNS-CRO:,date,time:::::RO=ro,AC=ac,REQRO=reqro:QT=qt:NUM=num,  
PDD=pdd,CNAME=cname,ADD=add,CCON=ccon,CCTEL=cctel,DATE=date,  
RN=rn;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message the control RESP ORG
<b>ac</b>	Action Code 1 byte identifier (required) valid entries: R = RESP ORG change request C = RESP ORG change request cancellation
<b>reqro</b>	Requesting RESP ORG 5 bytes decimal numeral (required) the RESP ORG that placed the original RESP ORG change request for the Dial Numbers within this message
<b>qt</b>	Quantity of Dial Numbers 2 bytes decimal numeral (required) allowable range: 01-48
<b>num</b>	The dial Telephone Number 10 or 12 bytes text string (required) format is npanxxxxxx where npanxxxxxx = dial number, Two blank spaces are allowed. all dial numbers will be in the same NPA

<b>pdd</b>	Past Due Date 8 bytes text string (required) format is: mm/dd/yy where mm: month (01-12) dd: day (01-31) yy: year (e.g., 98)
<b>cname</b>	Customer Name 30 bytes text string (required) maximum of 30 bytes
<b>add</b>	Customer Address 75 bytes text string (required) maximum of 75 bytes
<b>ccon</b>	Customer Contact Name 30 bytes text string (required) maximum of 30 bytes
<b>cctel</b>	Customer Contact Phone Number 10 bytes decimal numeral (required)
<b>date</b>	Customer Signature Date 8 bytes text string (required) See pdd parameter for format
<b>rn</b>	Reseller Name 1-30 bytes text string (optional) Optionally returned only on requests, not cancellations, if entered.

### 7.3.6 Report Resp Org Change Request Denial [REPT-ROC]

#### REPORT RESP ORG CHANGE REQUEST DENIAL [REPT-ROC] MISCELLANEOUS

This command is sent from an OS to SMS to deny a previously received RESP ORG change request. The OS must specify a reason for denial. Only the dial numbers for which the denial applies is transmitted in this message. Note that approvals are handled by the control RESP ORG making the RESP ORG change directly.

To view the current listing of reason codes, access the on-line RRC screen.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queueing	Optional
Response	RSP-ROC
Route ID	COC

#### *MESSAGE FORMAT*

**REPT- ROC:,date,time:::::ID=id,  
RO=ro:QT=qt:NUM=num:CNT1=cnt1:WHY=why;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	<p>Logon Id 8 bytes identifier (required) identifies sender of message</p>
<b>ro</b>	<p>Control Resp Org 5 bytes identifier (required) responsible organization for this message</p>
<b>qt</b>	<p>Quantity of Dial Numbers 2 bytes decimal numeral (required) allowable range: 01-48</p>
<b>num</b>	<p>The Dial Number 10 or 12 bytes text string (required) format is npanxxxxxx where npanxxxxxx = dial number, Two blank spaces are allowed.</p>
<b>cnt1</b>	<p>Count of Number of Reject Reason Codes 2 bytes decimal numeral (required) valid entries: 01-10 specifies the number of “why” tag-values</p>
<b>why</b>	<p>Reason for Denial 2 bytes text string (required)</p>

**NOTE:** The list of supported reason codes is now table-driven. The Help Desk has the responsibility to maintain the table. To obtain a list of current codes, users are requested to access the on-line SMS/800 system's RRC screen, which resides within the Service Maintenance functionality of the system.

### 7.3.7 Response to RESP ORG Change Request Denial [RSP-ROC]

#### RESPONSE TO RESP ORG CHANGE REQUEST DENIAL [RSP-ROC] MISCELLANEOUS

This message is the response to REPORT RESP ORG CHANGE REQUEST DENIAL. A successful response means the denial was accepted. A failed response means the denial was rejected and must be re-submitted with appropriate modifications made. A partially successful response means that some denials were accepted and some were not.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queueing	Yes
Command	REPT-ROC
Route ID	ROC

