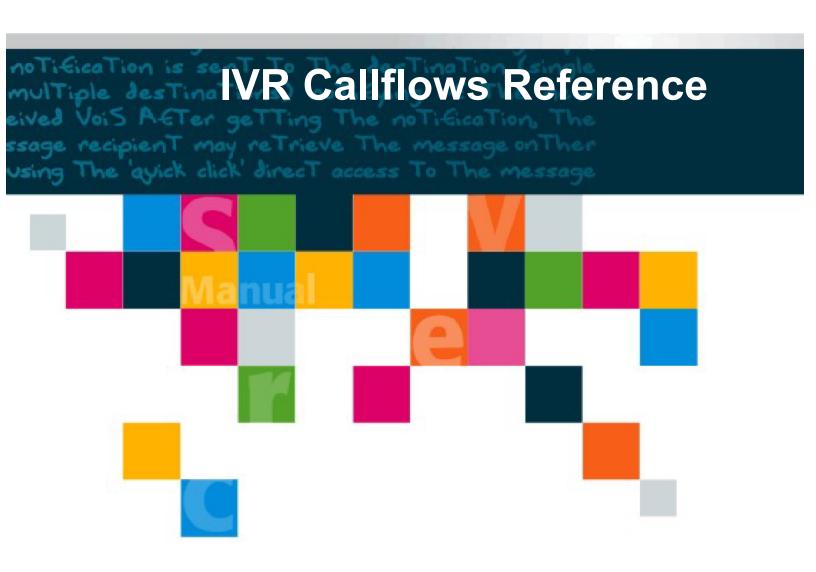




3.5 RT TR1.0



ComONE-3.5_RT_TR1.0_CFR-2011-02-28

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Revision History

The following table lists the document changes since the initial publication:

Date	Chapter	Description	
2011/02/28	All	Initial publication.	

ii Revision History

Notational Conventions



Useful information appears in this format.



Provides direction to important information



Important information appears in this format.



Indicates possible risk of damage to data, software, or hardware.



Indicates serious risk of damage to data, software, or hardware.

Table 1 Notational Conventions

Notation	Explanation of Convention		
References to printed documents	Helvetica italic		
	Example: See Database Reference Volume 2.		
<keys></keys>	UPPERCASE HELVETICA, in angle brackets		
	Example: Press <ctrl><q></q></ctrl> <shift><p> to create an em dash.</p></shift>		
User-entered text	Courier bold		
	Example: Enter Total Charges in the field.		
Placeholders for	Courier italic, in angle brackets		
user-determined text	Example: Enter your <i><password></password></i> .		
Code samples, TABLE_ NAMES, field_names, file and directory names, file contents, user names, passwords, UNIX ENVIRONMENT_VARIABLES	Courier		
Placeholders for	Helvetica italic		
system-generated text	Example: Messages appear in this form: timestamp messageID >> text.		
Buttons, Icon Names, and Menu	Helvetica bold		
items	Example: Choose Reports from the main menu.		

iv Notational Conventions

Special Markers

The Comverse ONE Billing and Active Customer Management solution has the three derivatives shown in <u>Table 2</u>, "<u>Labels in Markers</u>." For user convenience, any content that is specifically included in a derivative is highlighted with special markers so that it can readily be distinguished.

Table 2 Labels in Markers

Derivative	Label Shown in Markers
Comverse ONE Converged Billing derivative	Converged only
Comverse ONE Real-Time Charging derivative	Real Time only
Comverse ONE Postpaid Billing derivative	Postpaid only

Each derivative has a set of three color-coded markers, as shown in <u>Table 3</u>, <u>"Types of Markers."</u> The markers are used individually or in combination to highlight derivative-specific content by:

- Entire chapters
- Selected portions of chapters
- Tables, either entire or partial

Table 3 Types of Markers

Marker	Example	Description
Alert	Converged only This entire chapter pertains to Converged only.	 Placed at the beginning of an entire chapter that pertains only to a specific derivative.
	Real Time only This entire chapter pertains to Real Time only.	 Placed just before a table that partially or entirely pertains only to a specific
	Postpaid only This entire chapter pertains to Postpaid only.	derivative.
Block	Converged only Text goes here. Real Time only Text goes here. Postpaid only Text goes here.	A shaded box that encloses sections of documentation that pertain only to a specific derivative.
Flag	Converged only Real Time only Postpaid only	 Designates a shaded table row whose contents pertain only to a specific derivative. In a bulleted list, designates an item that pertains only to a specific derivative.

Comverse ONE Documentation List



this is a comprehensive list. As such, it may include documentation for products which you have not licensed.

The documents described below reference the Comverse ONE solution products. All documentation available with the Comverse ONE solution is described in the following pages, organized by the following categories:

- Infrastructure Domain
- Rating, Charging, and Promotions Domain
- Billing and Financials Domain (Converged only)
- Customer and Order Management Domain (Converged only)
- Mediation and Roaming Solutions Domain
- Self-Service Solutions Domain



Read the relevant Solution Description first to get an overview of *your* Comverse ONE solution. It gives an overview of the functionality in each product domain and also includes cross-references to the user documentation that provides more detailed information about the functionality.

There are two such documents and they are listed under the Infrastructure Domain heading below.

- Converged Billing & Active Customer Management Solution Description
- Real-Time Billing & Active Customer Management Solution Description

Infrastructure Domain

Download every document in the Infrastructure domain if you purchase the Comverse ONE solution. Documentation for this domain includes the following (in alphabetical order):

- Alarms Reference
 Contains tables of alarm IDs, descriptions, likely causes, and recommended resolutions for systems and components of the Unified Platform.
- Back Office Administration GUI Guide
 Provides information about the BackOffice subsystems for Inventory Administration,
 Address Management and Bulk Operations.
- Converged Billing & Active Customer Management Solution Description
 General overview of the Comverse ONE Converged Offer and the functionality available in each domain.
- Database Reference
 Describes all database tables and fields in detail.

Disaster Recovery Operations Guide (Optional Module)

The Disaster Recovery Operations Guide serves as both a technical overview of the optional Disaster Recovery solution and as a guide which details the operational procedures for failover, switchover and switchback provided by the solution.

Glossary

Provides a list of terms used specifically for the Comverse ONE solution

Investigation Units and Financial GUIs Guide

Describes the GUI-based tools used for investigating and troubleshooting various financials related processes: payments, bill invoices, refunds, and incomplete data work entries

Operation Reference

Describes the processes in the Comverse ONE solution.

Platform Operations Guide

Describes the back-end operations and maintenance functionality of the core Comverse ONE solution components. Includes AIX/HACMP platform and cluster operations, Linux/Veritas platform and cluster operations, backup/recovery, shared storage and fiber switch operations, and tape backup operations.

Product Catalog Overview

Provides a high-level description of the Comverse ONE solution Product Catalog, which is the primary mechanism for creating, configuring, managing, and propagating Product Catalog versions.

Product Catalog User Guide

Instructions on using the Product Catalog application to define and manage all aspects of Service provisioning.

Real-Time Billing & Active Customer Management Description General overview of the Comverse ONE Real-Time Offer and the fund

General overview of the Comverse ONE Real-Time Offer and the functionality available in each domain.

Schedulable Entity Reference Manual

Documents all the jobs, monitors, and workflows, for each component in the Unified Platform.

Security Platform Operations Guide

Technical overview of the security platform and information on how to provision and administer the platform.

Security Server API Guide

Provides an overview of the interfaces exposed by the Java-based Security SDK API, which client applications can leverage to access various security services, such as authentication, authorization, auditing, key management, and credentials management. Also provides information on the Security Web Services API, which provides interfaces to a subset of Security Server commands (Identity Management commands).

Signaling Gateway Unit Guide

Describes the hardware, installation, configuration, and maintenance of the Signaling Gateway Unit (SGU) used to connect Comverse real-time systems to the SS7 signaling network using either traditional SS7 protocols or Sigtran (SS7 over IP).

System Measurements Guide

The Comverse ONE Solution automatically collects statistical data from the Service Logic Unit (SLU) and the Service Gateway Unit (SGU). This includes service statistics on the SLF layer and platform data on the IPF layer.

This guide describes the format and location of this measurement information and provides a description of the meaning of the data. The measurement data can be used to create reports. It can also be imported into other applications (such as Excel) to be viewed.

System Validation Check Reference

Details all the system validation checks performed by the Comverse ONE Unified Platform on its components.

Unified API Guide

General overview of the Unified API, a brief description of its architecture, and information about:

- ☐ Framework classes and the functionality they provide
- □ Two standard interfaces provided with the Unified API (client SDK and web services)
- □ A subset of Unified API business methods most commonly used
- Unified Platform Guide

Technical overview of the Unified Platform and information on the procedures to manage core systems operations in the Comverse ONE solution.

Rating, Charging, and Promotions Domain

Documentation for this domain includes the following (in alphabetical order):

- Bulk Provisioning Guide
 - □ The *CC Batch* utility enables bulk creation of recharge vouchers and subscribers.
 - The *Bulk Provisioning* Utility enables bulk creation of anonymous accounts to support the pre-activation of pre-paid SIM cards.
- Charging Interfaces Guide

Describes the four interfaces that enable external services to support real-time authorization, rating, and charging for transactional usage: (1) the Event Charging Interface, a simple TCP/IP-based interface, (2) Open Services Access (OSA), (3) a Diameter-based interface version enhanced to take advantage of features of the Comverse ONE solution, and (4) a Diameter-based interface packet-switched version.

- Customer Care Client Provisioning Guide Real-Time
 Detailed task-oriented instructions for using Customer Care Client.
- Diameter Gateway Unit Guide

Describes the hardware, installation, configuration and maintenance of the Diameter Gateway Unit (DGU) used to connect Comverse real-time systems to external services, using the diameter protocol over IP.

- IVR Call Flows Reference
 - These all flows detail the logic flow of specific scenarios. Multiple access numbers can map to the same call flow. Different resellers have the option to publish different numbers but share the same logic.
- Network Interfaces and Notifications Guide
 Describes the operation, features, and provisioning of notifications, CAMEL-enabled services, and USSD-enabled services.
- Network Self-Care Guide

Describes the configuration, structure, and features.

- Operational Reports and Data Warehouse Utility Guide
 Describes the real-time Operational Reports Interface (ORI) and the Data Warehouse Extract Utility.
- Rating Technical Reference
 - Describes the Unified Rating Engine, which is the subsystem responsible for gathering incoming CDRs and processing them for billing.
- Recurring—Non-Recurring Charges Server Guide
 Describes all processes commonly available through the Recurring —Non-Recurring Charges Server.
- Voucher and Recharge Guide
 Describes the process by which subscribers add funds to accounts using recharge vouchers

through IVR, interaction with Customer Service, and other methods. Provides details of the Recharge Control Table, which allows resellers to provision the effects of recharges so that bonuses, discounts, and other changes to offers can result from a successful recharge. Also describes the Card Generator software used to create batches of recharge vouchers.

Billing and Financials Domain (Converged only)

Documentation for this domain includes the following (in alphabetical order):

- Advanced Invoice Numbering Guide
 Describes how to configure and use Advanced Invoice Numbering.
- Billing Reports and File Layouts User Guide Describes control reports and other file formats.
- Billing Technical Reference
 High-level descriptions of billing architecture, administration, bill generation and formatting, and system parameters
- Collections Guide
 Contains information on configuring Collections database tables, running the Collections module, and using the Collections interface.
- Invoice Designer Strings and Filters Reference
 Describes the static strings, dynamic strings, and filters in the Invoice Designer.
- Invoice Designer Technical Reference
 Describes how to configure and run Invoice Designer.
- Invoice Designer User Guide
 Describes the Invoice Designer and how to perform the tasks needed to create an invoice template.
- Journals Guide
 Describes the theory, configuration, and running of Journals processes.
- Miscellaneous Configurable Entities
 Instructions for configuring late fees, adjustments, and several other database entities used in postpaid and converged billing.
- Process Workflow Orchestration Guide
 Describes the command-line entries and the default queries for running billing-related processes via the Unified Platform.
- Taxation Guide
 Describes the configuration, operation, structure, and features of Taxation.

Customer and Order Management Domain (*Converged* only)

Documentation for this domain includes the following (in alphabetical order):

- Application Integrator Adapter Developer Kit User Guide
 Provides information necessary for the development of custom Application Integrator adapters.
- Application Integrator Add/Copy Header User Guide
 Describes the adapter that adds or copies header information in messages.
- Application Integrator Aggregator Adapter User Guide
 Describes the adapter that aggregates multiple input messages as a single composite output message.
- Application Integrator File Adapter User Guide
 Describes the configuration process and rules for the file adapter.
- Application Integrator CORBA Adapter (JacORB) User Guide
 Describes the elements and uses of the Application Integrator client and server Common Object Request Broker Architecture (CORBA) adapters for JacORB.
- Application Integrator Filemover Adapter User Guide
 Describes the use and configuration of the adapter, which is used to copy or move files from one machine to another.
- Application Integrator Generic Services User Guide
 Describes the Null adapter, Trash adapter, and Initiator adapter generic services.
- Application Integrator HTTP Adapter User Guide
 Describes the use and configuration of the adapter which provides an interface between
 HTTP clients and the Application Integrator.
- Application Integrator IPDR Adapter User Guide
 Describes use and configuration of the I adapter which converts the "compact encoding"
 form of IPDR billing record documents into a form easily parsed by the Application
 Integrator message broker.
- Application Integrator JMS Adapter User Guide
 Describes the use and configuration of the adapter, which is used with edge systems that transmit or receive JMS messages.
- Application Integrator KSI Adapter User Guide
 Describes the use and configuration of the adapter, which is used with edge systems that transmit or receive data formatted according to the Kenan Standard Interface (KSI) protocol.
- Application Integrator Operator Guide
 Describes the commands that operate the Application Integrator at creation and runtime.
- Application Integrator Python Adapter User Guide
 Describes the use and configuration of the adapter, which enables a user to run a Python script from within an integration.
- Application Integrator Retry Adapter User Guide
 Describes the use of the adapter to resend messages in case of failed transmissions.
- Application Integrator SAS Adapter User Guide
 Describes the use and configuration of the adapter, which is used with edge systems that transmit or receive data formatted according to the Comptel Mediation Device Solutions/Subscriber Administration System (MDS/SAS) protocol.
- Application Integrator Sequence Adapter User Guide
 Describes the use of the adapter to generate unique sequence numbers for messages.
- Application Integrator System Administrator Guide
 Outlines installation, sizing, operation, and administration of the Application Integrator

- and logging. Describes configuration of the user environment and commands for creation and operation of the Application Integrator.
- Application Integrator Unified API Client Adapter User Guide
 Describes the adapter which is used for interfaces based on the Unified API Client.
- Application Integrator Unified API Server Adapter User Guide
 Describes the adapter which is used for interfaces based on the Unified API Server.
- Application Integrator URL Client Adapter User Guide
 Describes the use and configuration of the adapter which makes it possible for a client to gain access to many kinds of network-accessible resources that are identified by a URL.
- Application Integrator User Guide
 Describes creating integration specifications, creating instances of the Application
 Integrator, and commands for operation of the Application Integrator. Provides a complete
 user guide for the iMaker compiler.
- Application Integrator XSLT User Guide
 Describes the use and configuration of the adapter which is used with applications (sometimes called edge systems) that transmit or receive XML- formatted data.
- Customer Center User Guide
 Detailed task-oriented instructions for using Customer Center.
- Inventory Guide
 Describes the configuration, operation, structure, and features of Inventory.
- Inventory Replenishment Guide
 Describes the operation, structure, and features of Inventory Replenishment.
- Orders Services Guide
 Describes the structure and features of Orders Services.
- Request Handling and Tracking and Service Fulfillment User Guide
 Describes the configuration, operation, structure and features of Request Handling and
 Tracking and Service Fulfillment.
- Workflow Developers Guide
 Helps new users understand the rules-based business process management system so users can create solutions and integrate Workpoint within those solutions.
- Workflow User Guide
 Describes the configuration, operation, structure, and features of Workpoint.

Customer Relationship Management

- Campaign Management Data Mapping Reference Describes how the data in DataMart is mapped to information in the Comverse ONE Customer database, the Comverse ONE ODS, and the Comverse ONE Sales and Service database.
- Campaign Management DataMart Implementation Guide
 Contains in-depth technical information on how to configure and populate the data mart
 used by all Campaign Management applications.
- Campaign Management Outbound Marketing Manager Reference
 Describes how to use the Campaign Management Outbound Marketing Manager features
 and guides you through the program's basic functionality.
- Campaign Management Quick Implementation Guide Helps novice users get started with implementing Campaign Management. It contains an overview of the product architecture, information on data mart design and creation, an explanation of how extraction works, and procedures for creating web pages, reports, lists, and campaigns.
- Campaign Management Topic Implementation Guide Provides information for implementers and professional services personnel who are creating applications that will run on an Campaign Management EpiCenter. Summarizes the Campaign Management functionality, architecture, and administration and contains indepth technical information for configuring the Campaign Management topics required for Campaign Management and analysis.
- Campaign Management User Guide
 Provides you with basic information about the Campaign Management applications.
- Customer Center User Guide
 Detailed task-oriented instructions for using Customer Center.
- Sales and Service Application Reference Contains technical reference information relevant to implementers involved in implementing and customizing CRM applications at customer sites. This book provides the reference context for the procedural information available in the Implementation Guide.
- Sales and Service Architecture Reference
 Provides technical information relevant to individuals involved in implementing the Open Architecture and the applications built on the architecture
- Sales and Service Data Dictionary Reference Includes a listing and description of the tables and columns used to store CRM operational business data. It also includes a description of the naming conventions for the tables. The target audience includes database administrators, application developers, and implementers.
- Sales and Service Dialog Designer User Guide
 Describes the Sales & Service Dialog Designer, a web-based graphical application for
 defining and editing dialogs. Includes procedures for using it.
- Sales and Service IBR Designer User Guide
 Describes how to use the IBR Designer to create Intelligent Business Rules, which can be used to implement rule-based behavior within your CRM applications.

- Sales and Service Implementation Guide
 Provides procedural information relevant to individuals involved in implementing and customizing the core and the Sales and Service applications built on the core.
- Sales and Service Integration Guide Provides overview and configuration information for the set of tools used to exchange data with a variety of back-end data sources, including generic SQL sources, Java and EJB-based sources, Web services, and other database types.
- Sales and Service Workflow Designer
 Explains how to use Workflow Designer, a web-based graphical tool for defining and editing workflows
- Sales Force Automation User and Administration Guide Contains detailed information about GUI screens and form fields that appear in the Sales Force Automation application. Also provides information on performing general procedures in the GUI and administrative tasks.

Mediation and Roaming Solutions Domain

Documentation for this domain is subdivided into Mediation/Roaming and Revenue Settlements.

Mediation and Roaming

Mediation and Roaming documentation includes the following (in alphabetical order):

- API Guide
 - Provides the concepts and functions for the Collection Application Programming Interface (CAPI), Mediation API, and Socket-Based Transmission API.
- Data Manager GUI Reference
 Contains detailed information about GUI screens and form fields that appear in the Data Manager interface
- GRID Mapping Language Developer Guide
 Describes the mediation feature components, semantics, and general syntax of the GRID Mapping Language (GML).
- Installation Guide for HP
 Describes how to install and configure the application, components, and some third-party applications associated with the HP platform.
- Installation Guide for HP Itanium
 Describes how to install and configure the application, components, and some third-party applications associated with the HP Itanium platform.
- Installation Guide for HP PA-RISC
 Describes how to install and configure the application, components, and some third-party applications associated with the HP PA-RISC platform.
- Installation Guide for IBM
 Describes how to install and configure the application, components, and some third-party applications associated with the IBM platform.
- Installation Guide for SUN
 Describes how to install and configure the application, components, and some third-party applications associated with the SUN platform.
- Mediation and Roaming User Guide
 Provides information on how to use the GUI interface, including information on using the Data System Manager application pages.
- Roaming Database Reference
 Provides reference information on the Roaming database.

- Roaming Setup Guide
 - Describes how to configure the Roaming Setup application pages. It also provides information on working with TAP, RAP, and CIBER statistics.
- Scripts Guide
 - Provides information on script files, which contain additional instructions on functions for data collection and transmission.
- System Manager GUI Reference
 Contains detailed information about GUI screens and form fields that appear in the System Manager interface
- Variable-Length GRID Guide
 Provides information on how to configure the control files for variable-length GRID.

Revenue Settlements

Revenue Settlements documentation includes the following (in alphabetical order):

- Comverse Revenue Settlements Billing System Adapter Guide
 Describes the configuration, operation, and installation for the Billing System adapter.
- Comverse Revenue Settlements Data Model Guide
 Overview of data model entities (such as partners, accounts, revenue sharing, and rate schedules) and how to configure them in the database.
- Comverse Revenue Settlements Database Reference
 Detailed descriptions of fields and tables in the database.
- Comverse Revenue Settlements Technical Reference
 Instructions for installing and operating Revenue Settlements. Also contains processing descriptions.
- Comverse Revenue Settlements User Guide
 Instructions for using the Revenue Settlements GUI.

Self-Service Solutions Domain

The Comverse ONE Self-Service Solutions domain consists of the core products plus the optional separately licensed premium products. The core products consist of the following:

- Self-Service Solutions Platform
- Self-Service Solutions Applications

Self-Service Solutions Platform Documentation

The Self-Service Solutions Platform has a comprehensive set of documentation covering the installation, configuration, and use of our products. The documentation set is divided into the following categories:

- Manuals: These manuals cover installing and using the platform.
- **Reference**: These reference documents contain information about APIs, databases, configuration files, and so on. These documents are delivered in HTML.

Self-Service Solutions Platform Manuals

Self-Service Solutions Platform manuals include the following (in alphabetical order):

Self-Service Platform Administration Guide
 Provides operations and maintenance instructions for Web applications using the Self-Service Solutions Platform.

- Self-Service Platform Communications Billing and Usage Reference
 Provides detailed descriptions of the data models and structure of the Self-Service Solutions
 Platform Communications Billing and Usage (CBU) database.
- Self-Service Platform Connectors Development Guide
 Provides instructions for developing and customizing Connectors of the Self-Service Solutions Platform.
- Self-Service Platform Core Module Development Guide
 Provides instructions for configuring and developing features of the core module of the Self-Service Solutions Platform.
- Self-Service Platform Customer Interaction Datastore Reference
 Provides detailed descriptions of the data models and the structure of the Self-Service
 Solutions Platform Customer Interaction Datastore (CID).
- Self-Service Platform Database Modules Development Guide
 Provides instructions for configuring, customizing, and developing features of the database module of the Self-Service Solutions Platform.
- Self-Service Platform Installation Guide
 Provides installation and configuration instructions for the Self-Service Solutions Platform.
- Self-Service Platform Services Guide
 Provides instructions for configuring, customizing, and developing features that use the services provided by the Self-Service Solutions Platform.
- Self-Service Platform Processors Development Guide
 Provides instructions for developing and customizing Processors of the Self-Service Solutions Platform.
- Self-Service Platform Reports Development Guide
 Provides instructions for developing and customizing Reports of the Self-Service Solutions Platform.
- Self-Service Solutions Overview Guide Provides a high-level architectural and functional description of the Comverse ONE Self-Service Solutions. It also includes a detailed description of the concepts and development process to create and deploy Self-Service Solutions.
- Self-Service Platform Web Applications Development Guide
 Provides instructions for configuring, developing, and deploying Web applications that use the Self-Service Solutions Platform.

Self-Service Solutions Platform Reference

Self-Service Solutions Platform reference documentation includes the following (in alphabetical order):

- Base Logic Manager Reference
 Describes usage syntax and configuration files for the Base Logic Manager (BLM) APIs.
 These APIs are the core services of the Self-Service Solutions Platform.
- CID2CBU Object Mapping Reference
 Describes the default mapping of Customer Interaction Datastore (CID) and
 Communications Billing and Usage (CBU) objects.
- Communications Billing and Usage Reference
 Provides detailed descriptions of fields and tables in the Communications Billing and Usage (CBU) database.
- Customer Interaction Datastore Reference
 Provides detailed descriptions of fields and tables in the Customer Interaction Datastore (CID).

- Integration Services Framework API Reference
 Describes usage syntax of the set of APIs to program connectors and other components of the Intelligent Synchronization Framework (ISF).
- Integration Services Framework Message Cache Reference
 Provides detailed descriptions of fields and tables in the Intelligent Synchronization
 Framework (ISF) Message Cache.
- Integration Services Framework Script API Reference
 Describes usage syntax of the Intelligent Synchronization Framework (ISF) script APIs to
 program the ISF connectors.
- JavaServer Page Framework for Internet Application API Reference Describes usage syntax for the JavaServer Page Framework for Internet Application (JFN) APIs. These APIs are used to build JSPs using the JFN. This framework provides basic application functions and services as the foundation of user interfaces.
- Logger Message Reference
 Provides detailed descriptions of the Self-Service Solutions Platform log messages.
- QRA API Reference
 Describes usage syntax for the Query, Reporting, and Analysis (QRA) Engine APIs. These
 APIs are used to build reports.
- UTIL API Reference
 Describes usage syntax for the UTIL package used by different components of the Self-Service Solutions Platform. This package contains a set of utilities including the logger.

Self-Service Solutions Applications Documentation

Each Self-Service Solutions Application comes with a comprehensive set of documentation covering the installation, configuration, and use of the product. The application documentation expands and complements the Self-Service Solutions Platform documentation.

The documentation set is divided into the following categories:

- **Manuals**: These manuals cover installing and using the application.
- Reference: These reference documents contain information about APIs, databases, configuration files, and so on. These documents are delivered in HTML.

Self-Service Solutions Application Manuals

A full set of these manuals is available for each Self-Service Solutions Application. The documentation set includes the following (in alphabetical order):

- Business Objects Model Reference
 Provides a detailed description of the models and entities that make up the Self-Service Solutions Application.
- Catalog Loader Reference
 Provides information about the Catalog Loader, including a functional description as well as installation, configuration, and use instructions.
- Configuration and Development Guide
 Provides instructions for configuring and developing Self-Service Solutions Application features.
- Feature Reference
 Describes the logic and provides use cases for the functional domains of the application.
- Out-of-the-Box Reference Guide
 Describes the Self-Service Solutions Application Out-of-the-Box release.
- Self-Service Installation Guide for Comverse ONE
 Provides detailed installation, configuration, and deployment instructions for the Self-Service Solutions Application alongside other elements of the Comverse ONE solution.
- Self-Service Installation and Deployment Guide Provides detailed installation, configuration, and deployment instructions for the Self-Service Solutions Application.
- Introduction
 Provides a high-level architectural and functional description of the Self-Service Solutions
 Application. It covers common features, order management, account management, and bill
 presentment.

Self-Service Solutions Application References

A full set of these references is available for each Self-Service Solutions Application. The reference documentation set includes the following (in alphabetical order):

- API Reference
 - Describes usage syntax for the Self-Service Solutions Application APIs. These APIs are used to program the user interface and manage data.
- Invoice Schema Reference
 Describes the invoice schema reference of the Self-Service Solutions Application.
- Presentation Layer Page Flow Reference
 Describes the page flows of the Self-Service Solutions Application.
- Specification Entity Relationship Diagrams
 Provides diagrams describing the actors, use cases, user activity, and storyboard in IBM Rational Rose format.

Self-Service Solutions - Separately Licensed Products

Documentation available with optional, separately-licensed premium products in the Comverse Self-Service Solutions is listed below.

Online Catalog Manager

Online Catalog Manager (OCM) documentation includes the following (in alphabetical order):

- Introduction to the Online Catalog Manager
 Provides a high-level architectural and functional description of the Online Catalog Manager.
- Online Catalog Manager Getting Started Guide
 Describes the best way to build product catalogs in the Online Catalog Manager. This manual is a template for creating end-user documentation.
- Online Catalog Manager Installation and Configuration Guide
 Provides installation and configuration instructions for the Online Catalog Manager.
- Online Catalog Manager User Documentation Template
 Describes the use of the Online Catalog Manager. This manual is a template for creating end-user documentation. This manual covers many common concepts and procedures of the OCM.
- Online Catalog Manager User Guide
 Provides a detailed description of the concepts and use of the Online Catalog Manager. The topics include:
 - Managing Media Files
 - Managing Offers
 - Managing Prices
 - Managing Products
 - Managing Properties
 - Managing Reference Data
 - Publishing

Business Self-Service

The Business Self-Service product includes the standard Application documentation, plus the following manual:

Business Self-Service User Guide
 A guide to using the Business Self-Service UI.

CSR Portal

The CSR Portal product includes the standard Application documentation, plus the following manual:

CSR Portal User Guide
 A guide to using the CSR Portal UI.

COMVERSE (Documentation I	IST

Callflow Overview

Callflows detail the logic flow of specific scenarios. Multiple access numbers can map to the same callflow. Different resellers have the option to publish different numbers but share the same logic.

The operator publishes two numbers:

- 1. One for the subscriber to call from their own phone.
- 2. Another for the subscriber to call from a different phone.

The access number profile is checked to determine if the caller is to be prompted for their number or not.

Operators frequently customize default callflows. In particular:

- Admin menu
- Add languages (English is delivered as the default)
- Create additional phrases



See the Network Self-Care Guide fro more information on the operation of the Interactive Voice response ('IVR') system.



There are some differences in behavior between IVR Self-Care and Legacy (SLF) IVR. However, since no customer is running both IVR Self-Care and Legacy IVR simultaneously, these differences do not impact the end users.

