

SCM Express

CSTA Interoperability Guide



COPYRIGHT

This guide 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 guide may be trademarks and/or registered trademarks of their respective companies.

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

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

If you need updated guides or have any questions concerning the contents of the guides, 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 guide describes CSTA Interoperability.

Document Content and Organization

This guide consists of three Chapters, Abbreviation as follows.

CHAPTER 1. CSTA Interoperability

This chapter describes generals of CSTA Interoperability for SCM.

CHAPTER 2. ACD Server Interworking Specification

This chapter describes details of ACD Server Interworking Specification.

CHAPTER 3. Samsung CSTA Phase-II PICS

This chapter describes CSTA Phase-II PICS which SCM supports.

ABBREVIATION

Describes the acronyms used in this manual.

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

Provides information or instructions that the reader should follow in order to avoid personal injury or fatality.



CAUTION

Provides information or instructions that the reader should follow in order to avoid a service failure or damage to the system.



CHECKPOINT

Provides the operator with checkpoints for stable system operation.



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.	First Vision
2.0	04. 2014.	Limitation of Interoperability is changed.

TABLE OF CONTENTS

INTRODUCTION I

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

CHAPTER 1. CSTA Interoperability 1-1

1.1 General Requirements.....	1-1
1.1.1 Introduction.....	1-1
1.1.2 License	1-1
1.1.3 CSTA Configuration	1-2
1.1.4 SCM Specific Features	1-3
1.1.5 Limitations.....	1-3
1.2 ACD Server Interworking Specification	1-5
1.2.1 Introduction.....	1-5
1.2.2 ACD Control Mode.....	1-5
1.2.3 CSTA Link Management.....	1-6

CHAPTER 2. ACD Server Interworking Specification 2-1

2.1 Introduction.....	2-1
2.2 Samsung Specific CSTA Messages.....	2-1
2.2.1 CSTA_LINK_SETUP	2-1
2.2.2 CSTA_ACD_SETUP_COMPLETE	2-1
2.2.3 CSTA_ACD_QUEUED_INFO.....	2-2
2.2.4 CSTA_LINK_ALIVE	2-2
2.2.5 CSTA_HUNT_GROUP.....	2-2
2.2.6 CSTA_ACD_GROUP	2-2
2.2.7 CSTA_ACD_AGENT	2-3
2.2.8 CSTA_ACD_AGENT_GROUP	2-3

2.3	Message Structure	2-4
2.3.1	Request Message Structure (Escape)	2-4
2.3.2	Response Message Structure (Private Event)	2-8
2.4	Common Message Field Definition	2-16
2.4.1	Message ID	2-16
2.4.2	Application Code	2-16
2.4.3	Tel Number Option	2-16
2.4.4	ACD Mode	2-17
2.4.5	Agent Status	2-17

CHAPTER 3. Samsung CSTA Phase-II PICS	3-1
--	------------

3.1	Introduction	3-1
3.2	Definition and abbreviations	3-2
3.3	Conformance	3-3
3.4	Instructions for completing the PICS proforma.....	3-4
3.5	Implementation identification.....	3-6
3.6	Switching function services	3-7
3.6.1	Alternate call	3-7
3.6.2	Answer call	3-7
3.6.3	Associate data	3-7
3.6.4	Call completion	3-8
3.6.5	Clear call	3-8
3.6.6	Clear connection	3-8
3.6.7	Conference call.....	3-9
3.6.8	Consultation call	3-9
3.6.9	Divert call	3-10
3.6.10	Hold call	3-10
3.6.11	Make call	3-11
3.6.12	Make predictive call	3-11
3.6.13	Park call	3-12
3.6.14	Query device.....	3-12
3.6.15	Reconnect call	3-13
3.6.16	Retrieve call	3-13
3.6.17	Send DTMF tones	3-14
3.6.18	Set feature	3-14
3.6.19	Single step conference.....	3-15
3.6.20	Single step transfer	3-16
3.6.21	Transfer call	3-17

3.7	Switching function events.....	3-18
3.7.1	Event report service	3-18
3.7.2	Call events	3-18
3.7.3	Agent events	3-23
3.7.4	Other feature events	3-25
3.7.5	Maintenance events.....	3-27
3.7.6	Private events.....	3-27
3.7.7	Voice unit events	3-28
3.8	Computing function services	3-31
3.8.1	Route request.....	3-31
3.8.2	Reroute request	3-31
3.8.3	Route select request.....	3-31
3.8.4	Route used request.....	3-32
3.8.5	Route end request	3-32
3.9	Bidirectional services.....	3-33
3.9.1	Escape.....	3-33
3.9.2	System status.....	3-33
3.10	Status reporting services.....	3-34
3.10.1	Change monitor filter.....	3-34
3.10.2	Monitor start.....	3-34
3.10.3	Monitor stop.....	3-35
3.10.4	Snapshot call	3-35
3.10.5	Snapshot device	3-36
3.11	Input/output services.....	3-37
3.11.1	Data path resumed	3-37
3.11.2	Data path suspended	3-37
3.11.3	Fast data	3-37
3.11.4	Resume data path	3-38
3.11.5	Send broadcast data	3-38
3.11.6	Send data.....	3-38
3.11.7	Send multicast data	3-39
3.11.8	Start data path.....	3-39
3.11.9	Stop data path.....	3-40
3.11.10	Suspend data path	3-40
3.12	Voice unit services	3-41
3.12.1	Concatenate message.....	3-41
3.12.2	Delete message	3-41
3.12.3	Play message	3-41

3.12.4 Query voice attribute	3-42
3.12.5 Record message	3-43
3.12.6 Reposition	3-44
3.12.7 Resume.....	3-44
3.12.8 Review	3-44
3.12.9 Set voice attribute.....	3-45
3.12.10 Stop	3-45
3.12.11 Suspend	3-46
3.12.12 Synthesize message.....	3-46

ABBREVIATION

I

A	I
C	I
P	I
S	I

LIST OF FIGURES

Figure 1.1 CSTA License	1-1
Figure 1.2 CSTA Activation Key	1-2
Figure 1.3 CSTA Configuration	1-3
Figure 1.4 Message flow between CTI application and the SCM	1-5
Figure 1.5 Link Alive Message.....	1-6
Figure 3.1 Clarifying diagram (informative).....	3-5

LIST OF TABLES

Table 2.1 CSTA_LINK_SETUP Request.....	2-5
Table 2.2 CSTA_LINK_ALIVE Request.....	2-6
Table 2.3 CSTA_HUNT_GROUP Request	2-6
Table 2.4 CSTA_ACD_GROUP Request	2-6
Table 2.5 CSTA_ACD_AGENT Request	2-7
Table 2.6 CSTA_ACD_SETUP_COMPLETE Request.....	2-7
Table 2.7 CSTA_ACD_AGENT_GROUP Request	2-7
Table 2.8 CSTA_LINK_SETUP Response.....	2-8
Table 2.9 CSTA_LINK_ALIVE Response.....	2-9
Table 2.10 CSTA_HUNT_GROUP Response.....	2-9
Table 2.11 CSTA_ACD_GROUP Response	2-12

Table 2.12 CSTA_ACD_AGENT Response..... 2-14

Table 2.13 CSTA_ACD_SETUP_COMPLETE Response..... 2-14

Table 2.14 CSTA_ACD_AGENT_GROUP Response..... 2-15

CHAPTER 1. CSTA Interoperability

1.1 General Requirements

1.1.1 Introduction

To interwork with CSTA applications, SCM supports CSTA Phase II.

For more details, please refer to CHAPTER 3 about CSTA Phase II PICS for Samsung CSTA Driver. In this chapter, general requirements are describes for CSTA inter working.

1.1.2 License

CSTA license defines the capability to use CSTA application. Operators should input CSTA licenses in the [SCM Administrator>CONFIGURATION>Miscellaneous>License] menu to integrate with CSTA applications such as Samsung Operator, Embedded ACD Agent, Communicator, ACD Server, SC Plus and other CSTA Applications.

When an external license is issued, each CSTA application can be connected up to the number of CSTA application channels which is defined in the license. In case of ACD Server, [Other CSTA Applications] license is required. Other CSTA applications in the absence of any different declaration uses the channels specified in [Other CSTA Applications].

The number specified in [Total CSTA Applications] entry means total available number that can be assigned to CSTA applications. It is including 10 licenses that SCM basically provides for SC Plus.

License Key Type	SCM Express - External Application	License Key	NRVTCGF-LSVSDWOD-YFXXOTM3U-H50CHYMY
MAC Address	000C2B03AFB	License Status	Deactivated
Samsung SIP Phones		Samsung Soft Phones	
Samsung Mobile Phones		Samsung PC Attendants	
3rd Party SIP Phones		Analog Phones(Gateway)	
AA Availability(Master/Slave)		High Availability(Active/Standby)	
Meet-Me Conference Channels		UMS Channels	
Total CSTA Applications	10	Samsung Operators	10
Embedded ACD Agent Links	10	Communicators/Desktop	10
Other CSTA Applications	10	SIP Application Channels	10

1.1 CSTA License

CHAPTER 1. Ошибка! Используйте вкладку "Главная" для применения 제목 1 к тексту, который должен здесь отображаться.

In SCME V5, new license framework is introduced. Old CSTA license can be used or new Activation Key can be issued for CSTA. Activation Key is set in the [SCM Administrator>CONFIGURATION>Miscellaneous>Activation Key] menu.

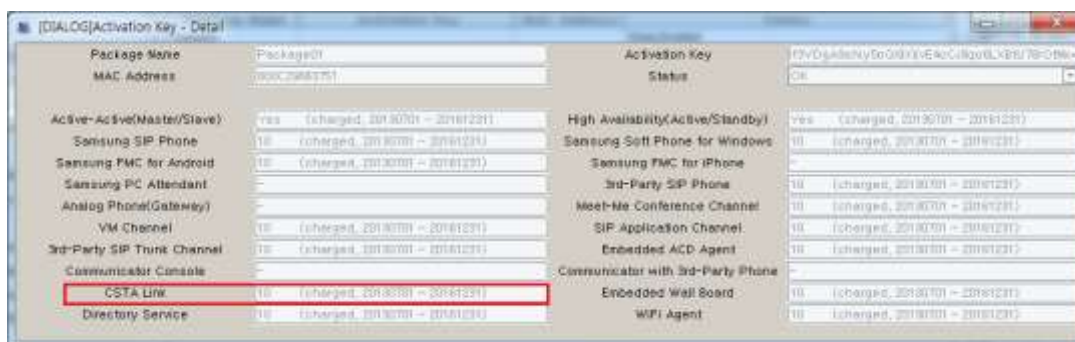


Figure 1.2 CSTA Activation Key

1.1.3 CSTA Configuration

As a client, CSTA application makes TCP connection to SCM with SCM IP address and CSTA port.

Each User Group has separate connection with a different CSTA port, which is determined according to the User Group. Therefore, ACD Group/Agent/IVR is controlled depending on the User Group. CSTA port for each user group is shown in the [SCM Administrator>

CONFIGURATION>User Group>Change User Group>Options] menu.

When several SCM is installed in a site, unique CSTA Call Id is available by setting CSTA Node Code in the [SCM Administrator>CONFIGURATION>User Group>Change User Group>Options] menu. Each SCM should have different CSTA Node Code. If just one SCM is installed in a site, CSTA Node Code has no meaning.



Figure 1.3 CSTA Configuration

1.1.4 SCM Specific Features

CSTA Connection ID Length

Generally CSTA Connection ID is 4 byte, whereas SCM uses 6 byte for CSTA Connection ID. If a CSTA application supports 4 byte Connection ID only, upper 4 byte of 6 byte CSTA Connection ID can be used. Lower 2 byte is always set to 0x00, 0x00.

OCTET STRING

SCM CSTA Driver is developed based on CSTA Emulator by Unigone Inc. SCM uses OCTET STRING as a hex value (4 bits) to express some integer. '1234' defined in OCTET STRING can be showed [12 34] in hexadecimal.

Only 4-digit Agent ID and Password is permitted in SCM.

There is an exceptional usage of OCTET STRING. Exceptionally, Agent ID defined in OCTET STRING in Agent Logged Off message is expressed with IA5String format.

Refer to a following example.

Example) Device ID: 1000 Agent ID: 2000 Password: 1234 Agent Group: 222

Agent Login:

```
a1 21 02 02 04 fb 02 01 0f 30 18 80 04 31 30 30 30 a3 10 a0 0e 8a 02
20 00 8b 02 12 23 80 04 32 32 32 32
```

Agent Logout:

```
a1 23 02 02 04 fd 02 01 0f 30 1a 80 04 31 30 30 30 a3 12 a1 10 8a 04
32 30 30 30 8b 02 12 34 80 04 32 32 32 32
```

1.1.5 Limitations

Active-Standby Configuration

When two SCMs are configured as an Active-Standby system, an active SCM and a standby SCM share a component IP address. A CSTA application connects to the

currently active SCM with the component IP address.

If a standby SCM switches over to an active system, a CSTA application has to re connect to newly active SCM and has to follow the ACD Server interworking flow described in Part 1.2 again if necessary.

Connected calls are guaranteed under switch-over and can be controlled by CSTA if it is preceded by Monitor Start requests after re-connecting.

Newly connected calls after switch-over can be controlled by CSTA.

Active-Active Configuration

When SCMs are configured as an Active-Active node, CSTA application can connect one of Master Node and Slave Node to control users by CSTA. But the CSTA control to some groups which are belonged to a particular node such as ACD group is not supported from the other node.

1.2 ACD Server Interworking Specification

1.2.1 Introduction

Among CSTA application, ACD Server wants to monitor users as well as to control Automatic Call Distribution (ACD) instead SCM. In this case, additional procedure is required as follows.

1.2.2 ACD Control Mode

To control ACD, the CSTA application has to interwork as an ACD Server. SCM provides ACD Server interworking specification.

The ACD Server can change ACD control mode by the procedure defined in the ACD Server Interworking specification.

- System Auto: ACD is controlled by SCM.
- CTI Server: ACD is controlled by ACD Server.

Default ACD control mode is System Auto mode. ACD Server can change the mode to CTI Server mode as described above. Even if the current ACD control mode is CTI Server mode, SCM resets the mode to System Auto if all connections between ACD Server and SCM are cleared.

