ENTRYPASS

Module : xSocket

R&D Department

XML Interface for 3rd Party Integration - V1.07

Revision History

Version	Date	Remarks
V. 1.00	27/01/2010	Initial Draft Release
V. 1.01	11/03/2010	Added for lift access lever listing Add lift access card
V.1.02	05/04/2010	Update command set for lift access L_ACCESS_LEVEL → LIFT_ACCESS_LEVEL L_START_DATE → LIFT_START_DATE L_END_DATE → LIFT_END_DATE L_IS_ACTIVATE → LIFT_IS_ACTIVATE STCODE Updated
V.1.03	17/05/2010	Added for lift STCODE
V.1.04	19/03/2012	Added support for Access Group
V.1.05	28/11/2012	Corrected the following in document: Change <IS_LIFT> to <IS_LIFT_CARD> Updated the command CARD_ADD for door to be the same as for lift. Command <L_AL_GET> is supposed to be <LAL_GET>
V.1.06	29/07/2016	Added support for Door Operation: • Security On/Off • Pulse Door Open • Inhibit/UnInibit
V1.07	22/9/2016	Added support for Alarm Operation: • Acknowledge Alarm Added <CTRLTAG> and <DOORNO> for Door_Get command.

Introduction

The purpose of this document is to specify the the interfacing protocol between Entrypass Platform1 Access Control System Version 3.0 Professional (and above) herein references as "EP.P1.Pro" and any 3rd party software application herein refer as "remote client" which built to send and receive XML formatted commands and results.

To enable XML interfacing capability in EP.P1, an Add-On Module named "xSocket" must be installed (xSocket Module must be purchased separately and can only be installed on EP.P1 Professional).

xSocket Overview

xSocket is an add-on module developed for EP.P1. Pro or above to enhance the integratability to 3rd party application which would like to leverage on certain functionalities available in EP.P1.

Integratable functions includes:-

- ☑ Card Services
    - Add staff parameters
    - Modify staff parameters
    - Delete staff parameters
    - Add card parameters
    - Modify card parameters
    - Delete card parameters
    - Activate card
    - Deactivate card
    - Get Card Access Level

- ☑ Transaction Services (Not Available Yet)

- ☑ Company Services (Not Available Yet)

- ☑ Controller Services (Partial Available)

XML Overview

XML stands for eXtensible Markup Language and is used to specify the formatting/representation of the data to be send to EP.P1. For more information on the XML standard itself, you may see the official reference at

http://www.w3.org/TR/2004/REC-xml-20040204

System Configuration
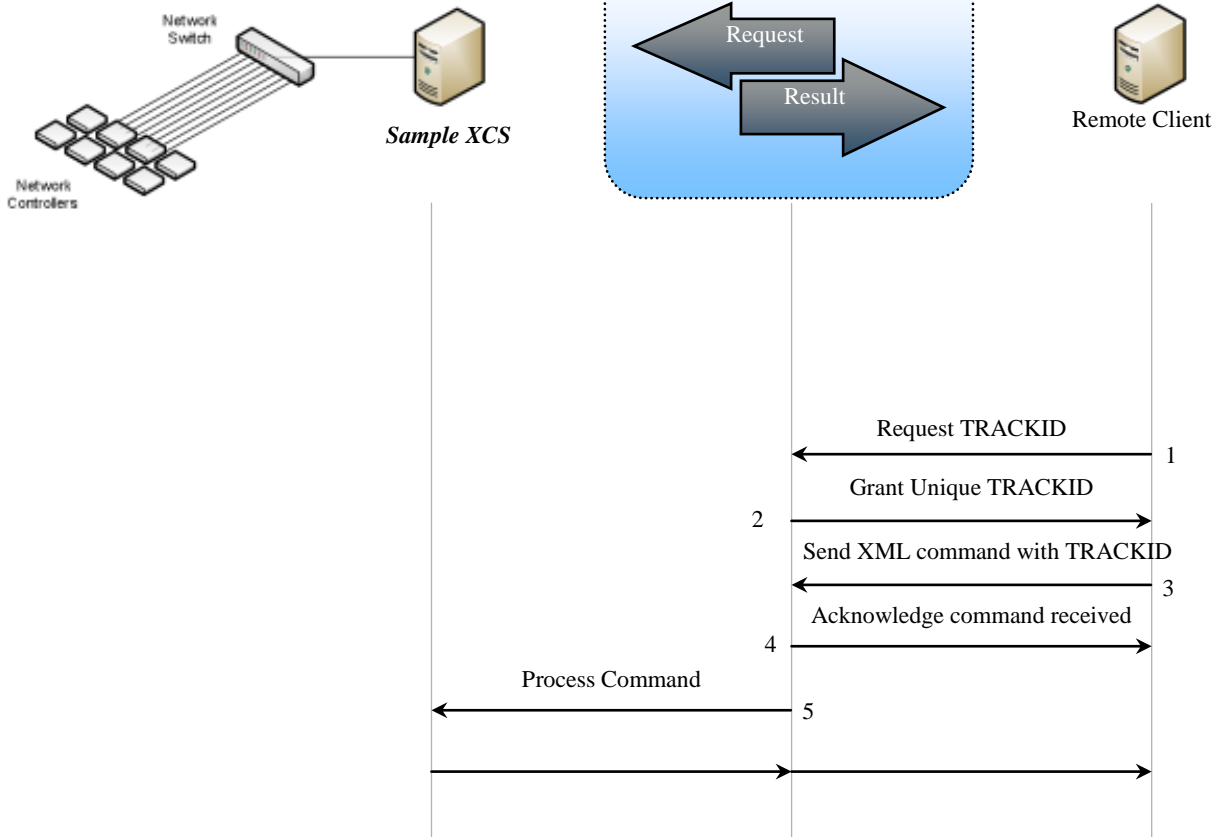
Process Flow

Process	Description	
1	Request TRACKID	Remote client initial the TRACKID process
2	Grant Unique TRACKID	xSocket module reply remote client request with an unique TRACKID
3	Send XML command with TRACKID	Remote client prepare and send XML formatted command sets with all necessary parameters (tagged with the unique TRACKID)

Process	Description	
4	Acknowledge command received	xSocket confirm the receiving with a acknowledgement
5	Process Command	xSocket parse command with all parameters to EP.P1.Pro for processing
6	Result Acknowledgement	EP.P1.Pro return processed result to xSocket
7	Result Acknowledgement	xSocket returns processed result to remote client with unique TRACKID

Basic XML Command Set (XCS) Structure

Each XCS must begin with a Service ID <SERVICE> to indicating which services it represents. Unique Service ID can be pre-created in xSocket Module prior to usage in remote client. Only the correct Service ID provided by the remote client will be processed. Please refer to xSocket Module User Manual for more details on how to create the Service ID.

Followed by the structure comes the Tracking ID <TRACKID>, Tracking ID is an unique tracking number assigned by the xSocket Module each time when a remote client wanted to initial the sending process of a XCS over to xSocket Module (please refer to *Process Flow* for the details).

If a XCS received with a non-exist Tracking ID, the particular XCS will be ignored (an error result will be returned). Also, the same Tracking ID can only be used once, If a second XCS received contains a same Tracking ID which previously used by another XCS, the second XCS will not be processed.

Lastly, a single XCS may consists of a one or maximum of 64 commands to be executed by xSocket Module. Each command may contain multiple parameters to describe the details of the command to be executed. Please refer to the detail parameter set in appendix X for more details.