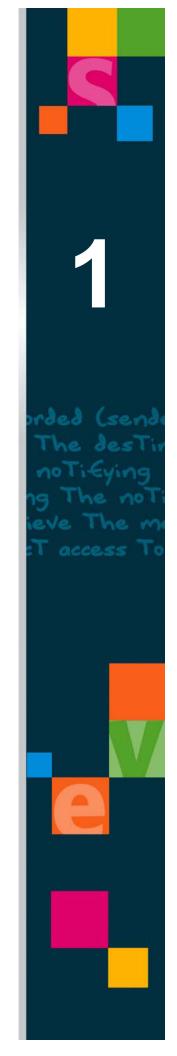
List of Legacy SLU IVR Callflows (RT)

New PPS Invocation	3
Call Termination - G, J2	8
Check for any Suspend Intercepts	9
Account Initialization Call	12
Collect Destination Number	27
Admin Function - CF_2	28
Customer Care Invocation Attempt - JP_2	29
Administrative Menu Functions - A, D	30
Information Server Invocation Attempt	32
Recharge Server Invocation Attempt	36
Language Selection Invocation Attempt	42
Language Set Invocation Attempt	44
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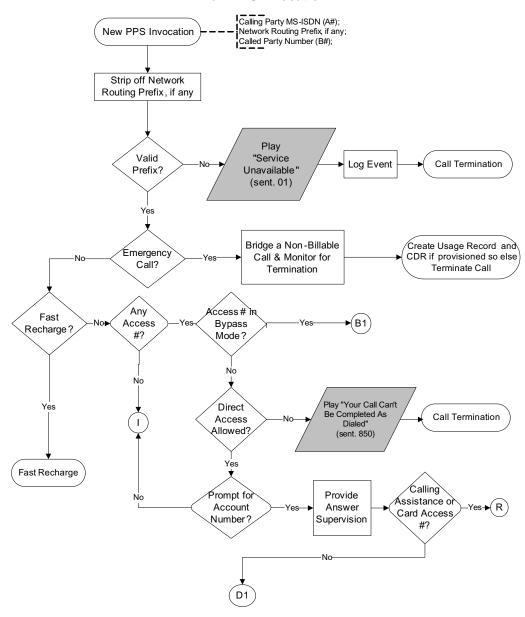
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Chapter 1 Legacy SLU IVR

Callflows (RT)



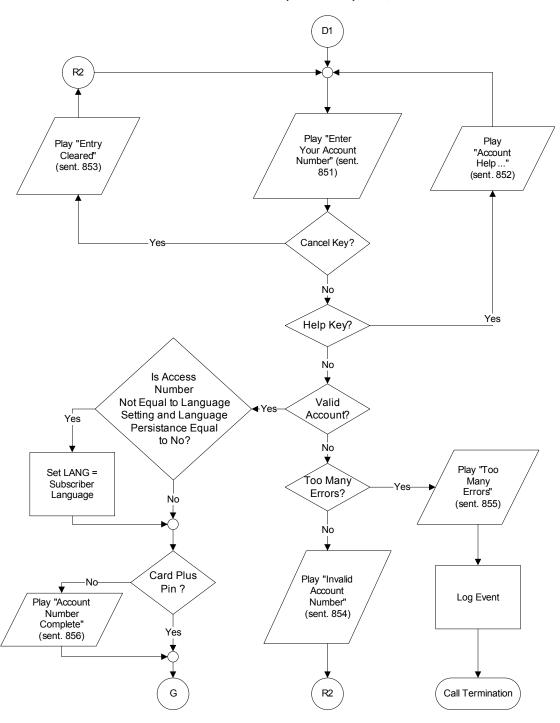
New PPS Invocation



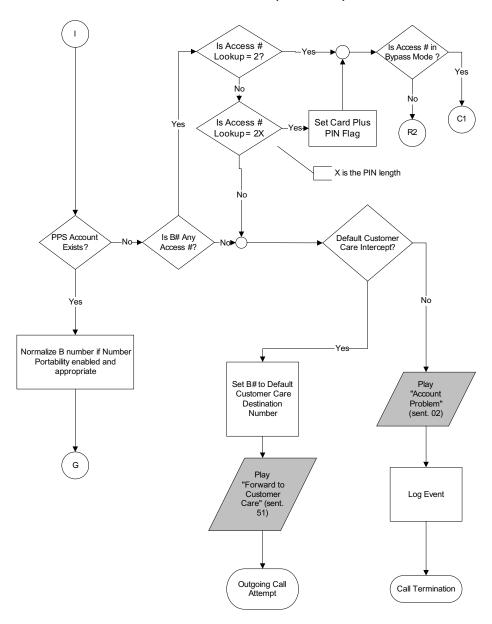


4 Chapter 1

New PPS Invocation (continued) - D1, R2

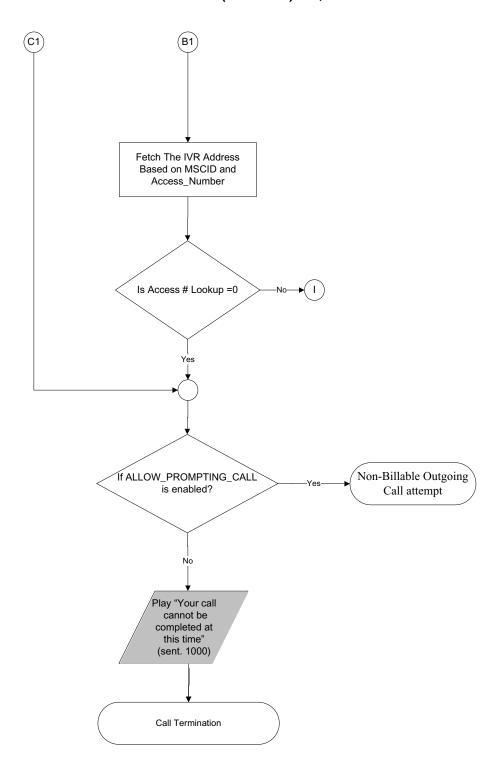


New PPS Invocation (continued)- I



6 Chapter 1

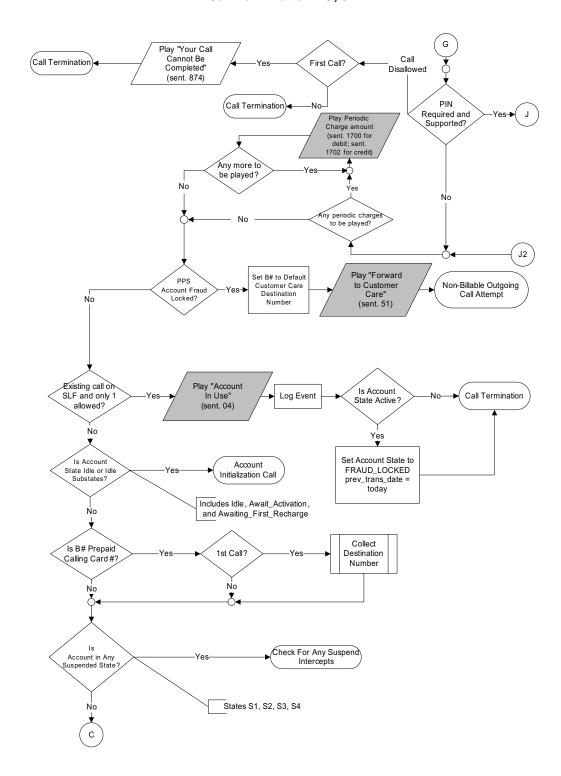
New PPS Invocation (continued)- B1, C1





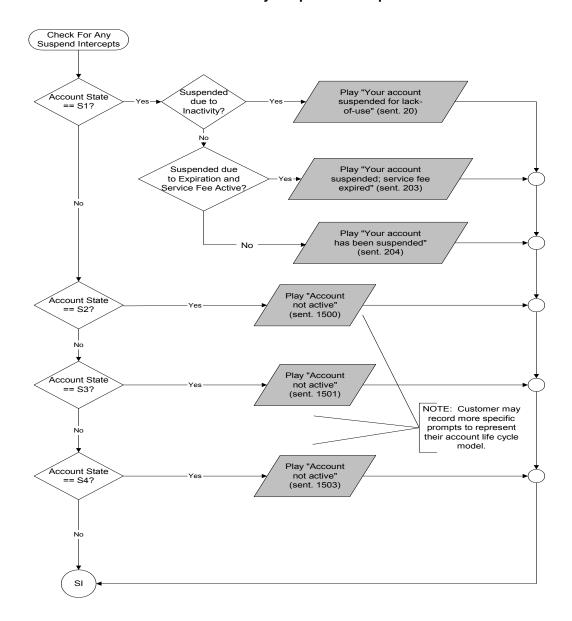
8 Chapter 1

Call Termination - G, J2





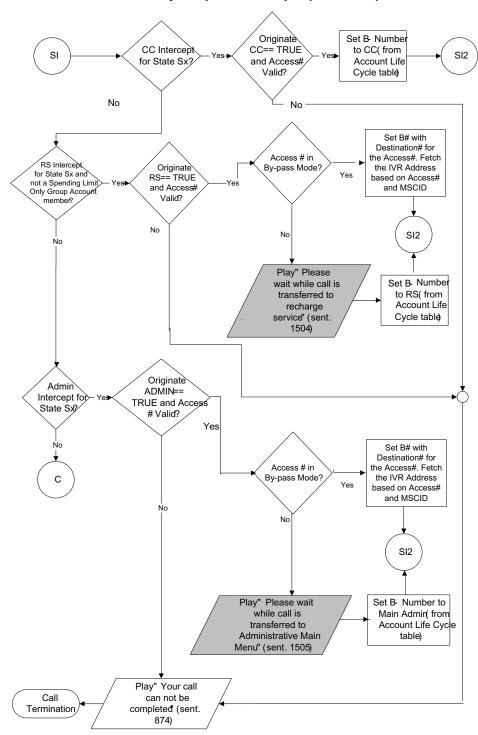
Check for any Suspend Intercepts





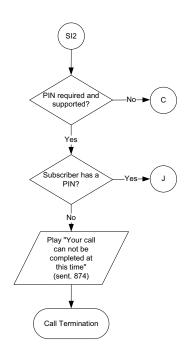
10 Chapter 1

Check for any Suspend Intercepts (continued) - SI



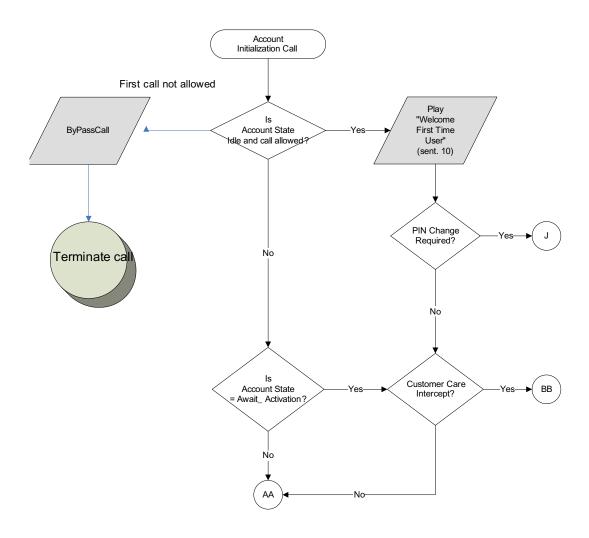


Check for any Suspend Intercepts (continued) - SI2



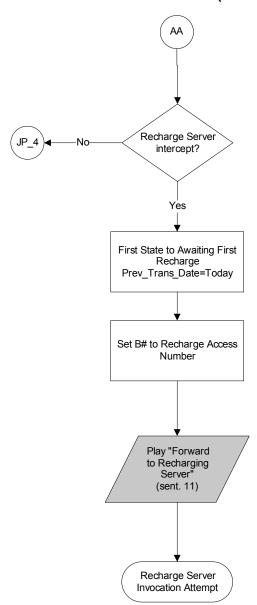
12 Chapter 1

Account Initialization Call



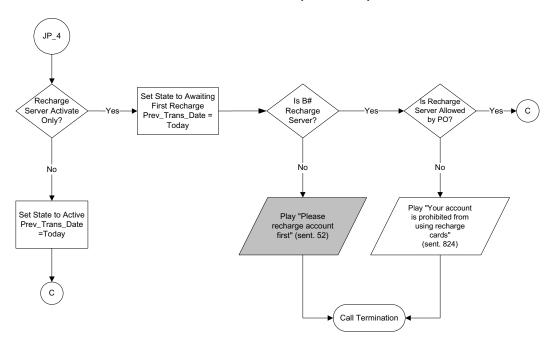


Account Initialization Call (continued) - AA



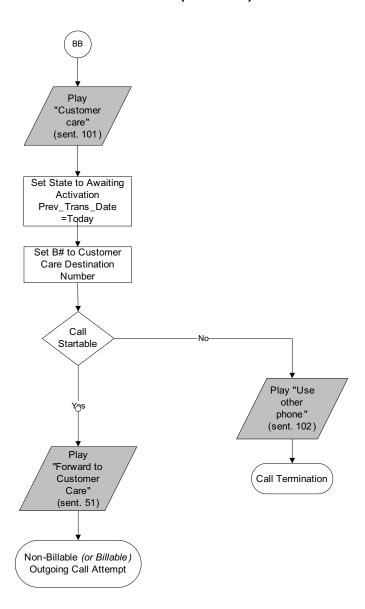


Account Initialization Call (continued) - JP_4



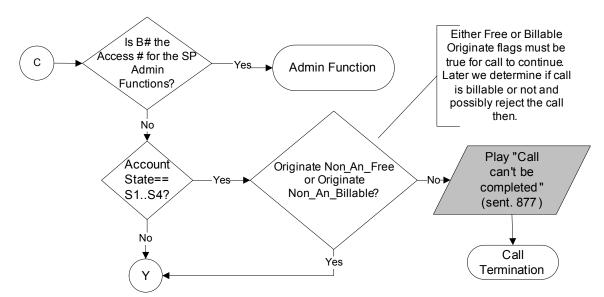


Account Initialization Call (continued) - BB



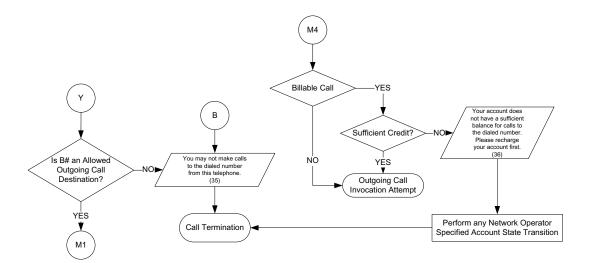


Account_Initialization_Call (continued) - C



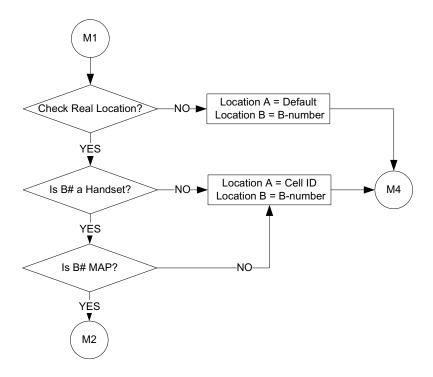


Account Initialization Call (continued) - Y, B, M4

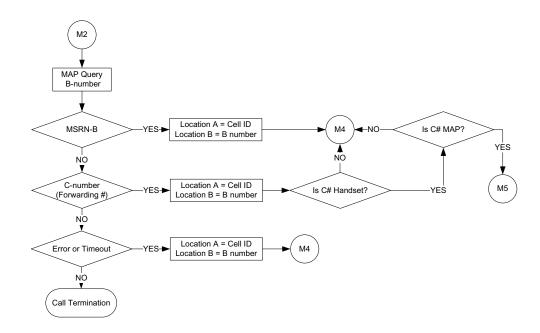




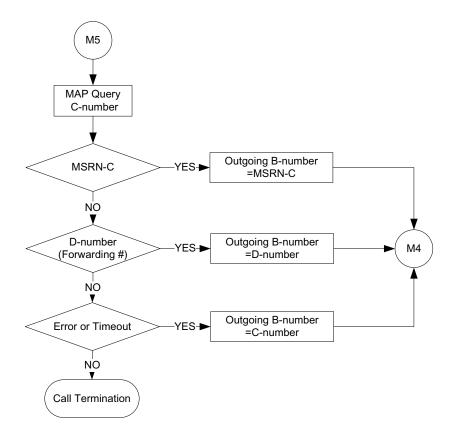
Account Initialization Call (continued) - M1



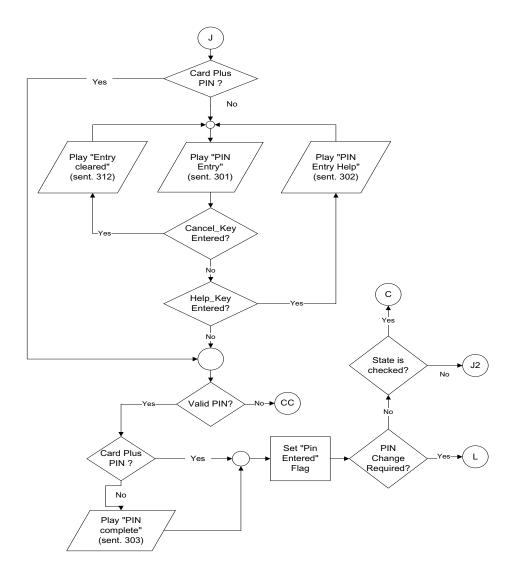
Account Initialization Call (continued) - M2



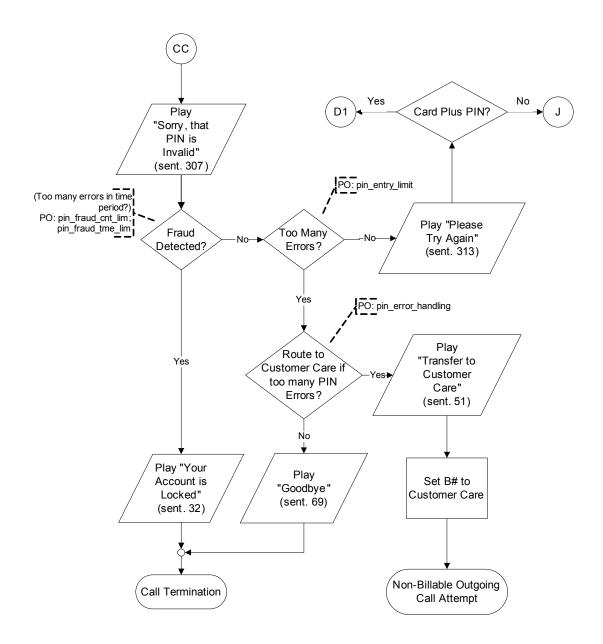
Account Initialization Call (continued) - M5



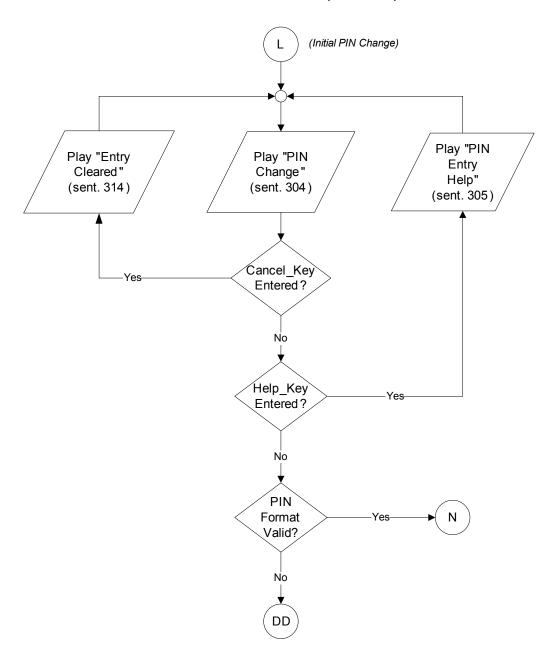
Account Initialization Call (continued) - J



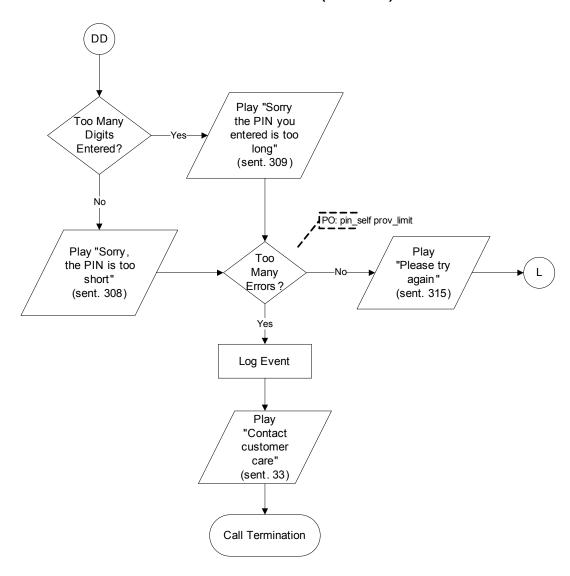
Account Initialization Call (continued) - CC



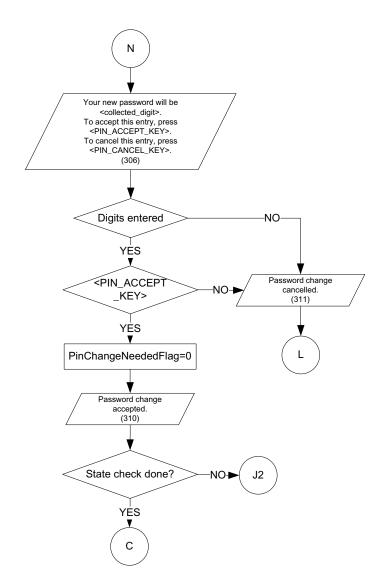
Account Initialization Call (continued) - L



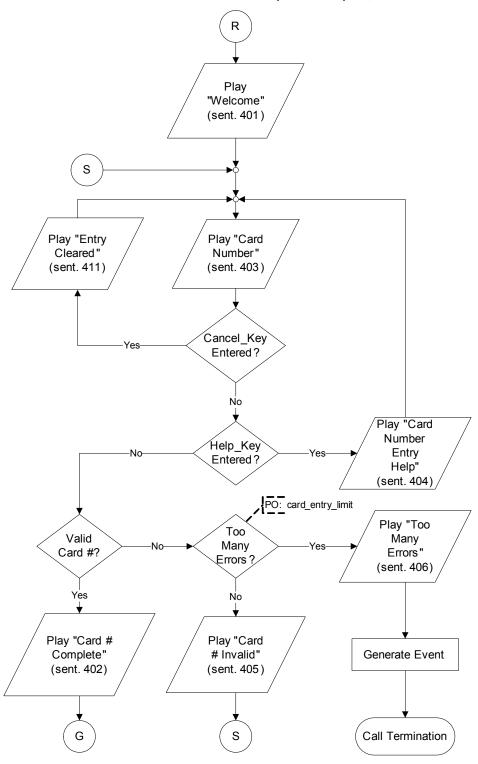
Account Initialization Call (continued) - DD



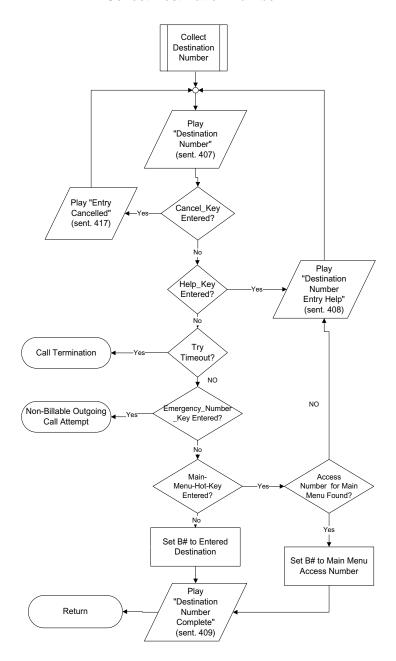
Account Initialization Call (continued) - N



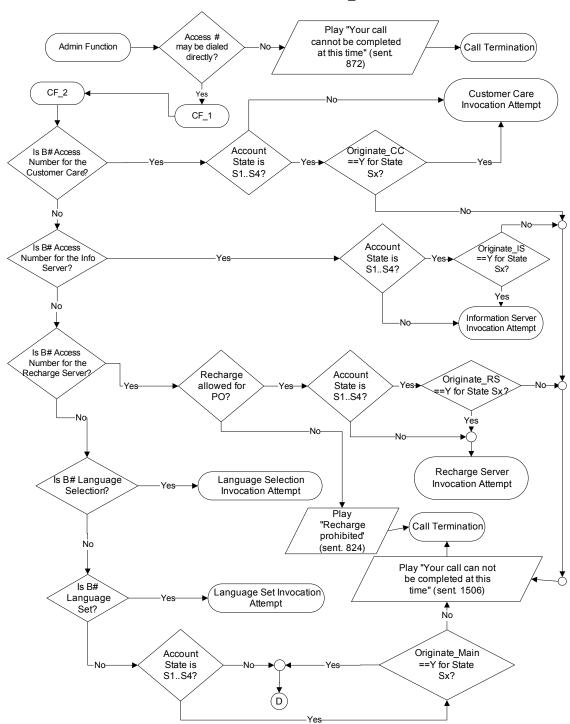
Account Initialization Call (continued) - R, S



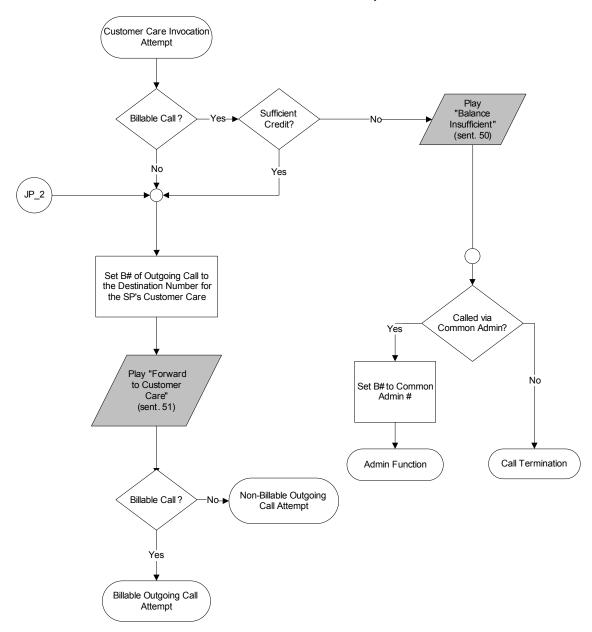
Collect Destination Number



Admin Function - CF_2

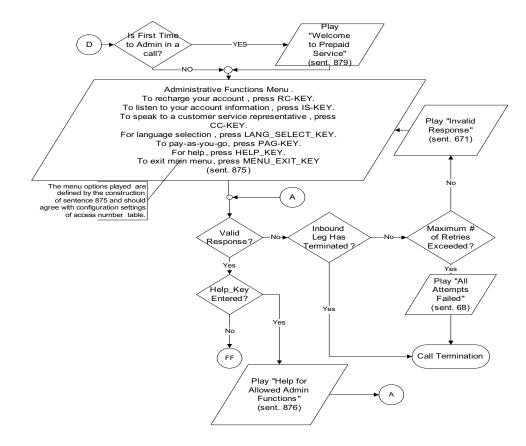


Customer Care Invocation Attempt - JP_2

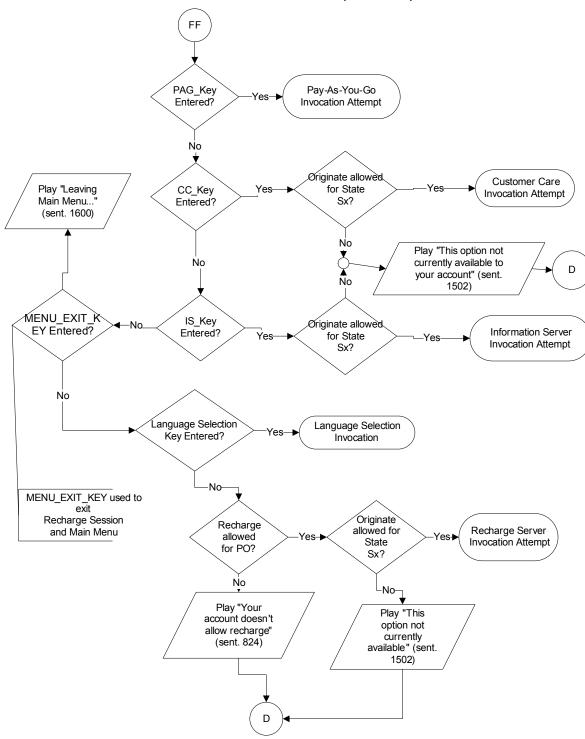




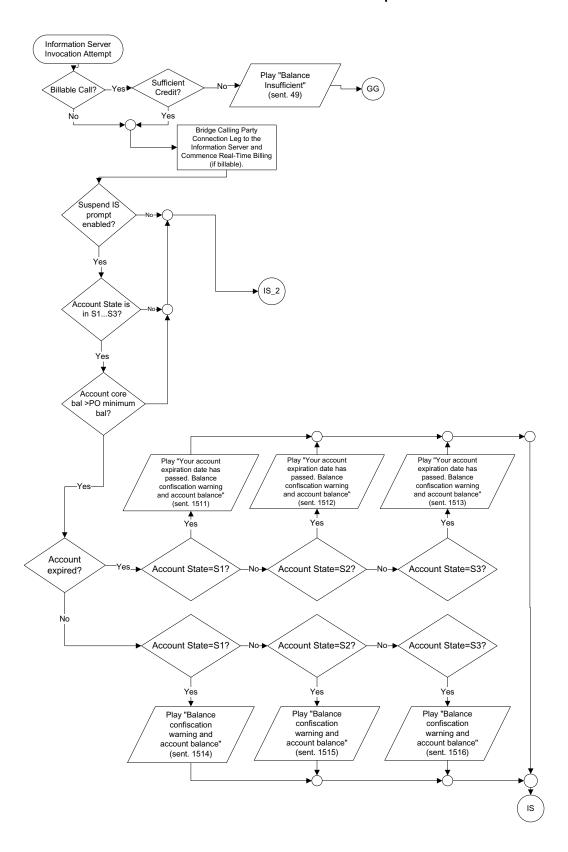
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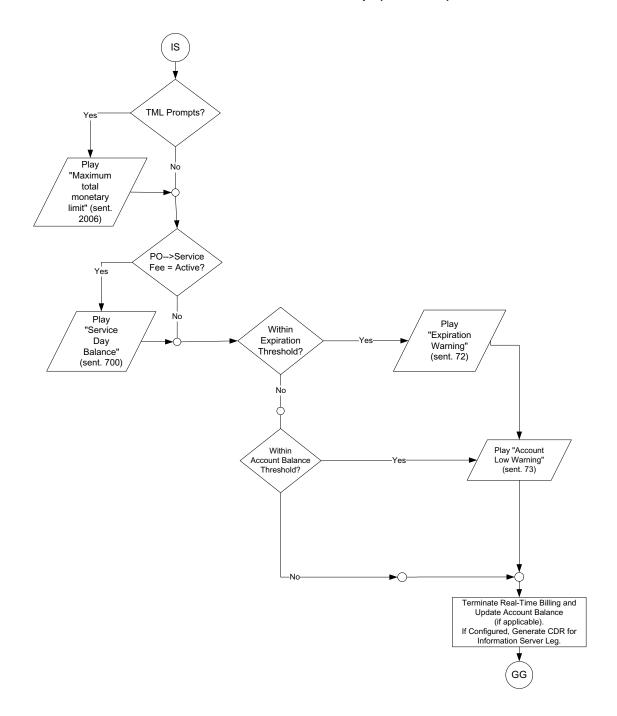
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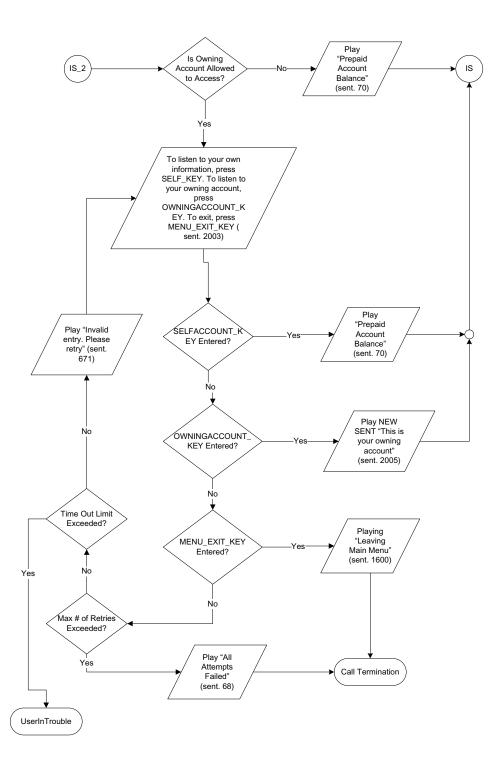
Information Server Invocation Attempt