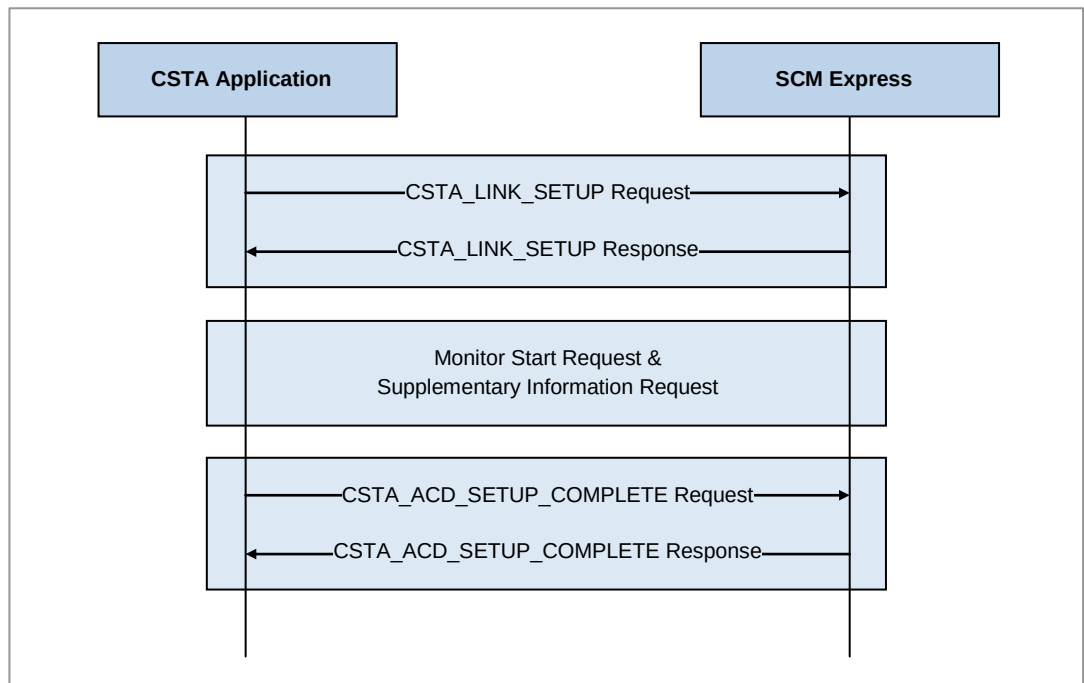


Figure 1.4 Message flow between CTI application and the SCM

1.2.3 CSTA Link Management

Normally, SCM does not manage whether CSTA connection is alive or not but SCM checks link alive for some special CSTA applications such as Samsung solutions and ACD Server. These applications follow additional procedures defined for SCM. The CSTA application connected to SCM as an ACD Server has to send CSTA_ESC_LINK_ALIVE to SCM periodically. SCM checks the receive time every 5 seconds. SCM destroys the CSTA connection when the time is past more than 30 seconds from the receive time.

SCM supports several CSTA connections. Even though a CSTA link which mode is a CTI Server mode is destroyed, the ACD control mode is not changed if other links under CTI Server mode are available.

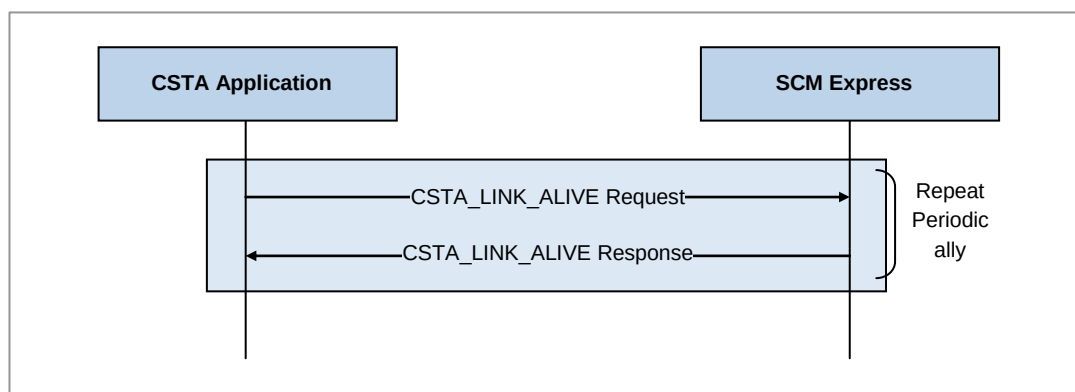


Figure 1.5 Link Alive Message



This page is intentionally left blank.

CHAPTER 2. ACD Server Interworking Specification

2.1 Introduction

ACD Server Interworking Specification is an additional procedure for a special purpose such as ACD server to provide more information. CSTA application establishes a logical private link to identify application type with CSTA_LINK_SETUP message.

By CSTA_LINK_ALIVE message SCM manages the private links. Other messages are used to get additional number plans.

CSTA Escape message is used for request of ACD Server Interworking Specification and the response is delivered in the CSTA Private message. Details for each message are described below.

2.2 Samsung Specific CSTA Messages

2.2.1 CSTA_LINK_SETUP

CSTA_LINK_SETUP Request

CSTA_LINK_SETUP is a starting message for ACD Server interworking. SCM checks the Application Code in CSTA_LINK_SETUP to confirm the license according to CSTA application type.

CSTA_LINK_SETUP Response

This is a response message for the CSTA_LINK_SETUP.

The message includes User Group and User (line) information which can be ignored according to a CTI application.

2.2.2 CSTA_ACD_SETUP_COMPLETE

CSTA_ACD_SETUP_COMPLETE Request

CSTA_ACD_SETUP message informs the SCM of completion of the ACD server interworking flows. In the case of ACD server interworking, the SCM changes the AC

D mode to CTI server from System Auto.

CSTA_ACD_SETUP_COMPLETE Response

The response returns the result of the request.

2.2.3 CSTA_ACD_QUEUED_INFO

CSTA_ACD_QUEUED_INFO Request

CSTA_ACD_AGENT_GROUP message requests information of ACD group list which an ACD agent is assigned to.

CSTA Queued Event (Call Event)

CSTA_QUEUED_EVENT message delivers information of queuing calls.

2.2.4 CSTA_LINK_ALIVE

CSTA_LINK_ALIVE Request

CSTA_ESC_LINK_ALIVE message is used for CTI link management.

The CTI application has to send this message periodically to notify that the link is available. The transmission period depends on the CTI application. SCM destroys the link if the last receive time is more than 30 seconds ago.

Refer to 1.2.3 CSTA Link Management.

CSTA_LINK_ALIVE Response

This is a response message for the CSTA_ESC_LINK_ALIVE.

The message includes the system name of the active SCM, which is changed when SCM switched over. With the system name the CTI application can know whether the switch-over occurs or not.

2.2.5 CSTA_HUNT_GROUP

CSTA_HUNT_GROUP Request

CSTA_HUNT_GROUP message requests information of a hunt group or all hunt groups.

CSTA_HUNT_GROUP Response

The response message returns information of a hunt group or groups. This includes group name, hunt type, and hunt member list.

2.2.6 CSTA_ACD_GROUP

CSTA_ACD_GROUP Request

CSTA_ACD_GROUP message requests information of all ACD groups.

CSTA_ACD_GROUP Response

The response message returns information of all ACD groups. This includes maximum queuing count, maximum overflow count, agent select method, wrap-up time, and destination according to the situation.

Refer to the structure of CSTA_ACD_GROUP Response.

2.2.7 CSTA_ACD_AGENT

CSTA_ACD_AGENT Request

CSTA_ACD_AGENT message requests information of all ACD agents.

CSTA_ACD_AGENT Response

The response returns information of all ACD agents. This includes agent name, extension number, and agent status.

2.2.8 CSTA_ACD_AGENT_GROUP

CSTA_ACD_AGENT_GROUP Request

CSTA_ACD_AGENT_GROUP message requests information of ACD group list which an ACD agent is assigned to.

CSTA_ACD_AGENT_GROUP Response

The response returns ACD group list which the ACD agent is assigned to.

2.3 Message Structure

This section describes the structure of the request and response messages.

2.3.1 Request Message Structure (Escape)

The SCM uses escape messages for the request messages.

```

CSTA-escape-service
{iso( 1) identified-organization( 3) icd-ecma( 12)
    standard( 0) csta2( 218) escape-service( 91) }

DEFINITION::=
BEGIN
IMPORTS
OPERATION, ERROR FROM Remote-Operations-Notation
    {joint-iso-ccitt( 2) remote-operations( 4) notation( 0) }
-- Data Types -
universalFailure FROM CSTA-error-definition
    {iso( 1) identified-organization( 3) icd-ecma( 12)
        standard( 0) csta2( 218) error-defination( 120) }
CSTASecurityData FROM CSTA-security
{iso( 1) identified-organization( 3) icd-ecma( 12)
    standard( 0) csta2( 218) security( 128) }
CSTACommonArguments, CSTAPrivateData FROM CSTA-extension-types
{iso( 1) identified-organization( 3) icd-ecma( 12)
    standard( 0) csta2( 218) extension-types( 129) };

escapeService      OPERATION
    ARGUMENT      EscapeServiceArgument
    RESULT        EscapeServiceResult
    ERRORS        {universalFailure}
::= 51

EscapeServiceArgument::=
    SEQUENCE
    {security          [0] IMPLICIT    CSTASecurityData
    OPTIONAL,
    privateData      [1] IMPLICIT    SEQUENCE OF CSTAPrivateData}

EscapeServiceResult::=
    CHOICE
    {extensions          CSTACommonArguments,
    noData              NULL}

END - of CSTA-escape-service

```

The structure of the escape message is as follows.

Sub-Field	Data Length	Description
Message ID	2 Bytes	The upper 1 byte has a Message ID value and the lower 1 byte is a reserved field and always filled with 0x00. Refer to 2.4.1 Message ID for each Message ID value.
Data Length	2 Bytes	Its byte order is big-endian. 2 byte Data Length Example: 0x00 0x02
Data	Up to 512 Bytes	This field is a data for the Message ID. Data field can divide to several sub fields according to Message ID. The maximum size of Data is 512 byte.

The following description is limited to a private Data format of the Escape message .
Refer to 2.4 Common Message Field Definition for some fields.

CSTA_LINK_SETUP Request

Table 2.1 CSTA_LINK_SETUP Request

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Application Code	1 Byte
	Additional Info	1 Byte

- Application Code: According to the purpose of CSTA application, different application code is used. SCM checks a license with the application code. Refer to 2.4 Common Message Field Definition for Application Code value.
- Additional Info: SCM determines whether the user number plan is included in the CSTA_LINK_SETUP Response or not by this field.

Additional Info	Value	Description
Added	0x00	The user number plan is included in the response message.
Node	0x01	The user number plan is not included in the response message

CSTA_LINK_ALIVE Request

Table 2.2 CSTA_LINK_ALIVE Request

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Application Code	1 Byte
	Reserved	1 Byte

- Application Code: According to the purpose of CSTA application, different application code is used. SCM checks a license with the application code. Refer to 2.4 Common Message Field Definition for Application Code value.
- Reserved: Not used.

CSTA_HUNT_GROUP Request

Table 2.3 CSTA_HUNT_GROUP Request

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Tel Number Option	1 Byte
	Station Group Number	20 Byte

- Tel Number Option: Determines a request range for Hunt group. If you want to know about all Hunt Group, set to 0x00. Refer to 2.4 Common Message Field Definition for more details.
- Station Group Number: Specifies the number of Hunt group to want to know if Tel Number Options is 0x01.

CSTA_ACD_GROUP Request

Table 2.4 CSTA_ACD_GORUP Request

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Reserved	1 Byte

- Reserved: Not used.

CSTA_ACD_AGENT Request**Table 2.5 CSTA_ACD_AGENT Request**

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Reserved	1 Byte

- Reserved: Not used.

CSTA_ACD_SETUP_COMPLETE Request**Table 2.6 CSTA_ACD_SETUP_COMPLETE Request**

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Tel Number Option	1 Byte
	ACD Group Number	20 Byte

- Tel Number Option: Determines a request range for ACD group. If you set to 0x00, it means all ACD Group. Refer to 2.4 Common Message Field Definition for more details.
- ACD Group Number: Specifies the number of an ACD group if Tel Number Options is 0x01.

CSTA_ACD_AGENT_GROUP Request**Table 2.7 CSTA_ACD_AGENT_GROUP Request**

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Agent ID	16 Byte

- Agent ID: Specifies an Agent ID to get an ACD group list which the ACD agent is assigned to.

2.3.2 Response Message Structure (Private Event)

The SCM uses private events for the response message.

```

CSTA-escape-service
{iso( 1) identified-organization( 3) icd-ecma( 12)
    standard( 0) csta2( 218) escape-service( 91) }
DEFINITION::=
BEGIN

PrivateEvent ::= NULL          --      The actual encoding of the
private event is added here.
                                --      replacing NULL with another valid ASN.1
                                type.

END - of CSTA-escape-service

```

The structure of the private event is as follows.

Sub-Field	Data Length	Description
Message ID	2 Bytes	The upper 1 byte is Message ID and the lower 1 byte is reserved as 0x00. Refer to 2.4 for Message IDs
Data Length	2 Bytes	Length of date. Byte order is big endian. (ex) date length of 2 byte date: 0x00 0x02
Data	Up to 512 Bytes	Date for the Message ID. Maximum data size is 512 bytes.

CSTA_LINK_SETUP Response

Table 2.8 CSTA_LINK_SETUP Response

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Total Message Count	2 Byte
	Current Message Count	2 Byte
	Data Block Count	2 Byte
	Data Block	User Number
		Reserved
		User Registration Status
		User Name
		User Group
		Reserved

- Total Block Count: The total number of fragmented messages. The user information can be divided and delivered in several response messages.
- Current Block Count: The current number of fragmented messages when the several response messages are sent.
- Data Block Count: The number of user information in a response message. The Maximum user data count is 50 in a response message.
- User Number: An extension number of a user.
- User Registration Status: A Registration status of a user.
- User Name: A name of a user.
- User Group: a user group which is assigned to a user.
- Reserved: Not used.

CSTA_LINK_ALIVE Response

Table 2.9 CSTA_LINK_ALIVE Response

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Application Code	1 Byte
	Reserved	1 Byte
	System Name	32 Byte
	Master IP Address	40 Byte
	Slave IP Address	40 Byte

- Application Code: According to the purpose of CSTA application, different application code is used. This field has same value with the Application Code in the request message. Refer to 2.4 Common Message Field Definition for Application Code value.
- Reserved: Not used.
- System Name: The system name of currently active SCM. If SCM is switched over, the system name of newly active SCM is delivered when SCM is configured Active-Standby mode.
- Master IP Address: When SCM is deployed in Active-Active configuration, an IP address of Master node is delivered.
- Slave IP Address: When SCM is deployed in Active-Active configuration, an IP address of Slave node is delivered.

CSTA_HUNT_GROUP Response

Table 2.10 CSTA_HUNT_GROUP Response

Field	Length
-------	--------

CHAPTER 2. Ошибка! Используйте вкладку "Главная" для применения 제목 1 к тексту, который должен здесь отображаться.

Message ID		2 Byte
Data Length		2 Byte
Data	Sequence	2 Byte
	Hunt Group Number	20 Byte
	Hunt Type	2 Byte

Table 2.10 CSTA_HUNT_GROUP Response (Continued)

Field		Length
Data	Total Block Count	2 Byte
	Current Block Number	2 Byte
	Block Member Count	2 Byte
	Hunt Member Number	20 Byte * 50

- Sequence: Shows how many hunt group information are sent and whether the transmission ends or not.

Sequence	Value	Description
Single Sequence	0xFFFF	A specified hunt group is delivered.
Multi Sequence	0x0001~0xN	Current sequence when multiple hunt group information is delivered in the several response messages
End Sequence	0x00000	Means all information is delivered and the transmission is complete.

- Hunt Group Number: The number of Hunt group.
- Hunt Type: How to hunt a member of the group.

Hunt Type	Value	Description
Sequential	0x01	The call is always directed to the first member in the hunt group in regular sequence.
Circular	0x02	The call is directed to the member on the hunt group list after the one who answered the previous call.
Parallel	0x03	The call is directed to all members in the hunt group.
Random	0x04	The call is randomly directed to one member in the hunt group.

- Total Block Count: The total number of fragmented messages. The information of a hunt group can be divided and delivered in several response messages.
- Current Block Count: The current number of fragmented messages when the several response messages are sent.
- Block Member Count: The number of member included in the response message.
- Hunt Member Number: The member list of a hunt group. The maximum number is 50 in a response message.

