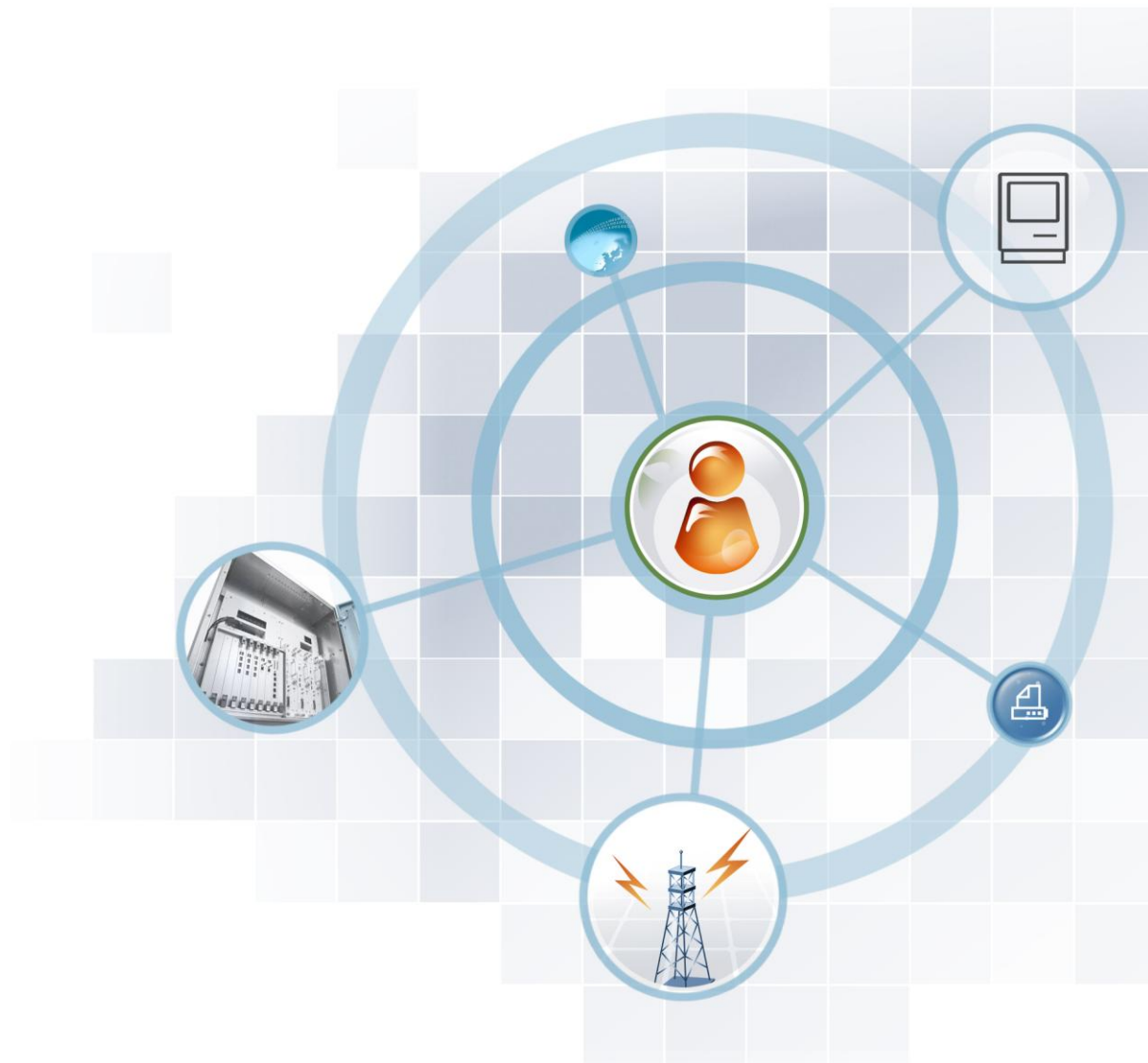


SCM Express

PMS Interoperability Guide



COPYRIGHT

This manual is proprietary to SAMSUNG Electronics Co., Ltd. and is protected by copyright.

No information contained herein may be copied, translated, transcribed or duplicated for any commercial purposes or disclosed to the third party in any form without the prior written consent of SAMSUNG Electronics Co., Ltd.

TRADEMARKS

Product names mentioned in this manual may be trademarks and/or registered trademarks of their respective companies.

This manual should be read and used as a guideline for properly installing and operating the product.

This manual may be changed for the system improvement, standardization and other technical reasons without prior notice.

If you need updated manuals or have any questions concerning the contents of the manuals, contact our **Document Center** at the following address or Web site:

**Address: Document Center 3rd Floor Jeong-bo-tong-sin-dong. Dong-Suwon P.O. Box 105, 416, Maetan-3dong
Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea 442-600**

Homepage: <http://www.samsungdocs.com>

INTRODUCTION

Purpose

This manual describes the PMS interoperability and hotel services of the SCM.

Audience

This manual provides information for administrator who is responsible for managing PMS Engineer interworking SCM.

Document Content and Organization

CHAPTER 1. Overview of Hotel Service

This chapter describes the hotel services of SCM.

CHAPTER 2. Hotel Service Configuration

This chapter describes the configuration of the hotel services.

CHAPTER 3. PMS Message Description

This chapter describes the PMS messages.

Conventions

The following types of paragraphs contain special information that must be carefully read and thoroughly understood. Such information may or may not be enclosed in a rectangular box, separating it from the main text, but is always preceded by an icon and/or a bold title.

 WARNING	WARNING Provides information or instructions that the reader should follow in order to avoid personal injury or fatality.
 CAUTION	CAUTION Provides information or instructions that the reader should follow in order to avoid a service failure or damage to the system.
 CHECK	CHECKPOINT Provides the operator with checkpoints for stable system operation.
 NOTE	NOTE Indicates additional information as a reference.

Console Screen Output

- The lined box with ‘`Courier New`’ font will be used to distinguish between the main content and console output screen text.
- ‘**`Bold Courier New`**’ font will indicate the value entered by the operator on the console screen.

Revision History

VERSION	DATE OF ISSUE	REMARKS
1.0	12. 2012.	Initial edition

SAFETY CONCERNS

The purpose of the Safety Concerns section is to ensure the safety of users and prevent property damage. Please read this document carefully for proper use.

Symbols

**Caution**

Indication of a general caution

**Restriction**

Indication for prohibiting an action for a product

**Instruction**

Indication for commanding a specifically required action



This page is intentionally left blank.

TABLE OF CONTENTS

INTRODUCTION I

Purpose	I
Audience.....	I
Document Content and Organization	I
Conventions.....	II
Console Screen Output	II
Revision History	II

SAFETY CONCERNS III

Symbols	III
---------------	-----

CHAPTER 1. Overview of Hotel Service 1-1

1.1 Room Management.....	1-1
1.1.1 Room Check-In/Check-Out	1-1
1.1.2 Room management	1-2
1.1.3 Group Management.....	1-2
1.2 Call Management	1-3
1.2.1 COS	1-3
1.2.2 call restriction.....	1-3
1.2.3 Call Restriction between user group	1-4
1.2.4 Room Account Code.....	1-4

CHAPTER 2. Hotel Service Configuration 2-1

2.1 Hotel Basic Configuration.....	2-1
2.1.1 Making Room Number.....	2-1
2.1.2 Configuring Hotel Options	2-2
2.1.3 Configuring Guest Room.....	2-3
2.1.4 Configuring Hotel COS	2-3
2.1.5 Configuring Feature Codes	2-4
2.2 Supplementary Hotel Information	2-5

2.2.1	Hotel Staff Code	2-5
2.2.2	Hotel Item Code	2-5
2.2.3	Hotel Event Code	2-5
2.3	Supplementary Hotel Services	2-6
2.3.1	Service Phone Number	2-6
2.3.2	Service Phone	2-6
2.3.3	Display the detailed guest information	2-6
2.4	PMS Integration Services	2-7
2.4.1	Room Management	2-7
2.4.2	Group Management	2-7
2.4.3	Configuring Features	2-7
2.4.4	Event Report	2-7
2.5	Special Services	2-8
2.5.1	Bath Alarm or Emergency Alarm	2-8
2.5.2	Off Hook Alarm	2-8
2.5.3	SMS Service	2-8
2.5.4	Voice Mail Service	2-8
2.5.5	Alarm Ring Service	2-8
2.5.6	Billing Service	2-9
2.5.7	Mobile Phone Service	2-9
2.5.8	Secretary Service	2-9
2.6	Phone Service	2-10
2.6.1	Registering Staff Location	2-10
2.6.2	Reporting Room's Repair or Cleaning Status	2-10
2.6.3	Reporting Room's Equipment Status	2-10
2.6.4	Changing Room State	2-10
2.6.5	Room DND Set	2-11
2.6.6	Room Alarm-Ring Set	2-11

CHAPTER 3. PMS Message Description

3-1

3.1	Basic Rule	3-1
3.1.1	Message Format	3-1
3.1.2	Link Management	3-2
3.1.3	Message ID	3-2
3.1.4	Error Message ID	3-6
3.1.5	Event Code	3-7
3.2	Link Management Message	3-8
3.2.1	Request approval for link connection	3-8

3.2.2	Request release link connection	3-9
3.2.3	Request link connection status.....	3-10
3.3	Data Synchronization message	3-11
3.3.1	Request Room list.....	3-12
3.3.2	Request for the room information.....	3-13
3.3.3	Request for feature status of the room	3-14
3.3.4	Request Room Alarm Ring State Information	3-16
3.3.5	Request Group Check-in List	3-18
3.3.6	Request Group Detailed Information	3-19
3.4	Room Control Message	3-21
3.4.1	Request Room Check-in	3-22
3.4.2	Request Check-in Information Update	3-24
3.4.3	Request Check-out	3-25
3.4.4	Request Room State Change	3-26
3.4.5	Request Phone Status.....	3-27
3.4.6	Request Room State	3-28
3.5	Group Control Message	3-29
3.5.1	Request Group Registration.....	3-30
3.5.2	Request Group Information Change.....	3-32
3.5.3	Request Group Release.....	3-33
3.6	Feature Setting Message.....	3-34
3.6.1	Request Feature Setting.....	3-35
3.6.2	Request Alarm Ring Set	3-36
3.6.3	Request SMS message sending	3-38
3.6.4	Request DID Incoming Set.....	3-39
3.6.5	Request DID Incoming Information.....	3-40
3.7	Event Report Message	3-41
3.7.1	Staff Reporting	3-41
3.7.2	Feature Set Report	3-42
3.7.3	Alarm Ring Report	3-44
3.7.4	CDR Report.....	3-45

LIST OF TABLES

Table 3.1	PMS message format	3-1
Table 3.2	PMS integration Message List	3-3
Table 3.3	Error ID list for PMS request message	3-6
Table 3.4	SCM Event ID List	3-7
Table 3.5	Header of Link Management message (PMS → SCM Request)	3-8
Table 3.6	Header of Link Management message (SCM → PMS Response)	3-8
Table 3.7	Message Header for data synchronization (PMS → SCM Request)	3-11
Table 3.8	Message Header for data synchronization (SCM → PMS Response)	3-11
Table 3.9	Room Control Message Header (PMS → SCM Request)	3-21
Table 3.10	Room Control Message Header (SCM → PMS Response)	3-21
Table 3.11	Group Control Message Header (PMS → SCM Request)	3-29
Table 3.12	Group Control Message Header (SCM → PMS Response)	3-29
Table 3.13	Feature Setting Message Header (PMS → SCM Request)	3-34
Table 3.14	Feature Setting Message Header (SCM → PMS Response)	3-34
Table 3.15	Message Header for Feature Setting (SCM → PMS Notify)	3-41

CHAPTER 1. Overview of Hotel Service

SCM's Hotel functionality includes services in a narrow sense that can be used in the hotel as well as services in a broad sense that available only during the specified time period through the check in/out.