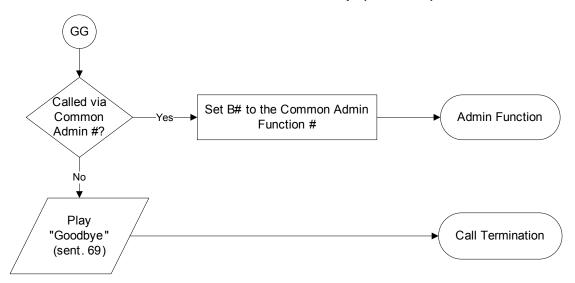
Information Server Invocation Attempt (continued) - IS



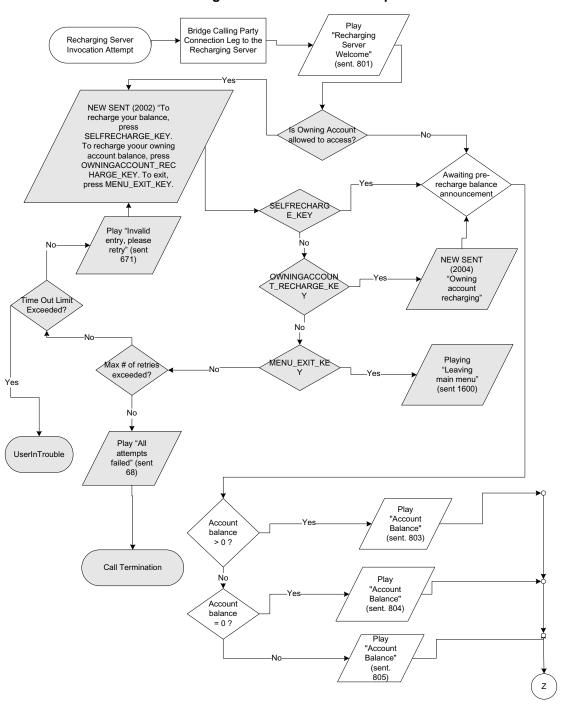
Information Server Invocation Attempt (continued) - IS_2



Information Server Invocation Attempt (continued) - GG

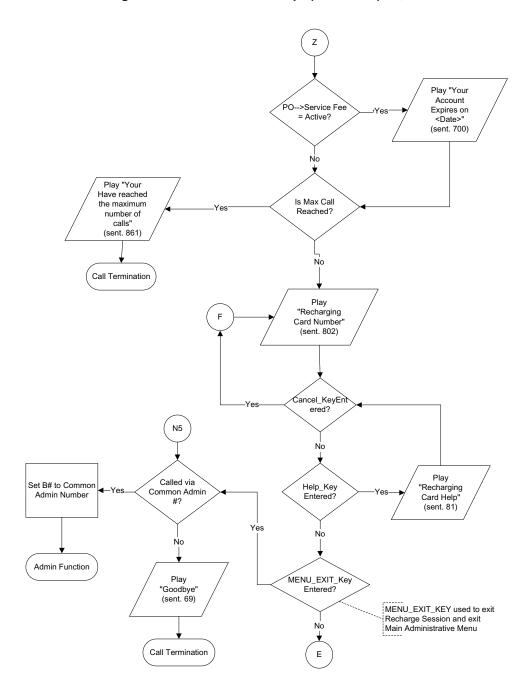


Recharge Server Invocation Attempt

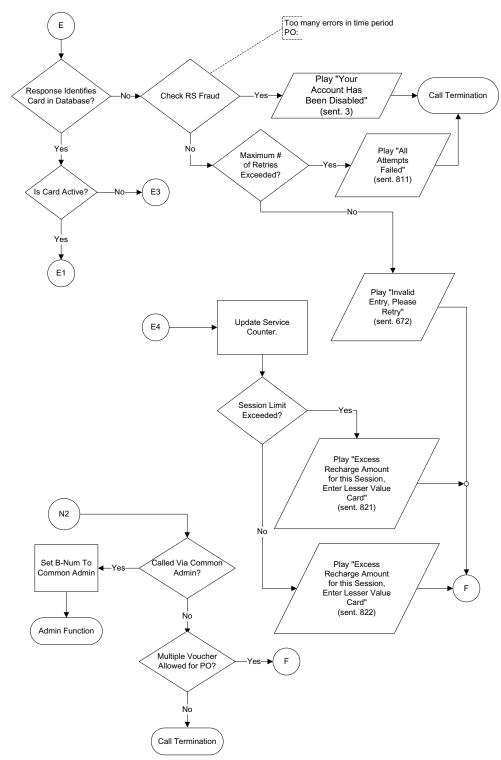




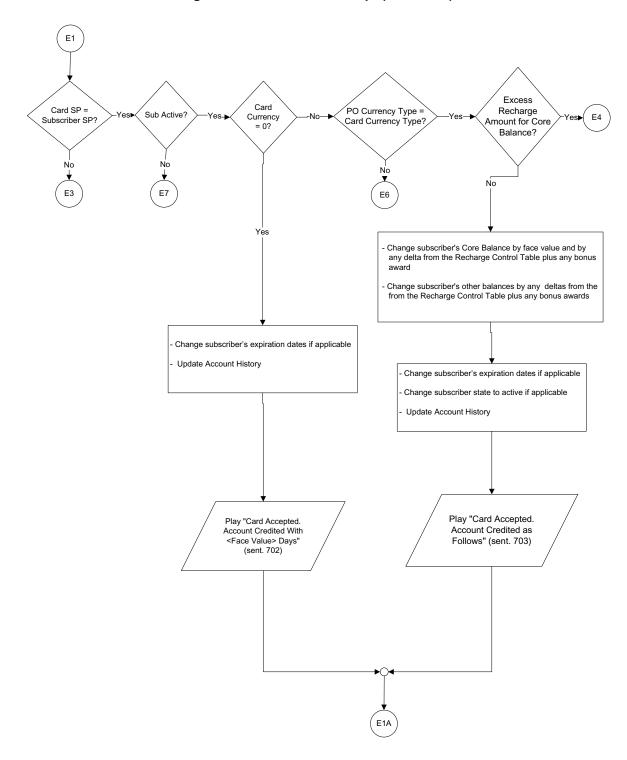
Recharge Server Invocation Attempt (continued) - F, Z



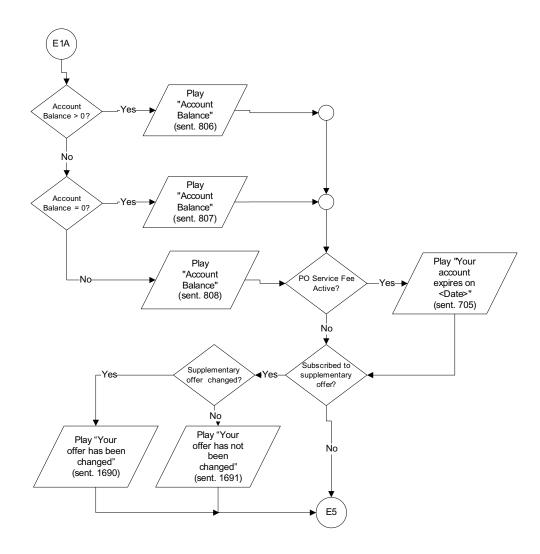
Recharge Server Invocation Attempt (continued) - E, E4, N2



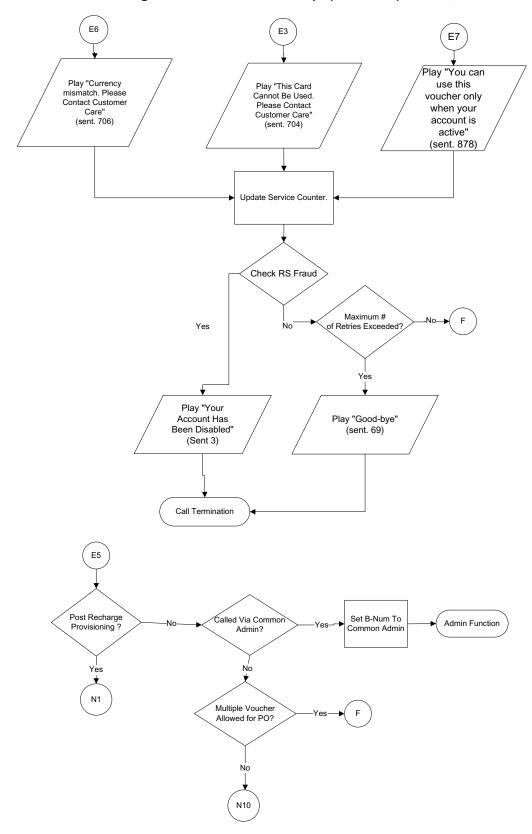
Recharge Server Invocation Attempt (continued) - E1



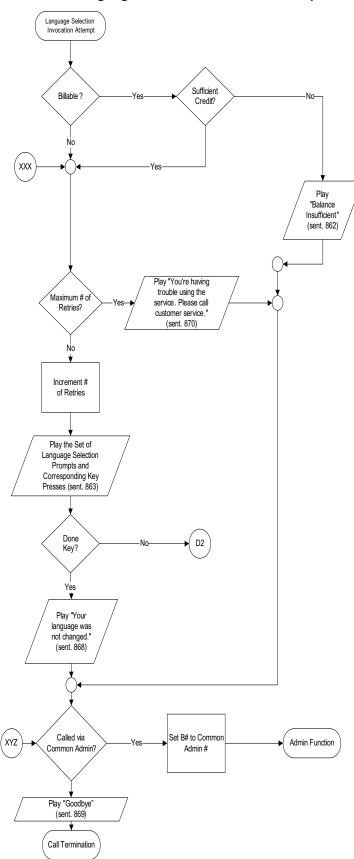
Recharge Server Invocation Attempt (continued) - E1A



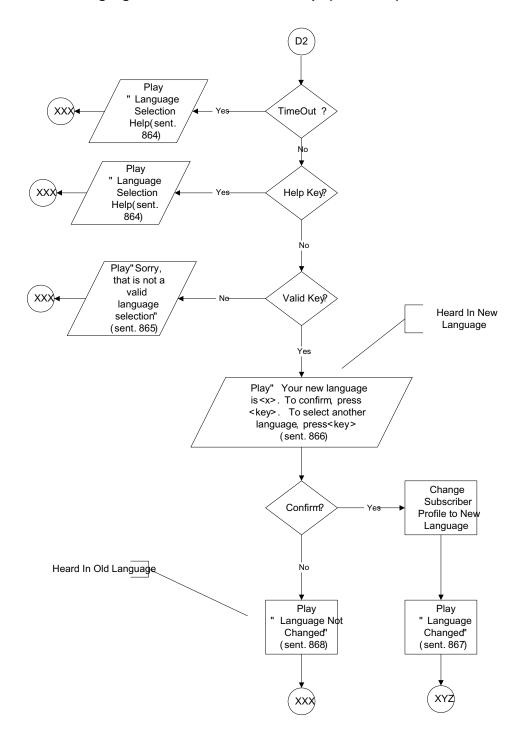
Recharge Server Invocation Attempt (continued) - E3, E5, E6, E7



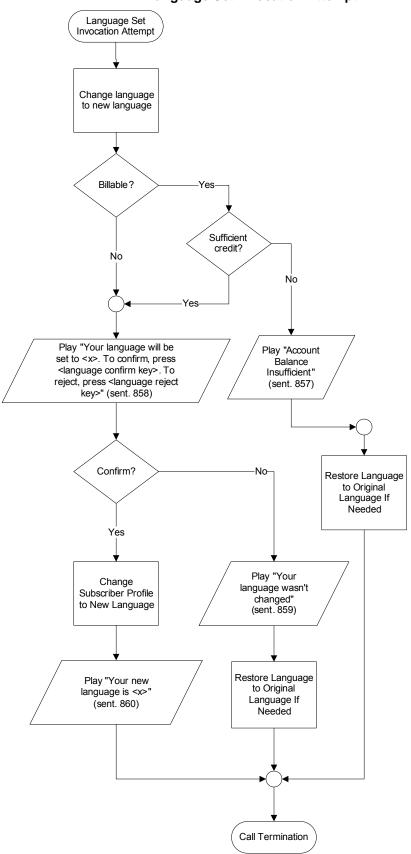
Language Selection Invocation Attempt



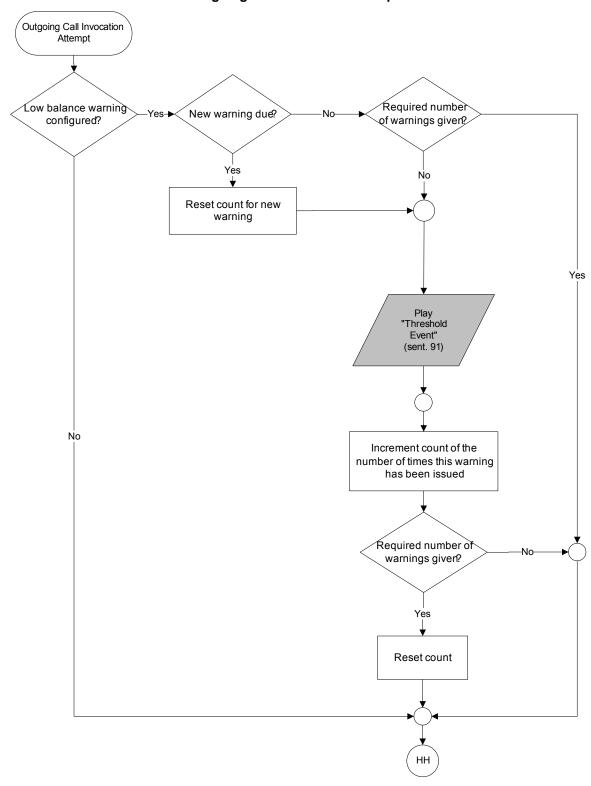
Language Selection Invocation Attempt (continued) - D2



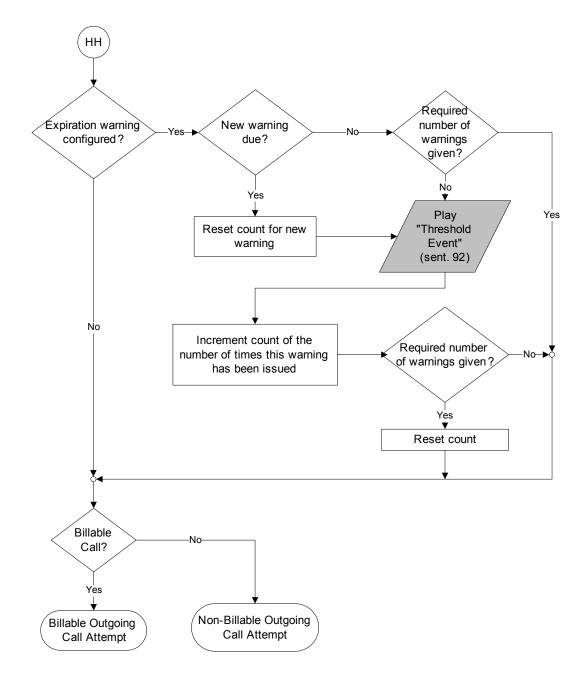
Language Set Invocation Attempt



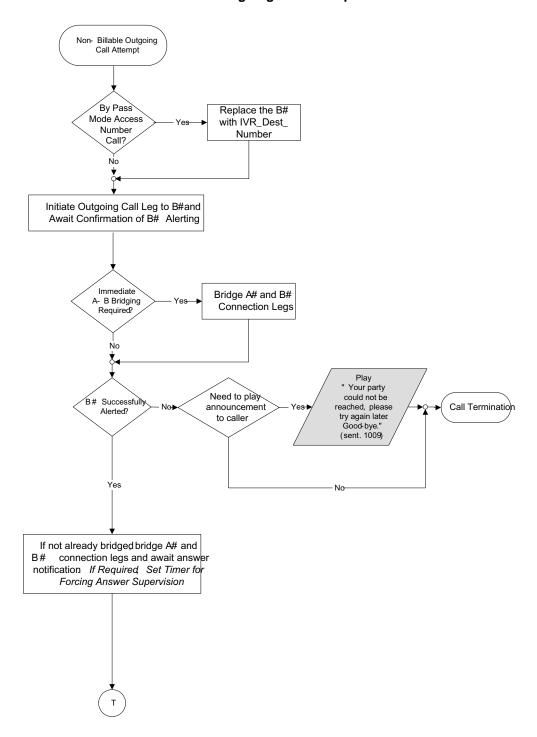
Outgoing Call Invocation Attempt



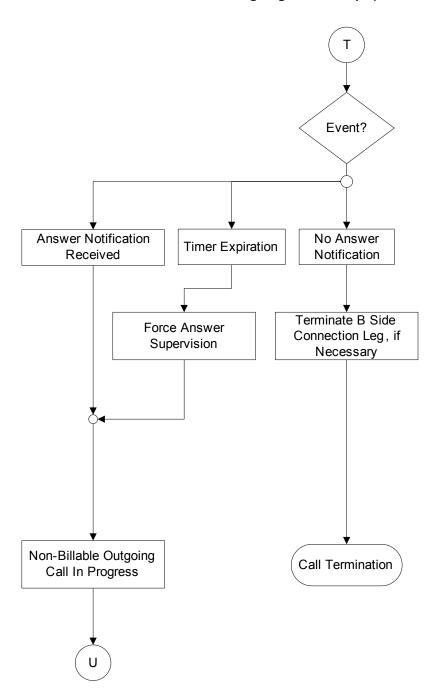
Outgoing Call Invocation Attempt (continued) - HH



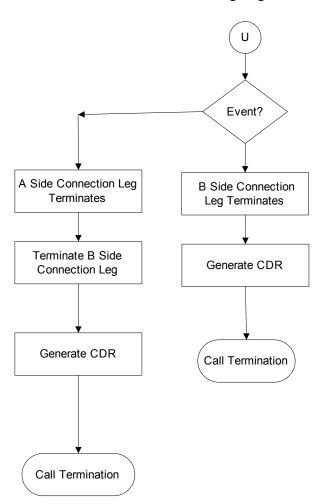
Nonbillable Outgoing Call Attempt



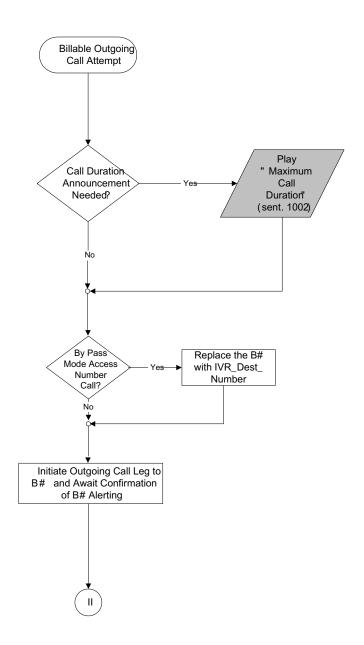
Nonbillable Outgoing Call Attempt (continued)- T



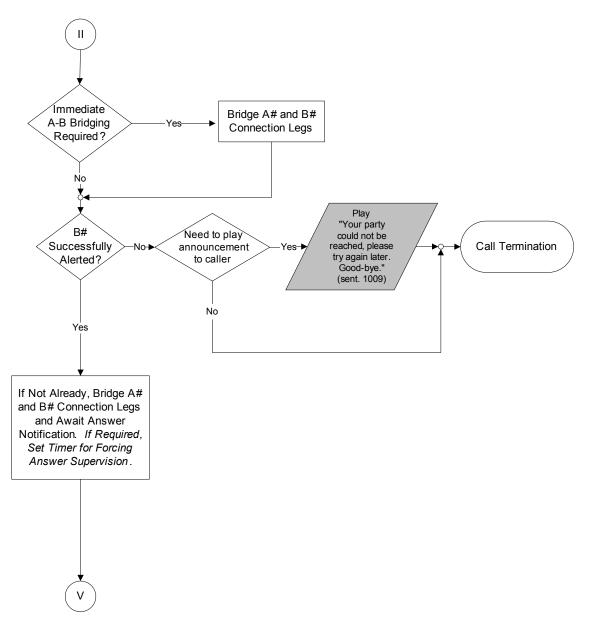
Nonbillable Outgoing Call Attempt (continued) - U



Billable Outgoing Call Attempt



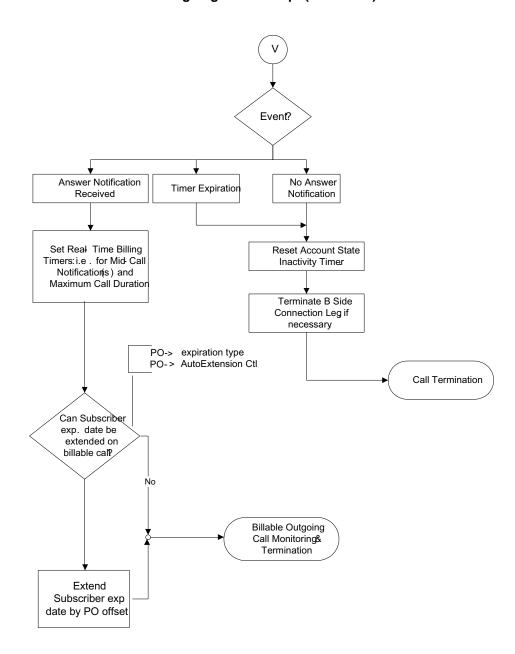
Billable Outgoing Call Attempt (continued) - II





The shaded boxes represent precall and/or terminating announcements that are candidates for switch-based announcements using the external IP feature.

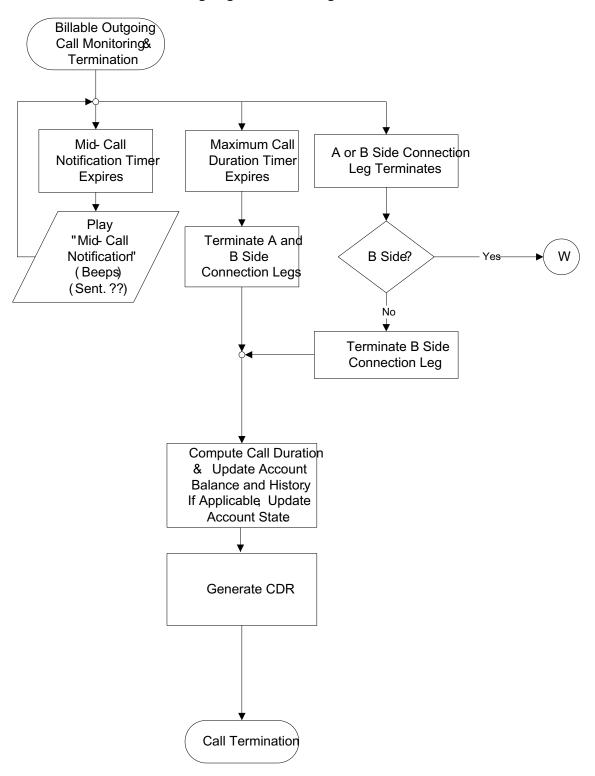
Billable Outgoing Call Attempt (continued) - V





Mid-call notifications are not available in all protocols.

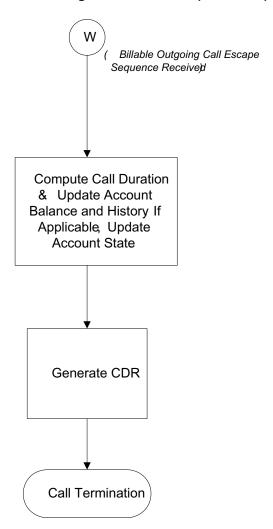
Billable Outgoing Call Monitoring and Termination



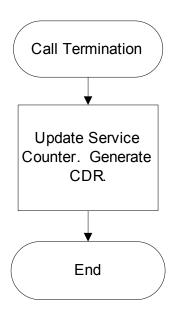


Mid-call notifications are not available in all protocols.

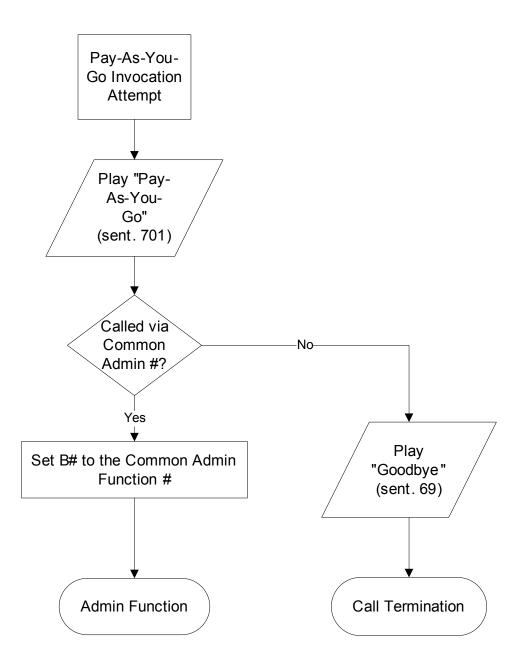
Billable Outgoing Call Monitoring and Termination (continued) - W



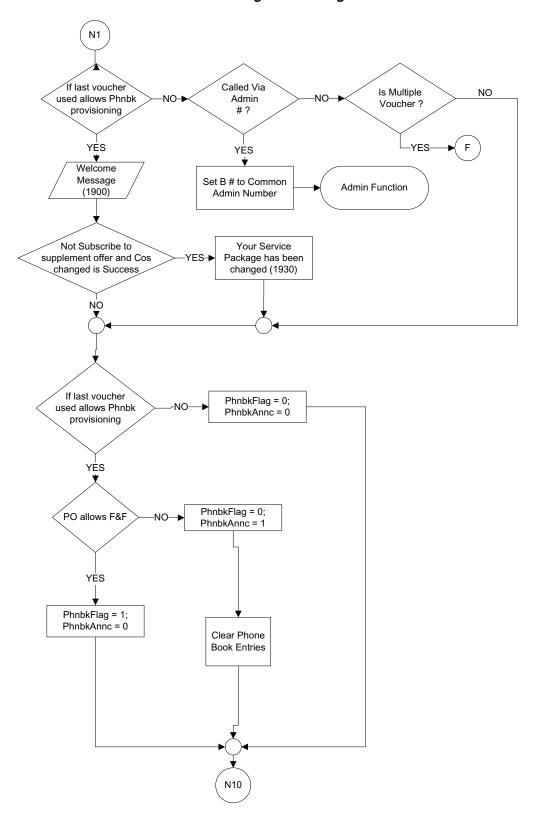
Call Termination



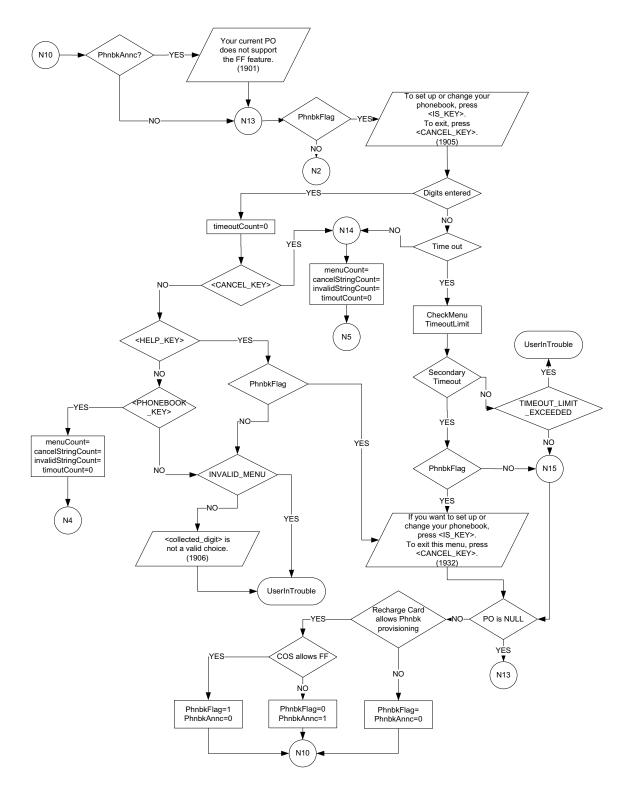
Pay-As-You-Go Invocation Attempt



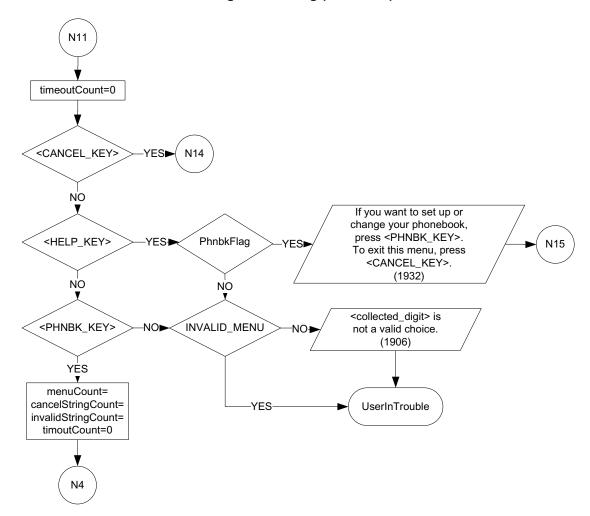
Post Recharge Processing - N1



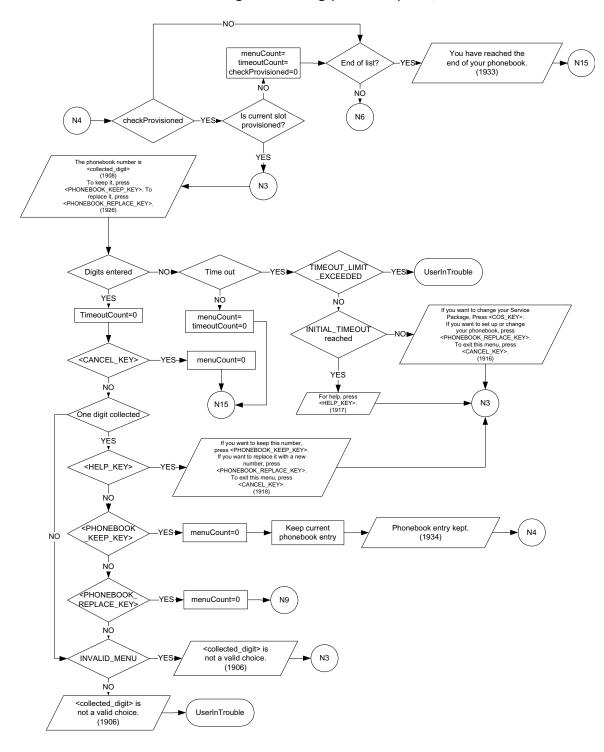
Post Recharge Processing (continued) - N10, N13, N14, N15