CSTA_ ACD_GROUP Response**Table 2.11 CSTA_ ACD_GROUP Response**

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Sequence	2 Byte
	ACD Group Number	20 Byte
	ACD Group Name	40 Byte
	Agent Select Method	2 Byte
	Maximum Queuing Count	1 Byte
	Maximum Overflow Count	1 Byte
	Queuing Wait Time	2 Byte
	Normal Wrap-Up Time	2 Byte
	No Answer Wrap-Up Time	2 Byte
	Overflow Time	2 Byte
	Overflow Destination	20 Byte
	All Busy Destination	20 Byte
	All Logout Destination	20 Byte
	Total Block Count	2 Byte
	Current Block Count	2 Byte
	Block Member Count	2 Byte
	Member Tel Number	20 Byte * 50

- Sequence: Shows how many ACD group information are sent and whether the transmission ends or not.

Sequence	Value	Description
Single Sequence	0xFFFF	A specified ACD group is delivered.
Multi Sequence	0x0001~0xN	Current sequence when multiple ACD group information is delivered in the several response messages
End Sequence	0x00000	Means all information is delivered and the transmission is complete.

- ACD Group Number: The number of ACD group.
- ACD Group Name: The name of ACD group.
- Agent Select Method: How to select an agent for call distribution.

Sequence	Value	Description
Longest Idle Agent	0x00	When distributing an ACD group call to an agent, the call is delivered to the agent with the longest idle time.
Least Occupied Agent	0x01	When distributing an ACD group call to an agent, the call is delivered to the agent with the fewest calls since the agent logged in.
Sequence Mode	0x02	Calls are distributed to the ACD group's agents in a sequence.

- **Maximum Queuing Count:** Specifies the maximum number of calls allowed to wait for the ACD.
- **Maximum Overflow Count:** Specifies the maximum number of calls allowed to be forwarded when forwarding an incoming ACD group call to another phone number, if the phone number is an ACD group number.
- **Agent No answer Time (sec):** Specifies the No Answer time to wait until the agent answers the call. If the agent is not answered by the time, the call is distributed to another agent.
- **Normal Wrap-Up Time:** Specifies the time to wrap up after the agent ends the ACD call.
- **No Answer Wrap-Up Time:** Specifies the time not to connect an agent which is not answered to the ACD call during No Answer Time.
- **Overflow Time:** Specifies the time to forward the call to another destination when there is no available agent or no answer for the queued call.
- **Overflow Destination:** Specifies the next destination which the queued call is forwarded to when there is no available agent or no answer for the queued call.
- **All Busy Destination:** The next destination which the queued call is forwarded to when all agents are on busy.
- **All Logout Destination:** The next destination which the queued call is forwarded to when all agents are logged out.
- **Total Block Count:** The total number of fragmented messages. The ACD group information can be divided and delivered in several response messages.
- **Current Block Count:** The current number of fragmented messages when the several response messages are sent.
- **Block Member Count:** The number of member included in the response message.
- **ACD Member Number:** The member list of an ACD group. The maximum number is 50 in a response message.

CSTA_ACD_AGENT Response**Table 2.12 CSTA_ACD_AGENT Response**

Field			Length
Message ID			2 Byte
Data Length			2 Byte
Data	Total Block Count		2 Byte
	Current Block Count		2 Byte
	Data Block Count		2 Byte
	Data Block	Agent ID	16 Byte
		Agent Number	20 Byte
		Agent Name	24 Byte
		Agent Status	2 Byte

- Total Block Count: The total number of fragmented messages. The information can be divided and delivered in several response messages.
- Current Block Count: The current number of fragmented messages when the several response messages are sent.
- Data Block Count: The number of agent information in a response message. The Maximum agent data count is 50 in a response message.
- Agent ID: The ID of an agent.
- Agent Number: The extension number which is assigned to an agent.
- Agent Name: The name of an agent.
- Agent Status: The status of an Agent. Refer to 2.4 Common Message Field Definition.

CSTA_ACD_SETUP_COMPLETE Response**Table 2.13 CSTA_ACD_SETUP_COMPLETE Response**

Field			Length
Message ID			2 Byte
Data Length			2 Byte
Data	ACD Mode		1 Byte
	Reserved		1 Byte

- ACD Mode: The ACD control mode. Refer to 2.4 Common Message Field Definition.
- Reserved: Not used.

CSTA_ACD_AGENT_GROUP Response

Table 2.14 CSTA_ ACD_AGENT_GROUP Response

Field		Length
Message ID		2 Byte
Data Length		2 Byte
Data	Agent ID	16 Byte
	ACD Group Count	2 Byte
	ACD Group Number	20 Byte * N

- Agent ID: The ID of an agent.
- ACD Group Count: The number of ACD group which an agent is assigned to.
- ACD Group Number: ACD group number which an agent is assigned to.

2.4 Common Message Field Definition

2.4.1 Message ID

Msg ID		Message Name	Description
Type	RQ RS		
0x01	0x00	Link Setup	Specifies the Application Type which is used for license check. In the response message can include user information of SCM according to an option.
	0x01		
0x02	0x00	Link Alive	Specifies to check link status periodically.
	0x01		
0x04	0x00	Hunt Group Info	Specifies the information of hunt group.
	0x01		
0x07	0x00	ACD Group Info	Specifies the list of all ACD Group.
	0x01		
0x08	0x00	ACD Agent ID Info	Specifies the list of all agents.
	0x01		
0x0D	0x00	ACD Setup Complete	Specifies the completion of setup.
	0x01		
0x0E	0x00	ACD Agent Group List	Specifies the list of ACD group which an agent is assigned to.
	0x01		

2.4.2 Application Code

Application Code	Value	Description
Other CSTA Application	0x00	CSTA Applications which use CSTA for some purpose.
ACD Server	0x20	CTI application which is used to interwork with the SCM as an ACD server.

2.4.3 Tel Number Option

Tel Number Option	Value	Description
All	0x00	Do not specify a tel number, which means all numbers.
Specific Tel Number	0x01	Specify a tel number.

2.4.4 ACD Mode

ACD Mode	Value	Description
System Auto	0x00	ACD is controlled by SCM internal process.
CTI Server	0x01	CTI Server is in charge of ACD control.

2.4.5 Agent Status

Agent Status	Value	Description
AgentNotReady	0x00	Login but not ready
AgentNull	0x01	Logout
AgentReady	0x02	Login and ready.
AgentBusy	0x03	Connected to a call.
AgentWorkingAfterCall	0x04	Working after call.



This page is intentionally left blank.

CHAPTER 3. Samsung CSTA Phase-II PICS

3.1 Introduction

The Protocol Implementation Conformance Statement (PICS) is a statement of which capabilities and options of the protocol have been implemented. The PICS can have a number of uses, including use:

- by the protocol implementor, as a check-list to reduce the risk of failure to conform to the standard through oversight;
- by the supplier and acquirer (or potential acquirer) of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the standard PICS proforma;
- by the user (or potential user) of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking cannot be guaranteed, failure to interwork can often be predicted from incompatible PICS);
- by a protocol tester, as the basis for selecting appropriate tests against which to assess the claim for conformance of the implementation.

3.2 Definition and abbreviations

This Standard uses the following terms defined in ISO 9646-1:

- Protocol Implementation Conformance Statement (PICS);
- PICS Proforma.

In the ‘Reference’ columns of the body of the PICS proforma, the letter S refers to the CSTA Phase II Services Standard ECMA-217 and the letter P refers to the CS TA Phase II Protocol Standard ECMA-218.

The following terms are used in the ‘Status’ columns of the body of the PICS proforma:

m	mandatory; the capability is required for conformance to the protocol.
o	optional; the capability is not required for conformance to the protocol, or is required only within constraints described in dependencies (‘if’ statements). If the capability is implemented, it is required to conform to the protocol specifications.
o.<n>	optional, but support of at least one of the group of options labelled by the same numeral <n> is required.
C.<cid>	conditional; the requirement is conditional according to the condition identified by <cid>.
<item>	simple-predicate condition, dependent on the support marked for <item>.

3.3 Conformance

The supplier of a protocol implementation which is claimed to conform to ECMA-218 shall complete a copy of the Protocol Implementation Conformance Statement (PICS) proforma in clauses A.5 to A.13.

3.4 Instructions for completing the PICS proforma

The first part of the PICS proforma, the Implementation Identification (clause A.5), is to be completed as indicated with the information necessary to identify fully both the supplier and the implementation. The main part of the PICS proforma (clauses A.6 to A.13) is a fixed format questionnaire divided into subclauses each containing a group of individual items. Answers to the questionnaire items are to be provided in the rightmost column, either by marking an answer to indicate a restricted choice (usually Yes or No), or by checking off all supported values (for parameters with a default).

Each item is identified by an item reference in the first column; the second column title indicates the nature of the table items which follow. The third column contains the references to material that specifies the item in the main body of ECMA-217 and ECMA-218. The remaining columns record the status of the item—whether support is mandatory, optional, or not applicable—and provide space for the answers. Where a service is not supported, any parameters or dependent service components are not applicable. These dependencies are indicated in the status column using the item identifier as a key. It is not necessary to complete items in any subsidiary sections if a 'No' response is given to the primary service component. For supported services, a negative response to a mandatory subsidiary item indicates that the service does not conform to ECMA-218, and conformance cannot be claimed for that service.

Figure 3.1 below is offered as an informative clarifying example of the first of the PICS proforma tables, that given in A.6.1 for the Alternate call service.

Item	Service/Feature	Reference	Status	N/A	Supported?
A1	Alternate call service	S10.1 P 9.1	o		Yes ☐ No ☐
A1a	Active call	P 18.6	A1: o1		Yes ☐ No ☐
A1b	Hold call	P 18.6	A1: o1		Yes ☐ No ☐
A1c	Private data in request	P 18.8	A1: o		Yes ☐ No ☐
A1d	Security data in request	P 18.7	A1: o		Yes ☐ No ☐
A1e	Service result positive	P 9.1	A1: m	☐	Yes ☐
A1f	Service result negative	P 16	A1: m	☐	Yes ☐
A1i	Private data in result	P 18.8	A1e: o		Yes ☐ No ☐
A1j	Security data in result	P18.7	A1e: o		Yes ☐ No ☐

Identifies this service/feature and all its parameters

Reference to ECMA-218, CSTA Protocol, where item is first seen

Reference to ECMA-217, CSTA Services

Support of individual CSTA services/features is 'optional'

Tick to indicate that this service/feature is supported

Tick to indicate not supported

Items are linked (part of link '1'). At least one must be supported

Support for this item is 'mandatory' for the service

Part of ...

A mandatory item would be Not Applicable if the item containing it (in this case the service) was not supported

Figure 3.1 Clarifying diagram (informative)

3.5 Implementation identification

Supplier	-
Protocol Version	First Edition
Date of Statement	-
Contact point for queries about the PICS	-
Implementation Name(s) and Version(s)	-
Other information necessary for full identification - e.g. Name(s) and Version(s) for machines and/or operating systems; system name(s)	-

The first five items are required for all implementations; other information may be completed as appropriate in meeting the requirement for full identification.

The terms Name and Version should be interpreted appropriately to correspond with a supplier's terminology (e.g. Type, Series, Model).

3.6 Switching function services

3.6.1 Alternate call

Item	Service/Feature	Reference	Status	N/A	Supported?
A1	Alternate call service	S10.1 P9.1	o	-	Yes [●] No []
A1a	Active call	P18.6	A1:o1	-	Yes [●] No []
A1b	Held call	P18.6	A1:o1	-	Yes [●] No []
A1c	Private data in request	P18.8	A1:o	-	Yes [] No [●]
A1d	Security data in request	P18.7	A1:o	-	Yes [] No [●]
A1e	Service result positive	P9.1	A1:m	[]	Yes [●]
A1f	Service result negative	P16	A1:m	[]	Yes [●]
A1g	Private data in result	P18.8	A1e:o	-	Yes [] No [●]
A1h	Security data in result	P18.7	A1e:o	-	Yes [] No [●]

3.6.2 Answer call

Item	Service/Feature	Reference	Status	N/A	Supported?
A2	Answer call service	S10.2 P9.2	o	-	Yes [●] No []
A2a	Call to be answered	P9.2	A2:m	[]	Yes [●]
A2b	Private data in request	P18.8	A2:o	-	Yes [] No [●]
A2c	Security data in request	P18.7	A2:o	-	Yes [] No [●]
A2d	Service result positive	P9.2	A2:m	[]	Yes [●]
A2e	Service result negative	P16	A2:m	[]	Yes [●]
A2f	Private data in result	P18.8	A2d:o	-	Yes [] No [●]
A2g	Security data in result	P18.7	A2d:o	-	Yes [] No [●]

3.6.3 Associate data

Item	Service/Feature	Reference	Status	N/A	Supported?
A3	Associate data service	S10.3 P9.3	o	-	Yes [] No [●]
A3a	Existing call	P9.3	A3:m	[]	Yes []
A3b	Account code	P9.3	A3:o1	-	Yes [] No []
A3c	Authorization code	P9.3	A3:o1	-	Yes [] No []
A3d	Correlator data	P9.3	A3:o1	-	Yes [] No []
A3e	Private data in request	P18.8	A3:o	-	Yes [] No []
A3f	Security data in request	P18.7	A3:o	-	Yes [] No []
A3g	Service result positive	P9.3	A3:m	[]	Yes []
A3h	Service result negative	P16	A3:m	[]	Yes []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
A3i	Private data in result	P18.8	A3g:o	-	Yes [] No []
A3j	Security data in result	P18.7	A3g:o	-	Yes [] No []

3.6.4 Call completion

Item	Service / Feature	Reference	Status	N/A	Supported?
A4	Call completion service	S10.4 P9.4	o	-	Yes [●] No []
A4a	Camp on caller	P18.6	A4:o1	-	Yes [●] No []
A4b	Call back caller	P18.6	A4:o1	-	Yes [●] No []
A4c	Intrude caller	P18.6	A4:o1	-	Yes [●] No []
A4d	Call back message caller	P18.6	A4:o1	-	Yes [●] No []
A4e	Private data in request	P18.8	A4:o	-	Yes [] No [●]
A4f	Security data in request	P18.7	A4:o	-	Yes [] No [●]
A4g	Service result positive	P9.4	A4:m	[]	Yes [●]
A4h	Service result negative	P16	A4:m	[]	Yes [●]
A4i	Private data in result	P18.8	A4g:o	-	Yes [] No [●]
A4j	Security data in result	P18.7	A4g:o	-	Yes [] No [●]

3.6.5 Clear call

Item	Service / Feature	Reference	Status	N/A	Supported?
A5	Clear call service	S10.5 P9.5	o	-	Yes [●] No []
A5a	Call to be cleared	P9.5	A5:m	[]	Yes [●]
A5b	Private data in request	P18.8	A5:o	-	Yes [] No [●]
A5c	Security data in request	P18.7	A5:o	-	Yes [] No [●]
A5d	Service result positive	P9.5	A5:m	[]	Yes [●]
A5e	Service result negative	P16	A5:m	[]	Yes [●]
A5f	Private data in result	P18.8	A5d:o	-	Yes [] No [●]
A5g	Security data in result	P18.7	A5d:o	-	Yes [] No [●]