#### *MESSAGE FORMAT*

- SUCCESSFUL RESPONSE

**RSP-ROC:,date,time:::COMPLD,00::ID=id,RO=ro:QT=qt:NUM=num;**

- PARTIALLY SUCCESSFUL RESPONSE

**RSP-ROC:,date,time:::COMPLD,11::ID=id,RO=ro:QT=qt:NUM=num:  
CNT=cnt:ENUM=enum,ERR=err,VERR=verr;**

- FAILED RESPONSE

**RSP-ROC:,date,time:::DENIED,01::ID=id,RO=ro:QT=qt:NUM=num:  
CNT=cnt:ENUM=enum,ERR=err,VERR=verr;**

#### *PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00 - No Error 01 - Error Present (see err field)
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>qt</b>	Quantity of Dial Numbers 2 bytes decimal numeral (required) allowable range: 01-48 number of successful denials in COMPLD,00 and COMPLD,11 and number of unsuccessful denials in DENIED,01
<b>num</b>	The dial Telephone Number 10 or 12 bytes text string (required) format is npanxxxxxx where npanxxxxxx = dial number, Two blank spaces are allowed.
<b>cnt</b>	Count of Error or Unsuccessful Blocks 2 bytes decimal numeral (optional) maximum value of 50

<b>enum</b>	Unsuccessful DIAL# Request 10 bytes text string (optional) format is npanxxxxx where npanxxxxx = dial number the DIAL# of an unsuccessful DIAL# RESP ORG change request returned only in the COMPLD,11 and DENIED,01 messages
<b>err</b>	Error Code at application level 2 bytes decimal numeral (optional) 01: Too many parameters (warning) 02: Required parameter missing 03: Unrecognized parameter 04: Invalid parameter combination 05: Syntax error 06: Invalid RESP ORG 07: Invalid WHY parameter 08: No RESP ORG change request has been placed 09: Invalid dial number 10: Invalid quantity 11: Status is not open or reopen 12: RESP ORG does not match original control RESP ORG 13: DIAL# cannot appear more than once in a single request  15: Invalid WHY count 16: WHY parameter cannot be duplicated for a single DIAL# 98: Invalid or missing date and/or time in application message 99: Other error
<b>verr</b>	Value of Field in Error 16 bytes text string (optional) returns original input in error where possible

### 7.3.8 Unsolicited Resp Org Change Denial [UNS-RRO]

#### UNSOLICITED RESP ORG CHANGE DENIAL [UNS-RRO] MISCELLANEOUS

This unsolicited message is sent from SMS to the requesting RESP ORG who previously submitted a RESP ORG change request, when the control RESP ORG denies the request. The original request may have been submitted via on-line or MGI. The denial may have been submitted via on-line or MGI.

To receive this message, an OS must make arrangements with the Help Desk to have the GUN screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queueing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>UNO</b>

#### *MESSAGE FORMAT*

**UNS- RRO:,date,time:::::RO=ro,  
CRO=ero:QT=qt:NUM=num,CNT1=cnt1,WHY=why;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>id</b>	<p>Logon Id 8 bytes identifier (required) identifies sender of message</p>
<b>ro</b>	<p>Resp Org 5 bytes identifier (required) responsible organization for this message</p>
<b>cro</b>	<p>Control RESP ORG 5 bytes identifier (required) specifies which RESP ORG placed the denial</p>
<b>qt</b>	<p>Quantity of Dial Numbers 2 bytes decimal numeral (required) allowable range: 01-48</p>
<b>num</b>	<p>The dial Telephone Number 10 or 12 bytes text string (required) format is npanxxxxxx where npanxxxxxx = dial number, Two blank spaces are allowed.</p>
<b>cnt1</b>	<p>Count of Number of Reject Reason Codes 2 bytes decimal numeral (required) valid entries: 01-10 specifies the number of “why” tag-values</p>
<b>why</b>	<p>Reason for Denial 2 bytes text string (required) specifies why the RESP ORG denied the RESP ORG change request <b>NOTE:</b> To obtain a list of current codes, users are requested to access the on-line RRC screen.</p>

### 7.3.9 Request System Automation Limits [REQ-ASL]

#### REQUEST SYSTEM AUTOMATION LIMITS [REQ-ASL] MISCELLANEOUS

This command allows an OS to determine the automation limits in effect at the time of the request. The following automation message limits can be requested by Resp Orgs:

- **Automation Resp Org Change:** The maximum quantity of dial numbers in which the Resp Org ID can be changed to the same new Resp Org, via sending a single Automation Multi-Dial Number Resp Org Change (MRO) request message.
- **Automation Dial Number Spare:** The maximum quantity of dial numbers that can be spared by a Resp Org in a single Automation Multi-Dial Number Spare (abbreviated MSP) request message.
- **Automation Dial Number Disconnect:** The maximum quantity of dial numbers that can be disconnected by a Resp Org in a single Automation Multi-Dial Number Disconnect (abbreviated MND) request message. This parameter applies to both regular customer records, template records and *Pointer records*.
- **Automation Conversion to Pointer records:** The maximum quantity of regular customer records (CRs) that can be converted to *Pointer records* by a Resp Org in a single Automated Conversion to Pointer records request message.
- **Automation Number Query:** The maximum quantity of Toll-Free Numbers that can be queried in a single Automation Multi-Dial Number Query (MNQ) request.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queueing	Optional
Response	RSP-ASL
Route ID	CAL

*MESSAGE FORMAT*

**REQ-ASL:,date,time:::::ID=id,RO=ro;**

*PARAMETERS DESCRIPTION*

**date,time** See Section 5.3

**id** Logon Id  
8 bytes identifier (required)  
identifies sender of message

**ro** Resp Org  
5 bytes identifier (required)  
responsible organization for this message

### 7.3.10 Response to System Automation Limits Request [RSP-ASL]

#### RESPONSE TO SYSTEM AUTOMATION LIMITS REQUEST [RSP-ASL] MISCELLANEOUS

This message is the response to the command REQ-ASL, Request System Automation Limits. The response message contains all system limits in effect at the time of the request. Two versions are supported: successful request and unsuccessful request.

Message Type	Response
<b>Logical Channel</b>	X4
<b>Source</b>	SMS
<b>Confirmation</b>	S
<b>Queueing</b>	Yes
<b>Command</b>	REQ-ASL
<b>Route ID</b>	RAL

#### *MESSAGE FORMAT*

- *Successful Response*

**RSP-ASL:,date,time:::COMPLD,00::ID=id,RO=ro:MROL=mrol,MSPL=mspl,  
MDSL=mdsl,MNQL=mnql,MCPL=mcpl;**

- *Unsuccessful Response*

**RSP-ASL:,date,time:::DENIED,01::ID=id,RO=ro:CNT=cnt:ERR=err,  
VERR=verr;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	Termination Report Code 6 bytes identifier COMPLD - Entire Request completed DENIED - Entire Request denied
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00 - No Error 01 - Error Present (see err field)
<b>id</b>	Logon Id 8 bytes identifier (required) identifies sender of message
<b>ro</b>	Resp Org 5 bytes identifier (required) responsible organization for this message
<b>mrol</b>	System Automation Limit for Multi-Dial Number Resp Org Change 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-MRO message.
<b>mspl</b>	System Automation Limit for Multiple Spare 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-NSC message.

<b>mdsl</b>	System Automation Limit for Multiple Disconnect 8 bytes decimal numeral The maximum number of Dial Numbers that are associated with regular CRs or Pointer records that can be entered in a single REQ-CRC message. MDSL also represents the maximum number of Template records that can be disconnected via a single REQ-TRC message.
<b>mnql</b>	System Automation Limit for Multi-Dial Number Query 8 bytes decimal numeral The maximum quantity of Dial Numbers that can be entered in a single REQ-MNQ message.
<b>mcpl</b>	System Automation Limit for Multiple Conversion of Regular Customer Records to Pointer records 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-CRC message.
<b>cnt</b>	Count of Error Blocks 1 or 2 bytes decimal numeral
<b>err</b>	Error Code 2 bytes decimal numeral (optional) 01 - too many parameters (warning) 02 - required parameter missing 03 - unrecognized parameter 04 - invalid parameter combination 05 - syntax error 06 - invalid Resp Org 07 - permission denied
<b>verr</b>	Value of Field in Error 1-30 bytes text string (optional) returns original input in error where possible.

### 7.3.11 Unsolicited System Automation Limits [UNS-ASL]

#### UNSOLICITED SYSTEM AUTOMATION LIMITS [UNS-ASL] MISCELLANEOUS

This unsolicited message is sent from SMS to the OS whenever there is a change to at least one system automation limit. These limits set the number of Dial Numbers that can be processed on one automation request. If one or more limits change, the full set of system limits are set to the OS. When a limit is changed, it applies to all SMS/800 users. Automation requests already queued in the system (i.e., for which the associated REQ message has been queued) are processed at the old limits.