To support hotel services, PMS (Property Management System) work as a hub of multiple systems in hotel environment and SCM provides services related call feature with PMS.

A few functionality created only for hotel service is provided. But basically, hotel service by combining several independent PBX features can be provided.

This chapter describes the SCM's hotel service based on hotel environment.

1.1 Room Management

Room management functionality is a key feature of the hotel services.

Hotel System authorize customer to use of room through check-in, and retrieve the authority of room through check-out procedures

If additional customer information is entered, SCM provide better services to customer in check-in status.

1.1.1 Room Check-In/Check-Out

Room check-in and check-out procedure is accomplished by the PMS.

For call service in hotel, SCM must have at least the information of check-in state of room and Class of Service (COS).

After the room check-in, room state is changed to the 'Occupied' and also COS is changed to the unrestricted grade for call.

If the room check-out, room state is changed to the 'Available' and COS is changed to the restricted grade that only extension call is available.

SCM display the customer's personal information on the opponent's phone screen when customer calls to hotel staff (front desk or operator of hotel).

SCM can receives and stores customer's personal information (as below) when room check-in from the PMS.

- Guest Name, guest sex, language, VIP or not, country, guest number.
- Arrived time, departure time, group name.

1.1.2 Room management

In room management, there are two type of management, room state management and cleaning/repair state management.

Room state management is performed by PMS or phone.

Room state management check whether room is check-in, Room state is divided into three state as below.

- Occupied: room is check-in.
- Available: room is check-out, possible to check-in
- User Defined state 1~7: room is check-out but check-in is not possible.

It is only possible to change room state to check-out from check-in state through the check-out procedure.

On the contrary, to change room to check-in from check-out is only possible through the check-in procedure.

By phone in the room or in the hotel desk, it is possible to change room state to check-in or not available state from check-out state.

Cleaning/repair state management check whether room is cleaned/repared.

Cleaning/repair state is divided into two state as below.

- Fixed: available room (it is not necessary to clean or repair).
- User Defined, Available, not available room. It is necessary to clean or repare.

By phone in the room or in the hotel desk, it is possible to change cleaning/repair state of room regardless of check-in/check-out state.

According to the PMS program, Cleaning/repair state and room state can be managed separately or together

If using PMS program that integrate room state and cleaning/repair state, only room state is used, the cleaning/repair state can be specified by the user-defined.

1.1.3 Group Management

When Customers stay in hotel as a group but personally have a room, SCM can provide integrated services to group.

SCM can manage all room as a group on same COS and can provide alarm services at the same time for group.

1.2 Call Management

SCM provides the call restriction service in a number of ways.

Also SCM provides many phone features that hotel needed.

1.2.1 COS

in general, Call management in hotel is determined by the COS, in addition, some call feature is restricted for each individual situation.

It is recommended to set COS when room check-in or check-out in advance.

PMS can request another COS for special-room to SCM. If there is no COS requested, default COS is applied.

SCM can restrict the following special call feature of the hotel by the COS.

- Call between the room
- To Change the call feature configuration of other phone

SCM can limit the use of the call feature by setting COS or restricting external call.

SCM can set COS of the phone except room phone by only 'SCM Administrator' tool

1.2.2 call restriction

Guest can ask staff or front-desk to restriction of outgoing call or incoming call when goes out.

Provided Call Feature is below.

- DND: when there is an incoming call, the DND announcement is played for the caller and the call is terminated
- Call Forward All: a service which forwards all incoming calls to another number
- Remote Office: automatic forwarding of all incoming calls for a user to an internal number or an external number specified
- Extension Lock: to set incoming/outgoing call lock.

Extension Lock feature may be set to by guest through the pressing feature code directly in room.

However, it is not recommended because call does not work by guest's mistake.

1.2.3 Call Restriction between user group

Calls to office from room directly and vice versa is not desirable situation.

In order to avoid taking incorrect call by mistake like this, SCM provide a service group concept.

PMS can specify the COS on each of the room service group, office service group, kitchen service group and etc, and can restrict the call between the each service group.

An error occurs if guest calls to another service group that have different COS not allowed call from another service group.

1.2.4 Room Account Code

If guest calls to external at lobby or desk, it can cause problem on how to grant the fee issue.

SCM can assign a account code to every room

When guest try to call to external outside the room, SCM is to connect the call to the device that collect the account code. And then guest must enter the account code and room number depending on the voice guidance. After this procedure, guest can call to external.

To avoid that a person who is not a guest call to external by room phone, SCM can set the FAC (Forced Account Code) mode when call to external by room phone.

In FAC mode, guest try to call to external, SCM is to connect the call to the device that collect the account code. And then guest must enter the account code.

CHAPTER 2. Hotel Service Configuration

This chapter describes the detailed configuration regarding hotel service.

2.1 Hotel Basic Configuration

In order to use hotel services, a hotel room should have permission to use the room for a guest. This is allowed by Check-In/Check-Out. A hotel room should have a phone number at one to one. And SCM supports hotel services based on a guest room. The readers of this document are required to have a basic knowledge on SCM because basic configurations for SCM are skipped.

2.1.1 Making Room Number

SCM can operate like several systems work. It is possible through the User Group Function that allows a separate grouping of the system users. But because the calls between user groups have many restrictions, single user group is recommended in case of hotel service. Every phone that related with hotel service (including the hotel desk phone and the guest room phone) should be included in the same user group.

When a user group is created, the default Location is created. In case of hotel service, there is no need to make an additional Location.

Service Groups can be used for various purposes. Because the restriction policies and COS are configured per Service Group. So it is recommended that Service Groups are divided into room group, service group, desk group, kitchen group and so on.

SCM has two types of phone numbers as shown below. If a single user should be changed to a multi-device user, the single user should be deleted first. And operators can make the multi-device user.

- Single user: One device can have one number.
- Multi-Device user: Multiple devices can have one number.

2.1.2 Configuring Hotel Options

The basic options for hotel services are shown in [CONFIGURATION/Service/Hotel Service/Hotel Options].

Item	Description
User Group	Assign a user group for hotel features. If there are many user groups, select the user group that including room phones and desk phones.
PMS Authorization Method	Select authorization method. - None: There is no need to go through authorization. - ID/Password: PMS server has to go through authorization process via User ID and password. - IP Address: PMS server has to go through authorization process via IP Address
PMS User ID	If authorization method for PMS server is ID/Password, the PMS user ID should be entered.
PMS User Password	If authorization method of PMS server is ID/Password, the PMS user password should be entered.
PMS IP Address	If authorization method of PMS server is IP Address, the PMS IP Address should be entered.
Service Desk	To configure features using other phones (including PMS or desk phone), this number is used as destination number. And if PMS or desk phone want to send SMS to room, this number will be calling number.
Default Checkin COS	When check-in room, if there is no COS set, this is applied to room.
Hotel Checkout COS	When check-out room, this is applied to room
Hotel CDR Report	After the call using a room phone is ended, the information of the call will be sent to PMS in real time. This option decides which information is sent. - None: Any information is not sent to PMS. - Trunk Call Only: The information of trunk calls only is sent. - All Call: The information of all calls is sent.

2.1.3 Configuring Guest Room

The phones for hotel services are divided into 4 types as shown below.

- Room phone: It is used in a room only. SCM provides restricted services to a room phone by check-in/out.
- Desk phone: It is used in a hotel desk. Operators are also included in it. COS that almost features are allowed is assigned to this phone for guest services.
- Service phone: It is used in public places such as hall, lobby and kitchen. It supports basic features only. It is usually configured Hot Line or Warm Line (Delayed Hot Line) features.
- FAX: This is a fax that installed in a room. It has the same COS that a room is assigned. In **[CONFIGURATION > Service > Hotel Service > Room Information]** menu, the extension number is set to a room phone. It can be configured at once through **[Tool > Customer Data Import/Export > Room Information]** menu. The phone number assigned to a room phone is used as the room number and supports Check-In/Check-Out services. In this menu, any options cannot be changed. It just only used to confirm the options set by PMS. But a room state is changed by using a room phone. If the phone number is not the same as the room number, it is distinguished through an extension name. The extension name is set per the extension number in **[CONFIGURATION > User > Single Phone User]** menu.

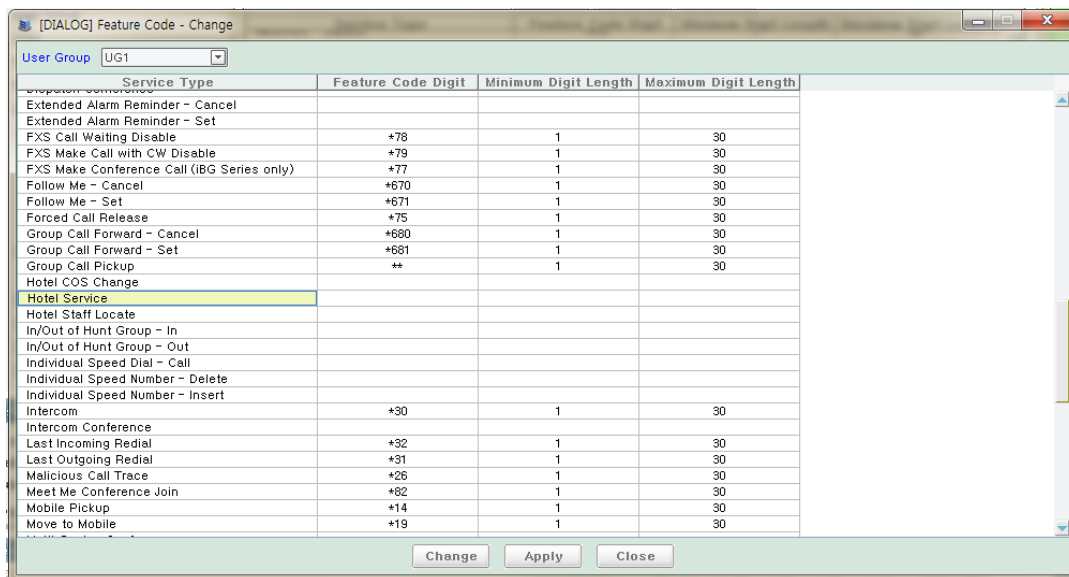
2.1.4 Configuring Hotel COS

In **[CONFIGURATION > Service > Hotel Service > Hotel COS]** menu, COS's name and restriction policy should be selected per hotel COS number. Hotel COS numbers are used in PMS. And hotel phones can also change COS and restriction policies by dialing feature codes.

Item	Description
Hotel COS Number	It is used in PMS. The range of hotel COS number is from 0 to 99. Maximum 100 COS numbers are allowed.
User Group	Select a user group for hotel features. If there are several user groups, select the user group that is including room phones and desk phones.
COS Name	Select a COS name.
Restriction Policy	Select a restriction policy.
Description	It describes the features that the hotel COS Number has. It supports an administrator to know easily about applied features.