3.6.6 Clear connection

Item	Service / Feature	Reference	Status	N/A	Supported?
A6	Clear connection service	S10.6 P9.6	o	-	Yes [●] No []
A6a	Connection to be cleared	P9.6	A6:m	[]	Yes [●]
A6b	Private data in request	P18.8	A6:o	-	Yes [] No [●]

(Continued)

Item	Service / Feature	Reference	Status	N/A	Supported?
A6c	Security data in request	P18.7	A6:o	-	Yes [] No [●]
A6d	Service result positive	P9.6	A6:m	[]	Yes [●]
A6e	Service result negative	P16	A6:m	[]	Yes [●]
A6f	Private data in result	P18.8	A6d:o	-	Yes [] No [●]
A6g	Security data in result	P18.7	A6d:o	-	Yes [] No [●]

3.6.7 Conference call

Item	Service / Feature	Reference	Status	N/A	Supported?
A7	Conference call service	S10.7 P9.7	o	-	Yes [●] No []
A7a	Held call	P18.6	A7:o1	-	Yes [●] No []
A7b	Active call	P18.6	A7:o1	-	Yes [●] No []
A7c	Private data in request	P18.8	A7:o	-	Yes [] No [●]
A7d	Security data in request	P18.7	A7:o	-	Yes [] No [●]
A7e	Service result positive	P9.7	A7:m	[]	Yes [●]
A7f	Service result negative	P16	A7:m	[]	Yes [●]
A7g	Conference call	P9.7	A7e:m	[]	Yes [●]
A7h	Connections	P18.4	A7e:o	-	Yes [●] No []
A7i	New connection	P18.4	A7h:o2	-	Yes [●] No []
A7j	Device ID	P18.4	A7h:o2	-	Yes [●] No []
A7k	Old connection	P18.4	A7h:o2	-	Yes [●] No []
A7l	Private data in result	P18.8	A7e:o	-	Yes [] No [●]
A7m	Security data in result	P18.7	A7e:o	-	Yes [] No [●]

3.6.8 Consultation call

Item	Service / Feature	Reference	Status	N/A	Supported?
A8	Consultation call service	S10.8 P9.8	o	-	Yes [●] No []
A8a	Existing call	P9.8	A8:m	[]	Yes [●]
A8b	Consulted device	P9.8	A8:m	[]	Yes [●]
A8c	Consulted device profile	P9.8	A8:o	-	Yes [] No [●]
A8d	Device class	P18.6	A8c:m	[]	Yes []
A8e	ISDN set up	P18.6	A8c:o	-	Yes [] No [●]
A8f	Account code	P9.8	A8:o	-	Yes [] No [●]
A8g	Authorization code	P9.8	A8:o	-	Yes [] No [●]
A8h	Correlator data	P9.8	A8:o	-	Yes [] No [●]

(Continued)

Item	Service / Feature	Reference	Status	N/A	Supported?
A8i	Private data in request	P18.8	A8:o	-	Yes [] No [●]
A8j	Security data in request	P18.7	A8:o	-	Yes [] No [●]
A8k	Service result positive	P9.8	A8:m	[]	Yes [●]
A8l	Service result negative	P16	A8:m	[]	Yes [●]
A8m	Initiated call	P9.8	A8k:m	[]	Yes [●]
A8n	Private data in result	P18.8	A8k:o	-	Yes [] No [●]
A8o	Security data in result	P18.7	A8k:o	-	Yes [] No [●]

3.6.9 Divert call

Item	Service / Feature	Reference	Status	N/A	Supported?
A9	Divert call service	S10.9 P9.9	o	-	Yes [●] No []
A9a	Deflect	P18.6	A9:o1	-	Yes [●] No []
A9b	Pickup	P18.6	A9:o1	-	Yes [●] No []
A9c	Group pickup	P18.6	A9:o1	-	Yes [●] No []
A9d	Correlator data	P9.9	A9:o	-	Yes [] No [●]
A9e	Private data in request	P18.8	A9:o	-	Yes [] No [●]
A9f	Security data in request	P18.7	A9:o	-	Yes [] No [●]
A9g	Service result positive	P9.9	A9:m	[]	Yes [●]
A9h	Service result negative	P16	A9:m	[]	Yes [●]
A9i	Private data in result	P18.8	A9g:o	-	Yes [] No [●]
A9j	Security data in result	P18.7	A9g:o	-	Yes [] No [●]

3.6.10 Hold call

Item	Service / Feature	Reference	Status	N/A	Supported?
A10	Hold call service	S10.10 P9.10	o	-	Yes [●] No []
A10a	Call to be held	P9.10	A10:m	[]	Yes [●]
A10b	Connection reservation	P9.10	A10:o	-	Yes [] No [●]
A10c	Private data in request	P18.8	A10:o	-	Yes [] No [●]
A10d	Security data in request	P18.7	A10:o	-	Yes [] No [●]
A10e	Service result positive	P9.10	A10:m	[]	Yes [●]
A10f	Service result negative	P16	A10:m	[]	Yes [●]
A10g	Private data in result	P18.8	A10e:o	-	Yes [] No [●]
A10h	Security data in result	P18.7	A10e:o	-	Yes [] No [●]

3.6.11 Make call

Item	Service / Feature	Reference	Status	N/A	Supported?
A11	Make call service	S10.11 P9.11	o	-	Yes [●] No []
A11a	Calling device	P9.11	A11:m	[]	Yes [●]
A11b	Called device	P9.11	A11:m	[]	Yes [●]
A11c	Device profile	P9.11	A11:o	-	Yes [] No [●]
A11d	Device class	P18.6	A11c:m	[]	Yes []
A11e	ISDN set up	P18.6	A11c:o	-	Yes [] No [●]
A11f	Account code	P9.11	A11:o	-	Yes [] No [●]
A11g	Authorization code	P9.11	A11:o	-	Yes [] No [●]
A11h	Correlator data	P9.11	A11:o	-	Yes [] No [●]
A11i	Private data in request	P18.8	A11:o	-	Yes [] No [●]
A11j	Security data in request	P18.7	A11:o	-	Yes [] No [●]
A11k	Service result positive	P9.11	A11:m	[]	Yes [●]
A11l	Service result negative	P16	A11:m	[]	Yes [●]
A11m	Initiated call	P9.11	A11k:m	[]	Yes [●]
A11n	Private data in result	P18.8	A11k:o	-	Yes [] No [●]
A11o	Security data in result	P18.7	A11k:o	-	Yes [] No [●]

3.6.12 Make predictive call

Item	Service / Feature	Reference	Status	N/A	Supported?
A12	Make predictive call service	S10.12 P9.12	o	-	Yes [] No [●]
A12a	Calling device	P9.12	A12:m	[]	Yes []
A12b	Called device	P9.12	A12:m	[]	Yes []
A12c	Allocation	P9.12	A12:o	-	Yes [] No []
A12d	Device profile	P9.12	A12:o	-	Yes [] No []
A12e	Device class	P18.6	A12d:m	[]	Yes []
A12f	ISDN set up	P18.6	A12d:o	-	Yes [] No []
A12g	Account code	P9.12	A12:o	-	Yes [] No []
A12h	Authorization code	P9.12	A12:o	-	Yes [] No []
A12i	Correlator data	P9.12	A12:o	-	Yes [] No []
A12j	Private data in request	P18.8	A12:o	-	Yes [] No []
A12k	Security data in request	P18.7	A12:o	-	Yes [] No []
A12l	Service result positive	P9.12	A12:m	[]	Yes []
A12m	Service result negative	P16	A12:m	[]	Yes []
A12n	Initiated call	P9.12	A12l:m	[]	Yes []

(Continued)

Item	Service / Feature	Reference	Status	N/A	Supported?
A12o	Private data in result	P18.8	A12l:o	-	Yes [] No []
A12p	Security data in result	P18.7	A12l:o	-	Yes [] No []

3.6.13 Park call

Item	Service / Feature	Reference	Status	N/A	Supported?
A13	Park call service	S10.13 P9.13	o	-	Yes [] No [●]
A13a	Call to park	P9.13	A13:m	[]	Yes []
A13b	Park to	P9.13	A13:m	[]	Yes []
A13c	Park device profile	P9.13	A13:o	-	Yes [] No []
A13d	Device class	P18.6	A13c:m	[]	Yes []
A13e	ISDN set up	P18.6	A13c:o	-	Yes [] No []
A13f	Correlator data	P9.13	A13:o	-	Yes [] No []
A13g	Private data in request	P18.8	A13:o	-	Yes [] No []
A13h	Security data in request	P18.7	A13:o	-	Yes [] No []
A13i	Service result positive	P9.13	A13:m	[]	Yes []
A13j	Service result negative	P16	A13:m	[]	Yes []
A13k	Private data in result	P18.8	A13i:o	-	Yes [] No []
A13l	Security data in result	P18.7	A13i:o	-	Yes [] No []

3.6.14 Query device

Item	Service / Feature	Reference	Status	N/A	Supported?
A14	Query device service	S10.14 P9.14	o	-	Yes [●] No []
A14a	Device	P9.14	A14:m	[]	Yes [●]
A14b	Feature	P9.14	A14:m	[]	Yes [●]
A14c	Private data in request	P18.8	A14:o	-	Yes [] No [●]
A14d	Security data in request	P18.7	A14:o	-	Yes [] No [●]
A14e	Service result positive	P9.14	A14:m	[]	Yes [●]
A14f	Service result negative	P16	A14:m	[]	Yes [●]
A14g	Device information in service result	P9.14	A14e:m	[]	Yes [●]
A14h	Message waiting on	P18.6	A14g:o1	-	Yes [●] No []
A14i	Do not disturb on	P18.6	A14g:o1	-	Yes [●] No []
A14j	Forward	P18.6	A14g:o1	-	Yes [●] No []
A14k	Forwarding type	P18.6	A14j:m	[]	Yes [●]

(Continued)

Item	Service / Feature	Reference	Status	N/A	Supported?
A14l	Forward to device	P18.6	A14j:m	[]	Yes [●]
A14m	Device information	P18.6	A14g:o1	-	Yes [●] No []
A14n	Device ID	P18.6	A14m:o	-	Yes [●] No []
A14o	Device type	P18.6	A14m:m	[]	Yes [●]
A14p	Device class	P18.6	A14m:m	[]	Yes [●]
A14q	Agent state	P18.6	A14g:o1	-	Yes [●] No []
A14r	Routing enabled	P18.6	A14g:o1	-	Yes [] No [●]
A14s	Auto answer on	P18.6	A14g:o1	-	Yes [●] No []
A14t	Microphone mute on	P18.6	A14g:o1	-	Yes [] No [●]
A14u	Speaker mute on	P18.6	A14g:o1	-	Yes [] No [●]
A14v	Speaker volume	P18.6	A14g:o1	-	Yes [] No [●]
A14w	Private data in result	P18.8	A14e:o	-	Yes [] No [●]
A14x	Security data in result	P18.7	A14e:o	-	Yes [] No [●]

3.6.15 Reconnect call

Item	Service / Feature	Reference	Status	N/A	Supported?
A15	Reconnect call service	S10.15 P9.15	o	-	Yes [●] No []
A15a	Held call	P18.6	A15:o1	-	Yes [●] No []
A15b	Active call	P18.6	A15:o1	-	Yes [●] No []
A15c	Private data in request	P18.8	A15:o	-	Yes [] No [●]
A15d	Security data in request	P18.7	A15:o	-	Yes [] No [●]
A15e	Service result positive	P9.15	A15:m	[]	Yes [●]
A15f	Service result negative	P16	A15:m	[]	Yes [●]
A15g	Private data in result	P18.8	A15e:o	-	Yes [] No [●]
A15h	Security data in result	P18.7	A15e:o	-	Yes [] No [●]

3.6.16 Retrieve call

Item	Service / Feature	Reference	Status	N/A	Supported?
A16	Retrieve call service	S10.16 P9.16	o	-	Yes [●] No []
A16a	Call to be retrieved	P9.16	A16:m	[]	Yes [●]
A16b	Private data in request	P18.8	A16:o	-	Yes [] No [●]
A16c	Security data in request	P18.7	A16:o	-	Yes [] No [●]
A16d	Service result positive	P9.16	A16:m	[]	Yes [●]
A16e	Service result negative	P16	A16:m	[]	Yes [●]

(Continued)

Item	Service / Feature	Reference	Status	N/A	Supported?
A16f	Private data in result	P18.8	A16d:o	-	Yes [] No [●]
A16g	Security data in result	P18.7	A16d:o	-	Yes [] No [●]

3.6.17 Send DTMF tones

Item	Service / Feature	Reference	Status	N/A	Supported?
A17	Send DTMF tones service	S10.17 P9.17	o	-	Yes [●] No []
A17a	Connection to send	P9.17	A17:m	[]	Yes [●]
A17b	Characters to send	P9.17	A17:m	[]	Yes [●]
A17c	Tone duration	P9.17	A17:o	-	Yes [] No [●]
A17d	Pause duration	P9.17	A17:o	-	Yes [] No [●]
A17e	Private data in request	P18.8	A17:o	-	Yes [] No [●]
A17f	Security data in request	P18.7	A17:o	-	Yes [] No [●]
A17g	Service result positive	P9.17	A17:m	[]	Yes [●]
A17h	Service result negative	P16	A17:m	[]	Yes [●]
A17i	Private data in result	P18.8	A17g:o	-	Yes [] No [●]
A17j	Security data in result	P18.7	A17g:o	-	Yes [] No [●]

3.6.18 Set feature

Item	Service / Feature	Reference	Status	N/A	Supported?
A18	Set feature service	S10.18 P9.18	o	-	Yes [●] No []
A18a	Device	P9.18	A18:m	[]	Yes [●]
A18b	Feature	P9.18	A18:m	[]	Yes [●]
A18c	Message waiting on	P18.6	A18b:o1	-	Yes [] No [●]
A18d	Do not disturb on	P18.6	A18b:o1	-	Yes [●] No []
A18e	Forward	P18.6	A18b:o1	-	Yes [●] No []
A18f	Forward immediate	P18.6	A18e:o2	[]	Yes [●] No []
A18g	Forward busy	P18.6	A18e:o2	[]	Yes [●] No []
A18h	Forward no answer	P18.6	A18e:o2	[]	Yes [●] No []
A18i	Forward busy internal	P18.6	A18e:o2	[]	Yes [] No [●]
A18j	Forward busy external	P18.6	A18e:o2	[]	Yes [] No [●]
A18k	Forward no answer internal	P18.6	A18e:o2	[]	Yes [] No [●]
A18l	Forward no answer external	P18.6	A18e:o2	[]	Yes [] No [●]
A18m	Forward immediate internal	P18.6	A18e:o2	[]	Yes [] No [●]
A18n	Forward immediate external	P18.6	A18e:o2	[]	Yes [] No [●]