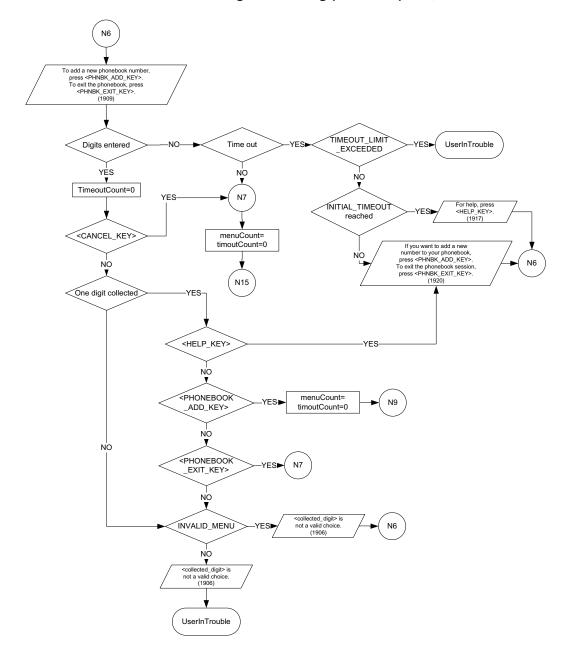
Post Recharge Processing (continued) - N11



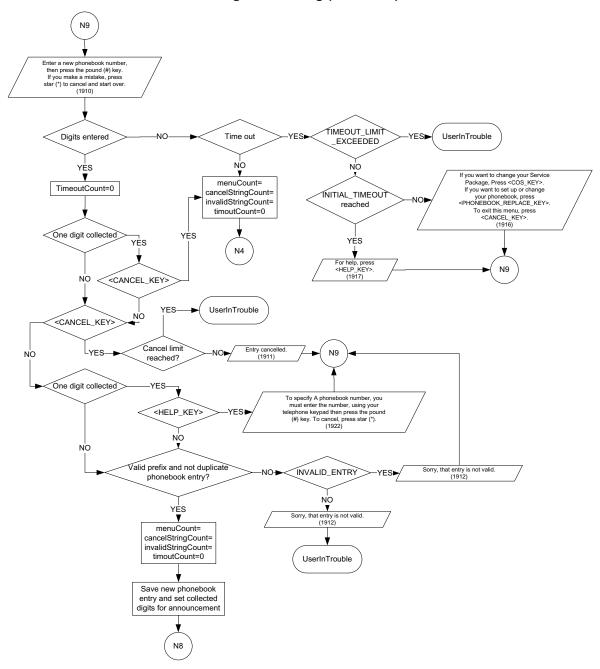
Post Recharge Processing (continued) - N3, N4



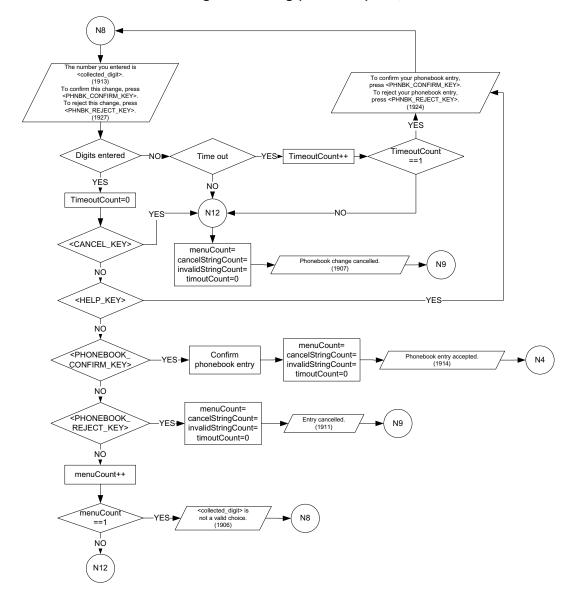
Post Recharge Processing (continued) - N6, N7



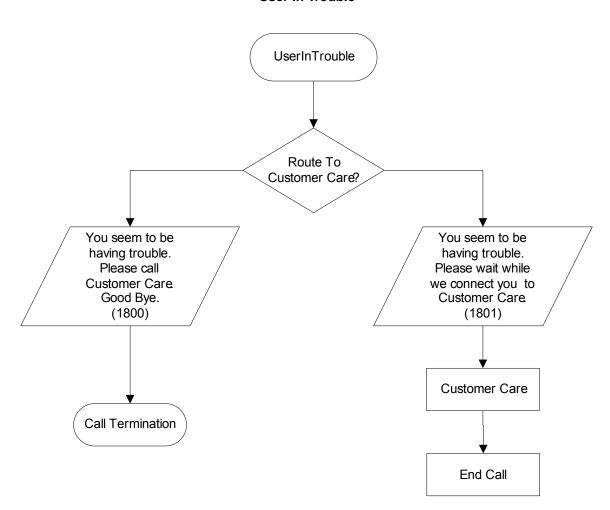
Post Recharge Processing (continued) - N9



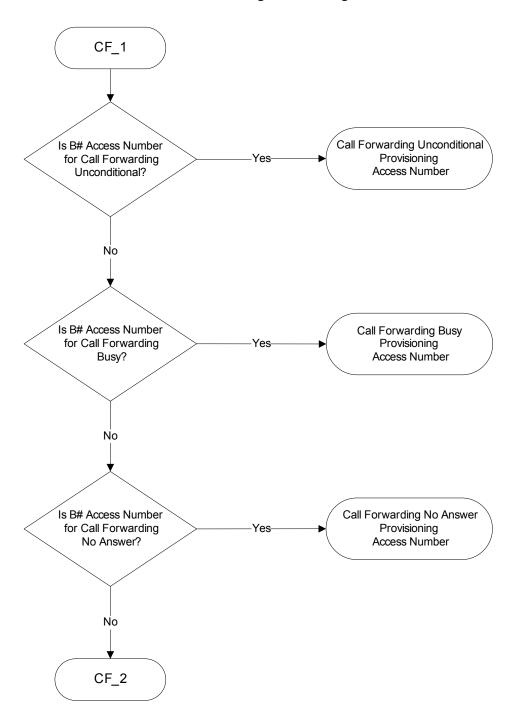
Post Recharge Processing (continued) - N8, N12



User In Trouble

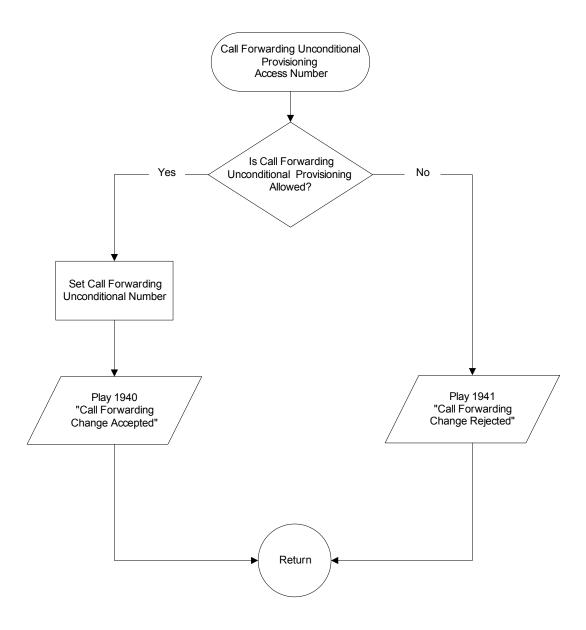


Call Forwarding Provisioning - CF_1



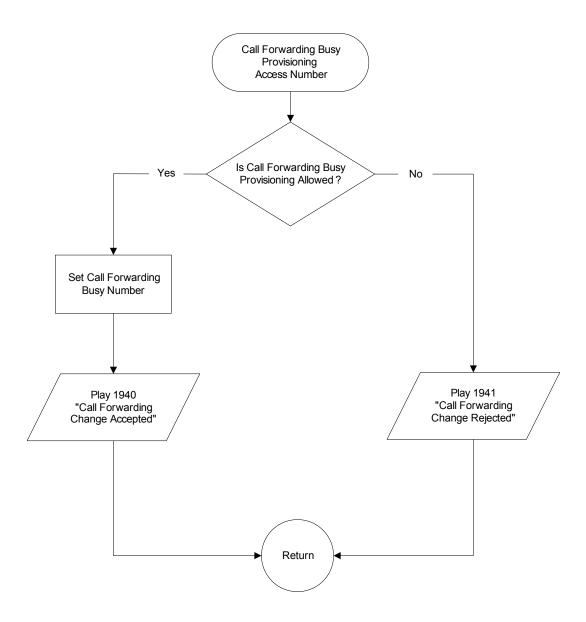


Call Forwarding Unconditional Provisioning Access Number



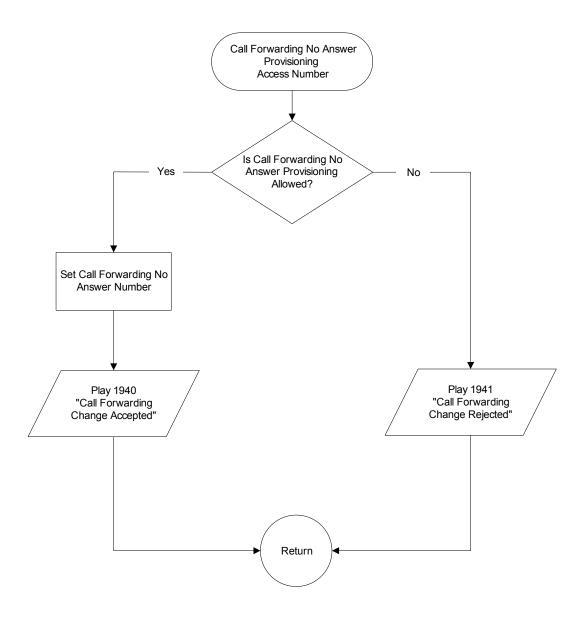


Call Forwarding Busy Provisioning Access Number





Call Forwarding No Answer Provisioning Access Number



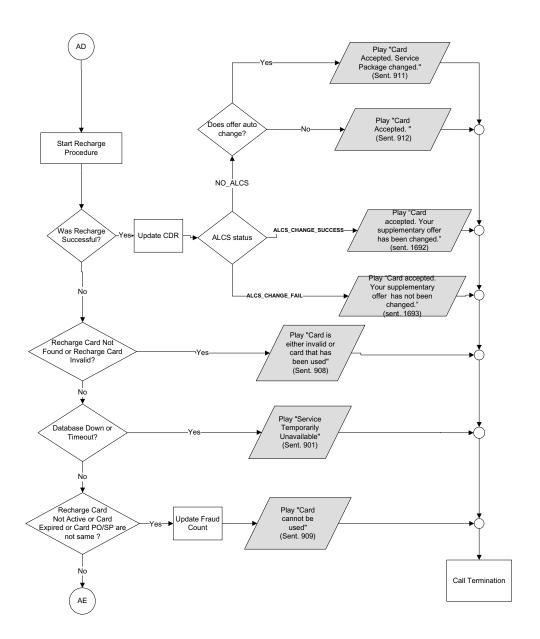


Fast Recharge Fast Recharge Calling Party Lookup Play "Service Calling Party Lookup Successful? Temporarily No (Error or unavailable" Timeout) (Sent. 901) Yes Play "Account Number Is Calling Party Valid? Invalid" (Sent. 903) Yes Play "Card No. Is Voucher Entered Invalid" Number Null? (Sent. 913) No Play "Your Account has Is Subscriber Fraud been Disabled" Locked? (Sent. 902) No Play "Acct. Calling Party Prohibited from Allowed to use Recharge card? using Recharge " (Sent. 904) Yes Call Termination



The shaded boxes represent precall and/or terminating announcements that are candidates for switch-based announcements using the external IP feature.

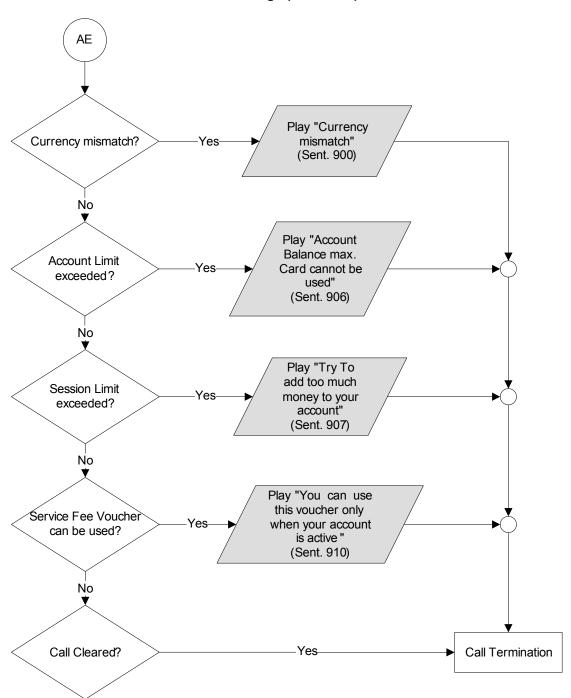
Fast Recharge (continued) - AD





The shaded boxes represent precall and/or terminating announcements that are candidates for switch-based announcements using external IP.

Fast Recharge (continued) - AE

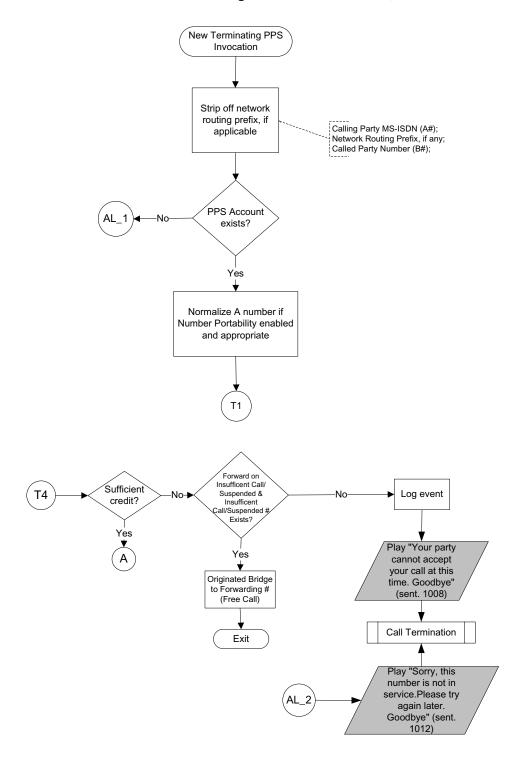




The shaded boxes represent precall and/or terminating announcements that are candidates for switch-based announcements using the external IP feature.

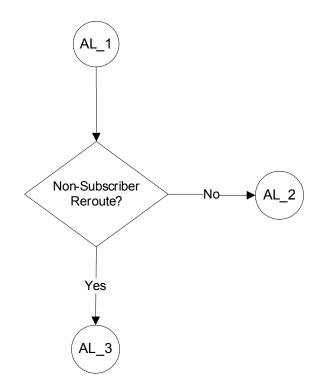
Terminated Prepaid Invocation (Incoming Calls)

New Terminating PPS Invocation - AL_2, T4

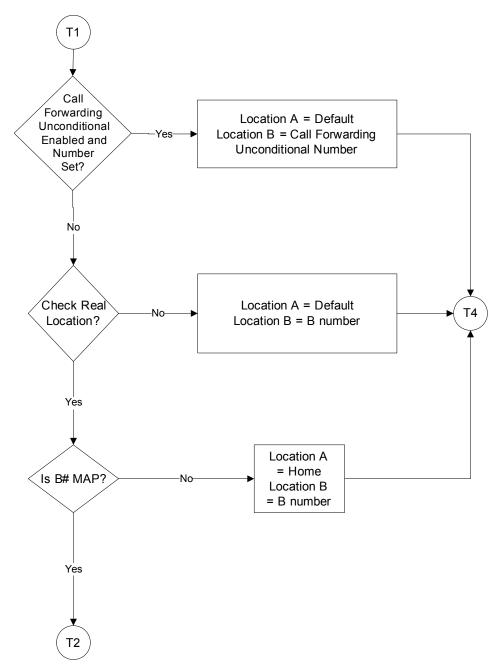




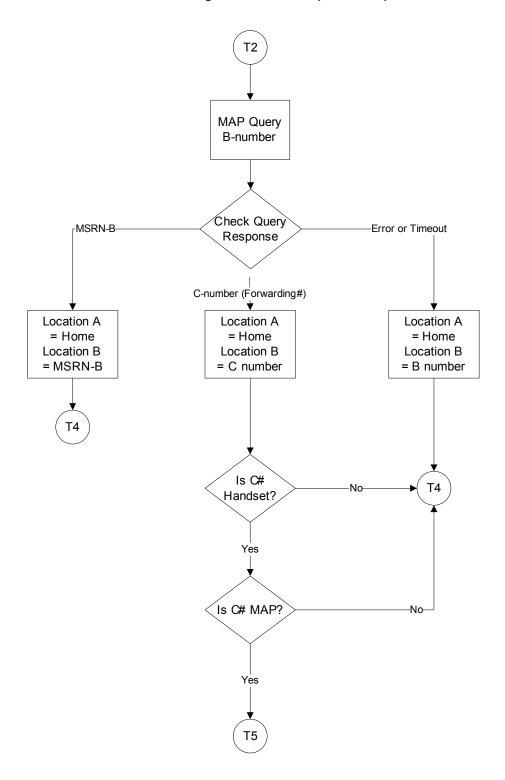
New Terminating PPS Invocation (continued) - AL_1



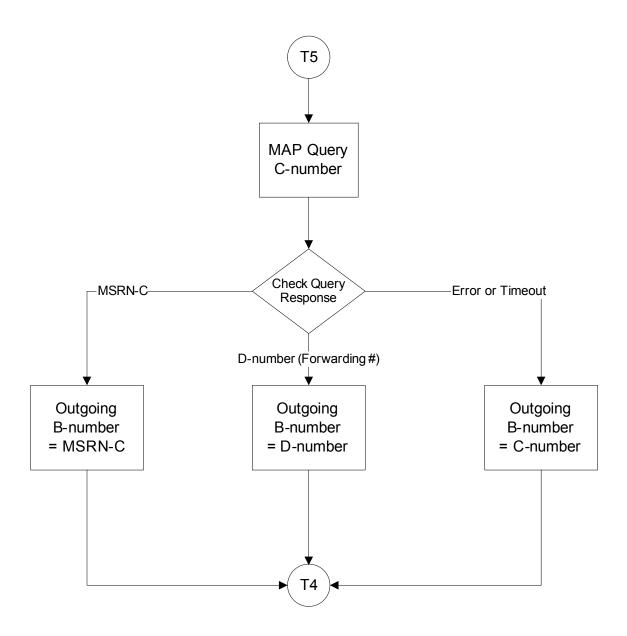
New Terminating PPS Invocation (continued) - T1



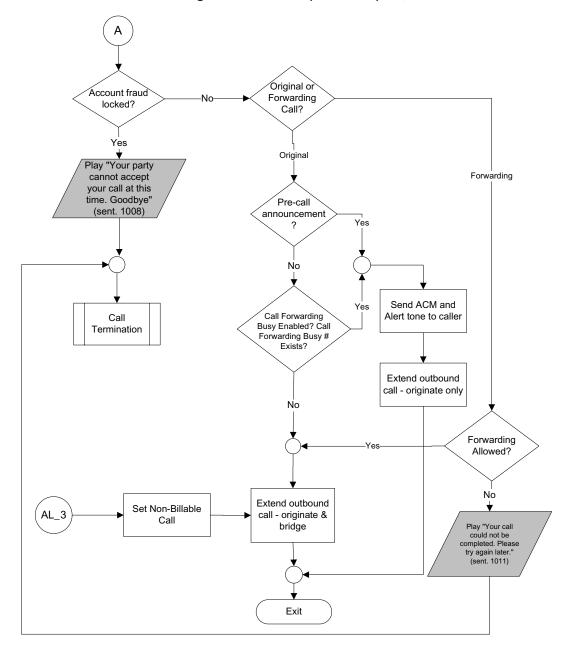
New Terminating PPS Invocation (continued) - T2



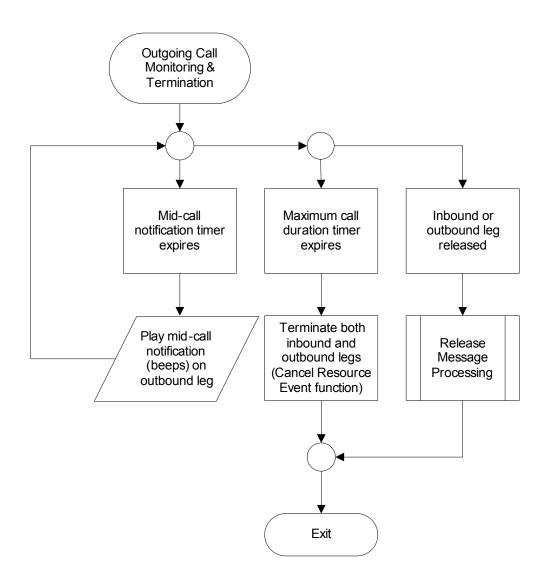
New Terminating PPS Invocation (continued) - T5



New Terminating PPS Invocation (continued) - A, AL_3



Outbound Call Answered - B



Release Message Processing - C Release Message Processing С Outbound Call released? Call Termination Yes Exit Outbound call С answered? Νo Play "Your party Call Forwarding could not be No Answer Enabled and Call Forwarding No Release reason completed. no ans T/O? Please try again later" (sent. 1011) Answer# Exists? Yes B-number= No Call Forwarding No T4 Answer number **Call Termination** Release NO ason = busy ? Update service counters and account state, if applicable. Generate CDR Call Forwarding Busy Enabled and Call Forwarding Busy# Exists? B-number= Call Forwarding Busy number T4 Release remaining leg of call, if Νo Play "Your call could applicable not be completed. Please try again later. Goodbye." (sent. 1011) Play "Your party could not be reached Please try again later." (sent. 1009) Exit



The Call Forwarding feature is not available in all protocols.

The shaded boxes represent precall and/or terminating announcements that are candidates for switch-based announcements using the external IP feature.

Chapter 2 IVR Self-Service Callflows

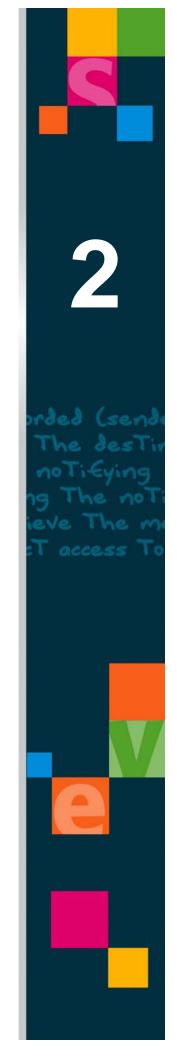


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Application Properties

Description					
Application Name	COMONE 3.5.50 RT TR 1.0 IVR Flowchart				
Language	English				
Type of Script	123				
Hours	12				
Date Format	dd'mm				
Key not in use	That key is not active (Prompt 102)				
Trilogue version					
Syntax File Name					
Script File Name	SC_123_6				
Emap File Name					
Map File					
Customer Name	COMONE 3.5.50 RT TR 1.0				
Project Manager					
Application Engineer					
Created At	5/10/2007 16 :20				
Updated At	1/14/2011 02 :44				
Flowchart Revision	01.01				

Revision Table

Rev.	Date	Author	Description	Approved by	Approval Date
00.01	6/1/2009	Peter Horn	Initial version with Invoice Inquiry and Invoice Payment.		
00.02	7/8/2009	Peter Horn	Changed Overview, Admin Menu, Admin Help, and re- ordered pages to correspond Added Hear Phone Number. Added charging for Phonebook Management.		
00.03	12/21/2010	Lian Liu	Update prompt id and call flow for 3.5.50 M*		
01.00	1/14/2011	Lian Liu	update miscpress and post state announcment.		
01.01	3/17/2011	Valery Lev	Update document Title and the footer		

Legend



Connector: Indicates a session which is described on another page of the call flow . Text within indicates the session name. The session represented by the connector is either a point of entry to or exit point from the session.



Goto and Label: These call flow components reduce the complexity of the transitions within the current page. A Goto call flow component assigns an identifier to a particular transition. To find the transition is destination point, look for the Label call flow component with the same identifier.



Transition: The arrow indicates the call flow movement from one call flow component to another, depending on both system status and user action.



Menu of Audio and Video types: Presents the user with a choice as to how the call flow should proceed: the user makes a choice by pressing a DTMF key or indicating a Timeout.



Context of Audio and Video types: Provides the user with information, e.g., the number and type of messages in a mailbox. It can be used, for example, after a Menu call flow component to confirm that the option selected for transition was carried out.



Play of Audio and Video types: Indicates that the system provides voice or video playback, e.g., a voice message, voice signature or outgoing message.



Record of Audio and Video types: Indicates that the system records a voice or video input from the user, e.g., a voice message, voice signature or outgoing message.



Process: Represents an action taken by the system, e.g., disconnect, transfer to extension.



Free Format: Allows the user to indicate that a specific function is required at this stage in the call flow, without having to insert all the details. It acts as a place marker: the user must return to this call flow component at a later stage and replace it with the appropriate call flow components.



Data Entry: Collects a specific DTMF input by the user (1-9, #, *), e.g., a subscriber ID or a mailing list number.



Decision Block: Represents a point where an internal decision is made by the system . In a call flow, such decisions are partly based on how the system is configured and partly on the system status at that moment in time.



C-Tone: The Command Ready tone -played before a menu or instructional prompt , after which user input is required .



E-Tone: The Error tone -usually played after an invalid user input, followed by an explanation of the error.



M-Tone: The Main Menu tone -usually played at the beginning of the subscriber main menu .



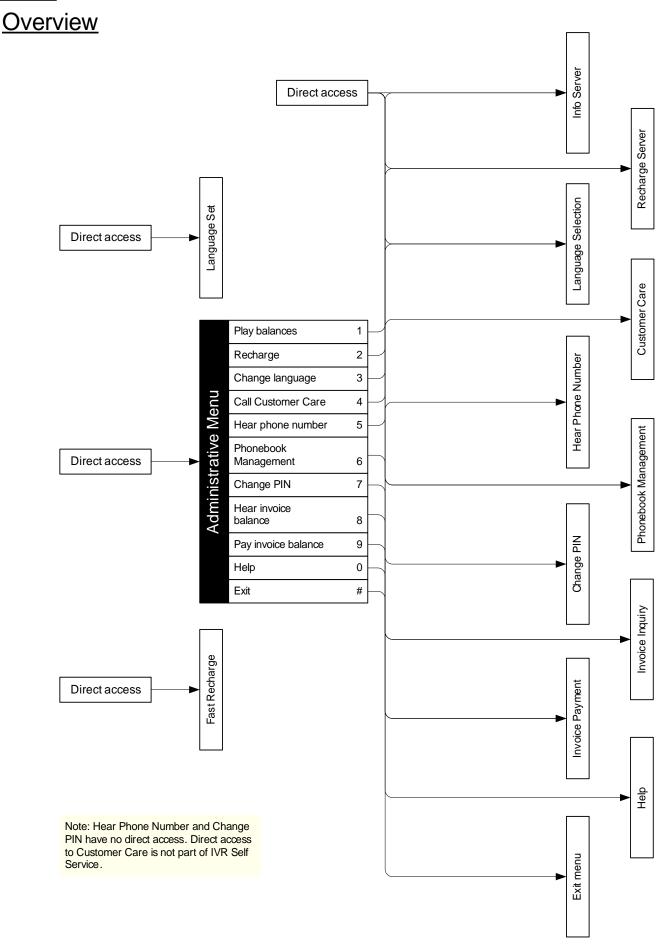
R-Tone: The Record tone-indicates to the user that recording is about to start.



F-Tone: The Fax signal-played before transferring a fax .



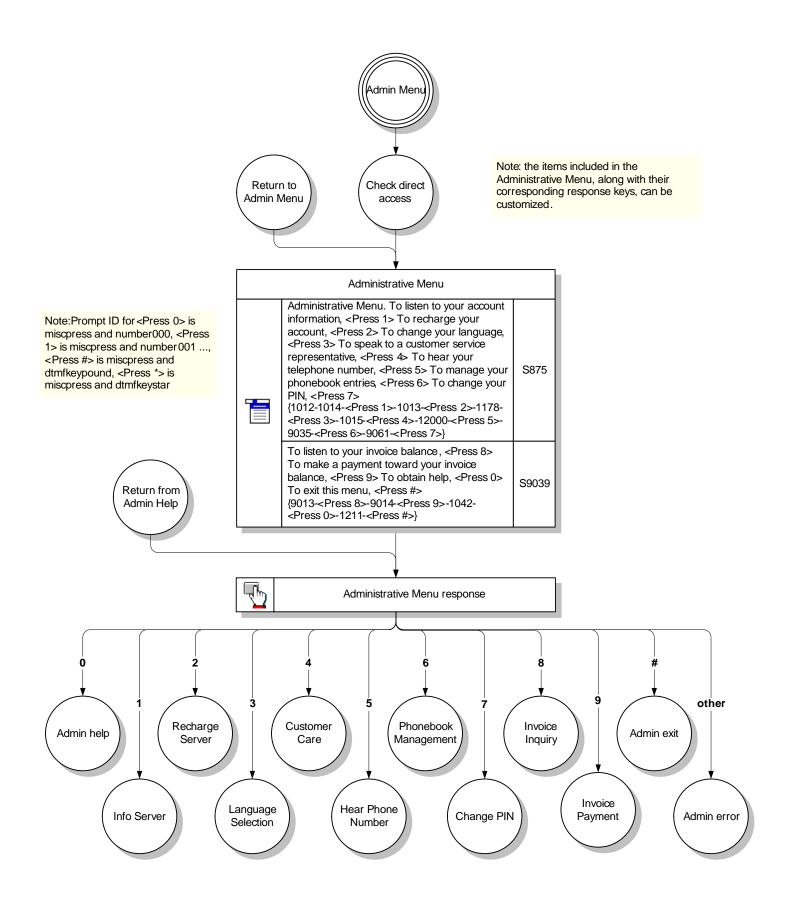
Comment: Allows the user to add a note, explaining what is going on at a given point in the call flow.