To receive this message, an OS must make arrangements with the Help Desk to have the GUN screen properly formatted.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>SMS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queueing</b>	<b>Yes</b>
<b>Command</b>	<b>N/A</b>
<b>Route ID</b>	<b>USL</b>

#### *MESSAGE FORMAT*

**UNS- ASL:,date,time:::::RO=ro,  
MROL=mrol,MSPL=mspl,MDSL=mdsl,MNQL=mnq,M CPL=mcpl;**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>ro</b>	<p>Resp Org 5 bytes identifier (required) responsible organization for this message</p>
<b>mrol</b>	<p>System Automation Limit for Multi-Dial Number Resp Org Change 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-MRO message.</p>
<b>mspl</b>	<p>System Automation Limit for Multi-Number Spare 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-NSC message.</p>
<b>mdsl</b>	<p>System Automation Limit for Multi-Number Disconnect 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-CRC message. MDSL also represents the maximum number of Template records that can be disconnected via a single REQ-TRC message.</p>
<b>mnql</b>	<p>System Automation Limit for Multi-Dial Number Query 8 bytes decimal numeral The maximum quantity of Dial Numbers that can be entered in a single REQ-MNQ message.</p>
<b>mcpl</b>	<p>System Automation Limit for Multiple Conversion of Regular Customer Records to Pointer records 8 bytes decimal numeral The maximum number of Dial Numbers that can be entered in a single REQ-CRC message.</p>

### 7.3.12 Request Global System Limits [REQ-GSL]

#### REQUEST GLOBAL SYSTEM LIMITS [REQ-GSL] MISCELLANEOUS

This command allows an OS to query SMS/800 for system limits (including Resp Org Entity limits) that are in effect at the time of the request.

The following system limits are supported:

- High Priority Customer Record Updates Allowed: Maximum quantity allowed of high priority customer record (CR) updates for a Resp Org Entity per day.
- High Priority Customer Record Updates Remaining: The remaining number of high priority CR updates that can be performed for the requesting Entity for that day.
- Template records Allowed: Maximum quantity of Template records that can be created by the requesting Resp Org Entity.
- Template records Remaining: The remaining number of Template records that can be created by the requesting Entity. Note: This is not a daily limit.

Message Type	Command
Logical Channel	X3
Source	OS
Confirmation	A
Queueing	Optional
Response	RSP-GSL
Route ID	CGL

*MESSAGE FORMAT*

**REQ-GSL:,date,time:::::ID=id,RO=ro,CREN=cren;**

*EXAMPLE OF REQ-GSL MESSAGE:*

**REQ-GSL:,2003-10-05,12-00-00-CST:::::ID=XXXXXX101,RO=XXXX1,CREN=XX;**

*PARAMETERS DESCRIPTION*

**date,time** See Section 5.3

**id**  
Logon Id  
8 bytes identifier (required)  
identifies sender of message

**ro**  
Resp Org  
5 bytes identifier (required)  
responsible organization for this message

**cren**  
Entity of the customer record  
2 bytes identifier (required)  
Entity for which the limits will be returned.

Remaining # Routing Templates field (TRCR tag) will be retrievable only by MGI Entities that have GSL permission for the retrieved Entity that was specified in the CREN tag in the REQ-GSL message.

Remaining # High Priority CR Updates (HCRUR tag) will be retrievable only by MGI Entities that have GSL permission for the retrieved Entity that was specified in the CREN tag in the REQ-GSL message.

### 7.3.13 Response to Global System Limits Request [RSP-GSL]

#### RESPONSE TO GLOBAL SYSTEM LIMITS REQUEST [RSP-GSL] MISCELLANEOUS

This message is the response to the command REQ-GSL, Request Global System Limits. The response message contains all system limits in effect at the time of the request. Two versions are supported: successful request and unsuccessful request.