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
A18o	Forward to device	P18.6	A18e:m	[]	Yes [●]
A18p	Agent state	P18.6	A18b:o1	-	Yes [●] No []
A18q	Agent working after call	P18.6	A18p:o3	[]	Yes [] No [●]
A18r	Agent ready	P18.6	A18p:o3	[]	Yes [●] No []
A18s	Agent logged on info	P18.6	A18p:o3	[]	Yes [●] No []
A18t	Agent logged off info	P18.6	A18p:o3	[]	Yes [●] No []
A18u	Agent not ready	P18.6	A18p:o3	[]	Yes [●] No []
A18v	Enable routing	P18.6	A18b:o1	-	Yes [] No [●]
A18w	Auto answer on	P18.6	A18b:o1	-	Yes [●] No []
A18x	Microphone mute on	P18.6	A18b:o1	-	Yes [] No [●]
A18y	Speaker mute on	P18.6	A18b:o1	-	Yes [] No [●]
A18z	Speaker volume	P18.6	A18b:o1	-	Yes [] No [●]
A18aa	Device profile	P9.18	A18:o	-	Yes [] No [●]
A18ab	Device class	P18.6	A18aa:m	[]	Yes []
A18ac	ISDN set up	P18.6	A18aa:o	-	Yes [] No [●]
A18ad	Private data in request	P18.8	A18:o	-	Yes [] No [●]
A18ae	Security data in request	P18.7	A18:o	-	Yes [] No [●]
A18af	Service result positive	P9.18	A18:m	[]	Yes [●]
A18ag	Service result negative	P16	A18:m	[]	Yes [●]
A18ah	Private data in result	P18.8	A18af:o	-	Yes [] No [●]
A18ai	Security data in result	P18.7	A18af:o	-	Yes [] No [●]

3.6.19 Single step conference

Item	Service/Feature	Reference	Status	N/A	Supported?
A19	Single step conference service	S10.19 P9.19	o	-	Yes [] No [●]
A19a	Active call	P9.19	A19:m	[]	Yes []
A19b	Device to join	P9.19	A19:m	[]	Yes []
A19c	Participation type	P9.19	A19:o	-	Yes [] No []
A19d	Device profile	P9.19	A19:o	-	Yes [] No []
A19e	Device class	P18.6	A19d:m	[]	Yes []
A19f	ISDN set up	P18.6	A19d:o	-	Yes [] No []
A19g	Account information	P9.19	A19:o	-	Yes [] No []
A19h	Authorization code	P9.19	A19:o	-	Yes [] No []
A19i	Correlator data	P9.19	A19:o	-	Yes [] No []
A19j	Private data in request	P18.8	A19:o	-	Yes [] No []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
A19k	Security data in request	P18.7	A19:o	-	Yes [] No []
A19l	Service result positive	P9.19	A19:m	[]	Yes []
A19m	Service result negative	P16	A19:m	[]	Yes []
A19n	Conferenced call	P9.19	A19l:m	[]	Yes []
A19o	Private data in result	P18.8	A19l:o	-	Yes [] No []
A19p	Security data in result	P18.7	A19l:o	-	Yes [] No []

3.6.20 Single step transfer

Item	Service/Feature	Reference	Status	N/A	Supported?
A20	Single step transfer service	S10.20 P9.20	o	-	Yes [●] No []
A20a	Active call	P9.20	A20:m	[]	Yes [●]
A20b	Device to transfer	P9.20	A20:m	[]	Yes [●]
A20c	Device profile	P9.20	A20:o	-	Yes [] No [●]
A20d	Device class	P18.6	A20c:m	[]	Yes []
A20e	ISDN set up	P18.6	A20c:o	-	Yes [] No [●]
A20f	Account information	P9.20	A20:o	-	Yes [] No [●]
A20g	Authorization code	P9.20	A20:o	-	Yes [] No [●]
A20h	Correlator data	P9.20	A20:o	-	Yes [] No [●]
A20i	Private data in request	P18.8	A20:o	-	Yes [] No [●]
A20j	Security data in request	P18.7	A20:o	-	Yes [] No [●]
A20k	Service result positive	P9.20	A20:m	[]	Yes [●]
A20l	Service result negative	P16	A20:m	[]	Yes [●]
A20m	Transferred call	P9.20	A20k:o	-	Yes [●] No []
A20n	Connections	P18.4	A20k:o	-	Yes [●] No []
A20o	New connection	P18.4	A20n:o1	-	Yes [●] No []
A20p	Device ID	P18.4	A20n:o1	-	Yes [●] No []
A20q	Old connection	P18.4	A20n:o1	-	Yes [●] No []
A20r	Private data in result	P18.8	A20k:o	-	Yes [] No [●]
A20s	Security data in result	P18.7	A20k:o	-	Yes [] No [●]

3.6.21 Transfer call

Item	Service/Feature	Reference	Status	N/A	Supported?
A21	Transfer call service	S10.21 P9.21	o	-	Yes [●] No []
A21a	Transfer information	P9.21	A21:m	[]	Yes [●]
A21b	Held call	P18.6	A21a:o1	-	Yes [●] No []
A21c	Active call	P18.6	A21a:o1	-	Yes [●] No []
A21d	Private data in request	P18.8	A21:o	-	Yes [] No [●]
A21e	Security data in request	P18.7	A21:o	-	Yes [] No [●]
A21f	Service result positive	P9.21	A21:m	[]	Yes [●]
A21g	Service result negative	P16	A21:m	[]	Yes [●]
A21h	Transferred call	P9.21	A21f:o	-	Yes [●] No []
A21i	Connections	P18.4	A21f:o	-	Yes [●] No []
A21j	New connection	P18.4	A21i:o2	-	Yes [●] No []
A21k	Device ID	P18.4	A21i:o2	-	Yes [●] No []
A21l	Old connection	P18.4	A21i:o2	-	Yes [●] No []
A21m	Private data in result	P18.8	A21f:o	-	Yes [] No [●]
A21n	Security data in result	P18.7	A21f:o	-	Yes [] No [●]

3.7 Switching function events

3.7.1 Event report service

Item	Service/Feature	Reference	Status	N/A	Supported?
B1	Event report service	S11.2 P10	o	-	Yes [●] No []
B1a	Monitor cross reference	P5.4 P10	B1:m	[]	Yes [●]
B1b	Event specific information	P10	B1:m	[]	Yes [●]
B1c	Private data	P18.8	B1:o	-	Yes [] No [●]
B1d	Security data	P18.7	B1:o	-	Yes [] No [●]

3.7.2 Call events

3.7.2.1 Call cleared

Item	Service/Feature	Reference	Status	N/A	Supported?
B2	Call cleared event	S11.2.3.1 P10.1.1	B1b:o	-	Yes [●] No []
B2a	Cleared call	P10.1.1	B2:m	[]	Yes [●]
B2b	Local connection state	P10.1.1	B2:o	-	Yes [●] No []
B2c	Correlator data	P10.1.1	B2:o	-	Yes [] No [●]
B2d	Cause	P10.1.1	B2:o	-	Yes [●] No []

3.7.2.2 Conferenced

Item	Service/Feature	Reference	Status	N/A	Supported?
B3	Conferenced event	S11.2.3.2 P10.1.2	B1b:o	-	Yes [●] No []
B3a	Primary old call	P10.1.2	B3:m	[]	Yes [●]
B3b	Conference controller	P10.1.2	B3:m	[]	Yes [●]
B3c	Added party	P10.1.2	B3:m	[]	Yes [●]
B3d	Secondary old call	P10.1.2	B3:C	[]	Yes [●] No []
B3e	Connections	P10.1.2	B3:o	-	Yes [●] No []
B3f	New connection	P18.4	B3e:o1	-	Yes [●] No []
B3g	Device ID	P18.4	B3e:o1	-	Yes [●] No []
B3h	Old connection	P18.4	B3e:o1	-	Yes [●] No []
B3i	Local connection information	P10.1.2	B3:o	-	Yes [●] No []
B3j	Correlator data	P10.1.2	B3:o	-	Yes [] No [●]
B3k	Cause	P10.1.2	B3:o	-	Yes [●] No []

C: If provided in previous events then mandatory
else optional

3.7.2.3 Connection cleared

Item	Service/Feature	Reference	Status	N/A	Supported?
B4	Connection cleared event	S11.2.3.3 P10.1.3	B1b:o	-	Yes [●] No []
B4a	Dropped connection	P10.1.3	B4:m	[]	Yes [●]
B4b	Releasing device	P10.1.3	B4:m	[]	Yes [●]
B4c	Local connection information	P10.1.3	B4:o	-	Yes [●] No []
B4d	Correlator data	P10.1.3	B4:o	-	Yes [] No [●]
B4e	Cause	P10.1.3	B4:o	-	Yes [●] No []

3.7.2.4 Delivered

Item	Service/Feature	Reference	Status	N/A	Supported?
B5	Delivered event	S11.2.3.4 P10.1.4	B1b:o	-	Yes [●] No []
B5a	Connection	P10.1.4	B5:m	[]	Yes [●]
B5b	Alerting device	P10.1.4	B5:m	[]	Yes [●]
B5c	Calling device	P10.1.4	B5:m	[]	Yes [●]
B5d	Called device	P10.1.4	B5:m	[]	Yes [●]
B5e	Last redirection device	P10.1.4	B5:m	[]	Yes [●]
B5f	Originating connection	P10.1.4	B5:o	-	Yes [] No [●]
B5g	Local connection information	P10.1.4	B5:o	-	Yes [●] No []
B5h	Correlator data	P10.1.4	B5:o	-	Yes [] No [●]
B5i	Cause	P10.1.4	B5:o	-	Yes [●] No []

3.7.2.5 Diverted

Item	Service/Feature	Reference	Status	N/A	Supported?
B6	Diverted event	S11.2.3.5 P10.1.5	B1b:o	-	Yes [●] No []
B6a	Diverted connection	P10.1.5	B6:C	[]	Yes [●] No []
B6b	Diverting device	P10.1.5	B6:m	[]	Yes [●]
B6c	New destination	P10.1.5	B6:m	[]	Yes [●]
B6d	Local connection information	P10.1.5	B6:o	-	Yes [●] No []
B6e	Correlator data	P10.1.5	B6:o	-	Yes [] No [●]
B6f	Cause	P10.1.5	B6:o	-	Yes [●] No []

C: If the call alerted the device then mandatory else optional

3.7.2.6 Established

Item	Service/Feature	Reference	Status	N/A	Supported?
B7	Established event	S11.2.3.6 P10.1.6	B1b:o	-	Yes [●] No []
B7a	Established connection	P10.1.6	B7:m	[]	Yes [●]
B7b	Answering device	P10.1.6	B7:m	[]	Yes [●]
B7c	Calling device	P10.1.6	B7:m	[]	Yes [●]
B7d	Called device	P10.1.6	B7:m	[]	Yes [●]
B7e	Last redirection device	P10.1.6	B7:m	[]	Yes [●]
B7f	Originating connection	P10.1.6	B7:o	-	Yes [] No [●]
B7g	Local connection information	P10.1.6	B7:o	-	Yes [●] No []
B7h	Correlator data	P10.1.6	B7:o	-	Yes [] No [●]
B7i	Cause	P10.1.6	B7:o	-	Yes [●] No []

3.7.2.7 Failed

Item	Service/Feature	Reference	Status	N/A	Supported?
B8	Failed event	S11.2.3.7 P10.1.7	B1b:o	-	Yes [●] No []
B8a	Failed connection	P10.1.7	B8:m	[]	Yes [●]
B8b	Failed device	P10.1.7	B8:m	[]	Yes [●]
B8c	Called device	P10.1.7	B8:m	[]	Yes [●]
B8d	Local connection information	P10.1.7	B8:o	-	Yes [●] No []
B8e	Correlator data	P10.1.7	B8:o	-	Yes [] No [●]
B8f	Cause	P10.1.7	B8:o	-	Yes [●] No []

3.7.2.8 Held

Item	Service/Feature	Reference	Status	N/A	Supported?
B9	Held event	S11.2.3.8 P10.1.8	B1b:o	-	Yes [●] No []
B9a	Held connection	P10.1.8	B9:m	[]	Yes [●]
B9b	Holding device	P10.1.8	B9:m	[]	Yes [●]
B9c	Local connection information	P10.1.8	B9:o	-	Yes [●] No []
B9d	Correlator data	P10.1.8	B9:o	-	Yes [] No [●]
B9e	Cause	P10.1.8	B9:o	-	Yes [●] No []

3.7.2.9 Network reached

Item	Service/Feature	Reference	Status	N/A	Supported?
B10	Network reached event	S11.2.3.9 P10.1.9	B1b:o	-	Yes [●] No []
B10a	Connection	P10.1.9	B10:m	[]	Yes [●]
B10b	Trunk used	P10.1.9	B10:m	[]	Yes [●]
B10c	Called device	P10.1.9	B10:m	[]	Yes [●]
B10d	Local connection information	P10.1.9	B10:o	-	Yes [●] No []
B10e	Correlator data	P10.1.9	B10:o	-	Yes [] No [●]
B10f	Cause	P10.1.9	B10:o	-	Yes [●] No []

3.7.2.10 Originated

Item	Service/Feature	Reference	Status	N/A	Supported?
B11	Originated event	S11.2.3.10 P10.1.10	B1b:o	-	Yes [●] No []
B11a	Originated connection	P10.1.10	B11:m	[]	Yes [●]
B11b	Calling device	P10.1.10	B11:m	[]	Yes [●]
B11c	Called device	P10.1.10	B11:m	[]	Yes [●]
B11d	Originating device	P10.1.10	B11:o	-	Yes [] No [●]
B11e	Local connection information	P10.1.10	B11:o	-	Yes [●] No []
B11f	Correlator data	P10.1.10	B11:o	-	Yes [] No [●]
B11g	Cause	P10.1.10	B11:o	-	Yes [●] No []

3.7.2.11 Queued

Item	Service/Feature	Reference	Status	N/A	Supported?
B12	Queued event	S11.2.3.11 P10.1.11	B1b:o	-	Yes [●] No []
B12a	Queued connection	P10.1.11	B12:m	[]	Yes [●]
B12b	Queue	P10.1.11	B12:m	[]	Yes [●]
B12c	Calling device	P10.1.11	B12:m	[]	Yes [●]
B12d	Called device	P10.1.11	B12:m	[]	Yes [●]
B12e	Last redirection device	P10.1.11	B12:m	[]	Yes [●]
B12f	Number of calls in queue	P10.1.11	B12:o	-	Yes [●] No []
B12g	Calls in front	P10.1.11	B12:o	-	Yes [] No [●]
B12h	Local connection information	P10.1.11	B12:o	-	Yes [] No [●]
B12i	Correlator data	P10.1.11	B12:o	-	Yes [] No [●]
B12j	Cause	P10.1.11	B12:o	-	Yes [] No [●]

3.7.2.12 Retrieved

Item	Service/Feature	Reference	Status	N/A	Supported?
B13	Retrieved event	S11.2.3.12 P10.1.12	B1b:o	-	Yes [●] No []
B13a	Retrieved connection	P10.1.12	B13:m	[]	Yes [●]
B13b	Retrieving device	P10.1.12	B13:m	[]	Yes [●]
B13c	Local connection information	P10.1.12	B13:o	-	Yes [●] No []
B13d	Correlator data	P10.1.12	B13:o	-	Yes [] No [●]
B13e	Cause	P10.1.12	B13:o	-	Yes [●] No []

3.7.2.13 Service initiated

Item	Service/Feature	Reference	Status	N/A	Supported?
B14	Service initiated event	S11.2.3.13 P10.1.13	B1b:o	-	Yes [●] No []
B14a	Initiated connection	P10.1.13	B14:m	[]	Yes [●]
B14b	Local connection information	P10.1.13	B14:o	-	Yes [●] No []
B14c	Cause	P10.1.13	B14:o	-	Yes [●] No []