2.1.5 Configuring Feature Codes

Hotel phones can be used to configure hotel services by dialing feature codes. The feature codes for hotel services can be set through **[CONFIGURATION/Service > Feature Service > Feature Code]**.



Service Type	Feature Code Digit	Minimum Digit Length	Maximum Digit Length
Extended Alarm Reminder - Cancel			
Extended Alarm Reminder - Set			
FXS Call Waiting Disable	+78	1	30
FXS Make Call with CW Disable	+79	1	30
FXS Make Conference Call (iBG Series only)	+77	1	30
Follow Me - Cancel	+670	1	30
Follow Me - Set	+671	1	30
Forced Call Release	+75	1	30
Group Call Forward - Cancel	+680	1	30
Group Call Forward - Set	+681	1	30
Group Call Pickup	**	1	30
Hotel COS Change			
Hotel Service			
Hotel Staff Locate			
In/Out of Hunt Group - In			
In/Out of Hunt Group - Out			
Individual Speed Dial - Call			
Individual Speed Number - Delete			
Individual Speed Number - Insert			
Intercom	+30	1	30
Intercom Conference			
Last Incoming Redial	+32	1	30
Last Outgoing Redial	+31	1	30
Melicious Call Trace	+26	1	30
Meet Me Conference Join	+82	1	30
Mobile Pickup	+14	1	30
Move to Mobile	+19	1	30

- **Hotel Staff Locate:** A staff can report a her/his location to PMS by dialing this feature code.
- **Hotel Service:** A staff can report the room state such as clean state, management state and item state.
- **Hotel COS Change:** A desk phone can change COS for a guest room.
- **Remote Extension Set:** A desk phone can change the settings about DND and extended alarm reminder services of a room.
- **DND-Set/Cancel:** A desk phone can set or cancel the DND service of a room.
- **Wake-Up Call Set/Cancel:** A guest can set or cancel the Wake-Up service using a room phone in herself. In this case, the index of the Extended Alarm Ring is 1.
- **Extended Alarm Reminder Set/Cancel:** A desk phone can set or cancel the Alarm Reminder of a room. In this case, the range of index is from 2 to 4.

2.2 Supplementary Hotel Information

This Chapter describes the additional information for various hotel services.

2.2.1 Hotel Staff Code

SCM usually needs specific codes to distinguish the staffs when supporting hotel services.

- It lets an administrator know a staff's location.
- PMS can distinguish who reported the item's state such as room equipments and minibars.
- PMS can distinguish who changed the room's state and feature settings.

Hotel staff codes are registered through **[CONFIGURATION > Service > Hotel Service > Hotel Staff Code]** menu.

2.2.2 Hotel Item Code

After checking room equipments and minibars, the result should be reported to PMS.

It is reported using a room phone and these items are distinguished by registered hotel item code.

In the **[CONFIGURATION > Service > Hotel Service > Hotel Item Code]** menu, hotel item codes are registered and it is possible 2 digits only (00-99).

SCM checks only the number of digits and is no concerned about which items are changed.

2.2.3 Hotel Event Code

The events that are occurred concerning hotel services are reported to PMS server.

Hotel event codes have 3 digits (100-199) and are used as specific usages according to hotel's situation. To distinguish the events, the description can be registered per event codes. Event codes are shown as blow. For the detailed information, refer to 'PART 3. PMS Integration'.

Code	Event Message	Description
100	Staff Location Report	A staff registered her location
101	Room Used State Report	A staff changed a room's state.
110	Wakeup Ring Answered	A guest answered alarm ring call.
111	Wakeup Ring Not Answered	A guest did not answer alarm ring call.
112	Wakeup Ring Failed	An alarm did not ring at at the designated time.

In **[CONFIGURATION > Service > Hotel Service > Event Code]** menu, operator should set the description for event codes.

2.3 Supplementary Hotel Services

These features are used not only in hotel but also in different circumstances.

This chapter describes the supplementary services for hotel.

2.3.1 Service Phone Number

In case a guest calls a hotel desk in a room, the shortcut number is very useful.

It is supported through System Speed Dial feature. It needs to dial system speed dial ID only without feature code. System speed Dial ID consists of 2~5 digits. This assignment should be done using the **[CONFIGURATION > Service > Speed Dial > System Speed Dial]** menu.

2.3.2 Service Phone

If a guest want to make a call for desk and service call, it is possible to use the service phone installed in hall or lobby. It just needs hook-off action or dialing short digits.

These are supported using Delayed Hot Line or Warm Line services.

If a guest act hook-off and dial the system speed dial ID, the hotel desk can be called.

If there is no action for the designated time after hook-off, SCM makes a call to the designated destination. And through no delayed Hot Line service, as soon as a guest is hook-off, the service call can be made.

A operator can set Hot Line service through **[CONFIGURATION > Service > Feature Service > Service Activation]** menu.

2.3.3 Display the detailed guest information

A room number is usually displayed when making a call between rooms. When a guest phone makes a call to a hotel desk, the detailed guest information should be displayed on the desk phone for better services. SCM supports the display including the detailed guest information via premium CID service. When check-in, SCM obtains the information from PMS. There are a Guest Name, Language, Country, VIP, Group Name and so on.

For premium CID service, the large LCD phones such as SMT-i5243 are good to use

In **[CONFIGURATION > Service > Feature Service > Service Activation]** menu,

Premium CID Service value should be 'Permitted'. Other options of the

[CONFIGURATION > Phone Setting > Service Options] menu should be set as shown below.

Item	Description
Use Premium CID Service	Select 'Yes'
Premium CID Type	Select 'Internal'. It supports the more detailed client information for desk phone.
Premium CID URL	CID server URL should be entered as following format: http://xxx.xxx.xxx.xxx/xml.php. xxx.xxx.xxx.xxx means an IP address of server.

2.4 PMS Integration Services

This chapter describes the services integrated with PMS. For more detailed, please refer to '3. PMS Integration'.

2.4.1 Room Management

PMS Server integrating with SCM provides specific services for a guest room as below.

- Check-In or Check-Out
- Change the information that entered at check-in time.
- Change a room's state.
- Room Exchanges-Move to an empty room or exchange between occupied rooms.

2.4.2 Group Management

PMS Server integrating with SCM provides group services by grouping the guest rooms.

- Create and delete groups-An in-room can be assigned to group.
- The members of group have same alarm ring and COS.

2.4.3 Configuring Features

PMS Server integrating with SCM can set the features such as below.

- Set or Cancel DND
- Set or Cancel All Call Forward
- Set or Cancel Call Forward to Operator
- Set or Cancel Key Rack State
- Set or Cancel Outgoing Lock State
- Set or Cancel Alarm Ring
- Send SMS
- Set DID Incoming Set

2.4.4 Event Report

The events that occurred when providing hotel services are usually needed in hotel. So SCM reports the events to PMS server in real time. For more detailed, refer to '3.7. Event Report Message'.

2.5 Special Services

This chapter describes specific services that needed in hotel.

2.5.1 Bath Alarm or Emergency Alarm

If an emergency occurs in some places such as bathroom, SCM let a hotel desk know an emergency state through specific actions such as pushing the button or pulling the line. SCM does not support a bath alarm feature directly. Therefore, additional devices should be installed to support this feature.

2.5.2 Off Hook Alarm

If an emergency occurs in phone conversation, SCM let a hotel desk know an emergency state. If a guest phone keeps hook-off state for a certain time, the hotel desk knows this situation via Off Hook Alarm.

2.5.3 SMS Service

A hotel desk wants to send a SMS for the guest who is out of office. In that case, SCM can send a SMS to a room phone. If a room phone receives a SMS, a guest can confirm the message that a hotel desk left.

2.5.4 Voice Mail Service

If a guest did not answer the call, because of busy or no answer state, the call can be connected to voice mail server. And the caller can leave the messages to the guest room phone. SCM supports this through integration with a built-in Voice Mail Server or an external voice mail server. In case of a built-in Voice Mail Server, it needs to check the maximum subscriber capability of SCM. No matter which server is used, SCM let a guest know that the messages arrived through the display of a in-room phone.

In **[CONFIGURATION > Service > Feature Service > Service Activation]** menu, the destination of Busy Forward or No Answer Forward should be a voice mail.

2.5.5 Alarm Ring Service

Many alarm ring features including morning calls are needed in hotel. SCM supports maximum 6 alarm rings per an in-room phone. Alarm rings are distinguished as shown below.

- Alarm ring 1: The alarm ring that a guest sets personally by using the guest room phone. A guest should dial <Alarm Ring Set/Cancel feature code + Alarm ring type + Time (HHMM)>.
- Alarm ring 2~4: The alarm ring that an operator sets a room's alarm through PMS.

- Alarm ring 5~6: The alarm ring that an operator sets a group's alarm through PMS. Alarm ring can be service once or every day at designated time. It depends on <Alarm ring type>. It can be set using the desk phone.

2.5.6 Billing Service

The phone bills in a guest room are very important in hotel. SCM only provides the information of a guest room call. So SCM needs the additional device for billing. SCM reports call logs of a guest room in real time. But because the call logs are summarized and do not be retransmitted, there are not proper to use for billing. For more detailed call information for billing, refer to 'SCM Express Operation Manual'.

2.5.7 Mobile Phone Service

SCM can ring at a guest phone and mobile phone simultaneously when the call for a guest phone is made. If a guest answers the call via mobile phone, extra charges can occur. For this service, an operator should set the multi-ring service and set the mobile number to a multi-ring member. It can be set using the desk phone or SCM Administrator and not using PMS.

2.5.8 Secretary Service

In case of a VIP room, a hotel clerk provides a secretary phone services. SCM supports the secretary service through multi-line feature. One secretary phone can act as a secretary of several VIP rooms. And several secretary phones can exist in a VIP room.

2.6 Phone Service

This chapter describes the services that hotel clerks provide using phones. If a room maid registers his/her location before changing the room state such as cleaning, fixing, room equipment and so on, it is reported who a clerk changes the room state.

2.6.1 Registering Staff Location

A hotel staff can register his/her location using the room phone.

- Dial <Hotel Staff Locate feature code + Hotel Staff Code> through the room phone or service phone.
- SCM reports <Event Code + Room Number + Hotel Staff Code> to PMS server

2.6.2 Reporting Room's Repair or Cleaning Status

A hotel staff can report room's repair or cleaning status via a room phone.

- Dial <Hotel Service feature code + *1 + State ID>.
- SCM reports <Event Code + Room Number + State ID> to PMS server
- The values of State ID are defined as shown below.
 - 1: Fixed (Normal)
 - 2~9: User Defined 1~8

2.6.3 Reporting Room's Equipment Status

A hotel staff can notify the updated status for equipment or mini-bar in a guest room.

- Dial <Hotel Service feature code + *2 + Item Code>.
- SCM reports <Event Code + Room Number + Item Code> to PMS server.

SCM supports maximum 5 item codes. Item codes should be entered as following format.
*XX*XX*XX*XX*XX (*: Deplimiter, XX: Item code)

2.6.4 Changing Room State

A hotel staff can change the status of guest rooms using hotel desk phone.