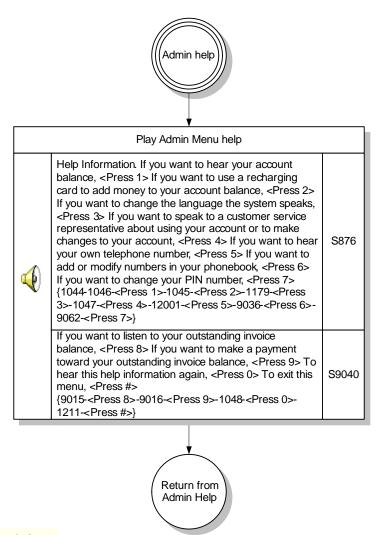
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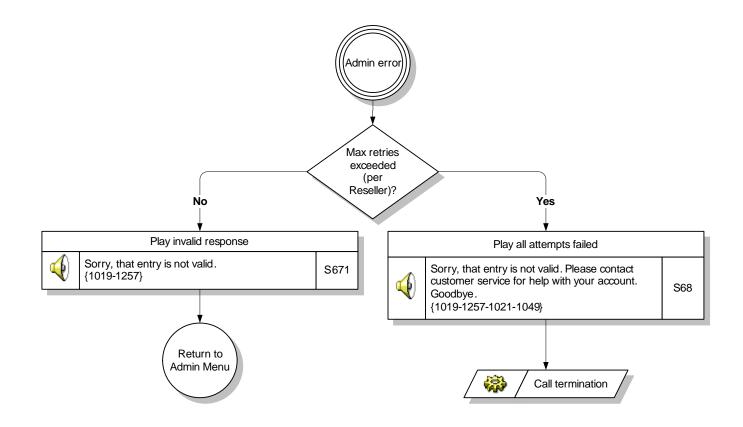


Rev. 00.00 Date 25/06/07



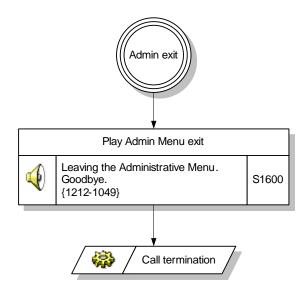
Note:Prompt ID for < Press 0> is miscpress and number000, < Press 1> is miscpress and number001 ..., < Press #> is miscpress and dtmfkeypound, < Press *> is miscpress and dtmfkeystar