3.7.2.14 Transferred

Item	Service/Feature	Reference	Status	N/A	Supported?
B15	Transferred event	S11.2.3.14 P10.1.14	B1b:o	-	Yes [●] No []
B15a	Primary old call	P10.1.14	B15:m	[]	Yes [●]
B15b	Secondary old call	P10.1.14	B15:C	[]	Yes [●] No []
B15c	Transferring device	P10.1.14	B15:m	[]	Yes [●]
B15d	Transferred-to device	P10.1.14	B15:m	[]	Yes [●]
B15e	Connections	P10.1.14	B15:o	-	Yes [●] No []
B15f	New connection	P18.4	B15e:o1	-	Yes [●] No []
B15g	Device ID	P18.4	B15e:o1	-	Yes [●] No []
B15h	Old connection	P18.4	B15e:o1	-	Yes [●] No []
B15i	Local connection information	P10.1.14	B15:o	-	Yes [●] No []
B15j	Correlator data	P10.1.14	B15:o	-	Yes [●] No []
B15k	Cause	P10.1.14	B15:o	-	Yes [●] No []

C: If parameter in previous events mandatory
else optional

3.7.3 Agent events

3.7.3.1 Agent logged on

Item	Service/Feature	Reference	Status	N/A	Supported?
B16	Agent logged on event	S11.2.2.2 P10.3.2	B1b:o	-	Yes [●] No []
B16a	Agent device	P10.3.2	B16:m	[]	Yes [●]
B16b	Agent ID	P10.3.2	B16:o	-	Yes [●] No []
B16c	Agent group	P10.3.2	B16:o	-	Yes [●] No []
B16d	Password	P10.3.2	B16:o	-	Yes [●] No []
B16e	Cause	P10.3.2	B16:o	-	Yes [] No [●]

3.7.3.2 Agent logged off

Item	Service/Feature	Reference	Status	N/A	Supported?
B17	Agent logged off event	S11.2.2.1 P10.3.3	B1b:o	-	Yes [●] No []
B17a	Agent device	P10.3.3	B17:m	[]	Yes [●]
B17b	Agent ID	P10.3.3	B17:o	-	Yes [●] No []
B17c	Password	P10.3.3	B17:o	-	Yes [●] No []
B17d	Agent group	P10.3.3	B17:o	-	Yes [●] No []
B17e	Cause	P10.3.3	B17:o	-	Yes [] No [●]

3.7.3.3 Agent ready

Item	Service/Feature	Reference	Status	N/A	Supported?
B18	Agent ready event	S11.2.2.4 P10.3.5	B1b:o	-	Yes [●] No []
B18a	Agent device	P10.3.5	B18:m	[]	Yes [●]
B18b	Agent ID	P10.3.5	B18:o	-	Yes [●] No []
B18c	Cause	P10.3.5	B18:o	-	Yes [] No [●]

3.7.3.4 Agent not ready

Item	Service/Feature	Reference	Status	N/A	Supported?
B19	Agent not ready event	S11.2.2.3 P10.3.4	B1b:o	-	Yes [●] No []
B19a	Agent device	P10.3.4	B19:m	[]	Yes [●]
B19b	Agent ID	P10.3.4	B19:o	-	Yes [●] No []
B19c	Cause	P10.3.4	B19:o	-	Yes [] No [●]

3.7.3.5 Agent working after call

Item	Service/Feature	Reference	Status	N/A	Supported?
B20	Agent working after call event	S11.2.2.5 P10.3.6	B1b:o	-	Yes [●] No []
B20a	Agent device	P10.3.6	B20:m	[]	Yes [●]
B20b	Agent ID	P10.3.6	B20:o	-	Yes [●] No []
B20c	Agent group	P10.3.6	B20:o	-	Yes [●] No []
B20d	Cause	P10.3.6	B20:o	-	Yes [] No [●]

3.7.3.6 Agent busy

Item	Service/Feature	Reference	Status	N/A	Supported?
B21	Agent busy event	S11.2.2.6 P10.3.1	B1b:o	-	Yes [] No [●]
B21a	Agent device	P10.3.1	B21:m	[]	Yes []
B21b	Agent ID	P10.3.1	B21:o	-	Yes [] No []
B21c	Agent group	P10.3.1	B21:o	-	Yes [] No []
B21d	Cause	P10.3.1	B21:o	-	Yes [] No []

3.7.4 Other feature events

3.7.4.1 Call information

Item	Service/Feature	Reference	Status	N/A	Supported?
B22	Call information event	S11.2.4.1 P10.2.2	B1b:o	-	Yes [] No [●]
B22a	Connection ID	P10.2.2	B22:m	[]	Yes []
B22b	Device	P10.2.2	B22:m	[]	Yes []
B22c	Account information	P10.2.2	B22:o	-	Yes [] No []
B22d	Authorization code	P10.2.2	B22:o	-	Yes [] No []
B22e	Correlator data	P10.2.2	B22:o	-	Yes [] No []

3.7.4.2 Do not disturb

Item	Service/Feature	Reference	Status	N/A	Supported?
B23	Do not disturb event	S11.2.4.2 P10.2.3	B1b:o	-	Yes [●] No []
B23a	Device	P10.2.3	B23:m	[]	Yes [●]
B23b	Do not disturb on	P10.2.3	B23:m	[]	Yes [●]

3.7.4.3 Forwarding

Item	Service/Feature	Reference	Status	N/A	Supported?
B24	Forwarding event	S11.2.4.3 P10.2.4	B1b:o	-	Yes [●] No []
B24a	Device	P10.2.4	B24:m	[]	Yes [●]
B24b	Forwarding type	P18.6	B24:m	[]	Yes [●]
B24c	Forward DN	P18.6	B24:o	-	Yes [●] No []

3.7.4.4 Message waiting

Item	Service/Feature	Reference	Status	N/A	Supported?
B25	Message waiting event	S11.2.4.4 P10.2.5	B1b:o	-	Yes [] No [●]
B25a	Device for message	P10.2.5	B25:m	[]	Yes [] No [●]
B25b	Invoking device	P10.2.5	B25:m	[]	Yes [] No [●]
B25c	Message waiting on	P10.2.5	B25:m	[]	Yes [] No [●]

3.7.4.5 Auto answer

Item	Service/Feature	Reference	Status	N/A	Supported?
B26	Auto answer event	S11.2.4.5 P10.2.1	B1b:o	-	Yes [●] No []
B26a	Device	P10.2.1	B26:m	[]	Yes [●]
B26b	Auto answer on	P10.2.1	B26:m	[]	Yes [●]

3.7.4.6 Microphone mute

Item	Service/Feature	Reference	Status	N/A	Supported?
B27	Microphone mute event	S11.2.4.6 P10.2.6	B1b:o	-	Yes [] No [●]
B27a	Device	P10.2.6	B27:m	[]	Yes []
B27b	Microphone mute on	P10.2.6	B27:m	[]	Yes []

3.7.4.7 Speaker mute

Item	Service/Feature	Reference	Status	N/A	Supported?
B28	Speaker mute event	S11.2.4.7 P10.2.7	B1b:o	-	Yes [] No [●]
B28a	Device	P10.2.7	B28:m	[]	Yes []
B28b	Speaker mute on	P10.2.7	B28:m	[]	Yes []

3.7.4.8 Speaker volume

Item	Service/Feature	Reference	Status	N/A	Supported?
B29	Speaker volume event	S11.2.4.8 P10.2.8	B1b:o	-	Yes [] No [●]
B29a	Device	P10.2.8	B29:m	[]	Yes []
B29b	Speaker volume	P10.2.8	B29:m	[]	Yes []

3.7.5 Maintenance events

3.7.5.1 Back in service

Item	Service/Feature	Reference	Status	N/A	Supported?
B30	Back in service event	S11.2.5.1 P10.4.1	B1b:o	-	Yes [] No [●]
B30a	Device	P10.4.1	B30:m	[]	Yes []
B30b	Cause	P10.4.1	B30:o	-	Yes [] No []

3.7.5.2 Out of service

Item	Service/Feature	Reference	Status	N/A	Supported?
B31	Out of service event	S10.2.5.2 P10.4.2	B1b:o	-	Yes [] No [●]
B31a	Device	P10.4.2	B31:m	[]	Yes []
B31b	Cause	P10.4.2	B31:o	-	Yes [] No []

3.7.6 Private events

3.7.6.1 Private

Item	Service/Feature	Reference	Status	N/A	Supported?
B32	Is/are private event(s)	S11.2.6 P10.5	B1b:o	-	Yes [●] No []

3.7.7 Voice unit events

3.7.7.1 Play

Item	Service/Feature	Reference	Status	N/A	Supported?
B33	Play event	S11.2.7.1 P10.6.1	B1b:o	-	Yes [] No [●]
B33a	Connection	P10.6.1	B33:m	[]	Yes []
B33b	Message	P10.6.1	B33:m	[]	Yes []
B33c	Message length	P10.6.1	B33:o	-	Yes [] No []
B33d	Current position in message	P10.6.1	B33:o	-	Yes [] No []
B33e	Speed	P10.6.1	B33:o	-	Yes [] No []
B33f	Cause	P10.6.1	B33:o	-	Yes [] No []

3.7.7.2 Record

Item	Service/Feature	Reference	Status	N/A	Supported?
B34	Record event	S11.2.7.2 P10.6.2	B1b:o	-	Yes [] No [●]
B34a	Connection	P10.6.2	B34:m	[]	Yes []
B34b	Message	P10.6.2	B34:m	[]	Yes []
B34c	Message length	P10.6.2	B34:o	-	Yes [] No []
B34d	Current position in message	P10.6.2	B34:o	-	Yes [] No []
B34e	Cause	P10.6.2	B34:o	-	Yes [] No []

3.7.7.3 Review

Item	Service/Feature	Reference	Status	N/A	Supported?
B35	Review event	S11.2.7.3 P10.6.3	B1b:o	-	Yes [] No [●]
B35a	Connection	P10.6.3	B35:m	[]	Yes []
B35b	Message	P10.6.3	B35:m	[]	Yes []
B35c	Message length	P10.6.3	B35:o	-	Yes [] No []
B35d	Current position in message	P10.6.3	B35:o	-	Yes [] No []
B35e	Cause	P10.6.3	B35:o	-	Yes [] No []

3.7.7.4 Stop

Item	Service/Feature	Reference	Status	N/A	Supported?
B36	Stop event	S11.2.7.4 P10.6.4	B1b:o	-	Yes [] No [●]
B36a	Connection	P10.6.4	B36:m	[]	Yes []
B36b	Message	P10.6.4	B36:m	[]	Yes []
B36c	Message length	P10.6.4	B36:o	-	Yes [] No []
B36d	Current position in message	P10.6.4	B36:o	-	Yes [] No []
B36e	Cause	P10.6.4	B36:o	-	Yes [] No []

3.7.7.5 Suspend play

Item	Service/Feature	Reference	Status	N/A	Supported?
B37	Suspend play event	S11.2.7.5 P10.6.5	B1b:o	-	Yes [] No [●]
B37a	Connection	P10.6.5	B37:m	[]	Yes []
B37b	Message	P10.6.5	B37:m	[]	Yes []
B37c	Message length	P10.6.5	B37:o	-	Yes [] No []
B37d	Current position in message	P10.6.5	B37:o	-	Yes [] No []
B37e	Cause	P10.6.5	B37:o	-	Yes [] No []

3.7.7.6 Suspend record

Item	Service/Feature	Reference	Status	N/A	Supported?
B38	Suspend record event	S11.2.7.6 P10.6.6	B1b:o	-	Yes [] No [●]
B38a	Connection	P10.6.6	B38:m	[]	Yes []
B38b	Message	P10.6.6	B38:m	[]	Yes []
B38c	Message length	P10.6.6	B38:o	-	Yes [] No []
B38d	Current position in message	P10.6.6	B38:o	-	Yes [] No []
B38e	Cause	P10.6.6	B38:o	-	Yes [] No []

3.7.7.7 Voice attribute change

Item	Service/Feature	Reference	Status	N/A	Supported?
B39	Voice attribute change event	S11.2.7.7 P10.6.7	B1b:o	-	Yes [] No [●]
B39a	Connection	P10.6.7	B39:m	[]	Yes []
B39b	Message	P10.6.7	B39:m	[]	Yes []

CHAPTER 3. Ошибка! Используйте вкладку "Главная" для применения 제목 1 к тексту, который должен здесь отображаться.

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
B39c	Speaker volume	P10.6.7	B39:o	-	Yes [] No []
B39d	Recording level	P10.6.7	B39:o	-	Yes [] No []
B39e	Speed	P10.6.7	B39:o	-	Yes [] No []
B39f	Current position in message	P10.6.7	B39:o	-	Yes [] No []
B39g	Cause	P10.6.7	B39:o	-	Yes [] No []

3.8 Computing function services

3.8.1 Route request

Item	Service/Feature	Reference	Status	N/A	Supported?
C1	Route request service	S12.3 P11.1	o	-	Yes [] No [●]
C1a	Cross reference	P11.1	C1:m	[]	Yes []
C1b	Current route	P11.1	C1:m	[]	Yes []
C1c	Calling device	P11.1	C1:o	-	Yes [] No []
C1d	Routing device	P11.1	C1:o	-	Yes [] No []
C1e	Routed call	P11.1	C1:o	-	Yes [] No []
C1f	Route select algorithm	P11.1	C1:o	-	Yes [] No []
C1g	Priority	P11.1	C1:o	-	Yes [] No []
C1h	Device profile	P11.1	C1:o	-	Yes [] No []
C1i	Device class	P18.6	C1h:m	[]	Yes []
C1j	ISDN set up	P18.6	C1h:o	-	Yes [] No []
C1k	Correlator data	P11.1	C1:o	-	Yes [] No []
C1l	Private data in request	P18.8	C1:o	-	Yes [] No []
C1m	Security data in request	P18.7	C1:o	-	Yes [] No []
C1n	Service result negative	P16	C1:m	[]	Yes []

3.8.2 Reroute request

Item	Service/Feature	Reference	Status	N/A	Supported?
C2	Reroute request service	S12.1 P11.2	o	-	Yes [] No [●]
C2a	Cross reference	P11.2	C2:m	[]	Yes []
C2b	Private data in request	P18.8	C2:o	-	Yes [] No []
C2c	Security data in request	P18.7	C2:o	-	Yes [] No []
C2d	Service result negative	P16	C2:m	[]	Yes []

3.8.3 Route select request

Item	Service/Feature	Reference	Status	N/A	Supported?
C3	Route select request service	S12.4 P11.3	o	-	Yes [] No [●]
C3a	Cross reference	P11.3	C3:m	[]	Yes []
C3b	Route selected	P11.3	C3:m	[]	Yes []
C3c	Remaining retries	P11.3	C3:o	-	Yes [] No []
C3d	Device profile	P11.3	C3:o	-	Yes [] No []
C3e	Device class	P18.6	C3d:m	[]	Yes []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
C3f	ISDN set up	P18.6	C3d:o	-	Yes [] No []
C3g	Route used request positive	P11.3	C3:o	-	Yes [] No []
C3h	Correlator data	P11.3	C3:o	-	Yes [] No []
C3i	Private data in request	P18.8	C3:o	-	Yes [] No []
C3j	Security data in request	P18.7	C3:o	-	Yes [] No []
C3k	Service result negative	P16	C3:m	[]	Yes []