- Dial <Remote Extension Set feature code + Room Number + Hotel Service feature code + *0 + State ID> in hotel desk.
- SCM changes the status of the room and notifies <Event Code + Room Number + State ID> to PMS server.
- The values of State ID are defined as shown below.
 - 1: Occupied (Check-In State)
 - 2: Available (Check-In Possible)
 - 3~9: User Defined 1~7.

2.6.5 Room DND Set

A hotel staff can set DND for a room phone through the desk phone.

- The desk phone dials <Remote Extension Set feature code + Room Number + DND-Set feature code>.
- SCM sets DND for a room phone and notifies <Event Code + Room Number>.

A hotel staff can cancel DND for a room phone through the desk phone.

- The desk phone dials <Remote Extension Cancel feature code + Room Number + DND-Cancel feature code>.
- SCM cancels DND for a room phone and notifies <Event Code + Room Number>.

2.6.6 Room Alarm-Ring Set

A hotel staff sets Alarm-Ring feature using the desk phone as following steps.

- The desk phone dials <Remote Extension Set feature code + Room Number + Extended Alarm Reminder-Set feature code + Alarm-Ring's Index + Alarm-Ring Type + Alarm Ring Time>.
- SCM sets Alarm-Ring for a room phone and notifies <Event Code + Room Number + Alarm Ring Information>.

The Alarm-Ring's Index has the range of 2-4. The Alarm-Ring type should be entered 1 (once) or 2 (everyday). If a Alarm-Ring type is once, the format that should be entered is MMDDHHMM (Month.Day.Hour.Min). And If a Alarm-Ring type is every day, it should be HHMM (Hour.Min).

A hotel staff can cancel Alarm-Ring feature using the desk phone as following steps.

- The desk phone dials <Remote Extension Set feature code + Room Number + Extended Alarm Reminder-Cancel feature code + Alarm-Ring's Index>.
- SCM sets Alarm-Ring for a room phone and notifies <Event Code + Room Number + Alarm Ring Information>.



This page is intentionally left blank.

CHAPTER 3. PMS Message Description

SCM's hotel functionality was designed to integrate with PMS. Because SCM cannot support Hotel functionality without PMS, it should be integrated with PMS. This Chapter will explain how to integrate with PMS.

3.1 Basic Rule

TCP/IP can be used to connect between SCM and PMS through Ethernet. Basic protocol is TCP and TLS could be used for security.

At this TCP connection, SCM would be Server and PMS would be working as Client.

So data cannot be communication without TCP connection if SCM had the data to send PMS.

And SCM will throw out the data instead of saving in case SCM had the data to send PMS if there is no connection between SCM and PMS. So at this case, it had better for PMS to request to SCM for whole data to synchronize.

3.1.1 Message Format

The message between SCM and PMS consists of header and data as table1.

Header is the fixed format and data can be used for each predefined message ID.

Table 3.1 PMS message format

Index	Item	Type	Byte	Mandatory	Description
Header	Data Length	int	4	Mandatory	Data Length except header
	Message ID	int	4	Mandatory	Message ID
	Reserved	int	8	Optional	Not used
	Parameter1	int	4	Optional	Used if necessary
	Parameter2	int	4	Optional	Used if necessary
Data	Contents	flexible	Flexible	Optional	It can be defined by message ID

The data type in the message between SCM and PMS is usually int type. This type is defined as 4 bytes and it should be used as following sequence

Ex) Data 0x01550403 and 2

Byte sequence	1st	2nd	3rd	4th
Data = 0x01550403	0x01	0x55	0x04	0x03
Data = 2	0x00	0x00	0x00	0x02

If data type is string, available data length is smaller than defined length to finish Null ('\\0').

It is recommend to initialize 0 for whole length when you create message, because it is marked 0 for unused field.

3.1.2 Link Management

PMS can request to link and unlink to the SCM.

SCM can define ID and Password to process the data only from defined PMS. In addition SCM can process the data from specific IP address. [**Configuration > Service > Hotel Service > Hotel Option**].

Once link between PMS and SCM established, PMS can manage link connection status by sending the message to SCM for checking the status. When SCM receives this message, SCM will send the time date for response. And PMS also can synchronize the time with SCM using this message.

3.1.3 Message ID

The message between SCM and PMS can be separated by sender as following

- Request Message: The message which PMS requests to SCM-rqMessage
- Response Message: The message which SCM response for the PMS's request-rsMessage
- Notify Message: The event alarm message which SCM send to PMS-nfMessage

The message between SCM and PMS can be separated by nature as following

- 1) Link Management Message
- 2) Data Synchronization Message
- 3) Room Management Message
- 4) Group Management Message
- 5) Function Setup Message
- 6) Event Report Message

Detail message ID list is following table 2.

Table 3.2 PMS integration Message List

Index	Message Name	PMS → SCM	SCM → PMS	Description
A1	PMS_rqLinkConnect	0x01550001	-	Request to get approval for connection
A2	PMS_rsLinkConnect	-	0x02550001	Response for connection request
A3	PMS_rqLinkDisconnect	0x01550002	-	Request to release connection
A4	PMS_rsLinkDisconnect	-	0x02550002	Response for connection release request
A5	PMS_rqLinkAlive	0x01550003	-	Request to check connection status
A6	PMS_rsLinkAlive	-	0x02550003	Response for connection status request
B1	PMS_rqRoomList	0x01550101	-	Request for room number list
B2	PMS_rsRoomList	-	0x02550101	Response for room number list request
B3	PMS_rqRoomInfo	0x01550102	-	Request for detail room information
B4	PMS_rsRoomInfo	-	0x02550102	Response for detail room information request
B5	PMS_rqRoomFeature	0x01550103	-	Request for functionality for room setup configuration
B6	PMS_rsRoomFeature	-	0x02550103	Response for functionality for room setup configuration request
B7	PMS_rqRoomWakeup	0x01550104	-	Request to setup the alarm of room
B8	PMS_rsRoomWakeup	-	0x02550104	Response for setup the alarm of room request
B9	PMS_rqGroupList	0x01550105	-	Request for Group list
B10	PMS_rsGroupList	-	0x02550105	Response for Group list request
B11	PMS_rqGroupInfo	0x01550106	-	Request for Group detail information
B12	PMS_rsGroupInfo	-	0x02550106	Response for Group detail information request
C1	PMS_rqRoomCheckin	0x01550201	-	Request for Check in

Table 3.2 PMS integration Message List (Continued)

Index	Message Name	PMS → SCM	SCM → PMS	Description
C2	PMS_rsRoomCheckin	-	0x02550201	Response for check in request
C3	PMS_rqRoomUpdate	0x01550202	-	Request for the change of check in information
C4	PMS_rsRoomUpdate	-	0x02550202	Response for the change of check in information request
C5	PMS_rqRoomCheckout	0x01550203	-	Request for check out
C6	PMS_rsRoomCheckout	-	0x02550203	Response for check out request
C7	PMS_RqRoomState	0x01550204	-	Request for the change of room status
C8	PMS_rsRoomState	-	0x02550204	Response for the change of room status request
C9	PMS_rqPhoneState	0x01550205	-	Request for the status of the phone
C10	PMS_rsPhoneState	-	0x02550205	Response for the status of the phone request
C11	PMS_rqRoomChange	0x01550206	-	Request for the change of the room
C12	PMS_rsRoomChange	-	0x02550206	Response for the change of the room request
D1	PMS_rqGroupCreate	0x01550301	-	Request for group creation
D2	PMS_rsGroupCreate	-	0x02550301	Response for group creation request
D3	PMS_rqGroupUpdate	0x01550302	-	Request for the change of group information
D4	PMS_rsGroupUpdate	-	0x02550302	Response for the change of group information request
D5	PMS_rqGroupDelete	0x01550303	-	Request to delete group
D6	PMS_rsGroupDelete	-	0x02550303	Response for deletion group request
E1	PMS_rqSetFeature	0x01550401	-	Request to configure the function
E2	PMS_rsSetFeature	-	0x02550401	Response for configuration of function request

Table 3.2 PMS integration Message List (Continued)

Index	Message Name	PMS → SCM	SCM → PMS	Description
E3	PMS_rqSetWakeup	0x01550402	-	Request to setup the alarm
E4	PMS_rsSetWakeup	-	0x02550402	Response for setup alarm request
E5	PMS_rqSetMessage	0x01550403	-	Request for message delivery
E6	PMS_rsSetMessage	-	0x02550403	Response for message delivery request
E7	PMS_rqSetDIDRoute	0x01550404	-	Request for setup of incoming DID Trunk
E8	PMS_rsSetDIDRoute	-	0x02550404	Response for setup of incoming DID Trunk
E9	PMS_rqSetDIDCurrent	0x01550405	-	Request for the information of incoming DID Trunk
E10	PMS_rsSetDIDCurrent	-	0x02550405	Response for the information of incoming DID Trunk request
F1	PMS_nfReportStaff	-	0x03550001	The report of information which employee enter
F2	PMS_nfReportFeature	-	0x03550002	The report of setup the functionality
F3	PMS_nfReportAlarm	-	0x03550003	The report of call handling for event
F4	PMS_nfReportCall	-	0x03550004	The report of toll charge (CDR)

3.1.4 Error Message ID

SCM always respond for the request message from PMS including error message.
Table 3.3 shows the error cases and it is marked in parameter 1.

Table 3.3 Error ID list for PMS request message

ID	Error Message	Description
0	Success	Success
1	Invalid Room Number	Invalid Room Number
2	Not Occupied Room	When PMS can request to the room of check-in, but PMS request for the room of check-out.
3	Not Available Room	When room is not available.
4	Occupied Room	When PMS can request to the room of check-out, but PMS request for the room of check-in.
5	Not Fixed Room	When PMS request to the room which it need to repair or cleaning
10	Not Permitted	When the functional configuration of room is limited by COS
11	Invalid Group Name	Invalid Group Name
12	Duplicated Group Name	Duplicated Group Name
13	Not Available Group	Not Available Group
14	Invalid Group Member	When PMS request to delete invalid group number
20	Invalid Message ID	When PMS request message before approval of link connection
21	Invalid Message Length	Invalid Message Length
22	Invalid Data	It there is invalid data in message
23	Invalid ID	Invalid ID at link connection
24	Invalid Password	Invalid Password at link connection
25	Invalid IP Address	Invalid IP Address at link connection
26	Invalid Count	When PMS request synchronization message, if message length and number of message is different
30	Invalid Phone Number	If there is no incoming number at the configuration of incoming DID trunk
100	Internal DB error	If there is an error when it is written to DB for the data PMS request

3.1.5 Event Code

SCM can send to PMS necessary information to manage the Hotel. Without requesting from PMS, it can be reported by Event Message. Table 3 is a defined Event ID which SCM can send to PMS. It can be checked in [**Configuration > Service > Hotel Service > Event Code**], and it also can be re-defined.