Rev. 00.00 Date 29/05/07

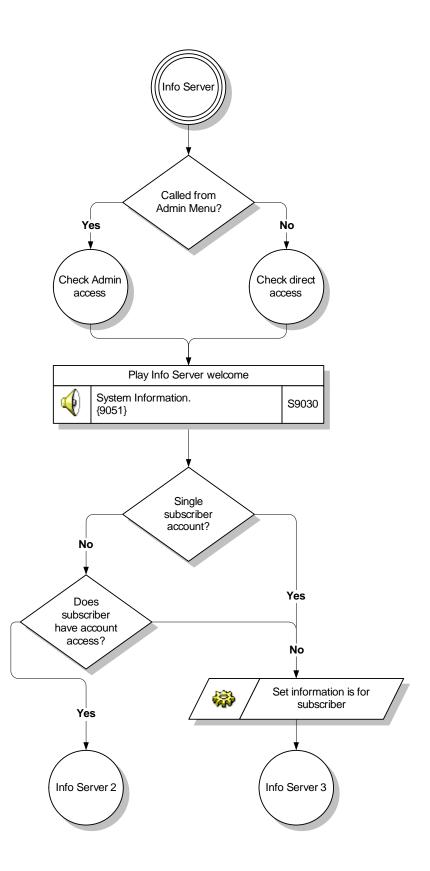


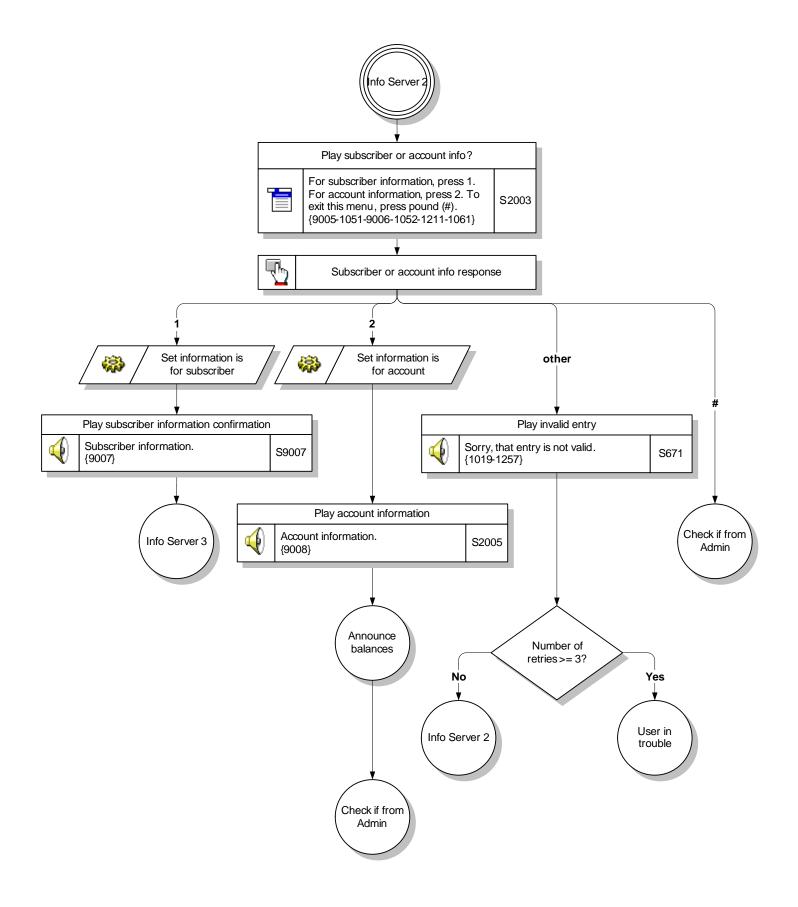
Rev. 00.00 Date 11/07/07

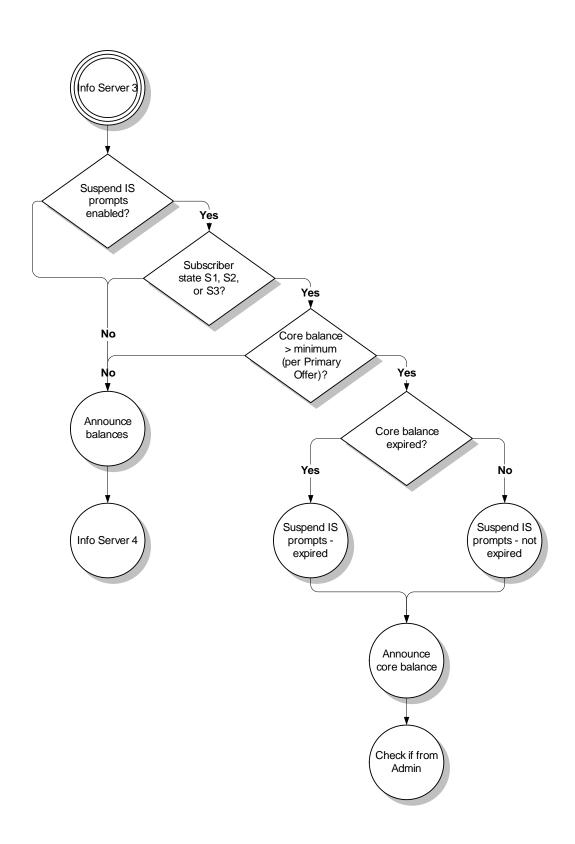
Admin exit

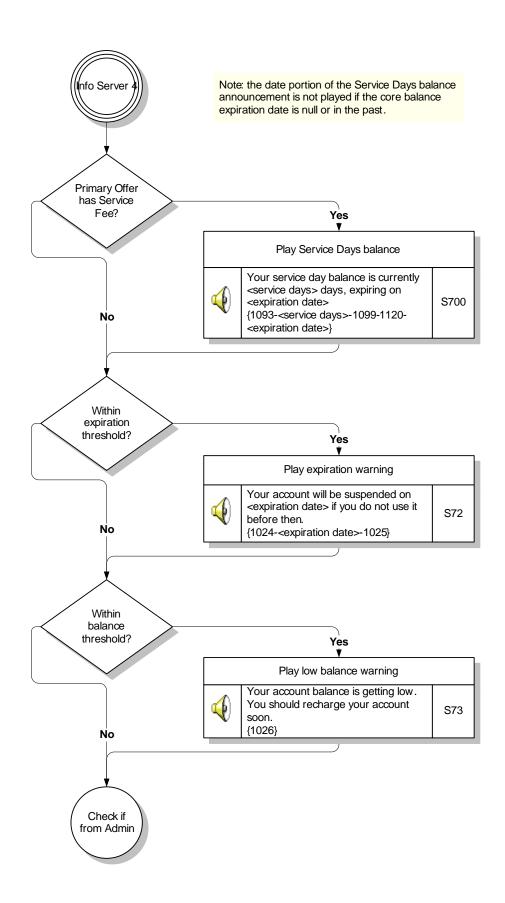


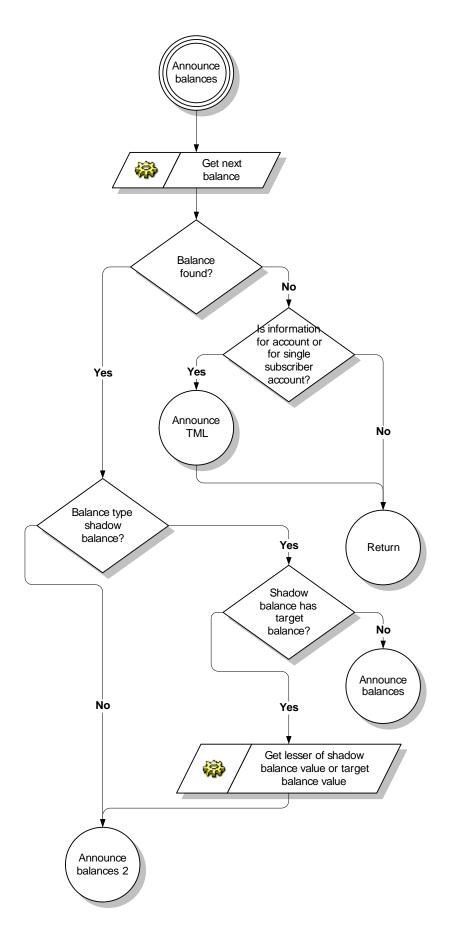
Info Server





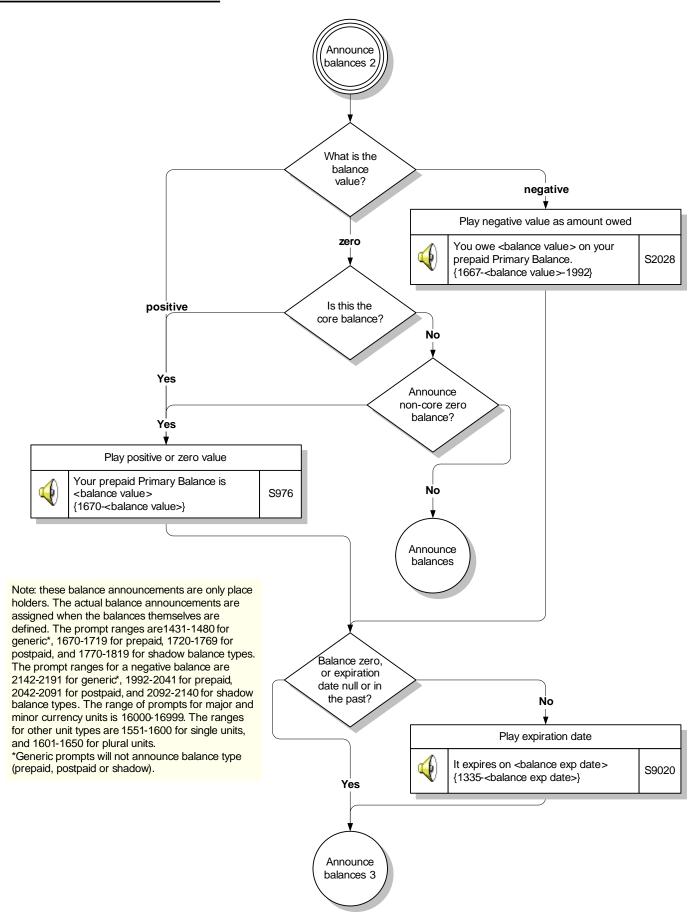




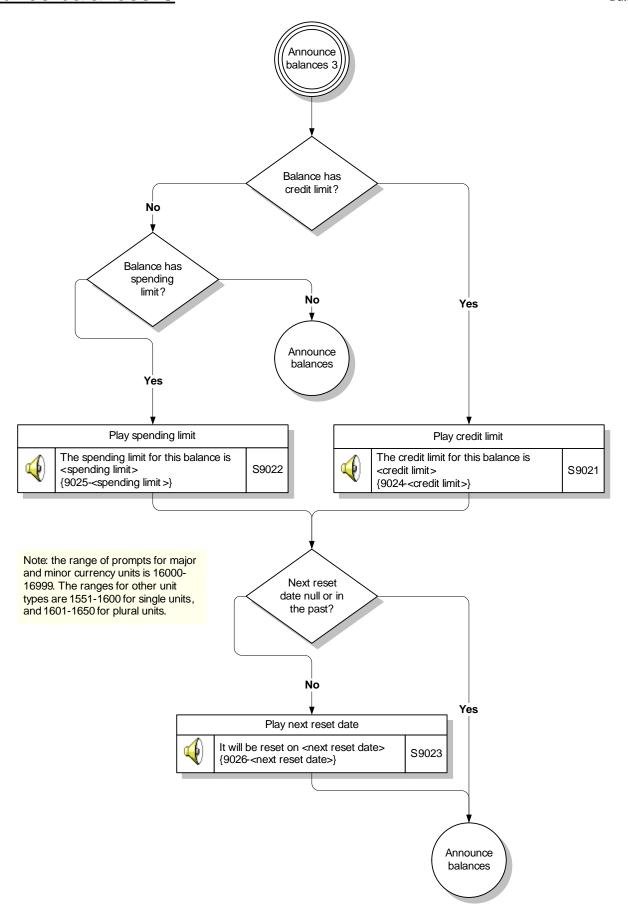


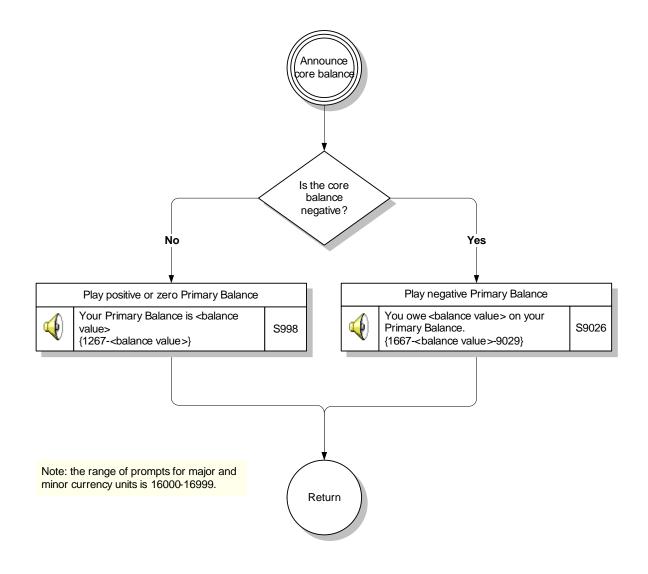
Announce balances 2

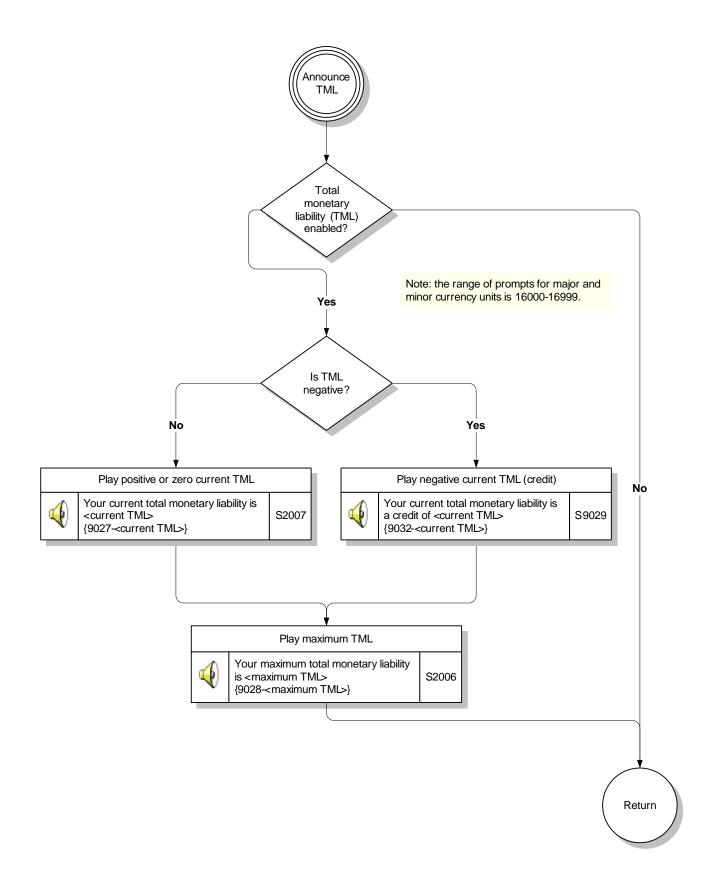
Rev. 00.00 Date 23/07/07



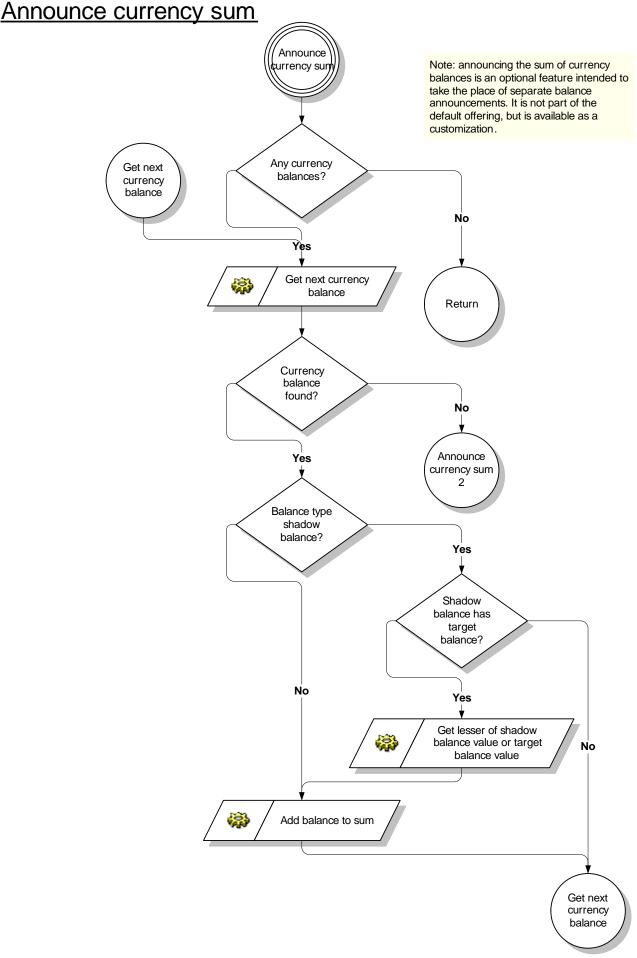
Rev. 00.00 Date 23/07/07





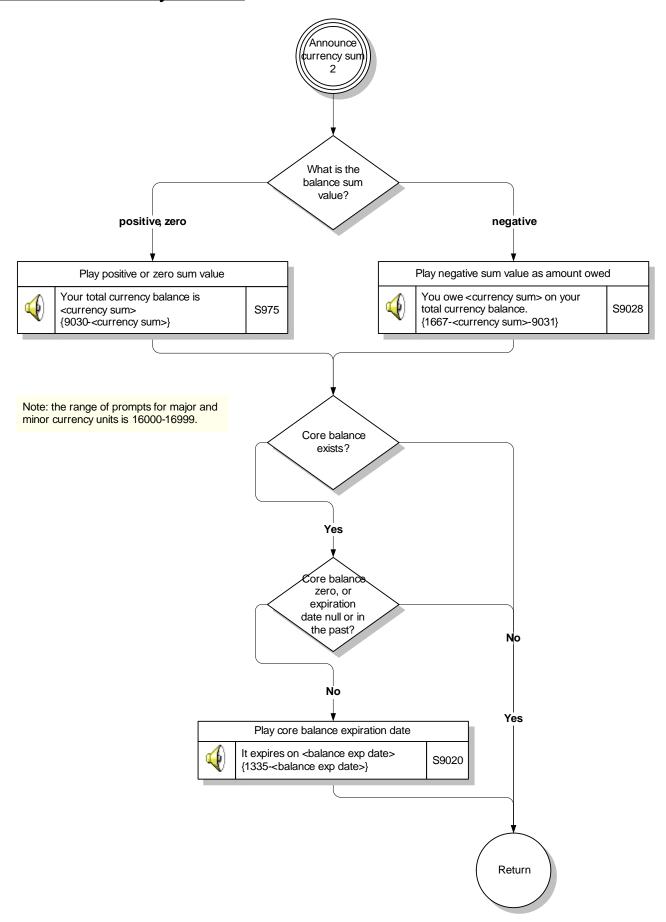


Rev. 00.00 Date 03/08/07



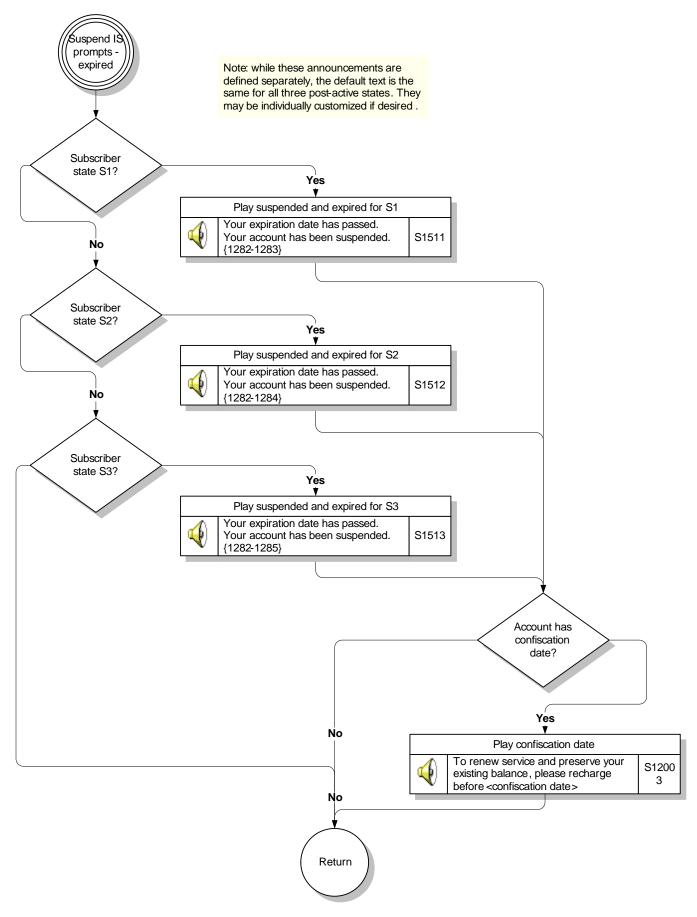
Announce currency sum 2

Rev. 00.00 Date 03/08/07



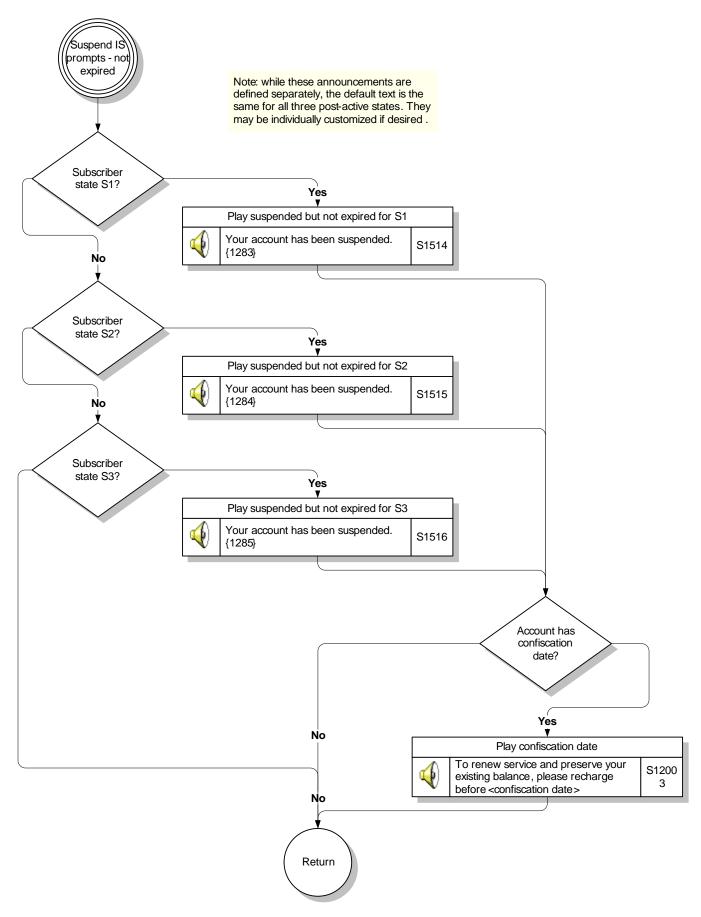
Suspend IS prompts - expired

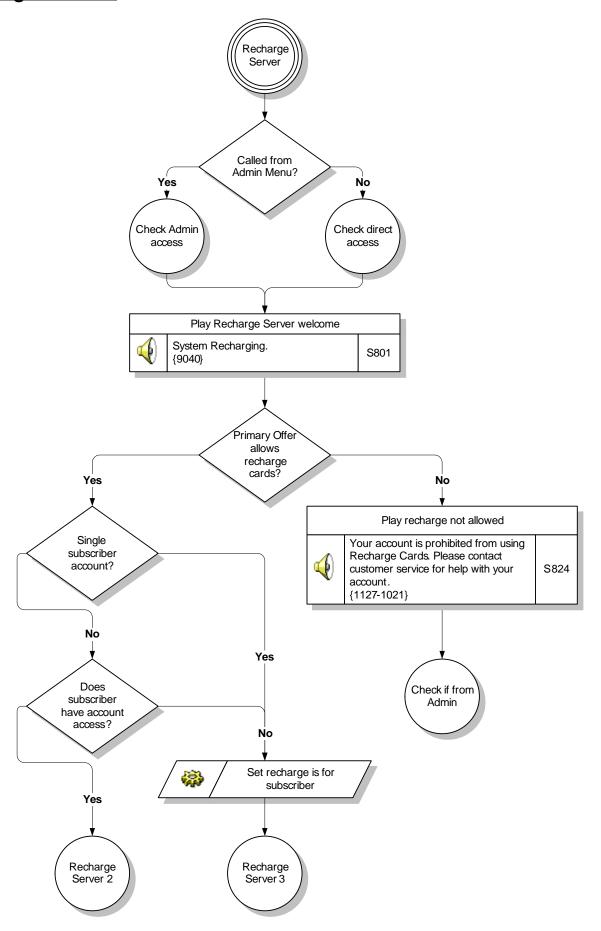
Rev. 00.00 Date 14/05/07



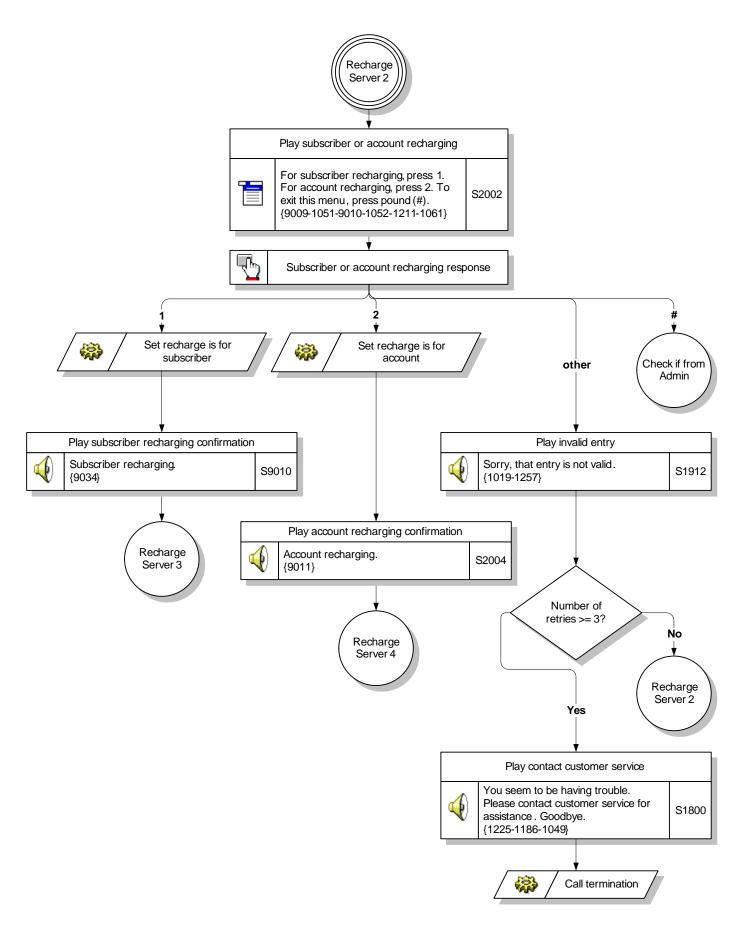
Suspend IS prompts - not expired

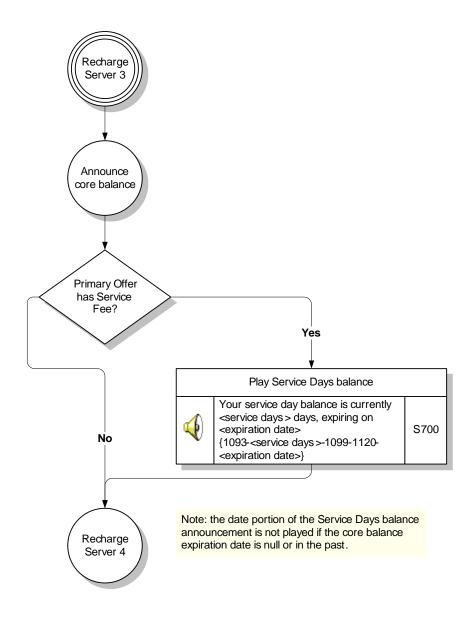
Rev. 00.00 Date 14/05/07



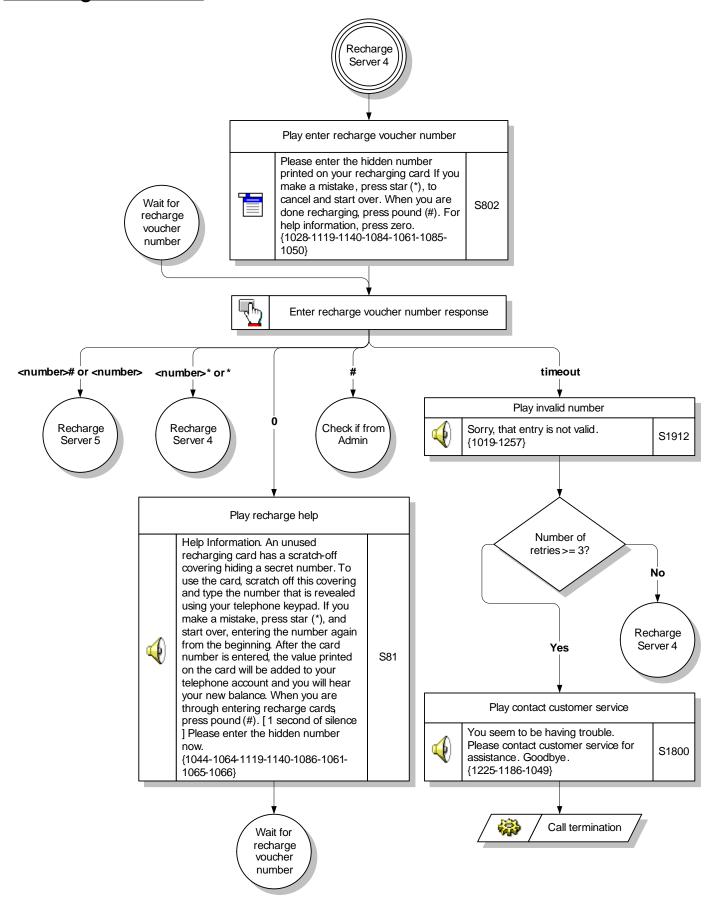


Rev. 00.00 Date 20/06/07

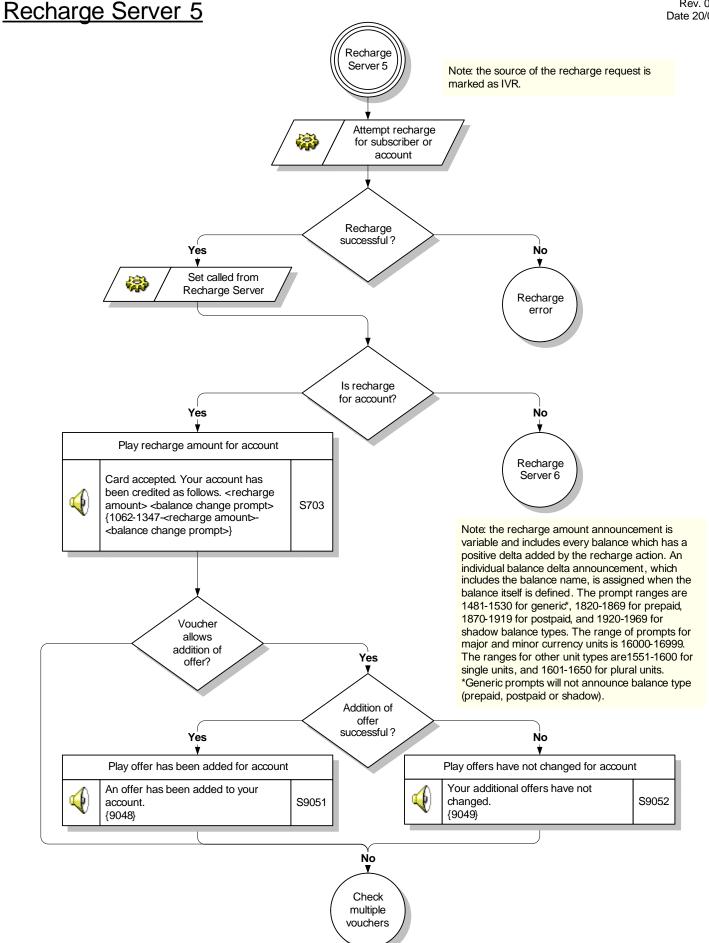




Rev. 00.00 Date 20/06/07



Rev. 00.00 Date 20/06/07



Phonebook Management

No

Check

multiple

vouchers

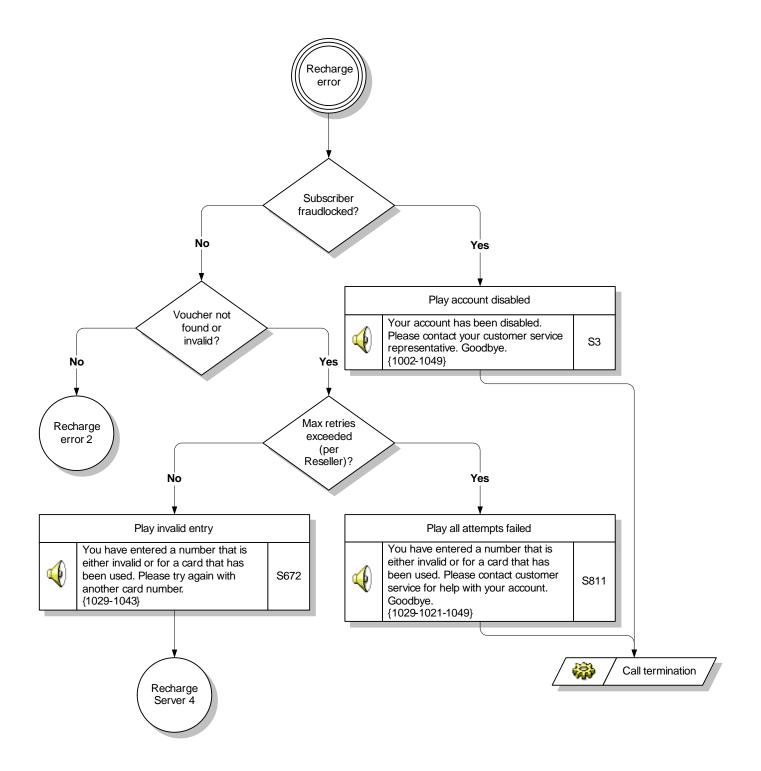
Yes

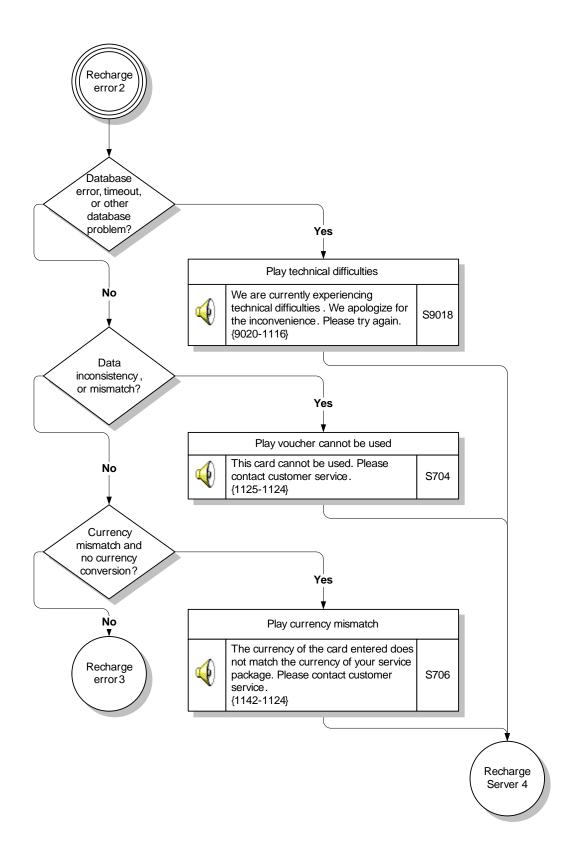
Phonebook

Management

from

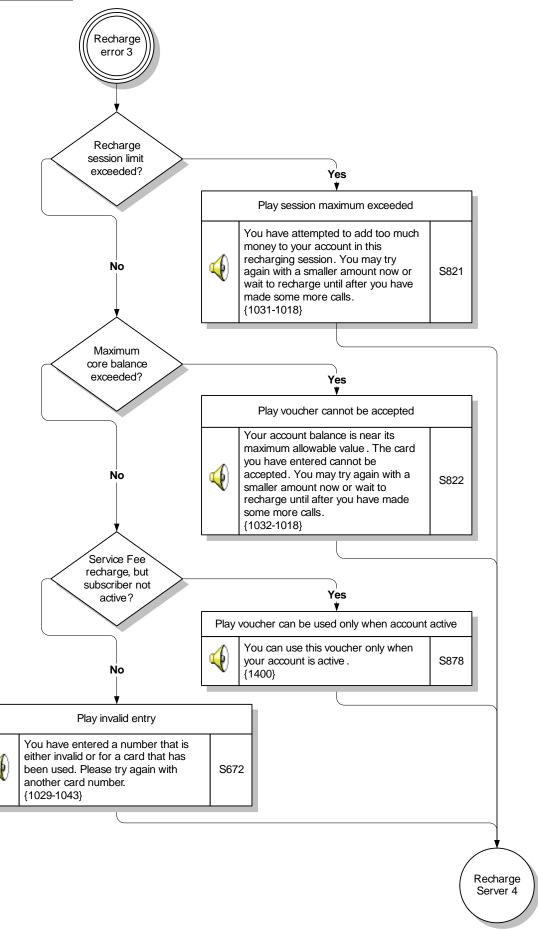
Recharge





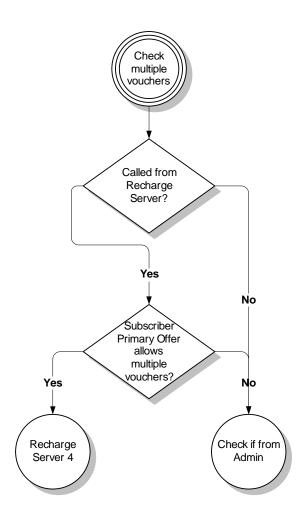
Rev. 00.00 Date 15/05/07

Recharge error 3



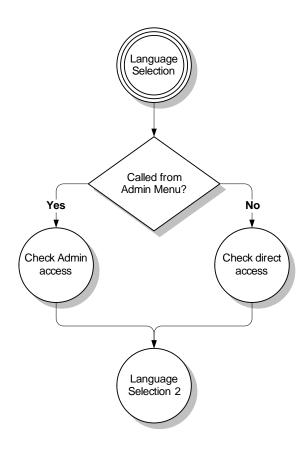
Check multiple vouchers

Rev. 00.00 Date 11/07/07



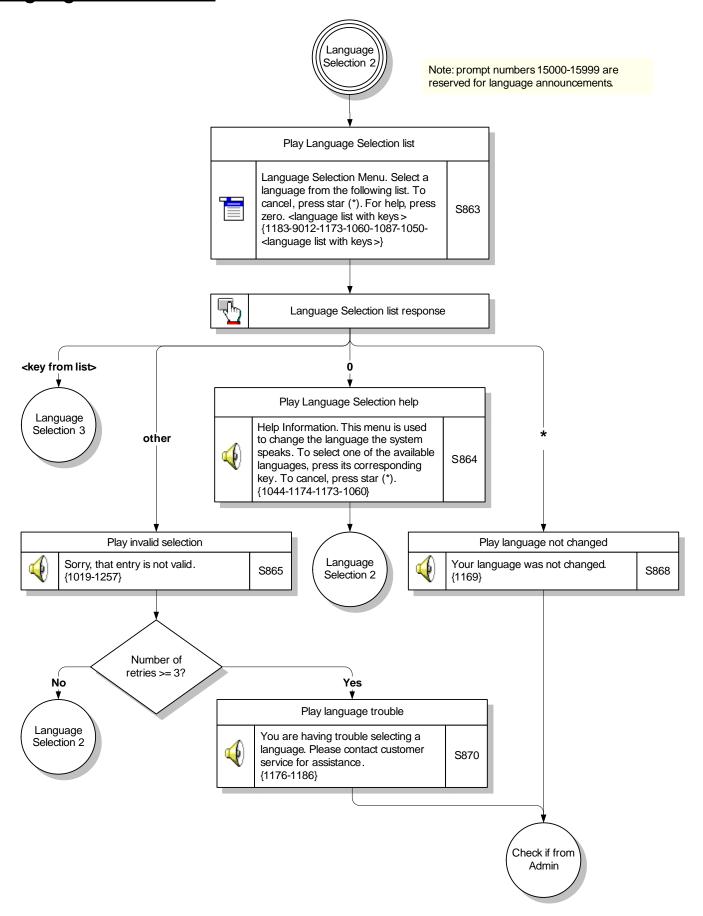
Language Selection

Rev. 00.00 Date 28/01/08

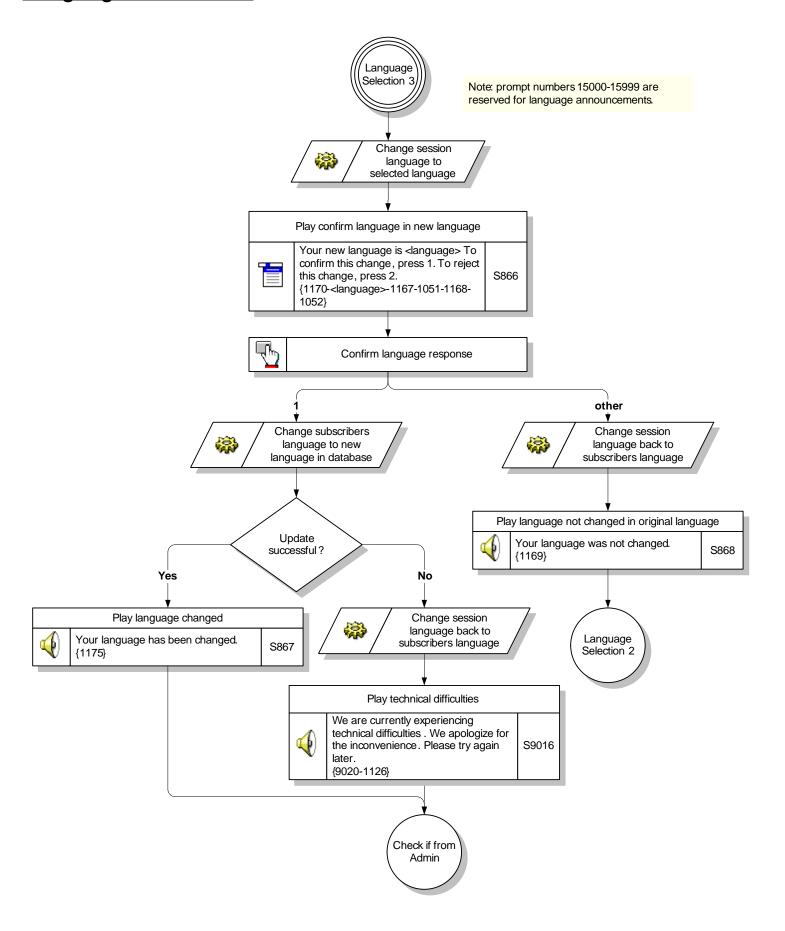


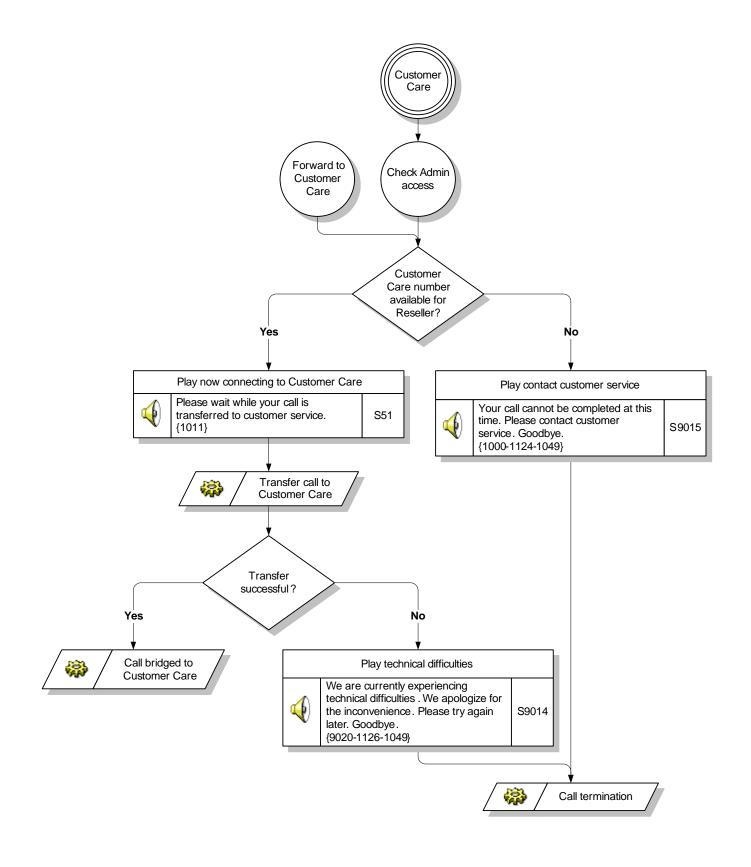
Note: this option is intended for sites with multiple languages. The default configuration is a single language of English.