3.8.4 Route used request

Item	Service/Feature	Reference	Status	N/A	Supported?
C4	Route used request service	S12.5 P11.4	o	-	Yes [] No [●]
C4a	Cross reference	P11.4	C4:m	[]	Yes []
C4b	Route used	P11.4	C4:m	[]	Yes []
C4c	Calling device	P11.4	C4:o	-	Yes [] No []
C4d	Domain	P11.4	C4:o	-	Yes [] No []
C4e	Correlator data	P11.4	C4:o	-	Yes [] No []
C4f	Private data in request	P18.8	C4:o	-	Yes [] No []
C4g	Security data in request	P18.7	C4:o	-	Yes [] No []
C4h	Service result negative	P16	C4:m	[]	Yes []

3.8.5 Route end request

Item	Service/Feature	Reference	Status	N/A	Supported?
C5	Route end request service	S12.2 P11.5	o	-	Yes [] No [●]
C5a	Cross reference	P11.5	C5:m	[]	Yes []
C5b	Error value	P11.5	C5:o	-	Yes [] No []
C5c	Private data in request	P18.8	C5:o	-	Yes [] No []
C5d	Security data in request	P18.7	C5:o	-	Yes [] No []
C5e	Service result negative	P16	C5:o	-	Yes [] No []

3.9 Bidirectional services

3.9.1 Escape

Item	Service/Feature	Reference	Status	N/A	Supported?
D1	Escape service	S13.1 P12.1	o	-	Yes [●] No []
D1a	Security data in request	P18.7	D1:o	-	Yes [] No [●]
D1b	Private data in request	P18.8	D1:m	[]	Yes [●]
D1c	Service result positive	P12.1	D1:m	[]	Yes [●]
D1d	Service result negative	P16	D1:m	[]	Yes [●]
D1e	Security data in result	P18.7	D1c:o	-	Yes [] No [●]
D1f	Private data in result	P18.8	D1c:o	-	Yes [] No [●]

3.9.2 System status

Item	Service/Feature	Reference	Status	N/A	Supported?
D2	System status service	S13.2 P12.2	o	-	Yes [] No [●]
D2a	System status cause	P12.2	D2:m	[]	Yes []
D2b	Initializing	P18.6	D2a:o	-	Yes [] No []
D2c	Enabled	P18.6	D2a:o	-	Yes [] No []
D2d	Normal	P18.6	D2a:o	-	Yes [] No []
D2e	Messages lost	P18.6	D2a:o	-	Yes [] No []
D2f	Disabled	P18.6	D2a:o	-	Yes [] No []
D2g	Overload imminent	P18.6	D2a:o	-	Yes [] No []
D2h	Overload reached	P18.6	D2a:o	-	Yes [] No []
D2i	Overload relieved	P18.6	D2a:o	-	Yes [] No []
D2j	Security data in request	P18.7	D2:o	-	Yes [] No []
D2k	Private data in request	P18.8	D2:o	-	Yes [] No []
D2l	Service result positive	P12.2	D2:m	[]	Yes []
D2m	Service result negative	P16	D2:m	[]	Yes []
D2n	Security data in result	P18.7	D2l:o	-	Yes [] No []
D2o	Private data in result	P18.8	D2l:o	-	Yes [] No []

3.10 Status reporting services

3.10.1 Change monitor filter

Item	Service/Feature	Reference	Status	N/A	Supported?
E1	Change monitor filter service	S11.1 P13.2	o	-	Yes [] No [●]
E1a	Cross reference ID in request	P13.2	E1:m	[]	Yes []
E1b	Filter list in request	P13.2	E1:m	[]	Yes []
E1c	Security data in request	P18.7	E1:o	-	Yes [] No []
E1d	Private data in request	P18.8	E1:o	-	Yes [] No []
E1e	Service result positive	P13.2	E1:m	[]	Yes []
E1f	Service result negative	P16	E1:m	[]	Yes []
E1g	Filter list in result	P13.2	E1e:o	-	Yes [] No []
E1h	Security data in result	P18.7	E1e:o	-	Yes [] No []
E1i	Private data in result	P18.8	E1e:o	-	Yes [] No []

3.10.2 Monitor start

Item	Service/Feature	Reference	Status	N/A	Supported?
E2	Monitor start service	S11.3 P13.1	o	-	Yes [●] No []
E2a	Monitor object	P13.1	E2:m	[]	Yes []
E2b	Monitor object device	P18.5	E2a:o1	-	Yes [●] No []
E2c	Monitor object call	P18.5	E2a:o1	-	Yes [] No [●]
E2d	Monitor type device	P18.5	E2a:o	-	Yes [] No [●]
E2e	Monitor type call	P18.5	E2a:o	-	Yes [] No [●]
E2f	Monitor filter for call processing events	P18.5	E2:o	-	Yes [] No [●]
E2g	Monitor filter for feature events	P18.5	E2:o	-	Yes [] No [●]
E2h	Monitor filter for agent events	P18.5	E2:o	-	Yes [] No [●]
E2i	Monitor filter for maintenance events	P18.5	E2:o	-	Yes [] No [●]
E2j	Monitor filter for voice unit events	P18.5	E2:o	-	Yes [] No [●]
E2k	Monitor filter for private filter event	P18.5	E2:o	-	Yes [] No [●]
E2l	Service result positive	P13.1	E2:m	[]	Yes [●]
E2m	Service result negative	P16	E2:m	[]	Yes [●]
E2n	Cross reference ID in result	P13.1	E2l:m	[]	Yes [●]
E2o	Monitor filter in result	P13.1	E2l:o	-	Yes [●] No []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
E2p	Security data in request	P18.7	E2:o	-	Yes [] No [●]
E2q	Private data in request	P18.8	E2:o	-	Yes [] No [●]
E2r	Security data in result	P18.7	E2l:o	-	Yes [] No [●]
E2s	Private data in result	P18.8	E2l:o	-	Yes [] No [●]

3.10.3 Monitor stop

Item	Service/Feature	Reference	Status	N/A	Supported?
E3	Monitor stop service	S11.4 P13.3	o	-	Yes [●] No []
E3a	Cross reference ID in request	P13.3	E3:m	[]	Yes [●]
E3b	Security data in request	P18.7	E3:o	-	Yes [] No [●]
E3c	Private data in request	P18.8	E3:o	-	Yes [] No [●]
E3d	Service result positive	P13.3	E3:m	[]	Yes [●]
E3e	Service result negative	P16	E3:m	[]	Yes [●]
E3f	Security data in result	P18.7	E3d:o	-	Yes [] No [●]
E3g	Private data in result	P18.8	E3d:o	-	Yes [] No [●]

3.10.4 Snapshot call

Item	Service/Feature	Reference	Status	N/A	Supported?
E4	Snapshot call service	S11.5 P13.5	o	-	Yes [] No [●]
E4a	Snapshot object in request	P13.5	E4:m	[]	Yes []
E4b	Security data in request	P18.7	E4:o	-	Yes [] No []
E4c	Private data in request	P18.8	E4:o	-	Yes [] No []
E4d	Service result positive	P13.5	E4:m	[]	Yes []
E4e	Service result negative	P16	E4:m	[]	Yes []
E4f	Device ID in result	P13.5	E4d:m	[]	Yes []
E4g	Connection ID in result	P13.5	E4d:m	[]	Yes []
E4h	Device profile	P13.5	E4d:o	-	Yes [] No []
E4i	Device class	P18.6	E4h:m	[]	Yes []
E4j	ISDN set up	P18.6	E4h:o	-	Yes [] No []
E4k	Local connection state in result	P13.5	E4d:o	-	Yes [] No []
E4l	Security data in result	P18.7	E4d:o	-	Yes [] No []
E4m	Private data in result	P18.8	E4d:o	-	Yes [] No []

3.10.5 Snapshot device

Item	Service/Feature	Reference	Status	N/A	Supported?
E5	Snapshot device service	S11.6 P13.4	o	-	Yes [●] No []
E5a	Device ID in request	P13.4	E5:m	[]	Yes [●]
E5b	Security data in request	P18.7	E5:o	-	Yes [] No [●]
E5c	Private data in request	P18.8	E5:o	-	Yes [] No [●]
E5d	Service result positive	P13.4	E5:m	[]	Yes [●]
E5e	Service result negative	P16	E5:m	[]	Yes [●]
E5f	Connection ID in result	P13.4	E5d:m	[]	Yes [●]
E5g	Call state in result	P13.4	E5d:m	[]	Yes [●]
E5h	Device profile	P13.4	E5d:o	-	Yes [] No [●]
E5i	Device class	P18.6	E5h:m	[]	Yes []
E5j	ISDN set up	P18.6	E5h:o	-	Yes [] No [●]
E5k	Security data in result	P18.7	E5d:o	-	Yes [] No [●]
E5l	Private data in result	P18.8	E5d:o	-	Yes [] No [●]

- If application user can notify the stuck call, the user can use SnapShotDevice command, then the stuck call can be synchronized with system's call state.
- If application user can not notify the stuck call, the stuck call will be remained.
For preventing the stuck call, automatic synchronization method is needed.

SCM system is recommend the method that application send the SnapShotDevice command per defined time.

The period time of sending SnapShotDevice command must be able to change, and recommend minimum 10 minutes.

3.11 Input/output services

3.11.1 Data path resumed

Item	Service/Feature	Reference	Status	N/A	Supported?
F1	Data path resumed service	S14.1 P14.9	o	-	Yes [] No [●]
F1a	Cross reference ID	P14.9	F1:m	[]	Yes []
F1b	Security data in request	P18.7	F1:o	-	Yes [] No []
F1c	Private data in request	P18.8	F1:o	-	Yes [] No []
F1d	Service result positive	P14.9	F1:m	[]	Yes []
F1e	Service result negative	P16	F1:m	[]	Yes []
F1f	Security data in result	P18.7	F1d:o	-	Yes [] No []
F1g	Private data in result	P18.8	F1d:o	-	Yes [] No []

3.11.2 Data path suspended

Item	Service/Feature	Reference	Status	N/A	Supported?
F2	Data path suspended service	S14.2 P14.7	o	-	Yes [] No [●]
F2a	Cross reference ID	P14.7	F2:m	[]	Yes []
F2b	Security data in request	P18.7	F2:o	-	Yes [] No []
F2c	Private data in request	P18.8	F2:o	-	Yes [] No []
F2d	Service result positive	P14.7	F2:m	[]	Yes []
F2e	Service result negative	P16	F2:m	[]	Yes []
F2f	Security data in result	P18.7	F2d:o	-	Yes [] No []
F2g	Private data in result	P18.8	F2d:o	-	Yes [] No []

3.11.3 Fast data

Item	Service/Feature	Reference	Status	N/A	Supported?
F3	Fast data service	S14.3 P14.10	o	-	Yes [] No [●]
F3a	CSTA object	P14.10	F3:m	[]	Yes []
F3b	Object device	P14.10	F3a:o1	-	Yes [] No []
F3c	Object call	P14.10	F3a:o1	-	Yes [] No []
F3d	I/O data	P14.10	F3:m	[]	Yes []
F3e	Data path type text	P14.10	F3:o	-	Yes [] No []
F3f	Data path type voice	P14.10	F3:o	-	Yes [] No []
F3g	Security data in request	P18.7	F3:o	-	Yes [] No []
F3h	Private data in request	P18.8	F3:o	-	Yes [] No []
F3i	Service result positive	P14.10	F3:m	[]	Yes []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
F3j	Service result negative	P16	F3:m	[]	Yes []
F3k	Security data in result	P18.7	F3i:o	-	Yes [] No []
F3l	Private data in result	P18.8	F3i:o	-	Yes [] No []

3.11.4 Resume data path

Item	Service/Feature	Reference	Status	N/A	Supported?
F4	Resume data path service	S14.4 P14.8	o	-	Yes [] No [●]
F4a	Cross reference ID	P14.8	F4:m	[]	Yes []
F4b	Security data in request	P18.7	F4:o	-	Yes [] No []
F4c	Private data in request	P18.8	F4:o	-	Yes [] No []
F4d	Service result positive	P14.8	F4:m	[]	Yes []
F4e	Service result negative	P16	F4:m	[]	Yes []
F4f	Security data in result	P18.7	F4d:o	-	Yes [] No []
F4g	Private data in result	P18.8	F4d:o	-	Yes [] No []

3.11.5 Send broadcast data

Item	Service/Feature	Reference	Status	N/A	Supported?
F5	Send broadcast data service	S14.5 P14.5	o	-	Yes [] No [●]
F5a	I/O data	P14.5	F5:m	[]	Yes []
F5b	Data path type text	P14.5	F5:o	-	Yes [] No []
F5c	Data path type voice	P14.5	F5:o	-	Yes [] No []
F5d	Security data in request	P18.7	F5:o	-	Yes [] No []
F5e	Private data in request	P18.8	F5:o	-	Yes [] No []
F5f	Service result positive	P14.5	F5:m	[]	Yes []
F5g	Service result negative	P16	F5:m	[]	Yes []
F5h	Security data in result	P18.7	F5f:o	-	Yes [] No []
F5i	Private data in result	P18.8	F5f:o	-	Yes [] No []

3.11.6 Send data

Item	Service/Feature	Reference	Status	N/A	Supported?
F6	Send data service	S14.6 P14.3	o	-	Yes [] No [●]
F6a	Cross reference ID	P14.3	F6:m	[]	Yes []
F6b	I/O data	P14.3	F6:m	[]	Yes []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
F6c	Cause code	S10.4 P16	F6:o	-	Yes [] No []
F6d	Security data in request	P18.7	F6:o	-	Yes [] No []
F6e	Private data in request	P18.8	F6:o	-	Yes [] No []
F6f	Service result positive	P14.3	F6:m	[]	Yes []
F6g	Service result negative	P16	F6:m	[]	Yes []
F6h	Security data in result	P18.7	F6f:o	-	Yes [] No []
F6i	Private data in result	P18.8	F6f:o	-	Yes [] No []

3.11.7 Send multicast data

Item	Service/Feature	Reference	Status	N/A	Supported?
F7	Send multicast data service	S14.7 P14.4	o	-	Yes [] No [●]
F7a	I/O cross reference ID list	P14.4	F7:m	[]	Yes []
F7b	I/O data	P14.4	F7:m	[]	Yes []
F7c	Security data in request	P18.7	F7:o	-	Yes [] No []
F7d	Private data in request	P18.8	F7:o	-	Yes [] No []
F7e	Service result positive	P14.4	F7:m	[]	Yes []
F7f	Service result negative	P16	F7:m	[]	Yes []
F7g	Security data in result	P18.7	F7e:o	-	Yes [] No []
F7h	Private data in result	P18.8	F7e:o	-	Yes [] No []

3.11.8 Start data path

Item	Service/Feature	Reference	Status	N/A	Supported?
F8	Start data path service	S14.8 P14.1	o	-	Yes [] No [●]
F8a	CSTA object	P14.1	F8:m	[]	Yes []
F8b	Object device	P14.1	F8:o1	-	Yes [] No []
F8c	Object call	P14.1	F8:o1	-	Yes [] No []
F8d	Data path from the computing function	P18.6	F8:o	-	Yes [] No []
F8e	Data path to the computing function	P18.6	F8:o	-	Yes [] No []
F8f	Data path bidirectional	P18.6	F8:o	-	Yes [] No []
F8g	Data path type text	P14.1	F8:o	-	Yes [] No []
F8h	Data path type voice	P14.1	F8:o	-	Yes [] No []
F8i	Number of characters to collect	P14.1	F8:o	-	Yes [] No []
F8j	Termination character	P14.1	F8:o	-	Yes [] No []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
F8k	Timeout	P14.1	F8:o	-	Yes [] No []
F8l	Cross reference ID in result	P14.1	F8:m	[]	Yes []
F8m	Number of characters to collect in result	P14.1	F8:o	-	Yes [] No []
F8n	Termination character in result	P14.1	F8:o	-	Yes [] No []
F8o	Timeout in result	P14.1	F8:o	-	Yes [] No []
F8p	Security data in request	P18.7	F8:o	-	Yes [] No []
F8q	Private data in request	P18.8	F8:o	-	Yes [] No []
F8r	Service result positive	P14.1	F8:m	[]	Yes []
F8s	Service result negative	P16	F8:m	[]	Yes []
F8t	Security data in result	P18.7	F8r:o	-	Yes [] No []
F8u	Private data in result	P18.8	F8r:o	-	Yes [] No []