Sample XCS Structure

```
<SERVICE ID=SERVICES>
    <TRACKID ID="yyyymmdd_xxxxxx>
        <COMMAND ID="1" COMCODE="X" >
            <Parameters1>
            <ParametersN>
        </COMMAND>
        <COMMAND ID="2" COMCODE="Y">
            <Parameters1>
            <ParametersN>
        </COMMAND>
        <COMMAND ID="n" COMCODE="XYZ">
            <Parameters1>
            <ParametersN>
        </COMMAND>
    </TRACKID>
</SERVICE>
```

Notes To Developer: Command ID shall not over 64

Assumption **: serviceID = VMS**
: reqID = 20100120_000001

System Operation : Request TRACKID

Command Code (COMCODE) *: TRACKID_GET*

Client Send *: <SERVICE ID="VMS">*
　　　　　<TRACKID_GET></TRACKID_GET>
　</SERVICE>
　↵ *(CARRIAGE RETURN LINE FEED)*

Command Received Successfully; *: <RESULT STCODE="0">*
Server Reply 　　　　*< TRACKID ID="20100120_000001"></TRACKID>*
　</RESULT>

If Fail; Server Reply *: <RESULT STCODE="XYZ">*
　　　　<TRACKID ID="Null"></TRACKID>
　　　　<COMMAND ID="Null"></COMMAND>
　　　　<PARAMETER>Null
　</RESULT>

Please refer Appendix-C for full Result Status Code Listing

Notes For Developer *: Please assign the returned TRACKID to the XCS going to be sent after the construction*

Command Examples

System Operation : Door Access Level Listing

Command Code (COMCODE)   : *AL_GET*

Client Send   : *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
             <COMMAND ID="1" COMCODE="AL_GET"></COMMAND>
</SERVICE>
↵ *(CARRIAGE RETURN LINE FEED)*

Command Received Successfully;   : *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID="20100120_000001">*
             <SUB_RESULT ID="1" STCODE="0">
             < ACCESS_LEVEL NO="0">Description 0</ACCESS_LEVEL>
             < ACCESS_LEVEL NO="1">Description 1</ACCESS_LEVEL>
                 ...
                 ...
             < ACCESS_LEVEL NO="n">Description n</ACCESS_LEVEL>
             </SUB_RESULT>
         </TRACKID>
</RESULT>

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
</RESULT>

Please refer Appendix-C for full Result Status Code Listing

Notes For Developer   : *Not all access level in the system will be made available for integration, it is recommended to have certain restriction imposed to prevent mis-usage of the integration.*

System Operation : Lift Access Level Listing

Command Code (COMCODE)   : *LAL_GET*

Client Send   : *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
             <COMMAND ID="1" COMCODE="LAL_GET"></COMMAND>
   </SERVICE>
   ↵ *(CARRIAGE RETURN LINE FEED)*

Command Received Successfully;   : *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID="20100120_000001">*
             <SUB_RESULT ID="1" STCODE="0">
             < L_ACCESS_LEVEL NO="0">Description 0</L_ ACCESS_LEVEL>
             < L_ACCESS_LEVEL NO="1">Description 1</L_ ACCESS_LEVEL>
                   ...
                   ...
             < L_ACCESS_LEVEL NO="n">Description n</L_ ACCESS_LEVEL>
             </SUB_RESULT>
         </TRACKID>
   </RESULT>

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
   </RESULT>

Please refer Appendix-C for full Result Status Code Listing

Notes For Developer   : *Not all lift access level in the system will be made available for integration, it is recommended to have certain restriction imposed to prevent mis-usage of the integration.*

System Operation : Door Access Group Listing

Command Code (COMCODE) : *AG_GET*

Client Send : *<SERVICE ID="VMS">*
      <TRACKID ID=20100120_000001>
            <COMMAND ID="1" COMCODE="AG_GET"></COMMAND>
  </SERVICE>
  ↵ *(CARRIAGE RETURN LINE FEED)*

Command Received Successfully; : *<RESULT STCODE="0">*
Server Reply
      <TRACKID ID="20100120_000001">
            <SUB_RESULT ID="1" STCODE="0">
            < ACCESS_GROUP NAME="A">Description A</ACCESS_GROUP>
            < ACCESS_GROUP NAME="B">Description B</ACCESS_GROUP>
                ...
                ...
            < ACCESS_GROUP NAME="n">Description n</ACCESS_GROUP>
            </SUB_RESULT>
      </TRACKID>
  </RESULT>

If Fail; Server Reply : *<RESULT STCODE="XYZ">*
      <TRACKID ID=" 20100120_000001"></TRACKID>
      <COMMAND ID="Null"></COMMAND>
      <PARAMETER>Null
  </RESULT>

Please refer Appendix-C for full Result Status Code Listing

Notes For Developer : *Not all access groups in the system will be made available for integration, it is recommended to have certain restriction imposed to prevent mis-usage of the integration.*

Staff Operation : Add Single Staff

Command Code (COMCODE)   **:** *STAFF_ADD*

Client Send   ***:*** *<SERVICE ID="VMS">*

```
<SERVICE ID="VMS">
    <TRACKID ID="20100120_000001">
        <COMMAND ID="1" COMCODE="STAFF_ADD">
            <STAFF_NAME>Visitor 001</STAFF_NAME>
            <STAFF_NO>VIS_0000000001</STAFF_NO>
            <DEPARTMENT>Visitor</DEPARTMENT>
            <JOB>Visitor</JOB>
            <DATE_OF_JOIN>20100120</DATE_OF_JOIN>
            <DATE_IF_BIRTH>19770510</DATE_OF_BIRTH>
            <SHIFT>AnyShift</SHIFT>
            <GENDER>0</GENDER>
            <IC_NO>770510-10-1234</IC_NO>
            <UDF_1></UDF_1>
            <UDF_2></UDF_2>
            <UDF_3></UDF_3>
            <UDF_4></UDF_4>
            <UDF_5></UDF_5>
            <UDF_6></UDF_6>
            <UDF_7></UDF_7>
            <UDF_8></UDF_8>
            <UDF_9></UDF_9>
            <UDF_10></UDF_10>
            <SHIFT_TYPE>0</SHIFT_TYPE>
            <TA_LOGIN_NAME></TA_LOGIN_NAME>
            <TA_LOGIN_PASSWORD></TA_LOGIN_PASSWORD>
            <IS_TA_ADMIN>0</IS_TA_ADMIN>
            <IS_SELF_AUTHORIZE>0</IS_SELF_AUTHORIZE>
            <PHOTO_FILE_NAME></PHOTO_FILE_NAME>
            <IS_RESIGN>0</IS_RESIGN>
            <DATE_OF_RESIGN></DATE_OF_RESIGN>
        </COMMAND>
    </TRACKID>
</SERVICE>
↵ (CARRIAGE RETURN LINE FEED)
```

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;	*:*	*<RESULT STCODE="0">*
Server Reply		*<TRACKID ID=20100120_000001>*
		<SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
		</TRACKID>
		</RESULT>

If Fail; Server Reply	*:*	*<RESULT STCODE="XYZ">*
		<TRACKID ID=" 20100120_000001"></TRACKID>
		<COMMAND ID="Null"></COMMAND>
		<PARAMETER>Null
		</RESULT>

Staff Operation : Modified A Single Staff

Command Code (COMCODE)   :   *STAFF_MOD*

Client Send   :
```
<SERVICE ID="VMS">
        <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="STAFF_MOD">
                        <STAFF_NAME>Visitor XYZ</STAFF_NAME>
                        <STAFF_NO>VIS_0000000001</STAFF_NO>
                        <DEPARTMENT>Visitor</DEPARTMENT>
                        <JOB>Visitor</JOB>
                        <DATE_OF_JOIN>20100120</DATE_OF_JOIN>
                        <DATE_IF_BIRTH>19770510</DATE_OF_BIRTH>
                        <SHIFT>AnyShift</SHIFT>
                        <GENDER>0</GENDER>
                        <IC_NO>770510-10-1234</IC_NO>
                        <UDF_1></UDF_1>
                        <UDF_2></UDF_2>
                        <UDF_3></UDF_3>
                        <UDF_4></UDF_4>
                        <UDF_5></UDF_5>
                        <UDF_6></UDF_6>
                        <UDF_7></UDF_7>
                        <UDF_8></UDF_8>
                        <UDF_9></UDF_9>
                        <UDF_10></UDF_10>
                        <SHIFT_TYPE>0</SHIFT_TYPE>
                        <TA_LOGIN_NAME></TA_LOGIN_NAME>
                        <TA_LOGIN_PASSWORD></TA_LOGIN_PASSWORD>
                        <IS_TA_ADMIN>0</IS_TA_ADMIN>
                        <IS_SELF_AUTHORIZE>0</IS_SELF_AUTHORIZE>
                        <PHOTO_FILE_NAME></PHOTO_FILE_NAME>
                        <IS_RESIGN>0</IS_RESIGN>
                        <DATE_OF_RESIGN></DATE_OF_RESIGN>
                </COMMAND>
        </TRACKID>
</SERVICE>
↵  (CARRIAGE RETURN LINE FEED)
```