Message Type	Response
Logical Channel	X4
Source	SMS
Confirmation	S
Queueing	Yes
Command	REQ-GSL
Route ID	RGL

#### MESSAGE FORMAT

- *Success Response*

**RSP-GSL:,date,time:::COMPLD,00::ID=id,RO=ro,CREN=cren,  
HCRUM=hcrum,HCRUR=hcrur,TRCM=tcrm,TRCR=trcr;**

*Example of a Success Response message:*

**RSP-GSL:,2003-10-25,17-49-22-CST:::COMPLD,00::ID=XXXXX101,  
RO=XXXX1,CREN=XX,HCRUM=010,HCRUR=005,TRCM=0075,TRCR=0025  
;**

- *Response for Unsuccessful Request*

**RSP-GSL:,date,time:::DENIED,01::ID=id,RO=ro,CREN=cren,  
CNT=cnt:ERR=err,VERR=verr;**

*Example of a Response for Unsuccessful Request message:*

**RSP-GSL:,2003-10-25,17-49-22-CST:::DENIED,01::ID=XXXXX101,  
RO=XXXX1,CREN=XX,CNT=01: ERR=12,VERR="XX";**

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code</p> <p>6 bytes identifier</p> <p>COMPLD - Entire Request completed</p> <p>DENIED - Entire Request denied</p>
<b>error_cd</b>	<p>Error Code</p> <p>2 bytes decimal numeral</p> <p>00 - No Error</p> <p>01 - Error Present (see err field)</p>
<b>id</b>	<p>Logon Id</p> <p>8 bytes identifier (required)</p> <p>identifies sender of message</p>
<b>ro</b>	<p>Resp Org</p> <p>5 bytes identifier (required)</p> <p>responsible organization for this message</p>
<b>cren</b>	<p>Entity of the customer record</p> <p>2 bytes identifier (optional)</p> <p>entity for which the limits will be returned</p>
<b>hcrum</b>	<p>Maximum high priority customer record updates</p> <p>3 bytes decimal numeral (optional)</p> <p>The maximum number of high priority customer record updates allowed per day for the requested entity.</p>
<b>hcurr</b>	<p>Remaining number of high priority customer record updates</p> <p>3 bytes decimal numeral (optional)</p> <p>The remaining number of high priority customer record updates allowed for the requested entity.</p>

<b>trcm</b>	Maximum Template records that can be created by an Entity 4 bytes decimal numeral (optional) The maximum number of Template records that can be created by the Entity that requested this parameter.
<b>trcr</b>	Remaining count of <i>Template records</i> that can be created by an Entity 4 bytes decimal numeral (optional) The remaining count of additional new <i>Template records</i> that can be created by the Entity that requested this parameter.
<b>cnt</b>	Count of Error Blocks 2 bytes decimal numeral
<b>err</b>	Error Code 2 bytes decimal numeral (optional) 01 - too many parameters (warning) 02 - required parameter missing 03 - unrecognized parameter 04 - invalid parameter combination 05 - syntax error 06 - invalid Resp Org 07 - permission denied  11 - invalid entity 12 - entity has not been defined to allow high priority customer record updates. Contact the Help Desk. 13 - trcm/trcr empty in TAL. Either or both the TRCM tag and/or TRCR tag are empty in SMS/800. Contact the Help Desk so they can set the Template limits for your Entity via the TAL screen. 98 - Invalid or missing date and/or time in application message. Refer to Section 5.3 for further details. 99 - Other. Refer to the verr for details of the error.
	See the CREN tag definition for permission rules for retrieving TRCR tag data.

**verr**              Value of Field in Error  
                    1-30 bytes text string (optional)  
                    returns original input in error where possible.

## 7.4 Data Communications

This section contains data communications interface messages. Functions supported are basic session initiation and termination capabilities, version control, and message denial capabilities.

**R7-4** [32] All messages in this section are required for the TCP/IP implementation of the SMS/800 Mechanized Generic Interface.

### 7.4.1 Retrieve Application Status Information [RTRV-ASI]

#### RETRIEVE APPLICATION STATUS INFORMATION [RTRV-ASI] DATA COMMUNICATIONS

SMS/800 sends this message to obtain the version number of the interface specification that the OS is currently supporting. This message can also be used by SMS/800 to verify that the applications can communicate with each other.

Message Type	Command
Logical Channel	X2
Source	SMS
Confirmation	A
Queuing	Yes
Response	RSP-ASI
Route ID	RSI

#### *MESSAGE FORMAT*

**RTRV-ASI:::::;**

*FREQUENCY*

SMS/800 sends this message whenever it is necessary to obtain the version number of the interface specification that is supported by the OS.

### 7.4.2 Response Application Status Information [RSP-ASI]

#### RESPONSE APPLICATION STATUS INFORMATION [RSP-ASI] DATA COMMUNICATIONS

An OS sends this message to SMS in response to RTRV-ASI indicating which version number of the interface specification that the OS is currently supporting.