Rev. 00.00 Date 17/05/07

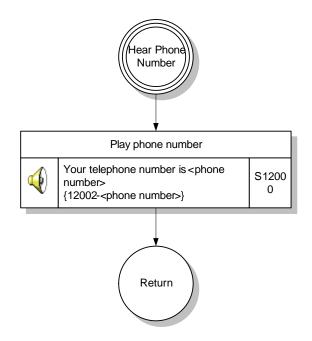


Rev. 00.00 Date 17/05/07

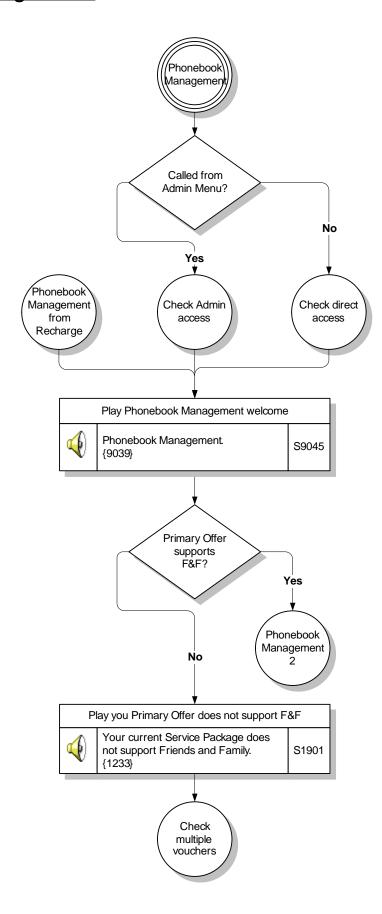


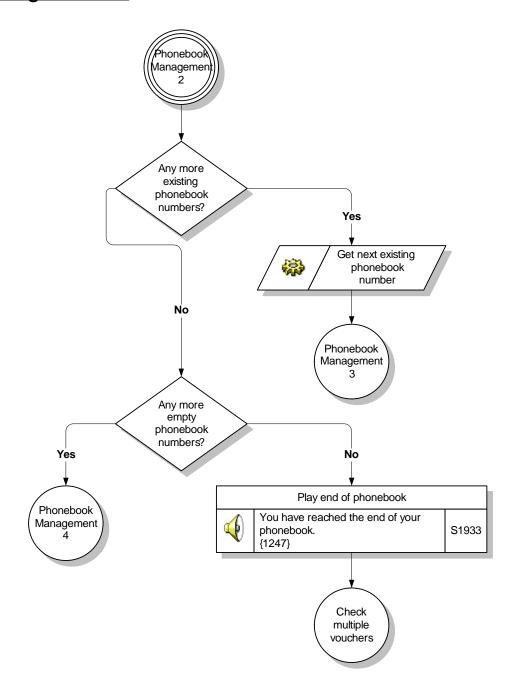


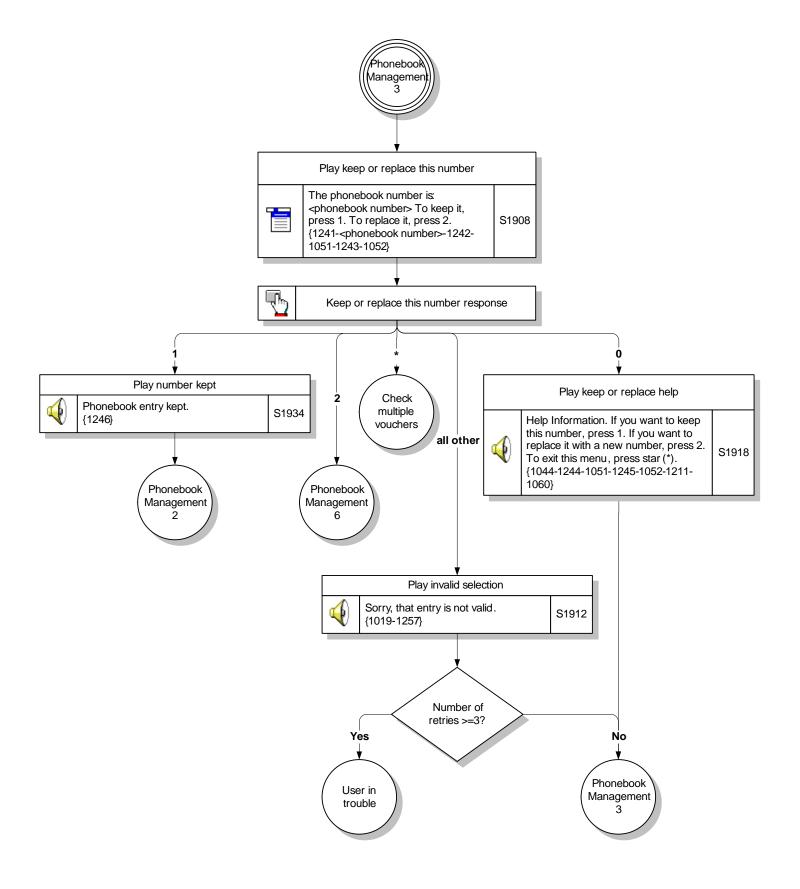
Hear Phone Number

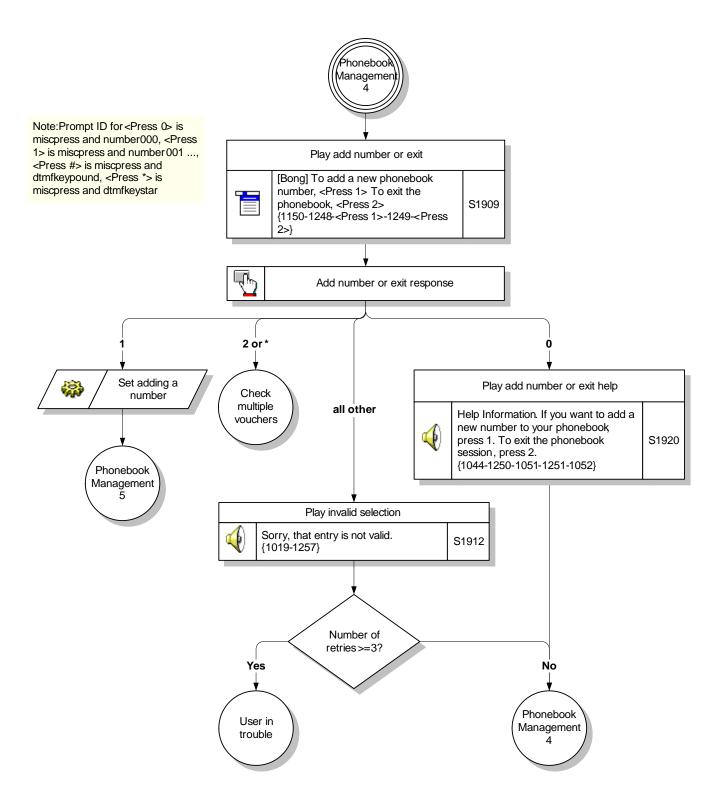


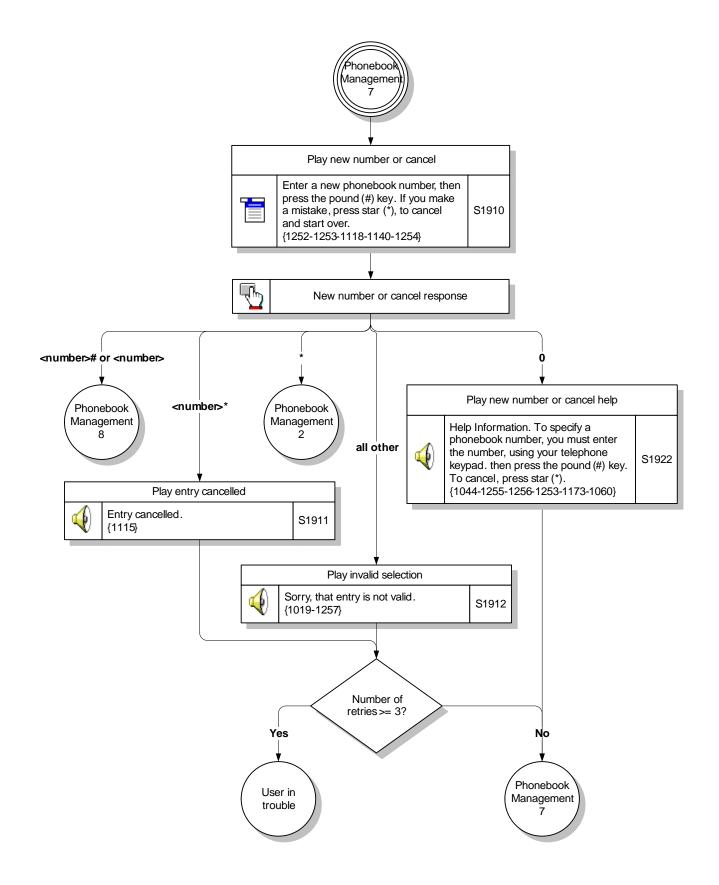
Rev. 00.00 Date 08/12/08

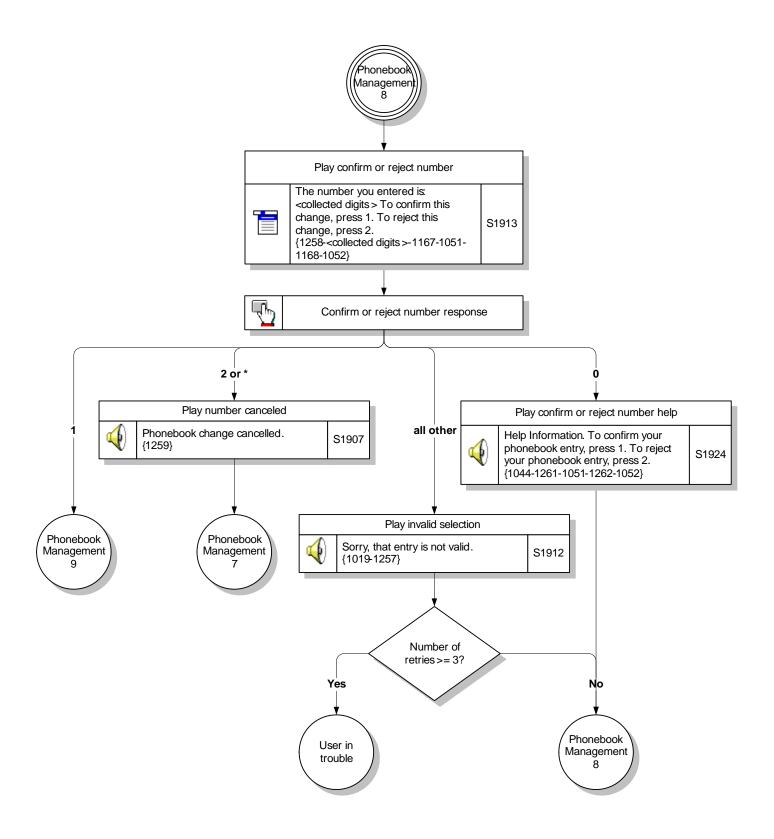


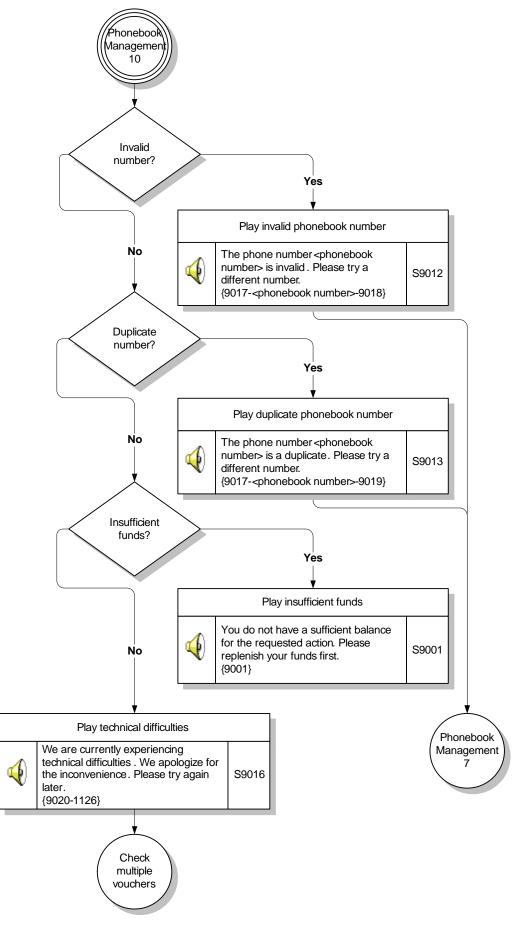




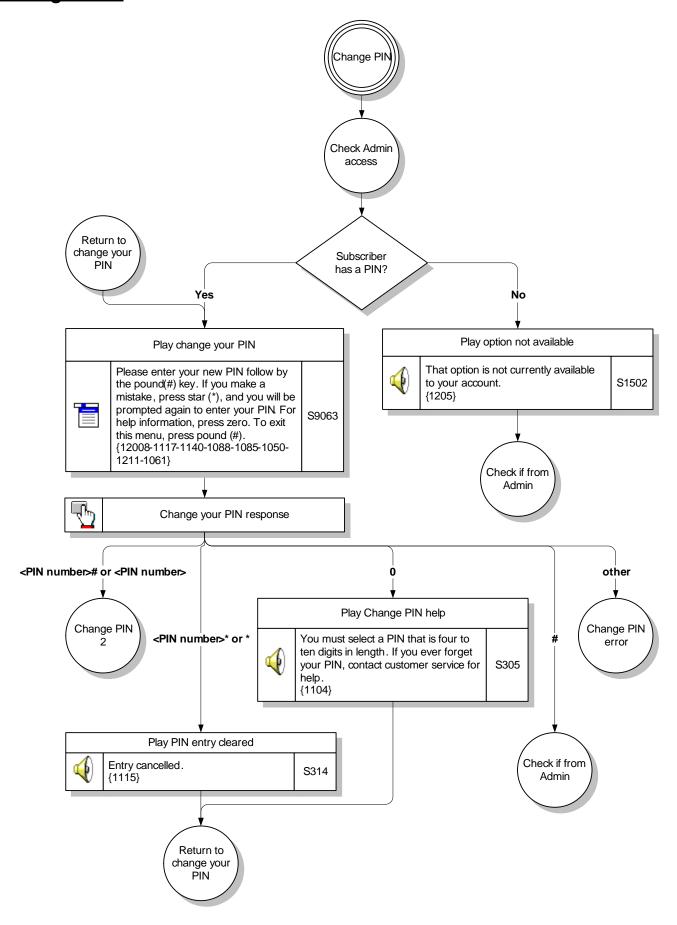


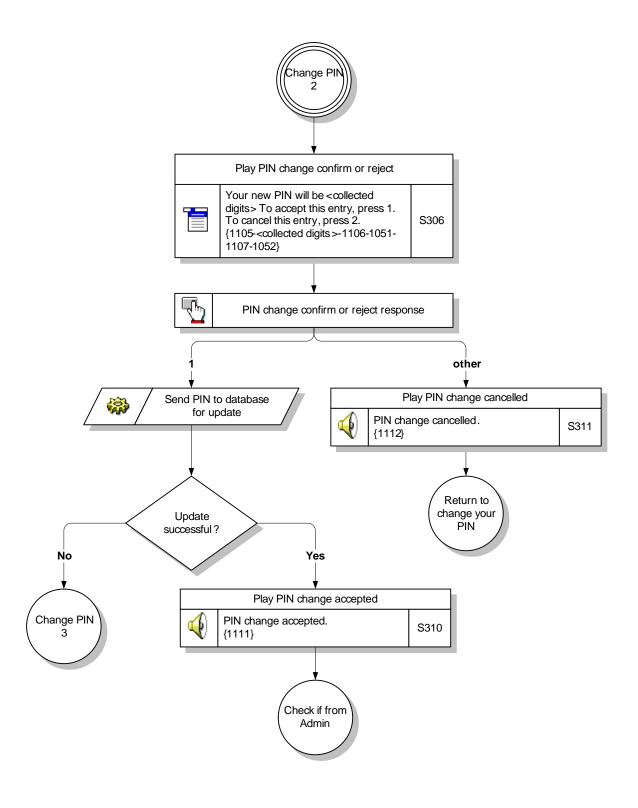


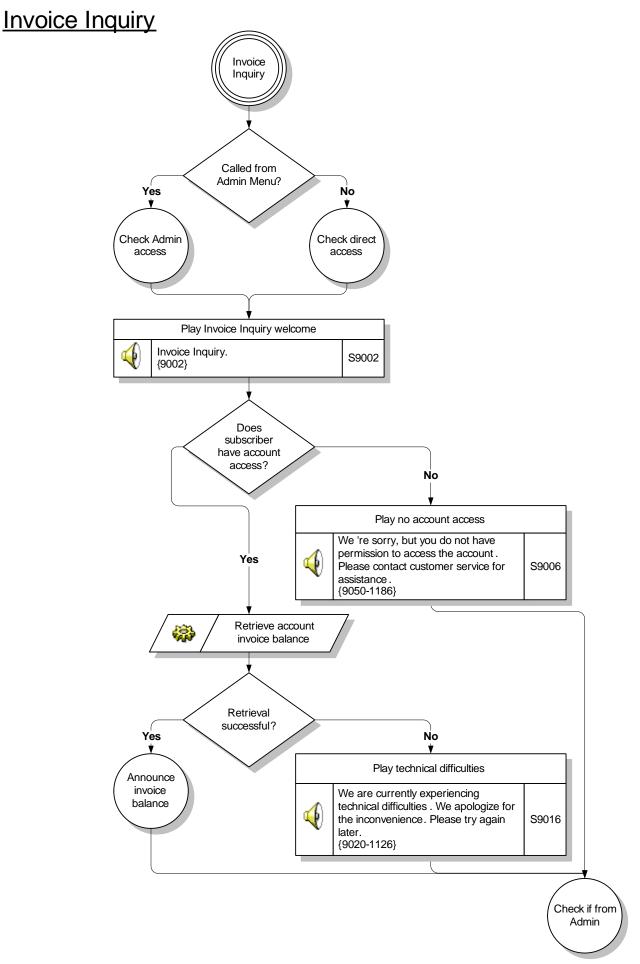


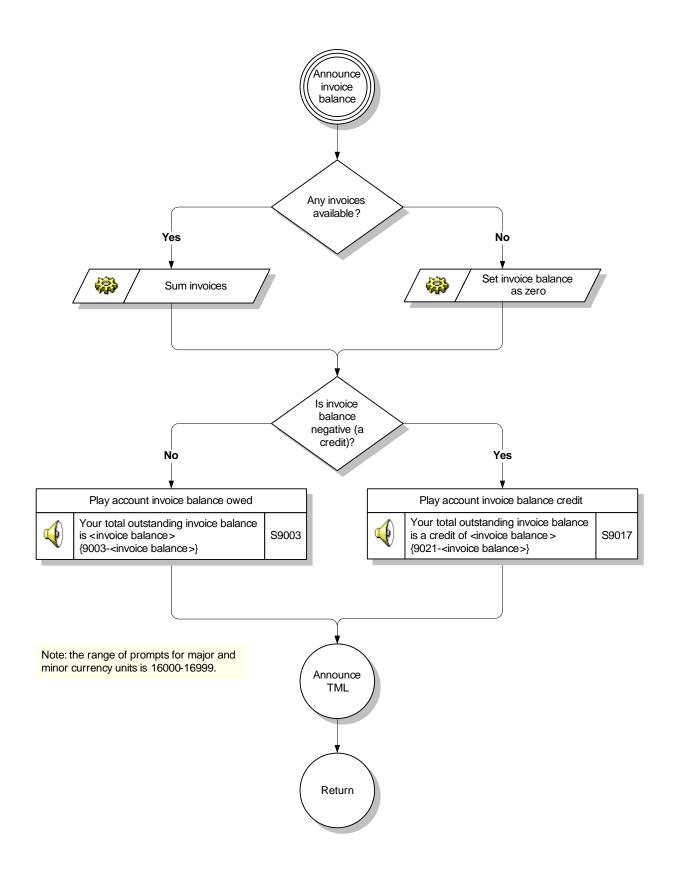


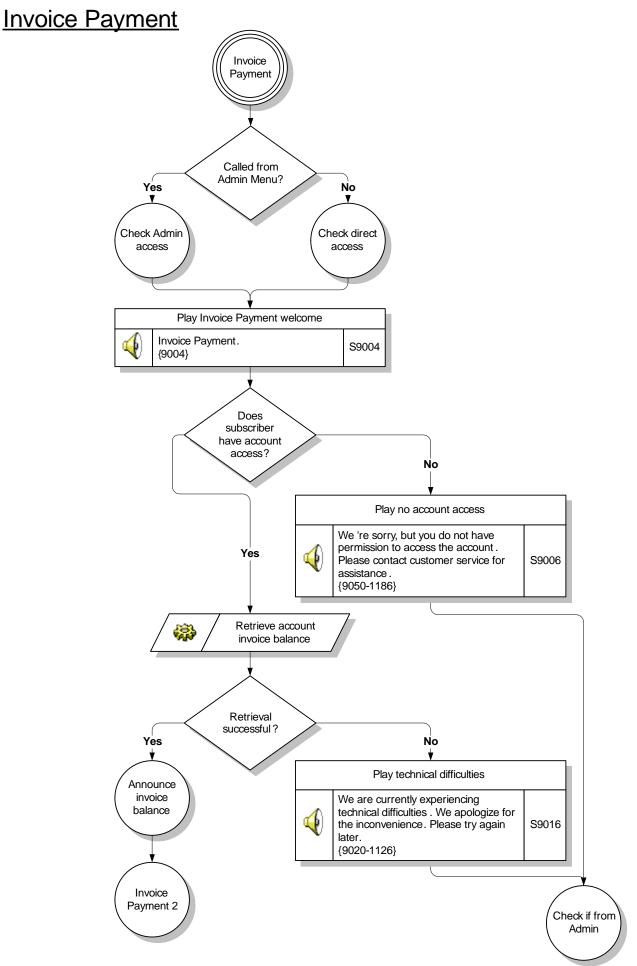
Rev. 00.00 Date 12/11/08

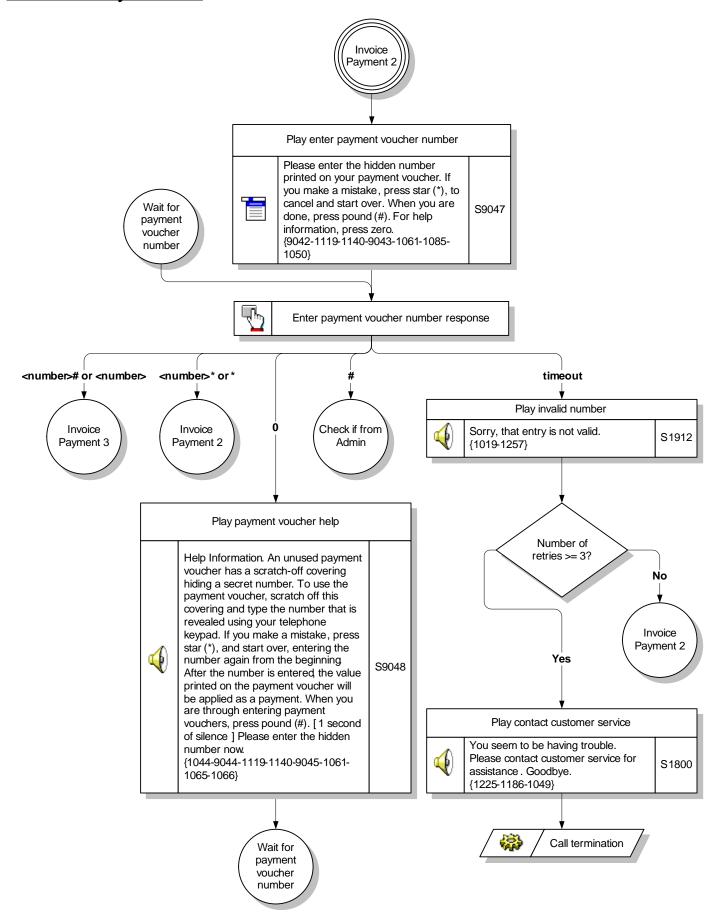




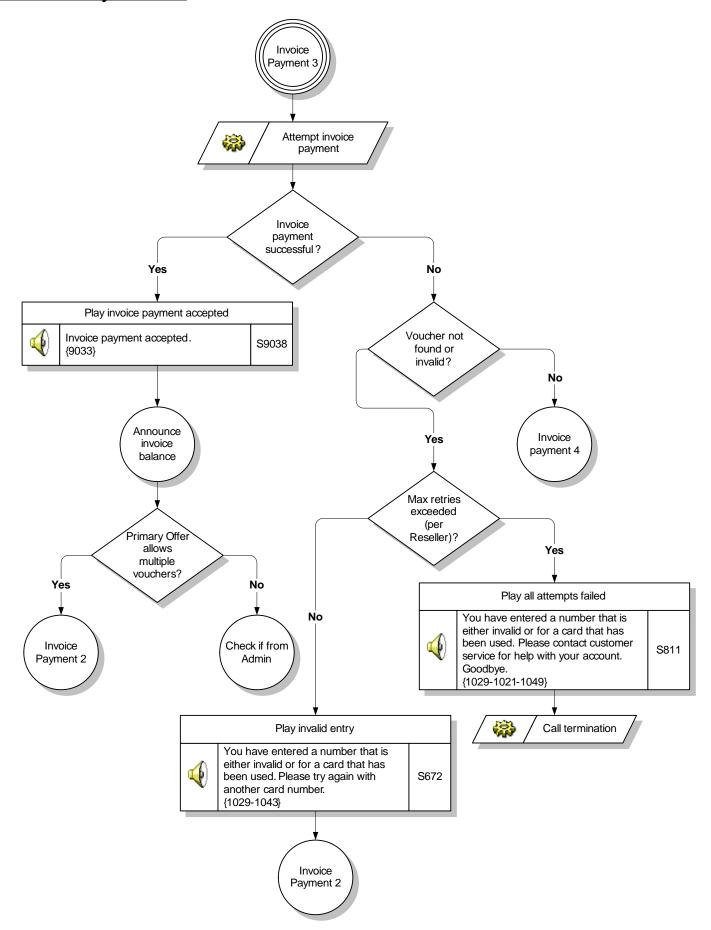




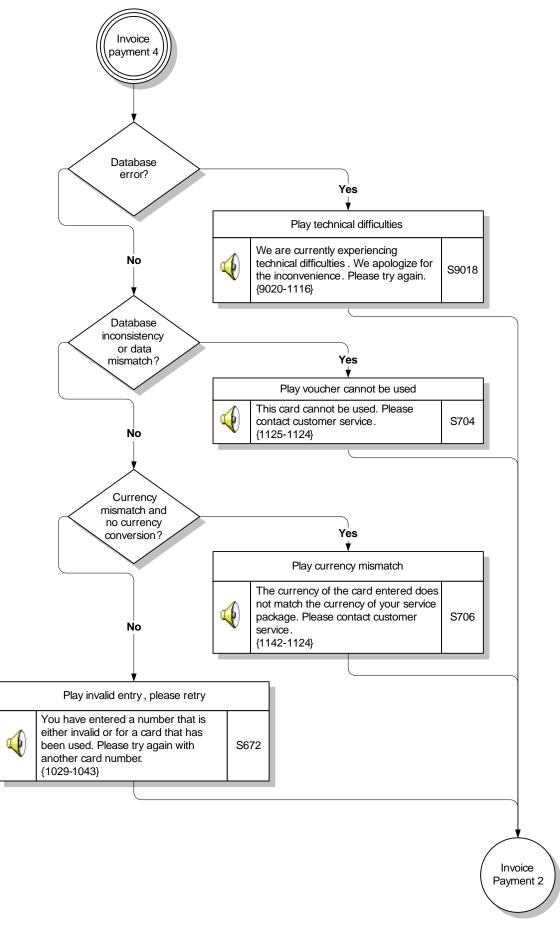




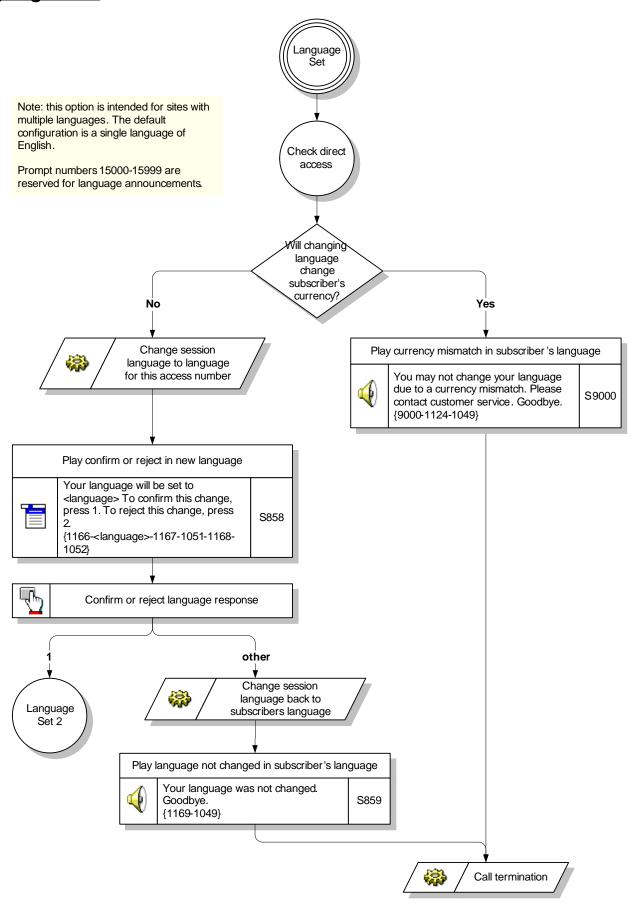
Invoice Payment 3

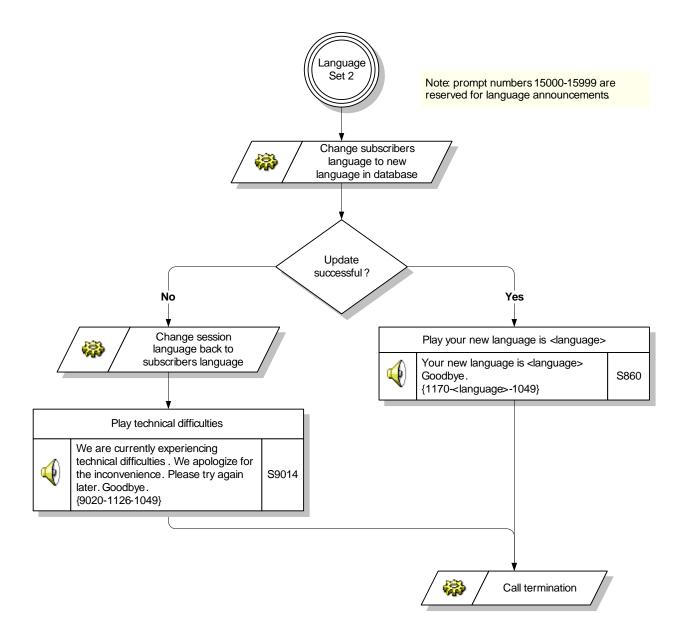


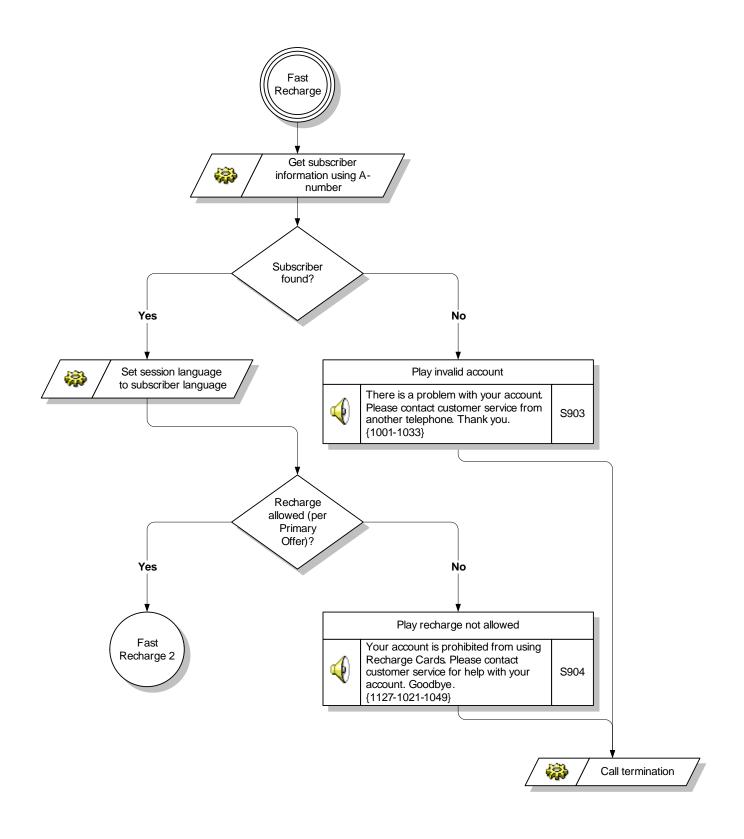
Invoice Payment 4

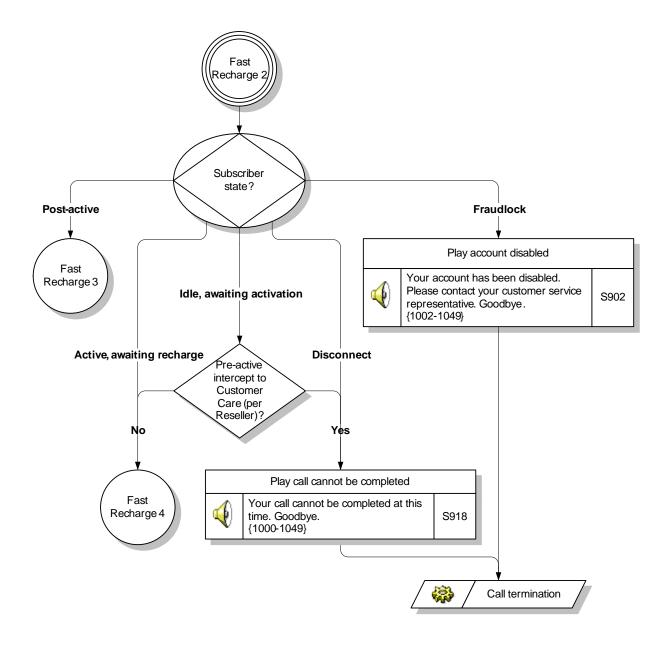


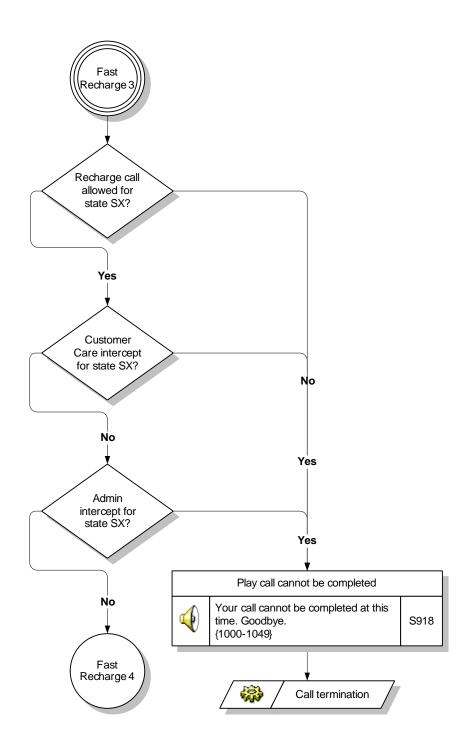
<u>Language Set</u>



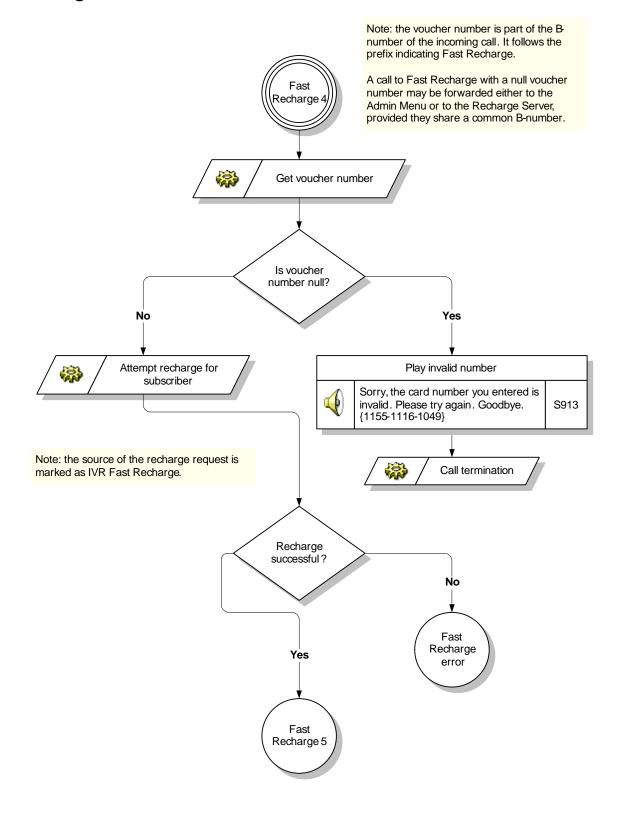






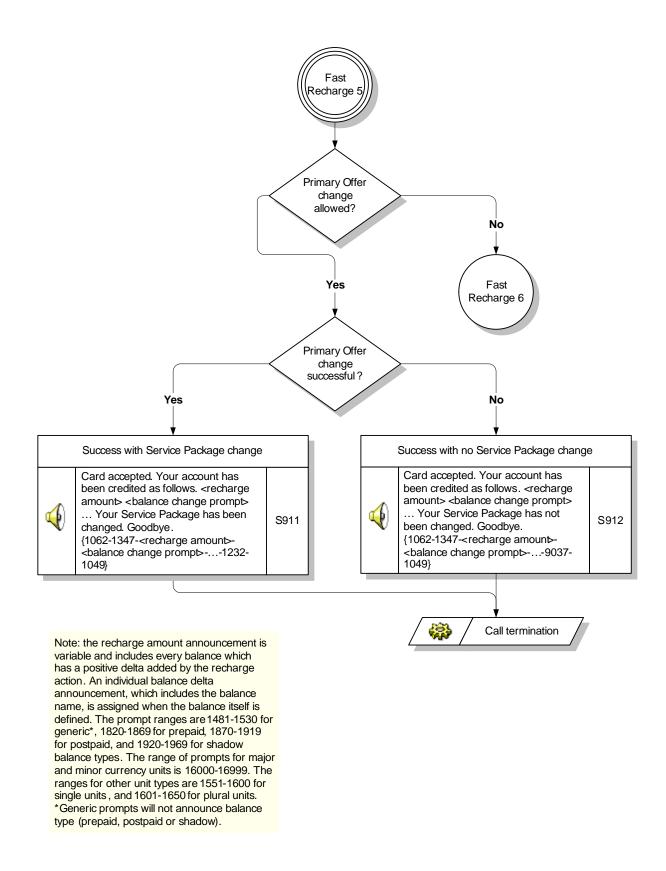


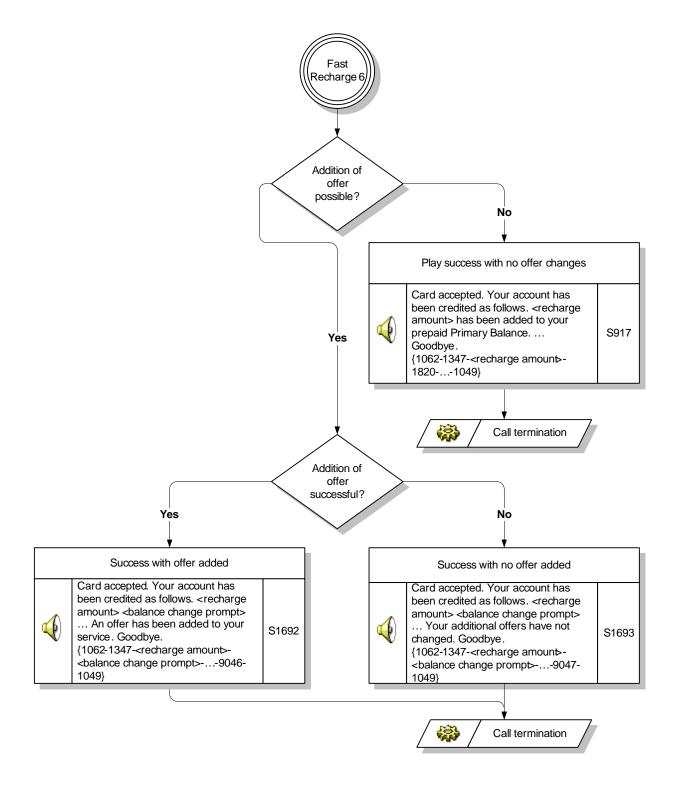
Rev. 00.00 Date 11/11/08

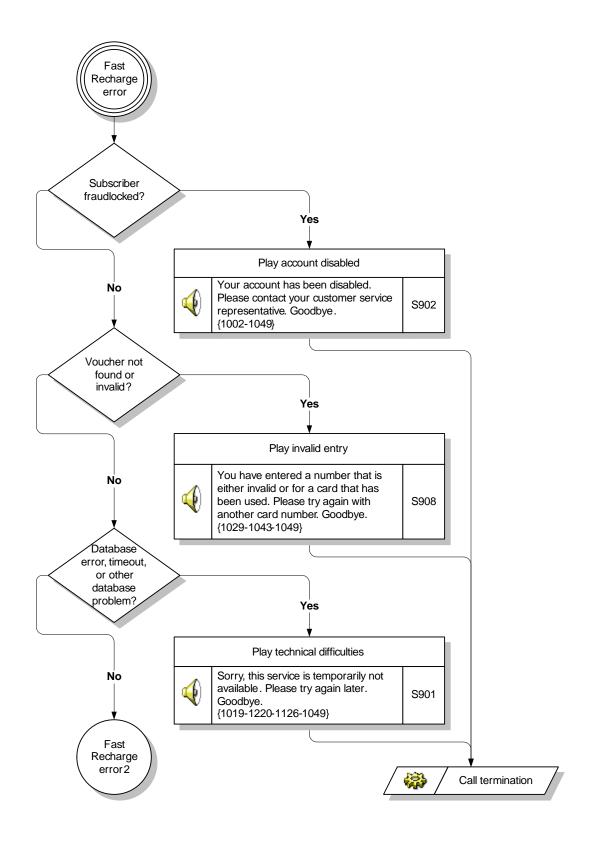


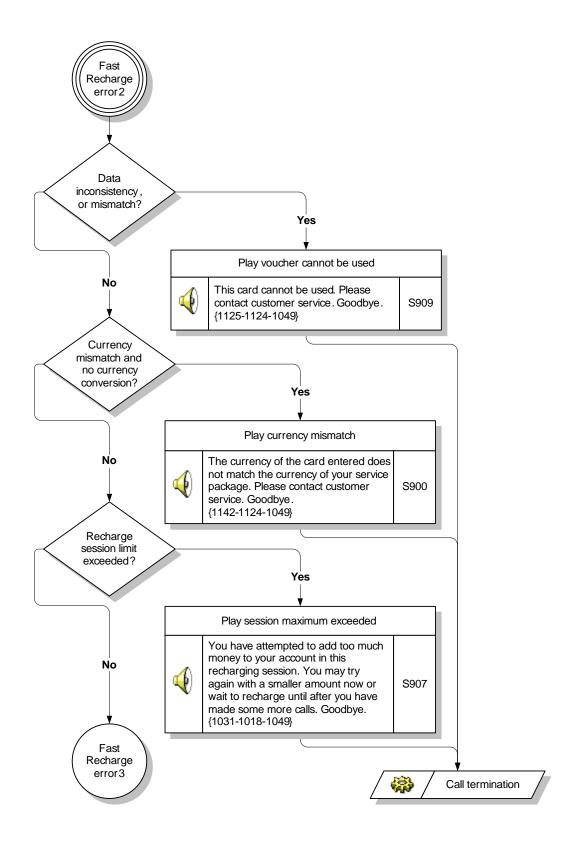
Fast Recharge 5

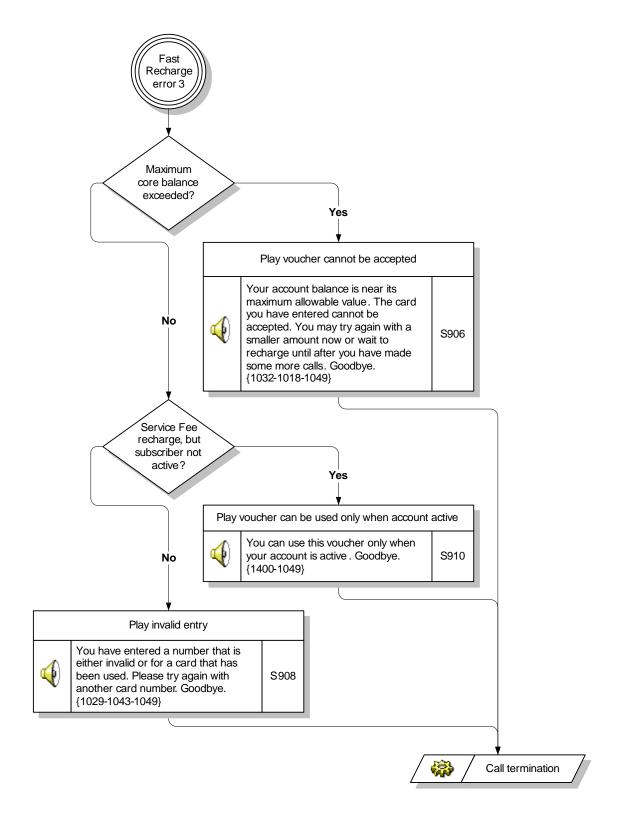
Rev. 00.00 Date 11/11/08

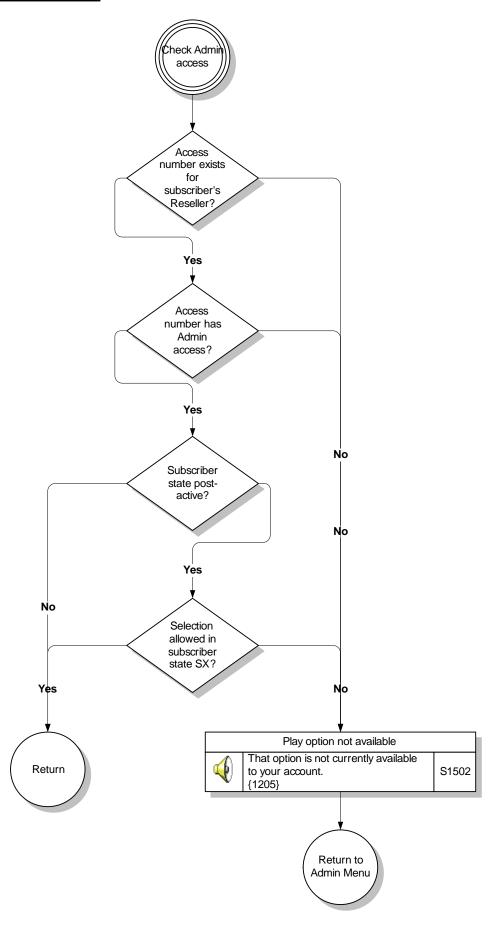




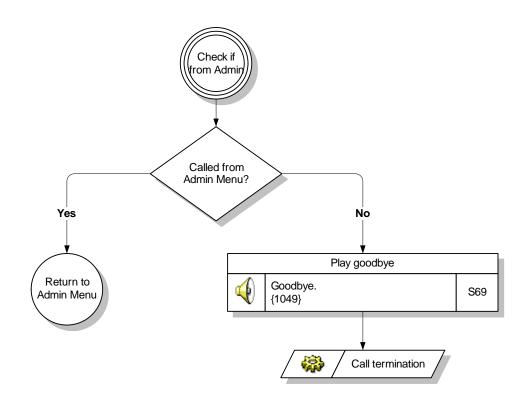


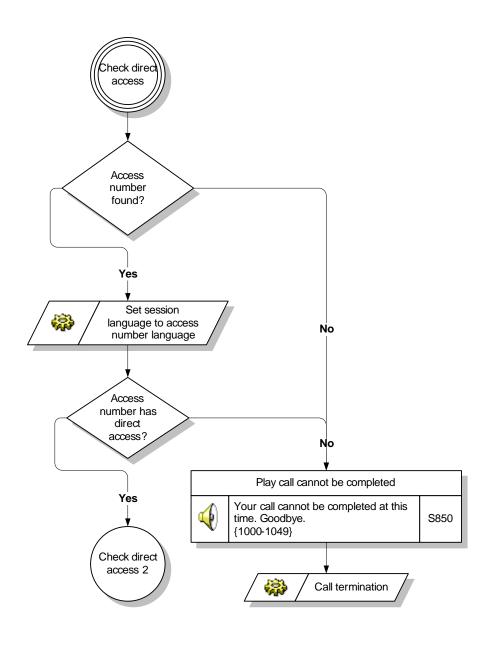


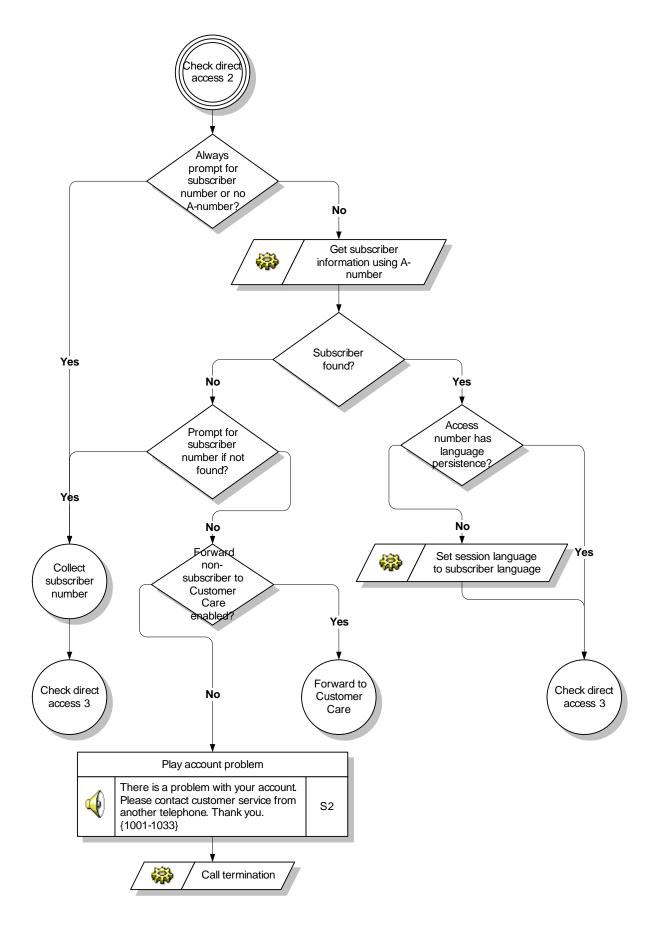


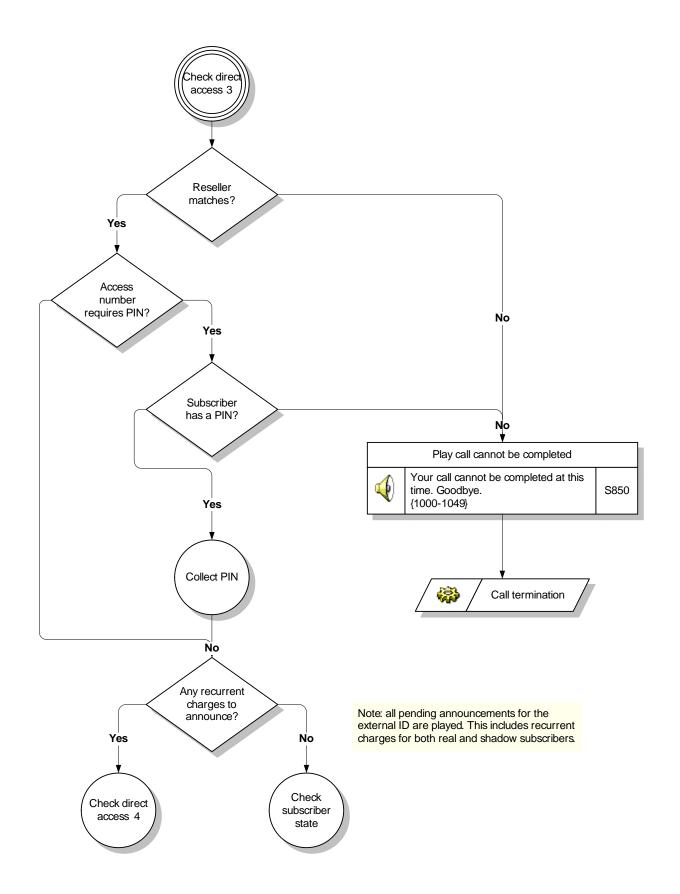


Check if from Admin

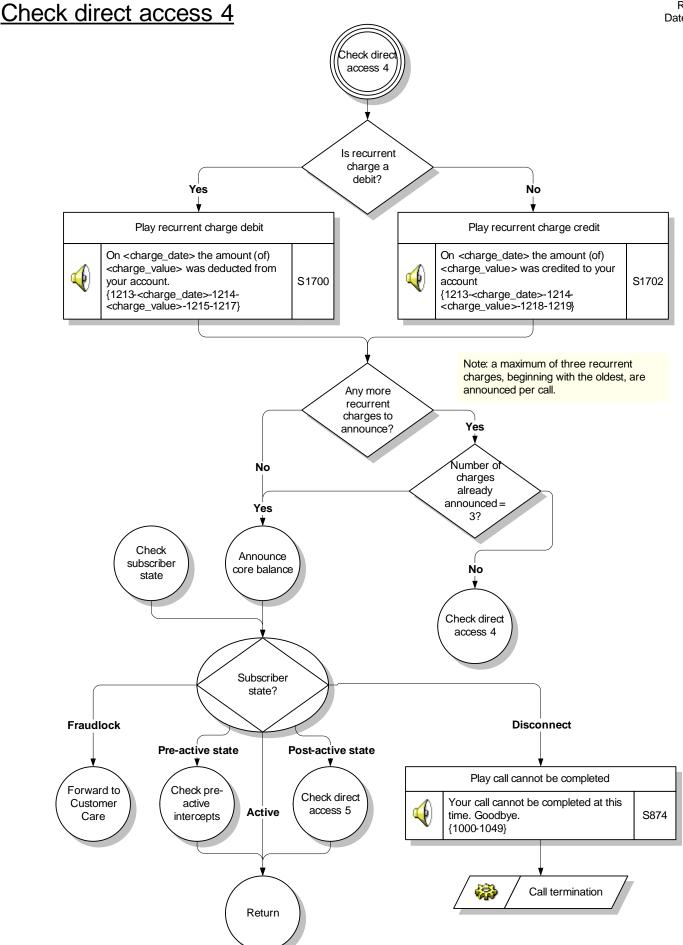




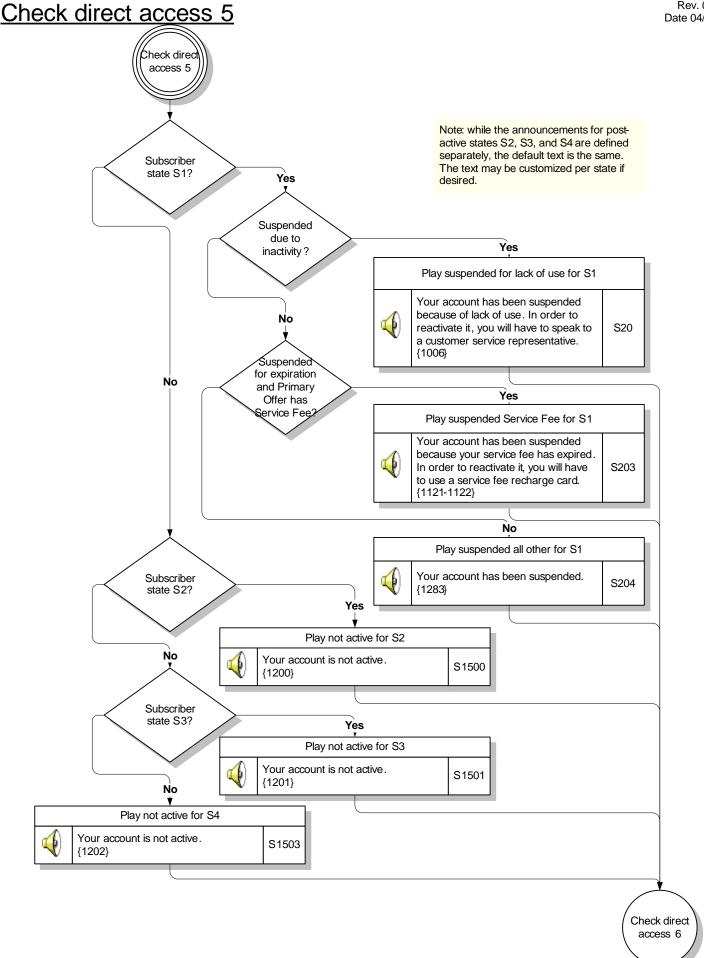