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :
Server Reply
```
<RESULT STCODE="0">
        <TRACKID ID=20100120_000001>
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
        </TRACKID>
</RESULT>
```

If Fail; Server Reply : *<RESULT STCODE="XYZ">*
    <TRACKID ID=" 20100120_000001"></TRACKID>
    <COMMAND ID="Null"></COMMAND>
    <PARAMETER>Null
  </RESULT>

Staff Operation : Delete A Single Staff

Command Code (COMCODE)   **: STAFF_DEL**

Client Send   **:** *<SERVICE ID="VMS">*
      <TRACKID ID=20100120_000001>
         <COMMAND ID="1" COMCODE="STAFF_DEL">
            <STAFF_NO>VIS_0000000001</STAFF_NO>
         </COMMAND>
      </TRACKID>
   </SERVICE>
   ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   **:** *<RESULT* *STCODE="0"**>*
Server Reply
      <TRACKID ID=20100120_000001>
         <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
      </TRACKID>
   </RESULT>

If Fail; Server Reply   **:** *<RESULT* *STCODE="XYZ"**>*
      <TRACKID ID=" 20100120_000001"></TRACKID>
      <COMMAND ID="Null"></COMMAND>
      <PARAMETER>Null
   </RESULT>

Notes For Developer   **:** *All cards related to this STAFF_NO will be deleted.*

Staff Operation : Delete Multiple Staffs In Single XCS

Command Code (COMCODE)   : *STAFF_DEL*

Client Send   : *<SERVICE ID="VMS">*
        <TRACKID ID=20100120_000001>
            <COMMAND ID="1" COMCODE="STAFF_DEL">
                <STAFF_NO>VIS_0000000001</STAFF_NO>
            </COMMAND>
            <COMMAND ID="2" COMCODE="STAFF_DEL">
                <STAFF_NO>VIS_0000000002</STAFF_NO>
            </COMMAND>
            <COMMAND ID="n" COMCODE="STAFF_DEL">
                <STAFF_NO>VIS_000000000n</STAFF_NO>
            </COMMAND>
        </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   : *<RESULT STCODE="0">*
Server Reply
        <TRACKID ID=20100120_000001>
            <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
            <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
            <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
        </TRACKID>
    </RESULT>

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null
    </RESULT>

Notes to Developer   : *All cards related to this STAFF_NO will be deleted.*

Card Operation : Add Single Card (For door access only)

Command Code (COMCODE)   :   **STAFF_ADD; CARD_ADD**

Client Send   :

```
<SERVICE ID="VMS">
    <TRACKID ID=20100120_000001>
        <COMMAND ID="1" COMCODE="STAFF_ADD">
            <STAFF_NAME>Visitor 001</STAFF_NAME>
            <STAFF_NO>VIS_0000000001</STAFF_NO>
            <DEPARTMENT>Visitor</DEPARTMENT>
            <JOB>Visitor</JOB>
            <DATE_OF_JOIN>20100120</DATE_OF_JOIN>
            <DATE_IF_BIRTH>19770510</DATE_OF_BIRTH>
            <SHIFT>AnyShift</SHIFT>
            <GENDER>0</GENDER>
            <IC_NO>770510-10-1234</IC_NO>
            <UDF_1></UDF_1>
            <UDF_2></UDF_2>
            <UDF_3></UDF_3>
            <UDF_4></UDF_4>
            <UDF_5></UDF_5>
            <UDF_6></UDF_6>
            <UDF_7></UDF_7>
            <UDF_8></UDF_8>
            <UDF_9></UDF_9>
            <UDF_10></UDF_10>
            <SHIFT_TYPE>0</SHIFT_TYPE>
            <TA_LOGIN_NAME></TA_LOGIN_NAME>
            <TA_LOGIN_PASSWORD></TA_LOGIN_PASSWORD>
            <IS_TA_ADMIN>0</IS_TA_ADMIN>
            <IS_SELF_AUTHORIZE>0</IS_SELF_AUTHORIZE>
            <PHOTO_FILE_NAME></PHOTO_FILE_NAME>
            <IS_RESIGN>0</IS_RESIGN>
            <DATE_OF_RESIGN></DATE_OF_RESIGN>
        </COMMAND>
        <COMMAND ID="2" COMCODE="CARD_ADD">
            <STAFF_NO>VIS_0000000001</STAFF_NO>
            <CARD_NO>0123456789</CARD_NO>
            <PIN_NO>123456</PIN_NO>
            <ACCESS_LEVEL>1</ACCESS_LEVEL>
            <START_DATE>20100120</START_DATE>
            <END_DATE>20100120</END_DATE>
            <CARD_TYPE>0</CARD_TYPE>
            <IS_ACTIVATE>1</IS_ACTIVATE>
            <IS_LIFT_CARD>0</IS_LIFT_CARD>
            <IS_ANTI_PASSBACK>0</IS_ANTI_PASSBACK>
            <BUDDY_NO>0</BUDDY_NO>
            <LIFT_ACCESS_LEVEL>1</LIFT_ACCESS_LEVEL>
            <LIFT_START_DATE>20100120</LIFT_START_DATE>
            <LIFT_END_DATE>20100120</LIFT_END_DATE>
            <LIFT_IS_ACTIVATE>1</LIFT_IS_ACTIVATE>
            <ACCESS_GROUPS>
                <GROUP_NAME>AG 1</GROUP_NAME>
                <GROUP_NAME>AG 2</GROUP_NAME>
            </ACCESS_GROUPS>
        </COMMAND>
    </TRACKID>
</SERVICE>
↵ (CARRIAGE RETURN LINE FEED)
```

Command Received Successfully; : *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
                                                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
                                                <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
                                         </TRACKID>
                                  </RESULT>

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
                                         <TRACKID ID=" 20100120_000001"></TRACKID>
                                         <COMMAND ID="Null"></COMMAND>
                                         <PARAMETER>Null
                                  </RESULT>

Notes to Developer   : *N/A*

Card Operation : Add Single Card (For door & lift access)