Message Type	Response
Logical Channel	X1
Source	OS
Confirmation	S
Queuing	Yes
Command	RTRV-ASI
Route ID	RAI

#### *MESSAGE FORMAT*

RSP-ASI;date,time:::term\_rept,error\_cd::VERS=vers;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>term_rept</b>	<p>Termination Report Code            6 byte identifier            COMPLD - Message Request Completed            DENIED - Message Request Denied</p>
<b>error_cd</b>	<p>Error Code            2 bytes decimal numeral            00:no error            01:error present</p>
<b>vers</b>	<p>Version Number of the MGI Interface Specification            17 bytes text            format is GR-1247-CORE-nnrr            where nn = issue number of interface document, and            rr = revision number, 00 if no revision.            Examples of the vers (Version Number) tag:              If a Resp Org's MGI client application supports MGI Interface Specification (SR-4592) issue 15, then set the vers tag to a value of: "GR-1247-CORE-1500"              If a Resp Org's MGI client application supports the SMS/800 Template Feature, then set the vers tag to a value of: "GR-1247-CORE-1600"              Double-quotes must surround the version number.              Document versions of the MGI Specification that are issues 16 and higher will support the <b>CR Template Feature</b>.</p>

### 7.4.3 Report Application Status Information [REPT-ASI]

#### REPORT APPLICATION STATUS INFORMATION [REPT-ASI] DATA COMMUNICATIONS

This message is an unsolicited message from an OS in which it informs SMS of the version number of the interface specification that it is currently supporting. This is sent to SMS whenever an OS changes the interface specification version number that it is supporting.

<b>Message Type</b>	<b>Unsolicited</b>
<b>Logical Channel</b>	<b>X5</b>
<b>Source</b>	<b>OS</b>
<b>Confirmation</b>	<b>S</b>
<b>Queuing</b>	<b>Yes</b>
<b>Command or Response</b>	<b>N/A</b>
<b>Route ID</b>	<b>UAS</b>

#### *MESSAGE FORMAT*

REPT-ASI:,date,time:::::VERS=vers;

*PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>vers</b>	<p>Version Number of Interface Specification 17 bytes text format is GR-1247-CORE-nnrr where nn = issue number of interface document, and rr = revision number, 00 if no revision  For example, GR-1247-CORE-1500 represents MGI Specification (SR-4592) issue 15.</p> <p>If a Resp Org's MGI client application supports the SMS/800 Template Feature, issue 16, then set the vers tag to a value of: <i>GR-1247-CORE-1600</i></p> <p>Double quotes must surround the version number.</p>

#### 7.4.4 Request Test Capabilities [REQ-TEST]

##### REQUEST TEST CAPABILITIES [REQ-TEST] DATA COMMUNICATIONS

The OS and SMS are required to meet all UAL and UPL functional requirements described earlier. Both the OS and SMS should employ a Test Driver procedure to generate test messages to validate each other's implementation of the interface at the UAL and UPL levels. Specifically, the test messages will be used to exercise and verify that UAL header field population procedures, message segmentation, confirmation options, and UPL level response message generating software are performing in an integrated manner according to this interface specification. Such testing may include the intentional introduction of syntactical and semantic errors in the command message to test the error handling procedures. Both SMS and the OS will be required to accept and validate these test messages using its normal processing procedures. If Application Confirmation is requested, the response message will include an echo of the initiating system specified text block that may extend over multiple UAL message segments. If Site-to-Site Confirmation is requested, then only the Site-to-Site Confirmation message (SSC) should be returned. There should be no RSP-TEST message returned.

This test capability will be a standard feature of the implementation. It is intended for use not only during initial lab-to-lab testing of the interface but also during ongoing interface operations when modifications to OS and SMS software may require retesting of the UAL and UPL capabilities.