Table 3.4 SCM Event ID List

Code	Event Message	Description
100	Staff Location Report	When Staff reports location
101	Room Used State Report	When Staff changes room status
102	Room Cleaning State Report	When Staff changes room's repair or cleaning status
103	Item Code Report	When Staff inputs room's equipment or mini bar
109	Staff Report Finished	When Staff finishes the room information report
110	Wakeup Ring Answered	When guest responses alarm ring.
111	Wakeup Ring Not Answered	Ring is released because customer doesn't respond
112	Wakeup Ring Failed	When alarm ring doesn't work at the designated time
113	Emergency Alarm	When there is emergency alarm in the room
114	Off-hook Alarm	When there is leaving alone alarm for the phone in the room
120	COS Changed	When PMS or Staff changes the COS in the room.
121	Text Message Sent	When PMS or Staff send SMS to the room
130	Hotel Wakeup Canceled	When PMS or Staff cancels the alarm ring
131	Hotel Wakeup Set	When PMS or Staff setup the alarm ring
132	Group Wakeup Canceled	When PMS cancels the group alarm ring
133	Group Wakeup Set	When PMS setup the group alarm ring
134	User Wakeup Canceled	When guest cancels morning call by itself
135	User Wakeup Set	When guest setup morning call by itself
140	DND Canceled	When PMS or Staff cancels the DND
141	DND Set	When PMS or Staff setup the DND
142	Forward All Canceled	When PMS or Staff cancels the unconditional DND
143	Forward All Set	When PMS or Staff setup the unconditional DND
144	Remote Locate Canceled	When PMS or Staff cancels the unconditional Forward
145	Remote Locate Set	When PMS or Staff setup the unconditional Forward
146	Key Rack State Canceled	When PMS or Staff cancels the key deposit status
147	Key Rack State Set	When PMS or Staff setup the key deposit status
148	Dial Lock Canceled	When PMS or Staff cancels the call restriction
149	Dial Lock Set	When PMS or Staff setup the call restriction

3.2 Link Management Message

This chapter defines the link management message between PMS and SCM.

The link management message consists of 1:1 matching which PMS requests and SCM responds, and it can be used message header as following table 5 and 6.

Table 3.5 Header of Link Management message (PMS → SCM Request)

Index	Item	Type	Byte	Mandatory	Description
H1	Data Length	int	4	Mandatory	The data length except header
H2	Message ID	int	4	Mandatory	Message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use

Table 3.6 Header of Link Management message (SCM → PMS Response)

Index	Item	Type	Byte	Mandatory	Description
H1	Data Length	int	4	Mandatory	The data length except header
H2	Message ID	int	4	Mandatory	Message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	Return Value for Request
H5	Parameter2	int	4	Optional	0: Not use

3.2.1 Request approval for link connection

This message is for PMS to request approval for link connection.

After approval link connection, PMS can request all the related message.

Request message format: PMS → SCM

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	40
H2	Message ID	int	4	Mandatory	0x01550001: PMS_rqLinkConnect
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use
D1	PMS User ID	string	20	Mandatory	Maximum up to 16 character of alpha-numeric.
D2	PMS Password	string	20	Mandatory	Maximum up to 16 character of alpha-numeric

Response message format: SCM → PMS

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	0
H2	Message ID	int	4	Mandatory	0x02550001: PMS_rsLinkConnect
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 20: Invalid Message ID 21: Invalid Message Length 23: Invalid PMS ID 24: Invalid Password 25: Invalid IP Address
H5	Parameter2	int	4	Optional	0: Not use

3.2.2 Request release link connection

This message is for PMS to request release the link connection. Once link is released, it can't be communicated between PMS and SCM even if there is TCP link.

Request message format: PMS → SCM

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	0
H2	Message ID	int	4	Mandatory	0x01550002: PMS_rqLinkDisconnect
H3	Reserved	int	4	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use

Response message format: SCM → PMS

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	0
H2	Message ID	int	4	Mandatory	0x02550002: PMS_rsLinkDisconnect
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 20: Invalid Message ID
H5	Parameter2	int	4	Optional	0: Not use

3.2.3 Request link connection status

This message is for PMS to request status of link connection.

PMS should request link connection status every 5 to 10 seconds. If SCM didn't receive link connection status message within 30 seconds, TCP link is disconnect.

SCM can send current time information as response for the request of link connection status, and PMS can synchronize the time with SCM using this message.

Request message format: PMS → SCM

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	0
H2	Message ID	int	4	Mandatory	0x01550003: PMS_rqLinkAlive
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use

Response message format: SCM → PMS

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	20
H2	Message ID	int	4	Mandatory	0x02550003: PMS_rsLinkAlive
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 20: Invalid Message ID
H5	Parameter2	int	4	Optional	0: Not use
D1	Current Time	string	20	Mandatory	YYYY-MM-DD HH:MM:SS format used 24 hour mode. SCM display this time data

3.3 Data Synchronization message

This chapter is for data synchronization when PMS connected to SCM.

PMS requests data synchronization message and SCM responds, it consists of 1:1 or 1:N, and it can be used message header as following table 7 and 8.

Table 3.7 Message Header for data synchronization (PMS → SCM Request)

Index	Item	Type	Byte	Mandatory	Description
H1	Data Length	int	4	Mandatory	The data length except header
H2	Message ID	int	4	Mandatory	Message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	The request location or the number of request of whole list
H5	Parameter2	int	4	Optional	0: Not use

Table 3.8 Message Header for data synchronization (SCM → PMS Response)

Index	Item	Type	Byte	Mandatory	Description
H1	Data Length	int	4	Mandatory	The data length except header
H2	Message ID	int	4	Mandatory	Message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	The total number of list or return value for request
H5	Parameter2	int	4	Optional	The start point of the sending list of whole list.

3.3.1 Request Room list

This message is for PMS to request entire room number list. And it can't be requested to separate between normal room and conference room. It can be registered maximum up to 5,000 rooms. SCM can send maximum 50 list per one message, PMS can designate starting point. The starting point of list mentions the total number of successful received message previously. There is no return value in response message for the request of room list. If there would be error in request message, SCM responds 0 for total list.

Request message format: PMS → SCM

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	0
H2	Message ID	int	4	Mandatory	0x01550101: PMS_rqRoomList
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0~5000: The starting point of request in total list (It is the same as the number of received correctly)
H5	Parameter2	int	4	Optional	0: Not use

Response message format: SCM → PMS

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	0~1000: The list of 20 x 50 items per each list
H2	Message ID	int	4	Mandatory	0x02550101: PMS_rsRoomList
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0~5000: The total number of list
H5	Parameter2	int	4	Mandatory	0~5000: The starting point in this message of entire list (It is the same as the number of previous sending message)
D1	Room Number 1	string	20	Optional	Maximum 16 characters' phone number (0~9, *, #)
D2	Room Number 2	string	20	Optional	Maximum 16 characters' phone number (0~9, *, #)

3.3.2 Request for the room information

This message is for PMS to request detail information for the room. The information this message request is that PMS can manage and it is requested for data synchronization when link connection. PMS can request maximum 50 room information. At this time SCM can send maximum 50 message for this request because SCM respond with separate message for each room.

Request message format: PMS → SCM

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	20~1000: 20 bytes x 50 rooms
H2	Message ID	int	4	Mandatory	0x01550102: PMS_rqRoomInfo
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	1~50: Requested the number of room
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number 1	string	20	Mandatory	Maximum 16 characters, phone number (0~9, *, #)
D2	Room Number 2	string	20	Optional	Maximum 16 characters, phone number (0~9, *, #)

Response message format: SCM → PMS

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	196
H2	Message ID	int	4	Mandatory	0x02550102: PMS_rsRoomInfo
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 1: Invalid Room Number 20: Invalid Message ID 21: Invalid Message Length 26: Invalid Count
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	Maximum 16 characters, phone number (0~9, *, #)
D2	Room State	int	4	Mandatory	1: Occupied, 2: Available, 3~9: User Defined 1~7
D3	Cleaning State	int	4	Optional	0: None, 1: Fixed, 2~9: User Defined 1~8
D4	Sex	int	4	Optional	0: None, 1: Female, 2: Male

(Continued)

Index	Item	Type	Byte	Mandatory	Data and Description
D5	VIP Flag	int	4	Optional	0: None, 1: Yes, 2: No
D6	Guest Count	int	4	Optional	0: None, 1~99: The number of guest
D7	COS Index	string	4	Optional	2 characters. COS Index 0~99
D8	Guest Name	string	32	Optional	Guest Name (Max. 30 characters)
D9	Language	string	20	Optional	Language (Max. 16 characters)
D10	Country	string	20	Optional	Country (Max. 16 characters)
D11	Arrived Time	string	20	Optional	Check in Time. YYYY-MM-DD HH:MM:SS
D12	Departure Time	string	20	Optional	Check out Time. YYYY-MM-DD HH:MM:SS
D13	Account Code	string	20	Optional	Maximum 16 characters' phone number (0~9). It can be used either in case of outgoing call at the room applied FAC (Forced Account Code) or outgoing trunk call outside the room.
D14	Group Name	string	20	Optional	Maximum 16 characters, Group name

3.3.3 Request for feature status of the room

This message is for PMS to request feature status for each room. The information this message request is that SCM can manage, and it can be requested for data synchronization when link connection or to check configuration status before setup the feature status.

Request message format: PMS → SCM

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	20~1000: 20 x 50 room
H2	Message ID	int	4	Mandatory	0x01550103: PMS_rqRoomFeature
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	1~50: Requested the number of room
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number 1	string	20	Mandatory	Maximum 16 characters, phone number (0~9, *, #)

(Continued)

Index	Item	Type	Byte	Mandatory	Data and Description
D2	Room Number 2	string	20	Optional	Maximum 16 characters, phone number (0–9, *, #)

Response message format: SCM → PMS

Index	Item	Type	Byte	Mandatory	Data and Description
H1	Data Length	int	4	Mandatory	88
H2	Message ID	int	4	Mandatory	0x02550103: PMS_rsRoomFeature
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 1: Invalid Room Number 20: Invalid Message ID 21: Invalid Message Length 26: Invalid Count
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	Maximum 16 characters' phone number (0–9, *, #)
D2	DND State	int	4	Mandatory	0: None, 1: Set
D3	Dial Lock State	int	4	Mandatory	0: None, 1: External Lock, 2: All Lock. Outgoing is not allowed.
D4	Key Rack State	int	4	Mandatory	0: None, 1: Yes. If key is deposited or not
D5	Forward State	int	4	Mandatory	0: None, 1: Set
D6	Forward Number	string	24	Optional	Maximum 23 characters, phone number (0–9, *, #)
D7	Remote State	int	4	Mandatory	0: None, 1: Set
D8	User Alarm Flag	int	4	Mandatory	0: None, 1: Set
D9	User Alarm Retry	int	4	Optional	0: None 1: Once, 2: Daily
D10	User Alarm Date	string	8	Optional	MMDD (MM: month, DD: day)
D11	User Alarm Time	string	8	Optional	HHMM (HH: hour, MM: minute), 24 hour mode

3.3.4 Request Room Alarm Ring State Information

This is the message that PMS request alarm ring state for each room. The information requested by this message are that SCM manages. This message can be requested for data synchronization when the link is connected or can be requested to check the state before the feature state request.

SCM can support upto 6 alarm ring per room. 6 Alarm rings can be assigned as follows;

- 1: Morning call that the guest set by themselves. This setting is sent to PMS and PMS does not manage this information.
- 2~4: PMS can request 3 alarm rings per each room.
- 5~6: This is the alarm ring that PMS set to all the rooms of group

PMS can request room setting information for max. 50 rooms in one time.

SCM can respond separate message per each room and so max. 50 messages can be sent.