Command Code (COMCODE)   **: STAFF_ADD ; CARD_ADD**

Client Send   **:**

```
<SERVICE ID="VMS">
    <TRACKID ID=20100120_000001>
        <COMMAND ID="1" COMCODE="STAFF_ADD">
            <STAFF_NAME>Visitor 001</STAFF_NAME>
            <STAFF_NO>VIS_0000000001</STAFF_NO>
            <DEPARTMENT>Visitor</DEPARTMENT>
            <JOB>Visitor</JOB>
            <DATE_OF_JOIN>20100120</DATE_OF_JOIN>
            <DATE_IF_BIRTH>19770510</DATE_OF_BIRTH>
            <SHIFT>AnyShift</SHIFT>
            <GENDER>0</GENDER>
            <IC_NO>770510-10-1234</IC_NO>
            <UDF_1></UDF_1>
            <UDF_2></UDF_2>
            <UDF_3></UDF_3>
            <UDF_4></UDF_4>
            <UDF_5></UDF_5>
            <UDF_6></UDF_6>
            <UDF_7></UDF_7>
            <UDF_8></UDF_8>
            <UDF_9></UDF_9>
            <UDF_10></UDF_10>
            <SHIFT_TYPE>0</SHIFT_TYPE>
            <TA_LOGIN_NAME></TA_LOGIN_NAME>
            <TA_LOGIN_PASSWORD></TA_LOGIN_PASSWORD>
            <IS_TA_ADMIN>0</IS_TA_ADMIN>
            <IS_SELF_AUTHORIZE>0</IS_SELF_AUTHORIZE>
            <PHOTO_FILE_NAME></PHOTO_FILE_NAME>
            <IS_RESIGN>0</IS_RESIGN>
            <DATE_OF_RESIGN></DATE_OF_RESIGN>
        </COMMAND>
        <COMMAND ID="2" COMCODE="CARD_ADD">
            <STAFF_NO>VIS_0000000001</STAFF_NO>
            <CARD_NO>0123456789</CARD_NO>
            <PIN_NO>123456</PIN_NO>
            <ACCESS_LEVEL>1</ACCESS_LEVEL>
            <START_DATE>20100120</START_DATE>
            <END_DATE>20100120</END_DATE>
            <CARD_TYPE>0</CARD_TYPE>
            <IS_ACTIVATE>1</IS_ACTIVATE>
            <IS_LIFT_CARD>1</IS_LIFT_CARD>
            <IS_ANTI_PASSBACK>0</IS_ANTI_PASSBACK>
            <BUDDY_NO>0</BUDDY_NO>
            <LIFT_ACCESS_LEVEL>1</LIFT_ACCESS_LEVEL>
            <LIFT_START_DATE>20100120</LIFT_START_DATE>
            <LIFT_END_DATE>20100120</LIFT_END_DATE>
            <LIFT_IS_ACTIVATE>1</LIFT_IS_ACTIVATE>
            <ACCESS_GROUPS>
                <GROUP_NAME>AG 1</GROUP_NAME>
                <GROUP_NAME>AG 2</GROUP_NAME>
            </ACCESS_GROUPS>
        </COMMAND>
    </TRACKID>
</SERVICE>
↵ (CARRIAGE RETURN LINE FEED)
```

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
                                                   <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
                                                   <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
                                             </TRACKID>
                                        </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
                                             <TRACKID ID=" 20100120_000001"></TRACKID>
                                             <COMMAND ID="Null"></COMMAND>
                                             <PARAMETER>Null
                                        </RESULT>

Notes to Developer   :   *N/A*

Card operation : Add multiple cards in single XCS

Command Code (COMCODE) : *STAFF_ADD ; CARD_ADD*

Client Send :
```
<SERVICE ID="VMS">
        <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="STAFF_ADD">
                        <STAFF_NAME>Visitor 001</STAFF_NAME>
                                ...
                                ...
                        <DATE_OF_RESIGN></DATE_OF_RESIGN>
                </COMMAND>
                <COMMAND ID="2" COMCODE="STAFF_ADD">
                        <STAFF_NAME>Visitor 002</STAFF_NAME>
                                ...
                                ...
                        <DATE_OF_RESIGN></DATE_OF_RESIGN>
                </COMMAND>
                <COMMAND ID="3" COMCOD="CARD_ADD">
                        <STAFF_NO>VIS_0000000001</STAFF_NO>
                                ...
                                ...
                        <BUDDY_NO>0</BUDDY_NO>
                </COMMAND>
                <COMMAND ID="4" COMCOD="CARD_ADD">
                        <STAFF_NO>VIS_0000000002</STAFF_NO>
                                ...
                                ...
                        <BUDDY_NO>0</BUDDY_NO>
                </COMMAND>
        </TRACKID>
</SERVICE>
↵  (CARRIAGE RETURN LINE FEED)
```

Command Received Successfully;
Server Reply
```
<RESULT STCODE="0">
        <TRACKID ID=20100120_000001>
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="3" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="4" STCODE="0"></SUB_RESULT>
        </TRACKID>
</RESULT>
```

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
    </RESULT>

If "out of range" value assigned in   : *<RESULT STCODE="21">*
"Access Level" parameter in   *< TRACKID ID="20100120_000001"></TRACKID>*
Command-4; Server Reply   *<COMMAND>4</COMMAND>*
         <PARAMETER>ACCESS_LEVEL
    </RESULT>

Elements colored in red are mandatory and CANNOT be null !

Card operation : Modified a single card parameter

Command Code (COMCODE) : **CARD_MOD**

Client Send : `<SERVICE ID="VMS">`
                  `<TRACKID ID=20100120_000001>`
                      `<COMMAND ID="1" COMCODE="CARD_MOD">`
                          `<STAFF_NO>VIS_0000000001</STAFF_NO>`
                          `<CARD_NO>0123456789</CARD_NO>`
                          `<PIN_NO>123456</PIN_NO>`
                          `<ACCESS_LEVEL>1</ACCESS_LEVEL>`
                          `<START_DATE>20100120</START_DATE>`
                          `<END_DATE>20100120</END_DATE>`
                          `<CARD_TYPE>0</CARD_TYPE>`
                          `<IS_ACTIVATE>1</IS_ACTIVATE>`
                          `<IS_LIFT_CARD>0</IS_LIFT_CARD>`
                          `<IS_ANTI_PASSBACK>0</IS_ANTI_PASSBACK>`
                          `<BUDDY_NO>0</BUDDY_NO>`
                          `<LIFT_ACCESS_LEVEL>1</LIFT_ACCESS_LEVEL>`
                          `<LIFT_START_DATE>20100120</LIFT_START_DATE>`
                          `<LIFT_END_DATE>20100120</LIFT_END_DATE>`
                          `<LIFT_IS_ACTIVATE>1</LIFT_IS_ACTIVATE>`
                          `<ACCESS_GROUPS>`
                              `<GROUP_NAME>AG 1</GROUP_NAME>`
                              `<GROUP_NAME>AG 2</GROUP_NAME>`
                          `</ACCESS_GROUPS>`
                      `</COMMAND`
                  `</TRACKID>`
              `</SERVICE>`
              ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully; : `<RESULT STCODE="0">`
Server Reply   `<TRACKID ID=20100120_000001>`
                                          `<SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>`
                                      `</TRACKID>`
                                  `</RESULT>`

If Fail; Server Reply : `<RESULT STCODE="XYZ">`
                              `<TRACKID ID=" 20100120_000001"></TRACKID>`
                              `<COMMAND ID="Null"></COMMAND>`
                              `<PARAMETER>Null</PARAMETER>`
                          `</RESULT>`

Note to Developer   **:**   *If intend to remove all access groups for a card, simply leave the group name empty.*