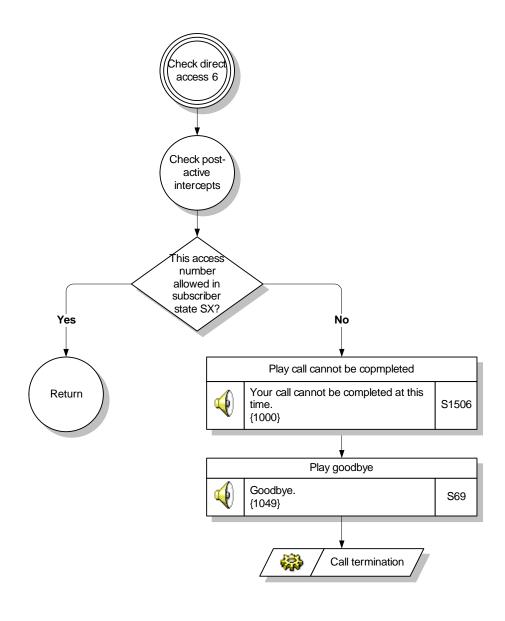


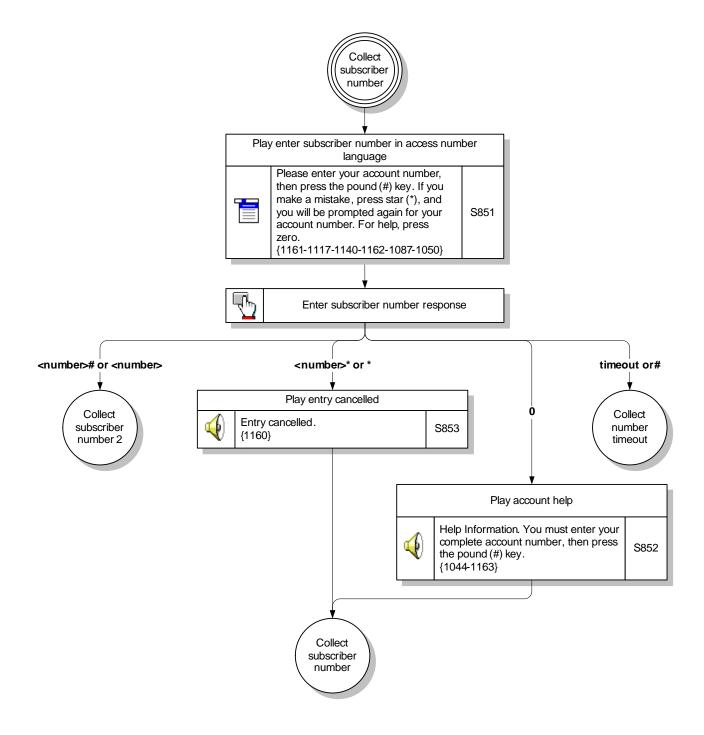
Rev. 00.00 Date 06/11/08

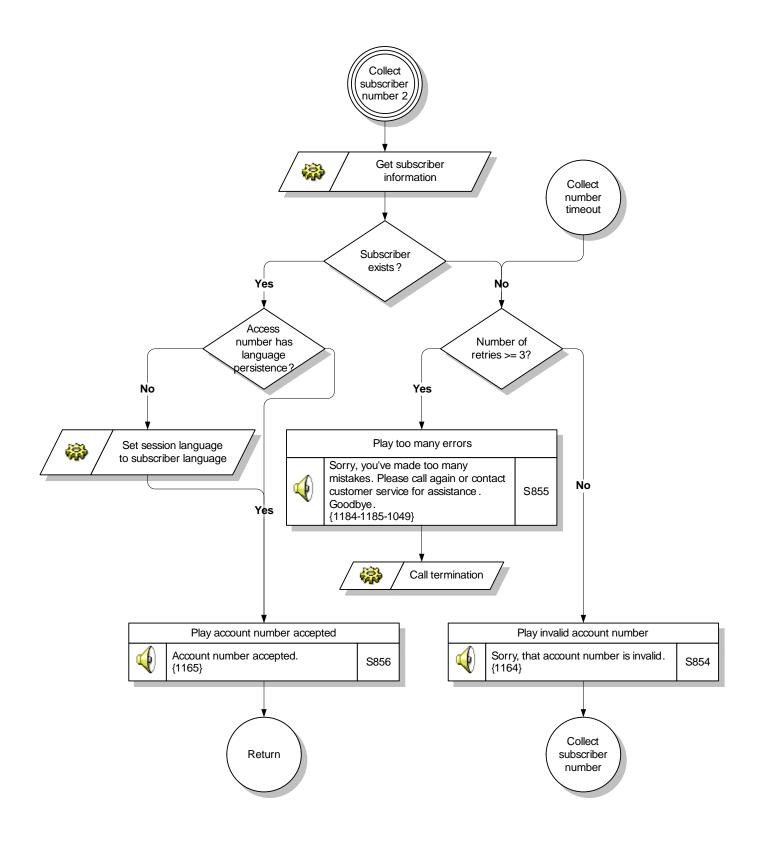


Rev. 00.00 Date 04/12/07

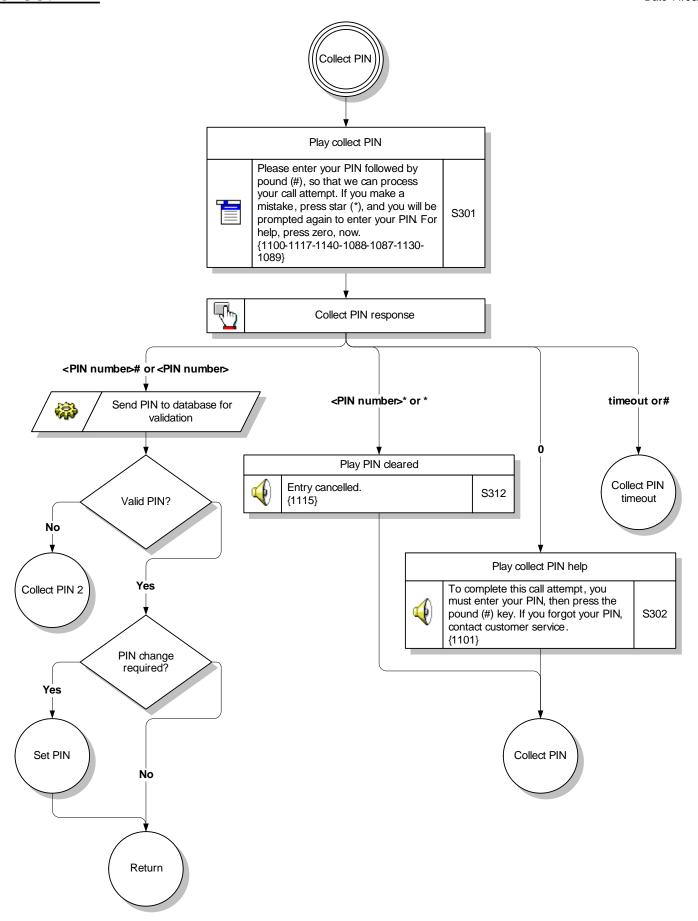




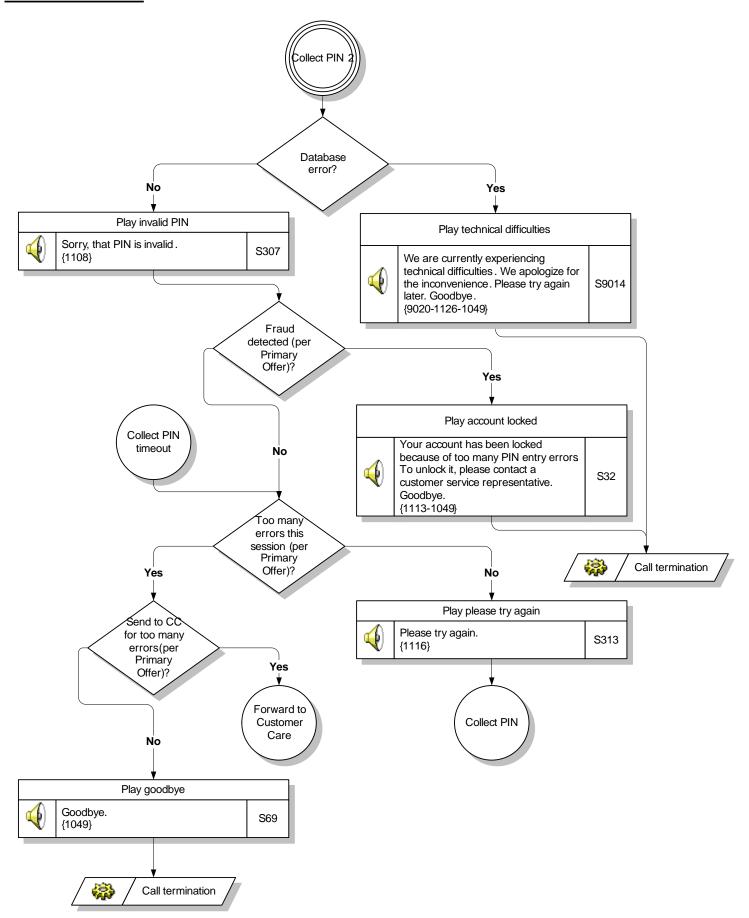




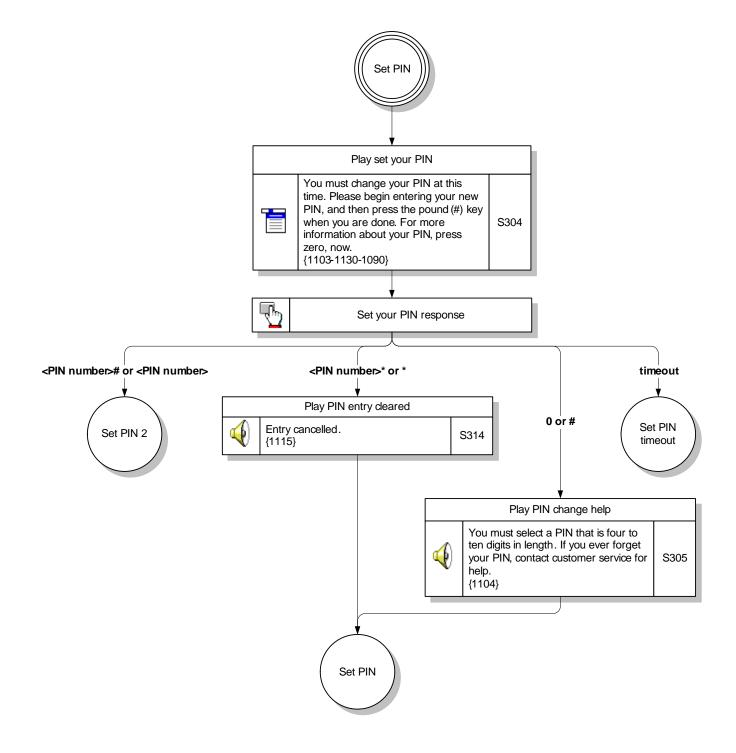
Rev. 00.00 Date 11/06/07

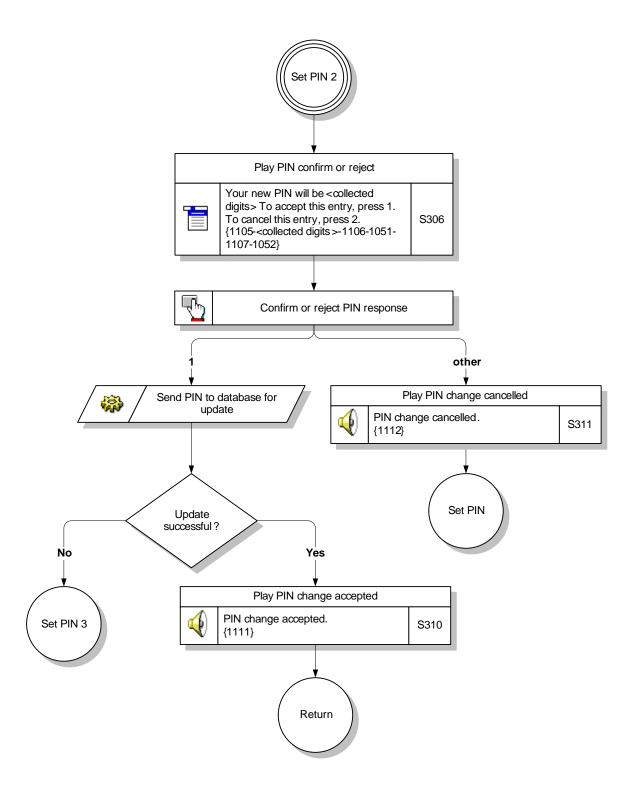


Rev. 00.00 Date 11/06/07



Set PIN

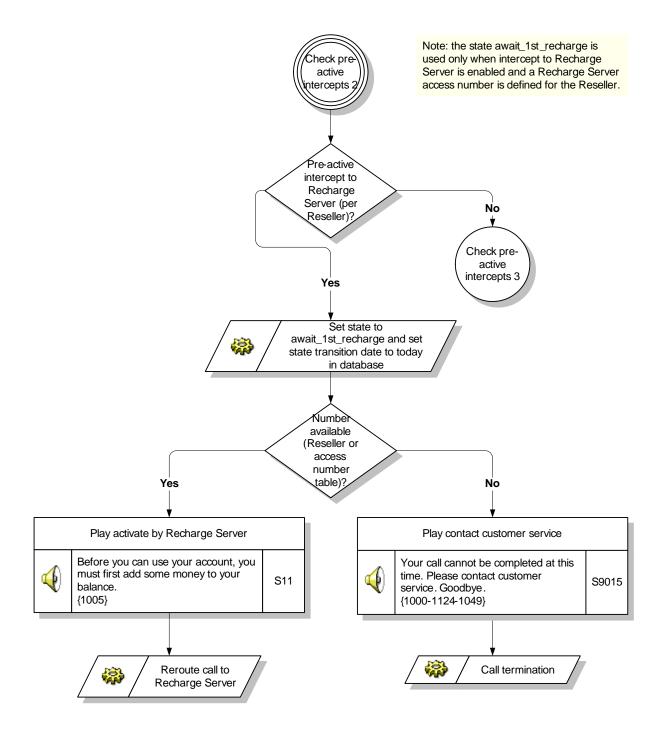




Rev. 00.00 Check pre-active intercepts Date 13/06/07 Check pre active intercepts Is subscriber state idle? Yes Play welcome first time user 4 Welcome to Comverse ONE. S10 {1004} No Pre-active intercept to Customer Ñο Care (per Reseller)? Check preactive intercepts 2 Yes Set state to await_activation and set state transition date to today in database √umbei available (Reseller or access number Yes table)? No Play activate by Customer Care Play contact customer service In order to activate your account, you Your call cannot be completed at this must first speak to a customer service time. Please contact customer S101 S9015 representative. service. Goodbye. {1023} {1000-1124-1049} Transfer call to **Customer Care** Transfer successful? Yes No Call bridged to Play technical difficulties Customer Care We are currently experiencing technical difficulties . We apologize for the inconvenience. Please try again S9014 later. Goodbye. {9020-1126-1049} Call termination

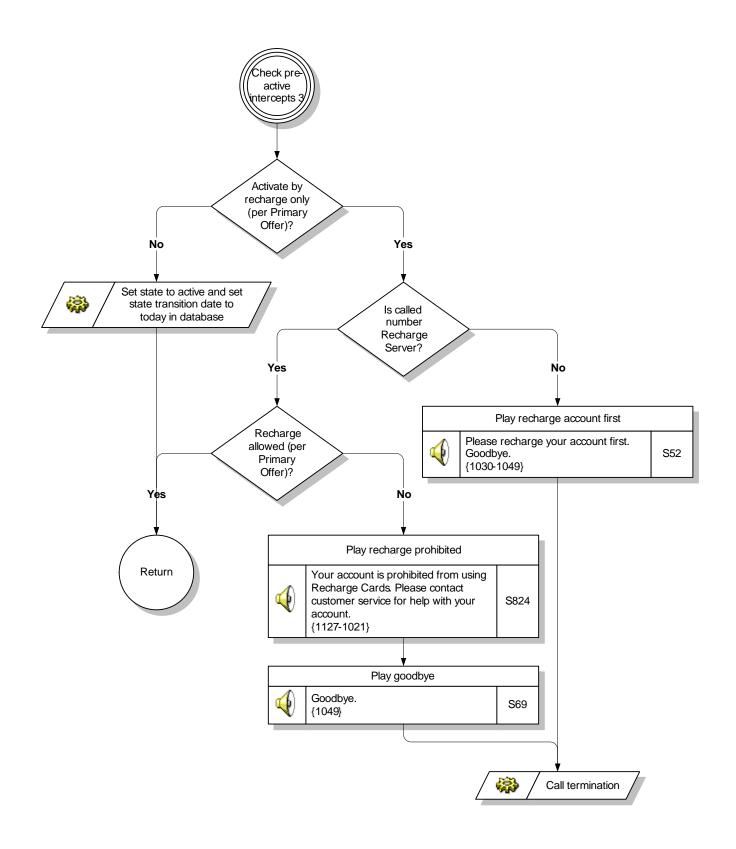
Check pre-active intercepts 2

Rev. 00.00 Date 13/06/07



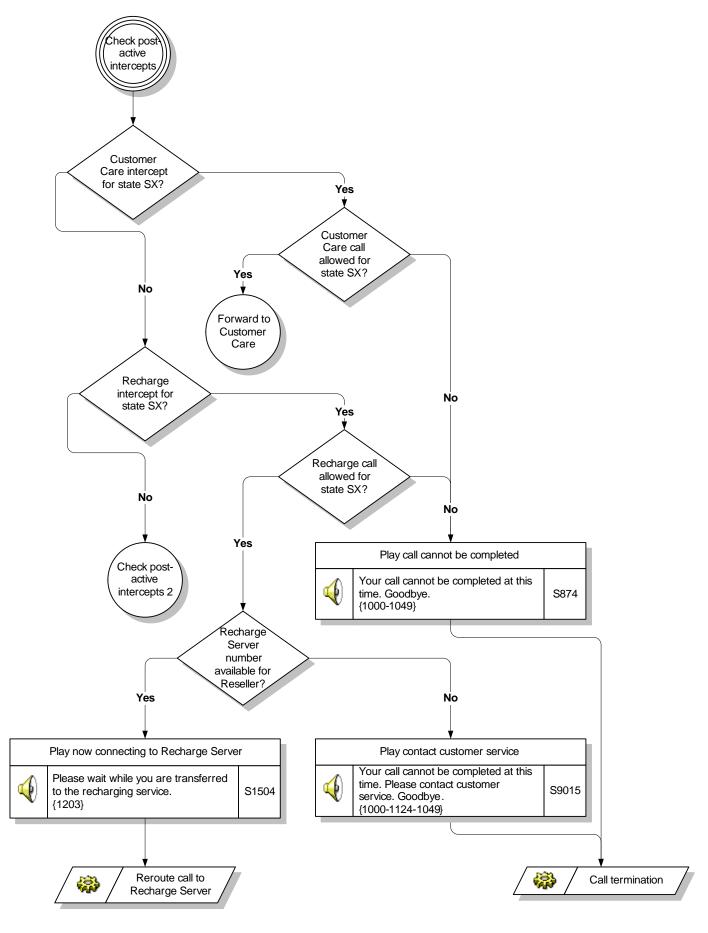
Check pre-active intercepts 3

Rev. 00.00 Date 11/07/07



Check post-active intercepts

Rev. 00.00 Date 30/05/07



Check post-active intercepts 2

Rev. 00.00 Date 25/06/07