Request message format: PMS → SCM

Index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20~1000: 20 x 50 rooms
H2	Message ID	int	4	Mandatory	0x01550104: PMS_rqRoomWakeup
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	1~50: Requested the number of room
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number 1	string	20	Mandatory	Maximum 16 characters, phone number (0~9, *, #)
D2	Room Number 2	string	20	optional	Maximum 16 characters, phone number (0~9, *, #)
~	~	~	~	~	~

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	80
H2	Message ID	int	4	Mandatory	0x02550104: PMS_rsRoomWakeup
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 1: Invalid Room Number 20: Invalid Message ID 21: Invalid Message Length 26: Invalid Count

(Continued)

index	item	type	byte	mandatory	Data & description
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	Maximum 16 characters, phone number (0~9, *, #)
D2	Alarm 2 Flag	int	4	mandatory	0: None, 1: Set
D3	Alarm 2 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D4	Alarm 2 Date	string	8	Optional	MMDD (MM:month, DD:date), not used in case Retry=Daily
D5	Alarm 2 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode
D6	Alarm 3 Flag	int	4	Mandatory	0: None, 1: Set
D7	Alarm 3 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D8	Alarm 3 Date	string	8	Optional	MMDD (MM:month, DD:date), not used in case Retry=Daily
D9	Alarm 3 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode
D10	Alarm 4 Flag	int	4	Mandatory	0: None, 1: Set
D11	Alarm 4 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D12	Alarm 4 Date	string	8	Optional	MMDD (MM:month, DD:date), not used in case of Retry=Daily
D13	Alarm 4 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode

3.3.5 Request Group Check-in List

This is the message that PMS use to request all group name. This message can be requested for data synchronization when the link is connected or can be requested to check the list before group Creation/Delete. SCM can send max 50 lists for one message and PMS specify starting point of the lists. The starting point means total number of lists that were successfully sent in previous message.

SCM can register max. 500 groups. There is no return value for Request Group List. If there is error in Request message, it responds 0 for total no. of list.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	0
H2	Message ID	int	4	Mandatory	0x01550105: PMS_rqGroupList
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0~500: The starting point of request in total list (It is the same as the number of received correctly)
H5	Parameter2	int	4	optional	0: Not use

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	0~1000: 20 x 50 list per list
H2	Message ID	int	4	Mandatory	0x02550105: PMS_rsGroupList
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0~500: total no. of list
H5	Parameter1	int	4	Mandatory	0~500: The starting point in this message of entire list (It is the same as the number of previous sending message)
D1	Group Name 1	string	20	optional	Maximum 16 ASCII characters
D2	Group Name 2	string	20	optional	Maximum 16 ASCII characters

3.3.6 Request Group Detailed Information

This is the message that PMS request detailed information for each group.

All the information that are requested in this message is managed by PMS and this message is requested for the data synchronization when the link is connected. PMS can request max. 50 group information. SCM responds per group separately and so max.50 message can be sent. SCM can set max 20 of rooms per group. If it is required to register more than 20 rooms, the group should be divided more than 2 groups, separately.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20~1000: 20 per group x 50 groups
H2	Message ID	int	4	Mandatory	0x01550106: PMS_rqGroupInfo
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	1~50: no of group that requested information
H5	Parameter2	int	4	Optional	0: Not use
D1	Group Name 1	string	20	Mandatory	Maximum 16 ASCII characters
D2	Group Name 2	string	20	Optional	Maximum 16 ASCII characters

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	76~476: add by 20 bytes per group member
H2	Message ID	int	4	Mandatory	0x02550106: PMS_rsGroupInfo
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 11: Invalid Group Name 20: Invalid Message ID 21: Invalid Message Length 26: Invalid Count
H5	Parameter2	int	4	Optional	0: Not use
D1	Group Name	string	20	Mandatory	Maximum 16 ASCII characters
D2	COS Index	string	4	Optional	2 characters. COS Index (0~99)
D3	Alarm 5 Flag	int	4	Mandatory	0: None, 1: Set
D4	Alarm 5 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D5	Alarm 5 Date	string	8	Optional	MMDD (MM:month, DD:date), not used in case Retry = Daily

(Continued)

index	item	type	byte	mandatory	Data & description
D6	Alarm 5 Time	string	8	optional	HHMM (HH: hour, MM: minute), 24 hour mode
D7	Alarm 6 Flag	int	4	Mandatory	0: None, 1: Set
D8	Alarm 6 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D9	Alarm 6 Date	string	8	Optional	MMDD (MM: month, DD: date), not used in case Retry=Daily
D10	Alarm 6 Time	string	8	Optional	HHMM (HH: hour, MM: minute), 24 hour mode
D11	Room Count	int	4	Mandatory	0~20: Group Member Count. (max 20)
D12	Room Number 1	string	20	Optional	Maximum 16 characters' phone number (0~9, *, #)
D13	Room Number 2	string	20	Optional	Maximum 16 characters' phone number (0~9, *, #)

3.4 Room Control Message

This chapter defines the message that PMS uses to control room status.

PMS request Room Control Message and SCM responses for this message and the message header in table 9, 10 are used.

The data field in response message uses same format in data field of request message.

When PMS receive the response message after the request message to SCM, if return value is OK (0), it means that it is saved to the DB of SCM but if return value is error, you can ignore as this is meaningless data.

PMS can send same sorts of message before receive the response message for the sending the message. And in this case, transaction ID in Parameter2 is used to distinguish the messages, i.e, SCM is responding with same transaction ID when PMS send transaction ID in parameter2. Any arbitrary number can be sent if this is not used

Table 3.9 Room Control Message Header (PMS → SCM Request)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length except header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	transaction ID is used to distinguish the response for multiple requests. Random value

Table 3.10 Room Control Message Header (SCM → PMS Response)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length except header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	return value for Request
H5	Parameter2	int	4	mandatory	copy transaction ID copy of Request message

3.4.1 Request Room Check-in

This is the message that PMS request check-in.

It is not necessary to assign all the items when you register group and you can assign as separate message later. It is necessary to remark Null (‘\0’) for the no input items so that to identify that this is not used.

SCM handles with error if the Room State is not Available status. After the check-in, Room State is changed to Occupied.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	196
H2	Message ID	int	4	Mandatory	0x01550201: PMS_rqRoomCheckin
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	Random value: transaction ID
D1	Room Number	string	20	Mandatory	Max.16 characters of phone number (0~9, *, #)
D2	Room State	int	4	Optional	0: None, 1: Occupied, 2: Available, 3~9: User Defined 1~7
D3	Cleaning State	int	4	Optional	0: None, 1: Fixed, 2~9: User Defined 1~8
D4	Sex	int	4	Optional	0: None, 1: Female, 2: Male
D5	VIP Flag	int	4	Optional	0: None, 1: Yes, 2: No
D6	Guest Count	int	4	Optional	0: None, 1~99: no of guest in the room
D7	COS Index	string	4	Optional	2 characters of COS Index (0~99)
D8	Guest Name	string	32	Optional	Max 30 characters of guest name
D9	Language	string	20	Optional	Max 16 characters of language name
D10	Country	string	20	Optional	Max 16 characters of country name
D11	Arrived Time	string	20	Optional	Check-in time. YYYY-MM-DD HH:MM:SS
D12	Departure Time	string	20	Optional	Check-out time. YYYY-MM-DD HH:MM:SS
D13	Account Code	string	20	Optional	Max 16 characters of dedicated account code.
D14	Group Name	string	20	Optional	Max 16 characters of group name

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	196
H2	Message ID	int	4	Mandatory	0x02550201: PMS_rsRoomCheckin
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	mandatory	0: Success 1: Invalid Room Number 3: Not Available Room 5: Not Fixed Room 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	mandatory	Request's transaction ID copy

Same format as the data field in Check-in Request Message (PMS_rqRoomCheckin)

3.4.2 Request Check-in Information Update

This is the message that PMS requests room state information change after the check-in. This message is only allowed to update the existing information, When you use this message, request current room state information (PMS_rqRoomInfo), and change required information and then, finally request the change. (PMS_rqRoomCheckin, PMS_rsRoomInfo, PMS_rqRoomUpdate use same message format) It is not allowed to change room state if it is already check-in and it is necessary to check-out first if you need change room state.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	196
H2	Message ID	int	4	Mandatory	0x01550202: PMS_rqRoomUpdate
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	Random value: transaction ID

Same format as the data field in Check-in Request Message (PMS_rqRoomCheckin)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	196
H2	Message ID	int	4	Mandatory	0x02550202: PMS_rsRoomUpdate
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 1: Invalid Room Number 2: Not Occupied Room 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	mandatory	Request's transaction ID copy

Same format as the data field in Check-in information change Request Message (PMS_rqRoomUpdate)

3.4.3 Request Check-out

This is the message that PMS request check-out.

When PMS request check-out, room state, cleaning and repair state can be set together.

Also the change can be requested after the check-out. (PMS_rqRoomCheckout, PMS_rqRoomState use same message format). SCM will change room state to Available after the check-out. SCM will remove from the room list of related group when group registered room check-out.

Request message format: PMS → SCM

index	item	Type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	28
H2	Message ID	int	4	Mandatory	0x01550203: PMS_rqRoomCheckout
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	Random value: transaction ID

Same format as the data field in Room state Change Request Message

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	28
H2	Message ID	int	4	Mandatory	0x02550203: PMS_rsRoomCheckout
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 1: Invalid Room Number 2: Not Occupied Room 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	Mandatory	Request's transaction ID copy

Same format as the data field in Check-out Request Message (PMS_rqRoomCheckout)

3.4.4 Request Room State Change

This is the message that PMS request room state and cleaning/repair state. PMS can change room state or cleaning/repair state without change the room check-in/check-out. In this case, None can be referenced for unnecessary item. The room state for already check-out room and cleaning/repair state for all the rooms can be changed by hotel staff using feature code. In this case, this event message is transferred to PMS and the state can be synchronized. It is not allowed to change room state if this room is Check-in (Occufied). In order to change room state, check-out should be made first. Also, it is not allowed to change the room state to Occufied if that room is check-out state. Only check-in message can change room state to Occufied. Room State and Cleaning/Repaid State can be used together. In this case, PMS use Room State Only and Cleaning/Repair state is set to Null (0: None). User defined field can be used as each hotel can use different type of state. SCM do not handle this user defined code separately.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	28
H2	Message ID	int	4	Mandatory	0x01550204: PMS_rqRoomState
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Mandatory	Random value: transaction ID
D1	Room Number	string	20	mandatory	Max.16 characters of phone number (0~9, *, #)
D2	Room State	int	4	Optional	0: None, 1: Occupied, 2: Available, 3~9: User Defined 1~7
D3	Cleaning State	int	4	optional	0: None, 1: Fixed, 2~9: User Defined 1~8

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	28
H2	Message ID	int	4	Mandatory	0x02550204: PMS_rsRoomState
H3	Reserved	int	8	optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 1: Invalid Room Number 4: Occupied Room 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	mandatory	Request's transaction ID copy

Same format as the data field in Room State Change Request Message (PMS_rqRoomState)