Card operation : Modified multiple cards parameter in single XCS

Command Code (COMCODE)   **:**   *CARD_MOD*

Client Send : *<SERVICE ID="VMS">*
    <TRACKID ID=20100120_000001>
        <COMMAND ID="1" COMCODE="CARD_MOD">
            <STAFF_NO>VIS_0000000001</STAFF_NO>
            <CARD_NO>0123456789</CARD_NO>
            <PIN_NO>123456</PIN_NO>
            <ACCESS_LEVEL>1</ACCESS_LEVEL>
            <START_DATE>20100120</START_DATE>
            <END_DATE>20100120</END_DATE>
            <CARD_TYPE>0</CARD_TYPE>
            <IS_ACTIVATE>1</IS_ACTIVATE>
            <IS_LIFT_CARD>0</IS_LIFT_CARD>
            <IS_ANTI_PASSBACK>0</IS_ANTI_PASSBACK>
            <BUDDY_NO>0</BUDDY_NO>
            <LIFT_ACCESS_LEVEL>1</LIFT_ACCESS_LEVEL>
            <LIFT_START_DATE>20100120</LIFT_START_DATE>
            <LIFT_END_DATE>20100120</LIFT_END_DATE>
            <LIFT_IS_ACTIVATE>1</LIFT_IS_ACTIVATE>
            <ACCESS_GROUPS>
                <GROUP_NAME>AG 1</GROUP_NAME>
                <GROUP_NAME>AG 2</GROUP_NAME>
            </ACCESS_GROUPS>
        </COMMAND
        <COMMAND ID="2" COMCODE="CARD_MOD">
            <STAFF_NO>VIS_0000000002</STAFF_NO>
            <CARD_NO>0124444449</CARD_NO>
            <PIN_NO>123456</PIN_NO>
            <ACCESS_LEVEL>1</ACCESS_LEVEL>
            <START_DATE>20100120</START_DATE>
            <END_DATE>20100120</END_DATE>
            <CARD_TYPE>0</CARD_TYPE>
            <IS_ACTIVATE>1</IS_ACTIVATE>
            <IS_LIFT_CARD>0</IS_LIFT_CARD>
            <IS_ANTI_PASSBACK>0</IS_ANTI_PASSBACK>
            <BUDDY_NO>0</BUDDY_NO>
            <LIFT_ACCESS_LEVEL>1</LIFT_ACCESS_LEVEL>
            <LIFT_START_DATE>20100120</LIFT_START_DATE>
            <LIFT_END_DATE>20100120</LIFT_END_DATE>
            <LIFT_IS_ACTIVATE>1</LIFT_IS_ACTIVATE>
            <ACCESS_GROUPS>
                <GROUP_NAME>AG 1</GROUP_NAME>
                <GROUP_NAME>AG 2</GROUP_NAME>
            </ACCESS_GROUPS>
        </COMMAND
    </TRACKID>
</SERVICE>
↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;	*:*	*<RESULT* *STCODE="0"**>*
Server Reply		*<TRACKID ID=20100120_000001>*
		<SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
		<SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
		</TRACKID>
		</RESULT>

If Fail; Server Reply	*:*	*<RESULT* *STCODE="XYZ"**>*
		<TRACKID ID=" 20100120_000001"></TRACKID>
		<COMMAND ID="Null"></COMMAND>
		<PARAMETER>Null
		</RESULT>

Note to Developer	*:*	*If intend to remove all access groups for a card, simply leave the group name empty.*

Card Operation : Delete single card

Command Code (COMCODE)   : *CARD_DEL*

Client Send   : *<SERVICE ID="VMS">*
        <TRACKID ID=20100120_000001>
            <COMMAND ID="1" COMCODE="CARD_DEL">
                <CARD_NO>0123456789</CARD_NO>
            </COMMAND>
        </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   : *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
            <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
        </TRACKID>
    </RESULT>

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null
    </RESULT>

Note For Developer   : *N/A*

Card Operation : Delete multiple cards in single XCS

Command Code (COMCODE) : *CARD_DEL*

Client Send : *<SERVICE ID="VMS">*
       <TRACKID ID=20100120_000001>
           <COMMAND ID="1" COMCODE="CARD_DEL">
             <CARD_NO>0123456789</CARD_NO>
            </COMMAND>
            <COMMAND ID="2" COMCODE="CARD_DEL">
             <CARD_NO>0124444449</CARD_NO>
            </COMMAND>
            <COMMAND ID="n" COMCODE="STAFF_DEL">
             <CARD_NO>000000000n</CARD_NO>
            </COMMAND>
       </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully; : *<RESULT STCODE="0">*
Server Reply
       <TRACKID ID=20100120_000001>
            <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
            <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
            <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
       </TRACKID>
    </RESULT>

If Fail; Server Reply : *<RESULT STCODE="XYZ">*
       <TRACKID ID=" 20100120_000001"></TRACKID>
       <COMMAND ID="Null"></COMMAND>
       <PARAMETER>Null
    </RESULT>

Note For Developer : *N/A*

Card Operation : Activate a single card

Command Code (COMCODE)   *: CARD_ACT*

Client Send   *:* *<SERVICE ID="VMS">*
          <TRACKID ID=20100120_000001>
               <COMMAND ID="1" COMCODE="CARD_ACT">
                    <CARD_NO>0123456789</CARD_NO>
               </COMMAND>
          </TRACKID>
   </SERVICE>
   ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *:* *<RESULT STCODE="0">*
Server Reply
          <TRACKID ID=20100120_000001>
               <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
          </TRACKID>
   </RESULT>

If Fail; Server Reply   *:* *<RESULT STCODE="XYZ">*
          <TRACKID ID=" 20100120_000001"></TRACKID>
          <COMMAND ID="Null"></COMMAND>
          <PARAMETER>Null
   </RESULT>

Note For Developer   *: N/A*

Card Operation : De-Activate a single card

Command Code (COMCODE)　　　　*: CARD_DCT*

Client Send　　　　　　　　　　*: <SERVICE ID="VMS">*
　　　　　　　　　　　　　　　　　　<TRACKID ID=20100120_000001>
　　　　　　　　　　　　　　　　　　　　<COMMAND ID="1" COMCODE="CARD_DCT">
　　　　　　　　　　　　　　　　　　　　　　<CARD_NO>0123456789</CARD_NO>
　　　　　　　　　　　　　　　　　　　　</COMMAND>
　　　　　　　　　　　　　　　　　　</TRACKID>
　　　　　　　　　　　　　　　</SERVICE>
　　　　　　　　　　　　　　　↵　*(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;　　*: <RESULT STCODE="0">*
Server Reply　　　　　　　　　　　　*<TRACKID ID=20100120_000001>*
　　　　　　　　　　　　　　　　　　<SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
　　　　　　　　　　　　　　　</TRACKID>
　　　　　　　　　　　　　</RESULT>

If Fail; Server Reply　　　　　　*: <RESULT STCODE="XYZ">*
　　　　　　　　　　　　　　　　<TRACKID ID=" 20100120_000001"></TRACKID>
　　　　　　　　　　　　　　　　<COMMAND ID="Null"></COMMAND>
　　　　　　　　　　　　　　　　<PARAMETER>Null
　　　　　　　　　　　　　</RESULT>

Note For Developer　　　　　　　*: N/A*

Door Operation : Door Listing

Command Code (COMCODE)	:	*DOOR_GET*

Client Send   :

```
<SERVICE ID="VMS">
        <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="DOOR_GET"></COMMAND>
</SERVICE>
↵ (CARRIAGE RETURN LINE FEED)
```

Command Received Successfully;   :
Server Reply

```
<RESULT STCODE="0">
        <TRACKID ID="20100120_000001">
                <SUB_RESULT ID="1" STCODE="0">
                < DOOR NAME="D1">Description 1
                    <CTRLTAG>0123456789AB</CTRLTAG>
                    <DOORNO>1</DOORNO>
                </DOOR>
                < DOOR NAME="D2">Description 2
                    <CTRLTAG>0123456789AB</CTRLTAG>
                    <DOORNO>2</DOORNO>
                </DOOR>
                        ...
                        ...
                < DOOR NAME="n">Description n
                    <CTRLTAG>0123456789AB</CTRLTAG>
                    <DOORNO>n</DOORNO>
                </DOOR>
                </SUB_RESULT>
        </TRACKID>
</RESULT>
```

If Fail; Server Reply   :

```
<RESULT STCODE="XYZ">
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null</PARAMETER>
</RESULT>
```

Please refer Appendix-C for full Result Status Code Listing

Notes For Developer   : *Not all access level in the system will be made available for integration, it is recommended to have certain restriction imposed to prevent mis-usage of the integration.*

Door Operation : Security On for a door

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :   *<SERVICE ID="VMS">*
        <TRACKID ID=20100120_000001>
            <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                <SECURITY>1</SECURITY>
                <ALL>0</ALL>
                <DOOR_NAME>Entrance 1</DOOR_NAME>
            </COMMAND>
        </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
            </TRACKID>
        </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null
    </RESULT>