3.11.9 Stop data path

Item	Service/Feature	Reference	Status	N/A	Supported?
F9	Stop data path service	S14.9 P14.2	o	-	Yes [] No [●]
F9a	CSTA cross reference ID	P14.2	F9:m	[]	Yes []
F9b	Security data in request	P18.7	F9:o	-	Yes [] No []
F9c	Private data in request	P18.8	F9:o	-	Yes [] No []
F9d	Service result positive	P14.2	F9:m	[]	Yes []
F9e	Service result negative	P16	F9:m	[]	Yes []
F9f	Security data in result	P18.7	F9d:o	-	Yes [] No []
F9g	Private data in result	P18.8	F9d:o	-	Yes [] No []

3.11.10 Suspend data path

Item	Service/Feature	Reference	Status	N/A	Supported?
F10	Suspend data path service	S14.10 P14.6	o	-	Yes [] No [●]
F10a	CSTA cross reference ID	P14.6	F10:m	[]	Yes []
F10b	Security data in request	P18.7	F10:o	-	Yes [] No []
F10c	Private data in request	P18.8	F10:o	-	Yes [] No []
F10d	Service result positive	P14.6	F10:m	[]	Yes []
F10e	Service result negative	P16	F10:m	[]	Yes []
F10f	Security data in result	P18.7	F10d:o	-	Yes [] No []
F10g	Private data in result	P18.8	F10d:o	-	Yes [] No []

3.12 Voice unit services

3.12.1 Concatenate message

Item	Service/Feature	Reference	Status	N/A	Supported?
G1	Concatenate message service	S15.1 P15.1	o	-	Yes [] No [●]
G1a	Message ID list	P15.1	G1:m	[]	Yes []
G1b	Security data in request	P18.7	G1:o	-	Yes [] No []
G1c	Private data in request	P18.8	G1:o	-	Yes [] No []
G1d	Service result positive	P15.1	G1:m	[]	Yes []
G1e	Service result negative	P16	G1:m	[]	Yes []
G1f	Security data in result	P18.7	G1d:o	-	Yes [] No []
G1g	Private data in result	P18.8	G1d:o	-	Yes [] No []

3.12.2 Delete message

Item	Service/Feature	Reference	Status	N/A	Supported?
G2	Delete message service	S15.2 P15.2	o	-	Yes [] No [●]
G2a	Message ID	P15.2	G2:m	[]	Yes []
G2b	Security data in request	P18.7	G2:o	-	Yes [] No []
G2c	Private data in request	P18.8	G2:o	-	Yes [] No []
G2d	Service result positive	P15.2	G2:m	[]	Yes []
G2e	Service result negative	P16	G2:m	[]	Yes []
G2f	Security data in result	P18.7	G2d:o	-	Yes [] No []
G2g	Private data in result	P18.8	G2d:o	-	Yes [] No []

3.12.3 Play message

Item	Service/Feature	Reference	Status	N/A	Supported?
G3	Play message service	S15.3 P15.3	o	-	Yes [] No [●]
G3a	Message ID	P15.3	G3:m	[]	Yes []
G3b	Call associated with message	P15.3	G3:m	[]	Yes []
G3c	Duration	P15.3	G3:o	-	Yes [] No []
G3d	Duration exceeded	P15.3	G3:o	-	Yes [] No []
G3e	DTMF detected	P15.3	G3:o	-	Yes [] No []
G3f	End of data detected	P15.3	G3:o	-	Yes [] No []
G3g	Speech detected	P15.3	G3:o	-	Yes [] No []
G3h	Security data in request	P18.7	G3:o	-	Yes [] No []
G3i	Private data in request	P18.8	G3:o	-	Yes [] No []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
G3j	Service result positive	P15.3	G3:m	[]	Yes []
G3k	Service result negative	P16	G3:m	[]	Yes []
G3l	Security data in result	P18.7	G3j:o	-	Yes [] No []
G3m	Private data in result	P18.8	G3j:o	-	Yes [] No []

3.12.4 Query voice attribute

Item	Service/Feature	Reference	Status	N/A	Supported?
G4	Query voice attribute service	S15.4 P15.4	o	-	Yes [] No [●]
G4a	Message ID	P15.4	G4:m	[]	Yes []
G4b	Connection associated with message	P15.4	G4:o	-	Yes [] No []
G4c	Query attribute	P15.4	G4:m	[]	Yes []
G4d	Attribute encode algorithm	P15.4	G4:o1	-	Yes [] No []
G4e	Attribute sampling rate	P15.4	G4:o1	-	Yes [] No []
G4f	Attribute duration	P15.4	G4:o1	-	Yes [] No []
G4g	Attribute file name	P15.4	G4:o1	-	Yes [] No []
G4h	Attribute current position	P15.4	G4:o1	-	Yes [] No []
G4i	Attribute current speed	P15.4	G4:o1	-	Yes [] No []
G4j	Attribute current volume	P15.4	G4:o1	-	Yes [] No []
G4k	Attribute current level	P15.4	G4:o1	-	Yes [] No []
G4l	Attribute current state	P15.4	G4:o1	-	Yes [] No []
G4m	Attribute in result	P15.4	G4ag:m	[]	Yes []
G4n	ADPCM-6k	P15.4	G4d:o2	-	Yes [] No []
G4o	ADPCM-8k	P15.4	G4d:o2	-	Yes [] No []
G4p	Mu-Law PCM 6k	P15.4	G4d:o2	-	Yes [] No []
G4q	A-Law PCM 6k	P15.4	G4d:o2	-	Yes [] No []
G4r	Sampling rate in result	P15.4	G4e:m	[]	Yes []
G4s	Duration in result	P15.4	G4f:m	[]	Yes []
G4t	File name in result	P15.4	G4g:m	[]	Yes []
G4u	Current position in result	P15.4	G4h:m	[]	Yes []
G4v	Current speed in result	P15.4	G4i:m	[]	Yes []
G4w	Current volume in result	P15.4	G4j:m	[]	Yes []
G4x	Current level in result	P15.4	G4k:m	[]	Yes []
G4y	Stop	P15.4	G4l:o3	-	Yes [] No []
G4z	Play	P15.4	G4l:o3	-	Yes [] No []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
G4aa	Record	P15.4	G4l:o3	-	Yes [] No []
G4ab	Suspend play	P15.4	G4l:o3	-	Yes [] No []
G4ac	Suspend record	P15.4	G4l:o3	-	Yes [] No []
G4ad	Review	P15.4	G4l:o3	-	Yes [] No []
G4ae	Security data in request	P18.7	G4:o	-	Yes [] No []
G4af	Private data in request	P18.8	G4:o	-	Yes [] No []
G4ag	Service result positive	P15.4	G4:m	[]	Yes []
G4ah	Service result negative	P16	G4:m	[]	Yes []
G4ai	Security data in result	P18.7	G4ag:o	-	Yes [] No []
G4aj	Private data in result	P18.8	G4ag:o	-	Yes [] No []

3.12.5 Record message

Item	Service/Feature	Reference	Status	N/A	Supported?
G5	Record message service	S15.5 P15.5	o	-	Yes [] No [●]
G5a	Connection associated with record	P15.5	G5:m	[]	Yes []
G5b	Sampling rate	P15.5	G5:o	-	Yes [] No []
G5c	ADPCM-6k	P15.5	G5:o1	-	Yes [] No []
G5d	ADPCM-8k	P15.5	G5:o1	-	Yes [] No []
G5e	Mu-Law PCM 6k	P15.5	G5:o1	-	Yes [] No []
G5f	A-Law PCM 6k	P15.5	G5:o1	-	Yes [] No []
G5g	Maximum duration	P15.5	G5:o	-	Yes [] No []
G5h	DTMF detected	P15.5	G5:o	-	Yes [] No []
G5i	No speech detected	P15.5	G5:o	-	Yes [] No []
G5j	Security data in request	P18.7	G5:o	-	Yes [] No []
G5k	Private data in request	P18.8	G5:o	-	Yes [] No []
G5l	Service result positive	P15.5	G5:m	[]	Yes []
G5m	Service result negative	P16	G5:m	[]	Yes []
G5n	Security data in result	P18.7	G5l:o	-	Yes [] No []
G5o	Private data in result	P18.8	G5l:o	-	Yes [] No []

3.12.6 Reposition

Item	Service/Feature	Reference	Status	N/A	Supported?
G6	Reposition service	S15.6 P15.6	o	-	Yes [] No [●]
G6a	Connection associated with message	P15.6	G6:m	[]	Yes []
G6b	Period	P15.6	G6:m	[]	Yes []
G6c	Message ID	P15.6	G6:o	-	Yes [] No []
G6d	Security data in request	P18.7	G6:o	-	Yes [] No []
G6e	Private data in request	P18.8	G6:o	-	Yes [] No []
G6f	Service result positive	P15.6	G6:m	[]	Yes []
G6g	Service result negative	P16	G6:m	[]	Yes []
G6h	Security data in result	P18.7	G6f:o	-	Yes [] No []
G6i	Private data in result	P18.8	G6f:o	-	Yes [] No []

3.12.7 Resume

Item	Service/Feature	Reference	Status	N/A	Supported?
G7	Resume service	S15.7 P15.7	o	-	Yes [] No [●]
G7a	Connection associated with message	P15.7	G7:m	[]	Yes []
G7b	Message ID	P15.7	G7:o	-	Yes [] No []
G7c	Duration	P15.7	G7:o	-	Yes [] No []
G7d	Security data in request	P18.7	G7:o	-	Yes [] No []
G7e	Private data in request	P18.8	G7:o	-	Yes [] No []
G7f	Service result positive	P15.7	G7:m	[]	Yes []
G7g	Service result negative	P16	G7:m	[]	Yes []
G7h	Security data in result	P18.7	G7f:o	-	Yes [] No []
G7i	Private data in result	P18.8	G7f:o	-	Yes [] No []

3.12.8 Review

Item	Service/Feature	Reference	Status	N/A	Supported?
G8	Review service	S15.8 P15.8	o	-	Yes [] No [●]
G8a	Connection associated with message	P15.8	G8:m	[]	Yes []
G8b	Period	P15.8	G8:m	[]	Yes []
G8c	Message ID	P15.8	G8:o	-	Yes [] No []
G8d	Security data in request	P18.7	G8:o	-	Yes [] No []

(Continued)

Item	Service/Feature	Reference	Status	N/A	Supported?
G8e	Private data in request	P18.8	G8:o	-	Yes [] No []
G8f	Service result positive	P15.8	G8:m	[]	Yes []
G8g	Service result negative	P16	G8:m	[]	Yes []
G8h	Security data in result	P18.7	G8f:o	-	Yes [] No []
G8i	Private data in result	P18.8	G8f:o	-	Yes [] No []

3.12.9 Set voice attribute

Item	Service/Feature	Reference	Status	N/A	Supported?
G9	Set voice attribute service	S15.9 P15.9	o	-	Yes [] No [●]
G9a	Connection associated with message	P15.9	G9:m	[]	Yes []
G9b	Speed	P15.9	G9:o1	-	Yes [] No []
G9c	Volume	P15.9	G9:o1	-	Yes [] No []
G9d	Level	P15.9	G9:o1	-	Yes [] No []
G9e	Message ID	P15.9	G9:o	-	Yes [] No []
G9f	Security data in request	P18.7	G9:o	-	Yes [] No []
G9g	Private data in request	P18.8	G9:o	-	Yes [] No []
G9h	Service result positive	P15.9	G9:m	[]	Yes []
G9i	Service result negative	P16	G9:m	[]	Yes []
G9j	Security data in result	P18.7	G9h:o	-	Yes [] No []
G9k	Private data in result	P18.8	G9h:o	-	Yes [] No []

3.12.10 Stop

Item	Service/Feature	Reference	Status	N/A	Supported?
G10	Stop service	S15.10 P15.10	o	-	Yes [] No [●]
G10a	Connection associated with message	P15.10	G10:m	[]	Yes []
G10b	Message ID	P15.10	G10:o	-	Yes [] No []
G10c	Security data in request	P18.7	G10:o	-	Yes [] No []
G10d	Private data in request	P18.8	G10:o	-	Yes [] No []
G10e	Service result positive	P15.10	G10:m	[]	Yes []
G10f	Service result negative	P16	G10:m	[]	Yes []
G10g	Security data in result	P18.7	G10e:o	-	Yes [] No []
G10h	Private data in result	P18.8	G10e:o	-	Yes [] No []

3.12.11 Suspend

Item	Service/Feature	Reference	Status	N/A	Supported?
G11	Suspend service	S15.11 P15.11	o	-	Yes [] No [●]
G11a	Connection associated with message	P15.11	G11:m	[]	Yes []
G11b	Message ID	P15.11	G11:o	-	Yes [] No []
G11c	Security data in request	P18.7	G11:o	-	Yes [] No []
G11d	Private data in request	P18.8	G11:o	-	Yes [] No []
G11e	Service result positive	P15.11	G11:m	[]	Yes []
G11f	Service result negative	P16	G11:m	[]	Yes []
G11g	Security data in result	P18.7	G11e:o	-	Yes [] No []
G11h	Private data in result	P18.8	G11e:o	-	Yes [] No []

3.12.12 Synthesize message

Item	Service/Feature	Reference	Status	N/A	Supported?
G12	Synthesize message service	S15.12 P15.12	o	-	Yes [] No [●]
G12a	Text	P15.12	G12:m	[]	Yes []
G12b	Male	P15.12	G12:o1	-	Yes [] No []
G12c	Female	P15.12	G12:o1	-	Yes [] No []
G12d	Language	P15.12	G12:o	-	Yes [] No []
G12e	Message ID in result	P15.12	G12:m	[]	Yes []
G12f	Security data in request	P18.7	G12:o	-	Yes [] No []
G12g	Private data in request	P18.8	G12:o	-	Yes [] No []
G12h	Service result positive	P15.12	G12:m	[]	Yes []
G12i	Service result negative	P16	G12:m	[]	Yes []
G12j	Security data in result	P18.7	G12h:o	-	Yes [] No []
G12k	Private data in result	P18.8	G12h:o	-	Yes [] No []





This page is intentionally left blank.

ABBREVIATION

A

ACD	Automatic Call Distribution
-----	-----------------------------

C

CSTA	Computer Supported Telecommunication Application
CTI	Computer Telephony Integration

P

PICS	Protocol Implementation Conformance Statement
------	---

S

SCM	Samsung Communication Manager
-----	-------------------------------

Ошибка! Используйте вкладку "Главная" для применения 제목 8 к тексту, который должен здесь отображаться



This page is intentionally left blank.

SCM Express CSTA Interoperability Guide

©2014 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.