3.4.5 Request Phone Status

This is the message that PMS inquires the state of room phone. SCM initialize the state of room phone when room state is changed to check-in or check-out. So, the call terminated if there is check-in or check-out during the call conversation. The call termination can be blocked from the room phone when trying to check-out. Request phone status and respond message have different data format, exceptionally.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20
H2	Message ID	int	4	Mandatory	0x01550205: PMS_rqPhoneState
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Mandatory	Random value: transaction ID
D1	Room Number	string	20	mandatory	Max.16 characters of phone number (0~9, *, #)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	24
H2	Message ID	int	4	Mandatory	0x02550205: PMS_rsPhoneState
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 1: Invalid Room Number 20: Invalid Message ID 21: Invalid Message Length
H5	Parameter2	int	4	mandatory	copy transaction ID of Request
D1	Room Number	string	20	Mandatory	Max.16 characters of phone number (0~9, *, #)
D2	Phone State	int	4	mandatory	0: Block, 1: Idle, 2: Busy

3.4.6 Request Room State

This is the message that PMS request room state. Check-in Room's state can be changed to empty room and check-in information can be swapped between two check-in rooms.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	44
H2	Message ID	int	4	Mandatory	0x01550206: PMS_rqRoomChange
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Mandatory	Random value: transaction ID
D1	Room Number	string	20	Mandatory	Max.16 characters of phone number (0~9, *, #)
D2	Change Type	int	4	Mandatory	1: Change, 2: Swap
D3	New Number	string	20	mandatory	Max.16 characters of phone number (0~9, *, #)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	44
H2	Message ID	int	4	Mandatory	0x02550206: PMS_rsRoomChange
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: OK 1: Invalid Room Number 2: Not Occupied Room 3: Not Available Room 5: Not Fixed Room 20: Invalid Message ID 21: Invalid Message Length
H5	Parameter2	int	4	Mandatory	copy transaction ID of Request

Same format as the data field in Room Change Request Message (PMS_rqRoomChange)

3.5 Group Control Message

This chapter defines the message that PMS use to control Group Guest.

PMS request Group Control Message and SCM responses for this message and the message header in table11 and 12 are used.

The data field in response message uses same format in data field of request message.

When PMS receive the response message after the request message to SCM, if return value is OK (0), it means that it is saved to the DB of SCM but if return value is error, you can ignore as this is meaningless data.

PMS can send same sorts of message before receive the response message for the sending the message. And in this case, transaction ID in Parameter2 is used to distinguish the messages, i.e, SCM is responding with same transaction ID when PMS send transaction ID in parameter2. Any arbitrary number can be sent if this is not used.

Table 3.11 Group Control Message Header (PMS → SCM Request)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length except header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	transaction ID is used to distinguish the response for multiple requests. Random value

Table 3.12 Group Control Message Header (SCM → PMS Response)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length except header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	return value from request
H5	Parameter2	int	4	mandatory	Copy the transaction ID of Request message

3.5.1 Request Group Registration

This is the message that PMS request group registration.

SCM can register max.500 groups and each group can assigns 20 guest rooms.

It is not necessary to assign all the items when you register group and you can assign as separate message later. It is necessary to remark Null ('0') for the no input items so that to identify that this is not used.

Each group can request max 20 guest rooms and message length should be added as guest room list were added.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	76~476: add by 20 byte per group member
H2	Message ID	int	4	Mandatory	0x01550301: PMS_rqGroupCreate
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Mandatory	Random value: transaction ID
D1	Group Name	string	20	Mandatory	Max 16 length of character
D2	COS Index	string	4	Optional	2 characters. COS Index (0~99)
D3	Alarm 5 Flag	int	4	Optional	0: None, 1: Set, 2: Cancel
D4	Alarm 5 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D5	Alarm 5 Date	string	8	Optional	MMDD (MM:month, DD:date), not used in case Retry=Daily
D6	Alarm 5 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode
D7	Alarm 6 Flag	int	4	Optional	0: None, 1: Set, 2: Cancel
D8	Alarm 6 Retry	int	4	Optional	0: None, 1:Once, 2: Daily
D9	Alarm 6 Date	string	8	Optional	MMDD (MM:month, DD:date), not used in case Retry=Daily
D10	Alarm 6 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode
D11	Room Count	int	4	Mandatory	0~20: Group Member Count
D12	Room Number 1	string	20	Optional	Max 16 characters of phone number (0~9, *, #)
D13	Room Number 2	string	20	Optional	Max 16 characters of phone number (0~9, *, #)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	mandatory	76~476: add by 20 bytes per group member
H2	Message ID	int	4	Mandatory	0x02550301: PMS_rsGroupCreate
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 12: Duplicated Group Name 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	Mandatory	copy transaction ID of Request

Same format as the data field in Group Request Request (PMS_rqGroupCreate)message

3.5.2 Request Group Information Change

This is the message that PMS request group information change.

When request group information change, newly added information is allowed to the information, request current group information (PMS_rqGroupInfo) and then change the newly added information and request the change. (PMS_rqGroupCreate, PMS_rsGroupInfo, PMS_rqGroupUpdate use same message format.) The room list for group registration can be max.20 and message length should be added by the length of room list added.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	76~476: add by 20 bytes per group member
H2	Message ID	int	4	Mandatory	0x01550302: PMS_rqGroupUpdate
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	Random value: transaction ID

Same format as data field in group registration request message (PMS_rqGroupCreate)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	76~476: add by 20 bytes per group member
H2	Message ID	int	4	Mandatory	0x02550302: PMS_rsGroupUpdate
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 11: Invalid Group Name 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	Mandatory	Copy transaction ID of Request

Same format as data field in group information change request message PMS_rqGroupUpdate)

3.5.3 Request Group Release

This is the message that PMS request group release. SCM remove only the link information that is related to group and does not check-out for each room.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20
H2	Message ID	int	4	Mandatory	0x01550303: PMS_rqGroupDelete
H3	Reserved	int	8	Optional	0
H4	Parameter1	int	4	Optional	0
H5	Parameter2	int	4	Optional	0
D1	Group Name	string	20	mandatory	Max 16 characters

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20
H2	Message ID	int	4	Mandatory	0x02550303: PMS_rsGroupDelete
H3	Reserved	int	8	Optional	0
H4	Parameter1	int	4	Optional	0: Success 9: Invalid Group Name 20: Invalid Message ID 21: Invalid Message Length
H5	Parameter2	int	4	Optional	0

Same format as data field in group cancellation request message (PMS_rqGroupDelete)

3.6 Feature Setting Message

This chapter defines the messages that PMS request to SCM to set specific feature to the room.

PMS request this message and SCM responds one by one and the message header in table 13 and 14 are used.

The data field in response message uses same format in data field of request message.

When PMS receive the response message after the request message to SCM, if return value is OK (0), it means that it is saved to the DB of SCM but if return value is error, you can ignore as this is meaningless data.

PMS can send same sorts of message before receive the response message for the sending the message. And in this case, transaction ID in Parameter2 is used to distinguish the messages, SCM is responding with same transaction ID when PMS send transaction ID in parameter2. Any arbitrary number can be sent if this is not used.

Table 3.13 Feature Setting Message Header (PMS → SCM Request)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length except header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	mandatory	transaction ID is used to distinguish the response for multiple requests. Random value

Table 3.14 Feature Setting Message Header (SCM → PMS Response)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length except header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	return value for request
H5	Parameter2	int	4	mandatory	copy the transaction ID of Request message.

3.6.1 Request Feature Setting

This is the message that PMS request DND or Call Forward so that the incoming call is not ringing to the room. Feature Setting Request is available only to the already check-in room. PMS need not to set 3 features like DND, Call Forward, Call delivery request at the same time and can set only to the specific feature. It should remark None for no setting/cancel features. Also, PMS can request feature setting after the request the current feature setting information (PMS_rqRoomFeature) and after the change the required the information. (PMS_rsRoomFeature, PMS_rqSetFeature are using the same message format.)

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	88
H2	Message ID	int	4	Mandatory	0x01550401: PMS_rqSetFeature
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	Random value: Transaction ID
D1	Room Number	string	20	Mandatory	Max 16 characters phone number (0~9, *, #)
D2	DND State	int	4	Mandatory	0: None, 1: Set, 2: Cancel
D3	Dial Lock State	int	4	Mandatory	0: None, 1: External Lock, 2: All Lock, 3: Cancel Outgoing Locking status
D4	Key Rack State	int	4	Mandatory	0: None, 1: Yes, 2: No. Key deposit status
D5	Forward State	int	4	Mandatory	0: None, 1: Set, 2: Cancel
D6	Forward Number	string	24	Optional	Max 23 characters phone number (0~9, *, #).
D7	Remote State	int	4	Mandatory	0: None, 1: Set, 2: Cancel
D8	User Alarm Flag	int	4	Optional	0: Not Use
D9	User Alarm Retry	int	4	Optional	0: Not Use
D10	User Alarm Date	string	8	Optional	0: Not Use
D11	User Alarm Time	string	8	Optional	0: Not Use

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	88
H2	Message ID	int	4	Mandatory	0x02550401: PMS_rsSetFeature
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	mandatory	0: Success 1: Invalid Room Number 2: Not Occupied Room 10: Not Permitted 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	mandatory	Copy the transaction ID of Request message

Same message format in data field as Feature Setting Request (PMS_rqSetFeature) message

3.6.2 Request Alarm Ring Set

This is the message that PMS request the Alarm Ring set to the room morning call.

The Alarm Ring Set is available only to the check-in room.

SCM can set max 6 alarm rings and following method can be used.

- 1: The guest sets the morning call by him/herself. This message of set is just sent to PMS and PMS does not control this message.
- 2~4: PMS can request 3 alarm ring set per room.
- 5~6: PMS can set alarm ring to the group check-in rooms

PMS needs not set 3 alarm rings simultaneously and can set only the required alarm. Alarm Flag should be None for the none Set/Cancel alarm. Alternatively, request the current alarm ring set information (PMS_rqRoomWakeup) and after changing the required information, you can request the set(PMS_rsRoomWakeup, PMS_rqSetWakeup use same message format).

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	92
H2	Message ID	int	4	Mandatory	0x01550402: PMS_rqSetWakeup
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	Random value: Transaction ID
D1	Room Number	string	20	Mandatory	Max 16 characters of phone number (0~9, *, #)

(Continued)

index	item	type	byte	mandatory	Data & description
D2	Alarm 2 Flag	int	4	Mandatory	0: None, 1: Set, 2: Cancel
D3	Alarm 2 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D4	Alarm 2 Date	string	8	Optional	MMDD (MM:month, DD:date), Retry=not used in case of Daily
D5	Alarm 2 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode
D6	Alarm 3 Flag	int	4	Mandatory	0: None, 1: Set, 2: Cancel
D7	Alarm 3 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D8	Alarm 3 Date	string	8	Optional	MMDD (MM:month, DD:date), Retry=not used in case of Daily
D9	Alarm 3 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode
D10	Alarm 4 Flag	int	4	Mandatory	0: None, 1: Set, 2: Cancel
D11	Alarm 4 Retry	int	4	Optional	0: None, 1: Once, 2: Daily
D12	Alarm 4 Date	string	8	Optional	MMDD (MM:month, DD:date), Retry=not used in case of Daily
D13	Alarm 4 Time	string	8	Optional	HHMM (HH:hour, MM:minute), 24 hour mode

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	92
H2	Message ID	int	4	Mandatory	0x02550402: PMS_rsSetWakeup
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 1: Invalid Room Number 2: Not Occupied Room 20: Invalid Message ID 21: Invalid Message Length 22: Invalid Data
H5	Parameter2	int	4	Mandatory	copy the transaction ID of Request message.