Note For Developer   :   *N/A*

Door Operation : Security On for multiple doors in single XCS

Command Code (COMCODE)   *: DOOR_OPERATION*

Client Send   *:* *<SERVICE ID="VMS">*
        <TRACKID ID=20100120_000001>
            <COMMAND ID="1" COMCODE="DOOR_OPERATION">
               <SECURITY>1</SECURITY>
               <ALL>0</ALL>
               <DOOR_NAME>Entrance 1</DOOR_NAME>
            </COMMAND>
            <COMMAND ID="2" COMCODE="DOOR_OPERATION">
               <SECURITY>1</SECURITY>
               <ALL>0</ALL>
               <DOOR_NAME>Entrance 2</DOOR_NAME>
            </COMMAND>
            <COMMAND ID="n" COMCODE="DOOR_OPERATION">
               <SECURITY>1</SECURITY>
               <ALL>0</ALL>
               <DOOR_NAME>Entrance n</DOOR_NAME>
            </COMMAND>
        </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *:* *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
            <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
            <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
            <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
        </TRACKID>
    </RESULT>

If Fail; Server Reply   *:* *<RESULT STCODE="XYZ">*
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null
    </RESULT>

Note For Developer   *: N/A*

Door Operation : Security On for ALL doors

Command Code (COMCODE)   *: DOOR_OPERATION*

Client Send   *:*   *<SERVICE ID="VMS">*
             <TRACKID ID=20100120_000001>
                    <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                        <SECURITY>1</SECURITY>
                        <ALL>1</ALL>
                        <DOOR_NAME></DOOR_NAME>
                  </COMMAND>
             </TRACKID>
  </SERVICE>
  ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *:*   *<RESULT STCODE="0">*
Server Reply
             <TRACKID ID=20100120_000001>
                    <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
             </TRACKID>
  </RESULT>

If Fail; Server Reply   *:*   *<RESULT STCODE="XYZ">*
             <TRACKID ID=" 20100120_000001"></TRACKID>
             <COMMAND ID="Null"></COMMAND>
             <PARAMETER>Null
  </RESULT>

Note For Developer   *:*   *N/A*

Door Operation : Security Off for a door

Command Code (COMCODE) : *DOOR_OPERATION*

Client Send : *<SERVICE ID="VMS">*
　　　　　　　<TRACKID ID=20100120_000001>
　　　　　　　　　　<COMMAND ID="1" COMCODE="DOOR_OPERATION">
　　　　　　　　　　　　<SECURITY>0</SECURITY>
　　　　　　　　　　　　<ALL>0</ALL>
　　　　　　　　　　　　<DOOR_NAME>Entrance 1</DOOR_NAME>
　　　　　　　　　　</COMMAND>
　　　　　　　</TRACKID>
　　　</SERVICE>
　　　↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully; : *<RESULT STCODE="0">*
Server Reply 　　　　　　　*<TRACKID ID=20100120_000001>*
　　　　　　　　　　<SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
　　　　　　　</TRACKID>
　　　</RESULT>

If Fail; Server Reply : *<RESULT STCODE="XYZ">*
　　　　　　　<TRACKID ID=" 20100120_000001"></TRACKID>
　　　　　　　<COMMAND ID="Null"></COMMAND>
　　　　　　　<PARAMETER>Null
　　　</RESULT>

Note For Developer : *N/A*

Door Operation : Security Off for multiple doors in single XCS

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :

```
<SERVICE ID="VMS">
        <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                        <SECURITY>0</SECURITY>
                        <ALL>0</ALL>
                        <DOOR_NAME>Entrance 1</DOOR_NAME>
                </COMMAND>
                <COMMAND ID="2" COMCODE="DOOR_OPERATION">
                        <SECURITY>0</SECURITY>
                        <ALL>0</ALL>
                        <DOOR_NAME>Entrance 2</DOOR_NAME>
                </COMMAND>
                <COMMAND ID="n" COMCODE="DOOR_OPERATION">
                        <SECURITY>0</SECURITY>
                        <ALL>0</ALL>
                        <DOOR_NAME>Entrance n</DOOR_NAME>
                </COMMAND>
        </TRACKID>
</SERVICE>
↵  (CARRIAGE RETURN LINE FEED)
```

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;
Server Reply   :

```
<RESULT STCODE="0">
        <TRACKID ID=20100120_000001>
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
        </TRACKID>
</RESULT>
```

If Fail; Server Reply   :

```
<RESULT STCODE="XYZ">
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null</PARAMETER>
</RESULT>
```

Note For Developer   :   *N/A*

Door Operation : Security Off for ALL doors

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :   *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                      <SECURITY>0</SECURITY>
                      <ALL>1</ALL>
                      <DOOR_NAME></DOOR_NAME>
                </COMMAND>
         </TRACKID>
   </SERVICE>
   ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply
         <TRACKID ID=20100120_000001>
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
         </TRACKID>
   </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
   </RESULT>

Note For Developer   :   *N/A*

Door Operation : Pulse Door Open for a door

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :   *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
             <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                 <PULSE>1</PULSE>
                 <ALL>0</ALL>
                 <DOOR_NAME>Entrance</DOOR_NAME>
             </COMMAND>
         </TRACKID>
   </SERVICE>
   ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply
         <TRACKID ID=20100120_000001>
             <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
         </TRACKID>
   </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
   </RESULT>

Note For Developer   :   *N/A*

Door Operation : Pulse Door Open for multiple doors in single XCS

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :   *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
                 <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                         <PULSE>1</PULSE>
                         <ALL>0</ALL>
                         <DOOR_NAME>Entrance 1</DOOR_NAME>
                 </COMMAND>
                 <COMMAND ID="2" COMCODE="DOOR_OPERATION">
                         <PULSE>1</PULSE>
                         <ALL>0</ALL>
                         <DOOR_NAME>Entrance 2</DOOR_NAME>
                 </COMMAND>
                 <COMMAND ID="n" COMCODE="DOOR_OPERATION">
                         <PULSE>1</PULSE>
                         <ALL>0</ALL>
                         <DOOR_NAME>Entrance n</DOOR_NAME>
                 </COMMAND>
         </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply
         <TRACKID ID=20100120_000001>
                 <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
                 <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
                 <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
         </TRACKID>
    </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
    </RESULT>

Note For Developer   :   *N/A*

Door Operation : Pulse Door Open for ALL doors

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :   *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
             <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                 <PULSE>1</PULSE>
                 <ALL>1</ALL>
                 <DOOR_NAME></DOOR_NAME>
             </COMMAND>
         </TRACKID>
  </SERVICE>
  ↵   *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply
         <TRACKID ID=20100120_000001>
             <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
         </TRACKID>
  </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
         <TRACKID ID=" 20100120_000001"></TRACKID>
         <COMMAND ID="Null"></COMMAND>
         <PARAMETER>Null
  </RESULT>

Note For Developer   :   *N/A*

Door Operation : Inhibit for a door

Command Code (COMCODE)   *: DOOR_OPERATION*

Client Send   *: <SERVICE ID="VMS">*
    <TRACKID ID=20100120_000001>
      <COMMAND ID="1" COMCODE="DOOR_OPERATION>
        <INHIBIT>1</INHIBIT>
        <ALL>0</ALL>
        <DOOR_NAME>Entrance</DOOR_NAME>
      </COMMAND>
    </TRACKID>
  </SERVICE>
  ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *: <RESULT STCODE="0">*
Server Reply
    <TRACKID ID=20100120_000001>
      <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
    </TRACKID>
  </RESULT>

If Fail; Server Reply   *: <RESULT STCODE="XYZ">*
    <TRACKID ID=" 20100120_000001"></TRACKID>
    <COMMAND ID="Null"></COMMAND>
    <PARAMETER>Null
  </RESULT>