<b>Message Type</b>	Command
<b>Logical Channel</b>	Any
<b>Source</b>	OS, SMS
<b>Confirmation</b>	A or S
<b>Queuing</b>	Optional
<b>Response</b>	RSP-TEST
<b>Route ID</b>	TSA - Application Confirmation TSS - Site-to-Site Confirmation

##### *MESSAGE FORMAT*

**REQ-TEST:,date,time:::sequence#:::"text to be echoed";**

##### *PARAMETERS DESCRIPTION*

<b>date,time</b>	See Section 5.3
<b>sequence#</b>	Application Sequence Number 6 bytes identifier (required) must begin with the letter "S"
<b>"text to be echoed"</b>	Echo Text a free-format text block (required) contains a string of zero or more ASCII characters enclosed in double quotes. binary zeroes are invalid the receiver is expected to echo this test block in its response message

### 7.4.5 Response to Test Capabilities [RSP-TEST]

#### RESPONSE TO TEST CAPABILITIES [RSP-TEST] DATA COMMUNICATIONS

The receiving system should parse and validate the syntax of the command message, REQ-TEST, as it does for all received messages. The receiving system should format a response message according to the general UAL and UPL message syntax requirements specified previously in this document; that is, send either a Site-to-Site or Application Confirmation message, as appropriate. The RSP-TEST message is the Application Confirmation message for the REQ-TEST message. This means that error responses should be sent if the conditions warrant, just like a response action to any other command. If the test command conforms to the valid format as specified above, then a completion response should be generated which includes the standard completion response outputs, followed by an echo of the input text block of the command message in a message-specific output data block as described below.

Message Type	Response
Logical Channel	Any
Source	OS, SMS
Confirmation	N/A
Queuing	No
Command	REQ-TEST
Route ID	TRA

#### MESSAGE FORMAT

- *Successful Test:*

**RSP-TEST;:,date,time:::sequence#:COMPLD,00:::"echoed text";**

- *Unsuccessful Test:*

**RSP-TEST;:,date,time:::sequence#:DENIED,01:::"failed request";**

#### PARAMETERS DESCRIPTION

<b>date,time</b>	See Section 5.3 (required)
<b>sequence#</b>	Application Sequence Number 6 bytes identifier (required) echo of the test command's sequence number
<b>term_rept</b>	Termination Report 6 bytes identifier (required) COMPLD - Request Completed DENIED - Request Denied
<b>error_cd</b>	Error Code 2 bytes decimal numeral 00: test request completed successfully 01: test message failed
<b>"echoed text"</b>	Echoed Text a free-format text block (required) contains a string of zero or more ASCII characters enclosed in double quotes the receiver is expected to echo this test block from the command message
<b>"failed request"</b>	Failed Request a free-format text block (required) contains a string of zero or more ASCII characters enclosed in double quotes the receiver is expected to return the entire UPL portion of the command message this parameter will contain a set of double quotes within double quotes which normally would violate the definition of a text field. This parameter is an exception case.

## 8. Glossary

Term	Full Name of Term and Brief Definition
CAD	Customer Administrative Data
CIC	Carrier Identification Code
CCS	Common Channel Signaling
CPR	Call Processing Record
CR	Customer Record; there are 3 types of Customer Records: regular record (which contain a CAD and optionally also a CPR and LAD), Pointer record (which contains a PAD), and a Template record (which contains a TAD and optionally also a CPR and LAD).
FCC	Federal Communications Commission
IC	Interexchange Carrier
LAD	Label Definition
LAN	Local Area Network
LATA	Local Access and Transport Area
LEC	Local Exchange Carrier
MGI	Mechanized Generic Interface
OS	Operations System; for example, a Resp Orgs Operations System that interfaces with SMS/800 via one of the supported SMS/800 interfaces (MGI, 3270 or WBA).
PAD	Pointer Administrative Data
Pointer	A Customer Record (CR) that uses a Template record for its routing data.
POTS	Plain Old Telephone Service
PVC	Permanent Virtual Circuit
Carrier Resp Org	Responsible Organization
SCP	Service Control Point
SMS/800	Service Management System for 800 Data Base Service
SOP	Service Order Processor
TAD	Template Administrative Data; a Template record. Also refers to the TAD screen in the Web Based Access (WBA) user-interface.
Template	A Routing Template that is composed of a Template Name, Effective Date/Time, control Resp Org, and routing information. An instance of a Template Name is a Template record that is created with a specific Effective Date/Time to be sent to SCPs. A Template contains call routing data that can be used on multiple Customer Records (CRs) provided the CRs that use a Template are built as Pointer records.
UAL	User Application Layer
UPL	User Program Layer

<b>Term</b>	<b>Full Name of Term and Brief Definition</b>
USL	User System Language
USO	Universal Service Order

## 9. References

- SMS/800 System Requirements and User Centered Design (UCD) for Customer Record Template Feature (800-TEMPLATE-REQ/UCD).
-