Same format in data filed of Alarm Ring Set (PMS_rqSetWakeup) message

3.6.3 Request SMS message sending

This is that message that PMS request SMS Message sending to the room.

This message can be requested to the check-in room only.

This message can be used when there is message to the guest and display the message receipt to the LCD of room phone. The sent message can't be canceled.

Exceptionally, request SMS message and response have different data format in the message.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20~120: data length is variable (max 100)
H2	Message ID	int	4	Mandatory	0x01550403: PMS_rqSetMessage
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	Random value: Transaction ID
D1	Room Number	string	20	mandatory	Max.16 characters of phone number (0~9, *, #)
D2	Message Text	string	100	mandatory	Max.100 characters of message

Response message format: SCM → PMS

index	description	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20
H2	Message ID	int	4	Mandatory	0x02550403: PMS_rsSetMessage
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 1: Invalid Room Number 2: Not Occupied Room 20: Invalid Message ID 21: Invalid Message Length
H5	Parameter2	int	4	Mandatory	Copy transaction ID of Request
D1	Room Number	string	20	mandatory	Max. 16 characters of phone number (0~9, *, #)

3.6.4 Request DID Incoming Set

This is the message that PMS requests incoming call set for DID trunk.

This message can be used to set room FAX number to DID number when there is check-in to the FAX equipped room and can be used to set office FAX when there is check-out.

This message also can be used to set DID number to the room.

PMS needs to set DID incoming number that was used during the check-in to somewhere when there is check-out. If deleted without trunk incoming set, SCM handles as 'invalid number' and rejects the call when there is an DID incoming call.

The DID number that PMS requests should be the number from the Central Office and SCM do not error check. Trunk incoming set telephone number is handled normally if this is the internal number of SCM system.

When request DID incoming set, if you request after the checking the current status (PMS_rqSetDIDCurrent), it can block to set DID number that is already used.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	40
H2	Message ID	int	4	Mandatory	0x01550404: PMS_rqSetDIDRoute
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	Random value: Transaction ID
D1	DID Number	string	20	Mandatory	Max 16 characters of DID number. (0~9)
D2	Phone Number	string	20	mandatory	Max 16 characters of phone number (0~9, *, #)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	40
H2	Message ID	int	4	Mandatory	0x02550404: PMS_rsSetDIDRoute
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 20: Invalid Message ID 21: Invalid Message Length 30: Invalid Phone Number
H5	Parameter2	int	4	Mandatory	copy transaction ID of Request message

Same format as Request DID Trunk Incoming Assignment (PMS_rqSetDIDRoute) in data field.

3.6.5 Request DID Incoming Information

This is the message that PMS requests DID incoming information.

This message can be used to check current status when set DID number to the room phone or FAX. When the requested DID number is not registered or if there is no station number assigned, the system responds with Null (\0) filed. Exceptionally, DID Incoming information request message and its response message has different message format.

Request message format: PMS → SCM

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	20
H2	Message ID	int	4	Mandatory	0x01550405: PMS_rqSetDIDCurrent
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	Random value: Transaction ID
D1	DID Number	string	20	mandatory	Max. 16 characters of DID number (0~9)

Response message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	40
H2	Message ID	int	4	Mandatory	0x02550405: PMS_rqSetDIDCurrent
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Mandatory	0: Success 20: Invalid Message ID 21: Invalid Message Length
H5	Parameter2	int	4	Mandatory	copy the transaction ID of Request message
D1	DID Number	string	20	Mandatory	Max 16 characters of DID number (0~9)
D2	Phone Number	string	20	Optional	Max 16 characters of phone number (0~9, *, #)

3.7 Event Report Message

This chapter defines the Event message generated from SCM to send to PMS.

Event message is one-way sent from the SCM and there is no acknowledge from the PMS.

Message Header in Table 15 is used for Event Report Message.

Table 3.15 Message Header for Feature Setting (SCM → PMS Notify)

index	item	type	byte	mandatory	description
H1	Data Length	int	4	Mandatory	Data length excluding header
H2	Message ID	int	4	Mandatory	message ID
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use

3.7.1 Staff Reporting

This is the message sent to PMS when the staff reporting with staff code message using the room phone. The staff can notify his location using room phone, room's usage status and cleaning/repair status. Also the staff can notify the updated status for equipment or mini-bar. When the staff notifies the updated status for equipment or mini-bar, the staff can inform upto 5 items and this input number he entered using the phone is sent to PMS. (*XX format used. *: separator, XX: item code)

The staff can change the room status only with the check-in or check out message.

When the staff reports to PMS in the room, the staff attaches event code (100, 109) at the beginning and end of the message so that PMS can identify who reports this message.

Notify message format: SCM → PMS

index	item	btype	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	116
H2	Message ID	int	4	Mandatory	0x03550001: PMS_nfReportStaff
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	Max 16 characters of phone number (0~9, *, #)
D2	Report Time	string	20	mandatory	Report time (YYYY-MM-DD HH:MM:SS)
D3	Event Code	string	36	mandatory	Event code (length 3) + ':' (length 2) + display (length 30) format 100: Staff Location Report 101: Room State Report 102: Room Cleaning Report 103: Item Code Report 109: Staff Report Finished

(Continued)

index	item	btype	byte	mandatory	Data & description
D4	Staff Code	string	12	Optional	(in case Event = 100) max 10 length of no. (0~9)
D5	Room State	int	4	Optional	(in case Event = 101) 1: Occupied, 2: Available, 3~9: User Defined 1~7
D6	Cleaning State	int	4	Optional	(in case Event = 102) 1: Fixed, 2~9: User Defined 1~8
D7	Item Count	int	4	Optional	0~5: Item Code Count. Max 5. (in case Event = 103)
D8	Item Code	string	16	Optional	*XX*XX*XX*XX*XX (in case Event = 103) XX: Item Code 00~99

3.7.2 Feature Set Report

This is the message sent to PMS when the staff sets the function of the room using front desk phone or operator phone. Or when the user set/cancels, DND or morning call using the feature code, this message is also sent to PMS

The phone that can control other phone's features is defined by COS.

Notify message format: SCM → PMS

index	item	type	byte	mandatory	Data & description
H1	Data Length	int	4	Mandatory	148
H2	Message ID	int	4	Mandatory	0x03550002: PMS_nfReportFeature
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	Max 16 characters of phone number (0~9, *, #)
D2	Report Time	string	20	Mandatory	Report time (YYYY-MM-DD HH:MM:SS)
D3	Event Code	string	36	mandatory	Event code (length 3) + ': ' (length 2) + display (length 30) format 120: COS Changed 121: Text Message Sent 130: Hotel Wakeup Canceled 131: Hotel Wakeup Set 132: Group Wakeup Canceled 133: Group Wakeup Set

(Continued)

index	item	type	byte	mandatory	Data & description
D3	Event Code	string	36	mandatory	134: User Wakeup Canceled 135: User Wakeup Set 140: DND Canceled 141: DND Set 142: Forward All Canceled 143: Forward All Set 144: Remote Locate Canceled 145: Remote Locate Set 146: Key Rack State Canceled 147: Key Rack State Set 148: Dial Lock Canceled 149: Dial Lock Set
D3	Service Number	string	20	Mandatory	Max 16 characters (0~9, *, #). Setting phone
D4	Forward Number	string	24	Optional	Max 23 characters (0~9, *, #). (in case Event = 143)
D5	COS Index	string	4	optional	Max length 2 COS ID (00~99). (in case Event = 120)
D6	Alarm Index	int	4	Optional	1: Alarm Index. (in case Event = 134, 135) 2~4: Alarm Index. (in case Event = 130, 131) 5~6: Alarm Index. (in case Event = 132, 133)
D7	Alarm Retry	int	4	Optional	0: None, 1: Once, 2: Daily (in case Event = 131, 133, 135)
D8	Alarm Date	string	8	Optional	MMDD (MM: month, DD: date)
D9	Alarm Time	string	8	optional	HHMM (HH: hour, MM: minute), 24 hour mode

3.7.3 Alarm Ring Report

This is the message sent to PMS when alarm ring registered to room phone is ringing or when there is alarm in the room.

Notify message format: SCM → PMS

Index	Item	type	Byte	Mandatory	Data & description
H1	Data Length	int	4	Mandatory	76
H2	Message ID	int	4	Mandatory	0x03550003: PMS_nfReportAlarm
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	Max 16 character of phone number (0~9, *, #)
D2	Report Time	string	20	Mandatory	Report time (YYYY-MM-DD HH:MM:SS)
D3	Event Code	string	36	Mandatory	Event code (length 3) +': ' (length 2) + display (length 30) format 130: Wakeup Ring Answered 131: Wakeup Ring Not Answered 132: Wakeup Ring Failed 133: Emergency Alarm 134: Off-hook Alarm

3.7.4 CDR Report

This is the CDR message to the PMS when the call is disconnected

The type of call to PMS can be defined in [**Configuration** > **Service** > **Hotel Service** > **Hotel Options**] menu. This message is used to identify the room's call history in PMS and is not retransmitted when report is failed. So, in order to handle the room's call cost, separate call costing equipment should be connected

Notify message format: SCM → PMS

Index	Item	type	Byte	Mandatory	Data & description
H1	Data Length	int	4	Mandatory	156
H2	Message ID	int	4	Mandatory	0x03550004: PMS_nfReportCall
H3	Reserved	int	8	Optional	0: Not use
H4	Parameter1	int	4	Optional	0: Not use
H5	Parameter2	int	4	Optional	0: Not use
D1	Room Number	string	20	Mandatory	max 16 characters of phone number (0~9, *, #)
D2	Release Time	string	20	Mandatory	Call release time (YYYY-MM-DD HH:MM:SS)
D3	Start Time	string	20	Mandatory	Call start time (YYYY-MM-DD HH:MM:SS)
D4	Connect Time	string	20	Mandatory	Call connect time (YYYY-MM-DD HH:MM:SS) If none, no answer call
D5	Call Duration	int	4	Mandatory	Call duration (second)
D6	Call Type	int	4	Mandatory	1: Outgoing, 2: Incoming
D7	Dialed Number	string	24	Optional	max 23 characters of dial number (0~9, *, #).
D8	Connect Number	string	20	Optional	Max 16 characters (0~9, *, #). (in case of outgoing, finally connected telephone number)
D9	CLI Number	string	20	Optional	Max 16 characters (0~9, *, #). (in case of incoming call, caller's telephond number)
D10	Transfer Flag	int	4	Optional	0: None, 1: Operator, 2: Account Code (in case when operator transferred the call or other phone makes a call using account code)
D11	Account Code	string	20	Optional	Max 16 characters (0~9). (in case when dialing the account code)
D12	Transfer Number	string	20	Optional	Max 16 characters (0~9, *, #). (transferring station's phone number)





This page is intentionally left blank.

SCM Express PMS Interoperability Guide

©2012 Samsung Electronics Co., Ltd.

All rights reserved.

Information in this manual is proprietary to SAMSUNG Electronics Co., Ltd.

No information contained here may be copied, translated, transcribed or duplicated by any form without the prior written consent of SAMSUNG.

Information in this manual is subject to change without notice.