Note For Developer   *: N/A*

Door Operation : Inhibit for multiple doors in single XCS

Command Code (COMCODE)   *: DOOR_OPERATION*

Client Send   *:* *<SERVICE ID="VMS">*
     <TRACKID ID=20100120_000001>
       <COMMAND ID="1" COMCODE="DOOR_OPERATION">
        <INHIBIT>1</INHIBIT>
        <ALL>0</ALL>
        <DOOR_NAME>Entrance 1</DOOR_NAME>
       </COMMAND>
       <COMMAND ID="2" COMCODE="DOOR_OPERATION">
        <INHIBIT>1</INHIBIT>
        <ALL>0</ALL>
        <DOOR_NAME>Entrance 2</DOOR_NAME>
       </COMMAND>
       <COMMAND ID="n" COMCODE="DOOR_OPERATION">
        <INHIBIT>1</INHIBIT>
        <ALL>0</ALL>
        <DOOR_NAME>Entrance n</DOOR_NAME>
       </COMMAND>
     </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *:* *<RESULT STCODE="0">*
Server Reply
     <TRACKID ID=20100120_000001>
       <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
       <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
       <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
     </TRACKID>
    </RESULT>

If Fail; Server Reply   *:* *<RESULT STCODE="XYZ">*
     <TRACKID ID=" 20100120_000001"></TRACKID>
     <COMMAND ID="Null"></COMMAND>
     <PARAMETER>Null
    </RESULT>

Note For Developer   *:* *N/A*

Door Operation : Inhibit for ALL doors

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :   *<SERVICE ID="VMS">*
             <TRACKID ID=20100120_000001>
                      <COMMAND ID="1" COMCODE="DOOR_OPERATION>
                               <INHIBIT>1</INHIBIT>
                               <ALL>1</ALL>
                               <DOOR_NAME></DOOR_NAME>
                      </COMMAND>
             </TRACKID>
     </SERVICE>
     ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :   *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
                      <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
             </TRACKID>
     </RESULT>

If Fail; Server Reply   :   *<RESULT STCODE="XYZ">*
             <TRACKID ID=" 20100120_000001"></TRACKID>
             <COMMAND ID="Null"></COMMAND>
             <PARAMETER>Null
     </RESULT>

Note For Developer   :   *N/A*

Door Operation : UnInhibit for a door

Command Code (COMCODE)   *:*   *DOOR_OPERATION*

Client Send   *:*   *<SERVICE ID="VMS">*
           <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="DOOR_OPERATION>
                     <INHIBIT>0</INHIBIT>
                     <ALL>0</ALL>
                     <DOOR_NAME>Entrance</DOOR_NAME>
                </COMMAND>
           </TRACKID>
   </SERVICE>
   ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *:*   *<RESULT STCODE="0">*
Server Reply
           <TRACKID ID=20100120_000001>
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
           </TRACKID>
   </RESULT>

If Fail; Server Reply   *:*   *<RESULT STCODE="XYZ">*
           <TRACKID ID=" 20100120_000001"></TRACKID>
           <COMMAND ID="Null"></COMMAND>
           <PARAMETER>Null
   </RESULT>

Note For Developer   *:*   *N/A*

Door Operation : UnInhibit for multiple doors in single XCS

Command Code (COMCODE)   :   *DOOR_OPERATION*

Client Send   :

```
<SERVICE ID="VMS">
        <TRACKID ID=20100120_000001>
                <COMMAND ID="1" COMCODE="DOOR_OPERATION">
                        <INHIBIT>0</INHIBIT>
                        <ALL>0</ALL>
                        <DOOR_NAME>Entrance 1</DOOR_NAME>
                </COMMAND>
                <COMMAND ID="2" COMCODE="DOOR_OPERATION">
                        <INHIBIT>0</INHIBIT>
                        <ALL>0</ALL>
                        <DOOR_NAME>Entrance 2</DOOR_NAME>
                </COMMAND>
                <COMMAND ID="n" COMCODE="DOOR_OPERATION">
                        <INHIBIT>0</INHIBIT>
                        <ALL>0</ALL>
                        <DOOR_NAME>Entrance n</DOOR_NAME>
                </COMMAND>
        </TRACKID>
</SERVICE>
↵  (CARRIAGE RETURN LINE FEED)
```

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   :
Server Reply

```
<RESULT STCODE="0">
        <TRACKID ID=20100120_000001>
                <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="2" STCODE="0"></SUB_RESULT>
                <SUB_RESULT ID="n" STCODE="0"></SUB_RESULT>
        </TRACKID>
</RESULT>
```

If Fail; Server Reply   :

```
<RESULT STCODE="XYZ">
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null</PARAMETER>
</RESULT>
```

Note For Developer   :   *N/A*

Door Operation : UnInhibit for ALL doors

Command Code (COMCODE)   : *DOOR_OPERATION*

Client Send   : *<SERVICE ID="VMS">*
        <TRACKID ID=20100120_000001>
            <COMMAND ID="1" COMCODE="DOOR_OPERATION>
                <INHIBIT>0</INHIBIT>
                <ALL>1</ALL>
                <DOOR_NAME></DOOR_NAME>
            </COMMAND>
        </TRACKID>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   : *<RESULT STCODE="0">*
Server Reply
        <TRACKID ID=20100120_000001>
            <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
        </TRACKID>
    </RESULT>

If Fail; Server Reply   : *<RESULT STCODE="XYZ">*
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null
    </RESULT>

Note For Developer   : *N/A*

Alarm Operation : Acknowledge Alarm

Command Code (COMCODE)   **:**   *ALARM_OPERATION*

Client Send   *:*   *<SERVICE ID="VMS">*
         <TRACKID ID=20100120_000001>
             <COMMAND ID="1" COMCODE="ALARM_OPERATION>
                <TRID>0123456789AB</TRID>
                <ACKDATE>yyyymmdd</ACKDATE >
                <ACKTIME>hhmmss</ACKTIME>
                <ACKBY>a</ACKBY>
                <ACKCOMMENT></ ACKCOMMENT >
             </COMMAND>
         </TRACKID>
  </SERVICE>
  ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   *:*   *<RESULT STCODE="0">*
Server Reply   *<TRACKID ID=20100120_000001>*
             <SUB_RESULT ID="1" STCODE="0"></SUB_RESULT>
        </TRACKID>
  </RESULT>

If Fail; Server Reply   *:*   *<RESULT STCODE="XYZ">*
        <TRACKID ID=" 20100120_000001"></TRACKID>
        <COMMAND ID="Null"></COMMAND>
        <PARAMETER>Null
  </RESULT>

Note For Developer   *:*   *N/A*

Appendix - A

Staff / Card Holder Parameters

TAG	Description	Type	Size	Example
STAFF_NO	**Staff Number**	String	30	A123456
STAFF_NAME	Name	String	50	Chau Sing Chi
DEPARTMENT	Department	String	15	Administration
JOB	Job	String	15	Manager
DATE_OF_JOIN	**Date of Join**	String	8	20100120 (yyyymmdd)
DATE_OF_BIRTH	**Date of Birth**	String	8	19770105 (yyyymmdd)
SHIFT	Shift	String	15	Normal Shift
IC_NO	Identity Card Number	String	20	770501-10-1234
UDF_1	User Defined Field 1	String	45	Married
UDF_2	User Defined Field 2	String	45	012-123-1234
UDF_3	User Defined Field 3	String	45	Anything
UDF_4	User Defined Field 4	String	45	Anything
UDF_5	User Defined Field 5	String	45	Anything
UDF_6	User Defined Field 6	String	45	Anything
UDF_7	User Defined Field 7	String	45	Anything
UDF_8	User Defined Field 8	String	45	Anything
UDF_9	User Defined Field 9	String	45	Anything
UDF_10	User Defined Field 10	String	45	Anything
SHIFT_TYPE	**Shift Type**	Number		• 0 = Normal Shift • 1 = Shift Roster
TA_LOGIN_NAME	TA Login Name	String	15	Chausingchi

TAG	Description	Type	Size	Example
TA_LOGIN_PASSWORD	TA Login Password	String	25	Chausingchi123
IS_TA_ADMIN	**Is TA Admin**	String	1	• 0 = Not Admin • 1 = Is Admin
IS_SELF_AUTHORIZE	**Is Self Authorize**	String	1	• 0 = Cannot Self Authorize • 1 = Can Self Authorize
PHOTO_FILE_NAME	Photo Filename	String	50	Dennis.jpg
IS_RESIGN	**Is Resign**	Number		• 0 = Not Resign • 1 = Resigned
DATE_OF_RESIGN	Date of Resign	String	8	• 20100120 (yyyymmdd)

Elements colored in red are mandatory and CANNOT be null !

Appendix - B

Card Parameters

TAG	Description	Type	Size	Example
STAFF_NO	Staff No	String	30	A123456
CARD_NO	Card No	String	• 6 (6 Digits System) • 10 (10 Digits System)	• 012345 (6 Digits) • 0123456789 (10 Digits)
PIN_NO	Pin No	String	6	123456
ACCESS_LEVEL	Access Level	Number	3	0 ~ 255
START_DATE	Start Date	String	8	20100120 (yyyymmdd)
END_DATE	End Date	String	8	20100131 (yyyymmdd)
CARD_TYPE	Card Type	Number	1	• 0 = Normal Access Card • 1 = Arm / Disarm Card • 2 = Guard Tour Card • 3 = Master Card
IS_ACTIVATE	Is Activate	Number	1	• 0 = Disable • 1 = Enable
IS_LIFT_CARD_CARD	Is Lift Card	Number	1	• 0 = Not Lift Card • 1 = Is Lift Card
IS_ANTI_PASSBACK	Is Antipassback	Number	1	• 0 = Disable • 1 = Enable
BUDDY_NO	Buddy Mode	Number	1	• 0 = Disable • 1 = Master Buddy 2 ~ 255 = Other Buddy No.
ACCESS_GROUPS	XML element simply to group GROUP_NAME			
GROUP_NAME	Access Group Name	String	30	AG 1

Elements colored in red are mandatory and CANNOT be null !

Lift Card Parameters

TAG	Description	Type	Size	Example
STAFF_NO	Staff No	String	30	A123456
CARD_NO	Card No	String	• 6 (6 Digits System) • 10 (10 Digits System)	• 012345 (6 Digits) • 0123456789 (10 Digits)
PIN_NO	Pin No	String	6	123456
ACCESS_LEVEL	Access Level	Number	3	0 ~ 255
START_DATE	Start Date	String	8	20100120 (yyyymmdd)
END_DATE	End Date	String	8	20100131 (yyyymmdd)
CARD_TYPE	Card Type	Number	1	• 0 = Normal Access Card • 1 = Arm / Disarm Card • 2 = Guard Tour Card • 3 = Master Card
IS_ACTIVATE	Is Activate	Number	1	• 0 = Disable • 1 = Enable
IS_LIFT_CARD_CARD	Is Lift Card	Number	1	• 0 = Not Lift Card • 1 = Is Lift Card
IS_ANTI_PASSBACK	Is Antipassback	Number	1	• 0 = Disable • 1 = Enable
BUDDY_NO	Buddy Mode	Number	1	• 0 = Disable • 1 = Master Buddy 2 ~ 255 = Other Buddy No.
LIFT_ACCESS_LEVEL	Lift Access Level	Number	3	0 ~ 255
LIFT_START_DATE	Lift Card Start Date	String	8	20100120 (yyyymmdd)
LIFT_END_DATE	Lift Card End Date	String	8	20100131 (yyyymmdd)
LIFT_IS_ACTIVATE	Lift Is Activate	Number	1	• 0 = Disable • 1 = Enable

Elements colored in red are mandatory and CANNOT be null !

Appendix - C

RESULT STATUS CODE (STCODE)

Value	Description
-2	Fail Attempt
-1	Invalid or incomplete XML structure
0	Command successful received & validated
1	No attribute value in "SERVICE" tag
2	No ID attribute in "SERVICE" tag
3	Invalid "SERVICE" ID
4	No "SERVICE" tag
5	No attribute value in "TRACKID" tag
6	No ID attribute in "TRACKID" tag
7	Invalid "TRACKID" value
8	No "TRACKID" tag
9	No attribute value in "COMMAND" tag
10	No ID attribute in "COMMAND" tag
11	Invalid "COMMAND" ID (must be in sequence. E.g: 1, 2, 3 .... 64)
12	No "COMMAND" tag
13	No "COMMAND" structure
14	No "COMCODE" attribute in "COMMAND" tag
15	Incomplete element structure in "COMMAND" tag
16	Invalid "COMCODE" In "COMMAND" tag
17	"COMMAND" ID exceed 64
18	Primary element in "COMMAND" structure contains empty value

Value	Description
19	Element size in "COMMAND" structure exceed the given value
20	Wrong element type in "COMMAND" structure
21	Element value in "COMMAND" structure out of range
22	Invalid data format (must in "yyyymmdd")
23	Incomplete attributes in "COMMAND" tag
24	Invalid source IP
25	Fail to setup DB (Host Server)
26	Fail to assign TrackID due to date changed
27	General failure within internal process
28	TrackID expired
29	Staff number not exist in host DB
30	Card number already exist in host DB
31	Card number do not exist in host DB
32	Staff already exist in host DB
33	Fail to send email notification
34	Fail to connect to SMTP server
35	TrackID sent from unauthorized client
36	TrackID in use
40	TrackID exceeded maximum quota per day (999999)
41	Lift card already exist in host DB
42	Door access level sent by client cannot be used (restricted)
43	Lift access level sent by client cannot be used (restricted)
44	Invalid data length sent from client
45	Door access group sent by client cannot be used (restricted)

Value	Description
46	Door access group conflict due to duplicate doors found
47	Door Name do not exist in host DB
48	Door Name not in allowable list
49	Conflicting Data found

Appendix - D

Example for error with no TRACKID

Command Code (COMCODE)   : ***CARD_DCT***

Client Send   : *<SERVICE ID="VMS">*
        <COMMAND ID="1" COMCODE="CARD_DCT">
            <CARD_NO>0123456789</CARD_NO>
        </COMMAND>
    </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully;   : *N/A*
Server Reply

If Fail; Server Reply   : *<RESULT STCODE="8">*
    <TRACKID>null</TRACKID>
    <COMMAND ID="1"></COMMAND>
    <PARAMETER>null
  </RESULT>

Notes to Developer   : *Server always return the first detected error.*

Example for error with incomplete parameters

Command Code (COMCODE) : **CARD_MOD**

Client Send :
      <SERVICE ID="VMS">
          <TRACKID ID=20100120_000001>
             <COMMAND ID="1" COMCODE="CARD_MOD">
                <STAFF_NO>VIS_0000000001</STAFF_NO>
                <CARD_NO>0123456789</CARD_NO>
      "PIN_NO" missing -->
                <ACCESS_LEVEL>1</ACCESS_LEVEL>
                <START_DATE>20100120</START_DATE>
                <END_DATE>20100120</END_DATE>
      "CARD_TYPE" missing -->
                <IS_ACTIVATE>1</IS_ACTIVATE>
                <IS_LIFT_CARD>0</IS_LIFT_CARD>
                <IS_ANTI_PASSBACK>0</IS_ANTI_PASSBACK>
                <BUDDY_NO>0</BUDDY_NO>
             </COMMAND
          </TRACKID>
     </SERVICE>
    ↵ *(CARRIAGE RETURN LINE FEED)*

Elements colored in red are mandatory and CANNOT be null !

Command Received Successfully; : *N/A*
Server Reply

If Fail; Server Reply :
    <RESULT STCODE="15">
        <TRACKID ID="20100120_000001"></TRACKID>
        <COMMAND ID="1"></COMMAND>
        <PARAMETER>PIN_NO
    </RESULT>

Notes to Developer : *Server always return the first detected error.*