# 3GPP TS 24.293 V0.2.0 (2008-08)

*Technical Specification*

**3rd Generation Partnership Project;
Technical Specification Group Core Network and Terminals;
IMS Centralized Services (ICS) Protocol via I1 Interface;
(Release 8)**

Keywords
Circuit Switched, IMS, Supplementary Services

# Contents

# Foreword

This Technical Specification has been produced by the 3$^{rd}$ Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x    the first digit:

    1    presented to TSG for information;

    2    presented to TSG for approval;

    3    or greater indicates TSG approved document under change control.

y    the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z    the third digit is incremented when editorial only changes have been incorporated in the document.

# 1 Scope

The present document describes the I1 interface between IMS Centralized Services (ICS) UE and Service Centralization and Continuity (SCC) Application Server (AS).

This specification defines a new application layer protocol over I1 interface, specifies the interaction between the ICS UE and the SCC AS including session control procedures and supplementary services control procedures.

For the current version of the specification the application layer protocol is run over Unstructured Supplementary Service Data (USSD) transport, however the application layer protocol is not restricted to USSD transport.

The overall ICS architecture is specified in 3GPP TS 23.292 [3].

The present document is applicable to User Equipment (UE) and Application Servers (AS) which are intended to support the IMS centralized services.

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.002: "Network architecture".

[3] 3GPP TS 23.292: "IP Multimedia Subsystem (IMS) Centralized Services; Stage 2".

[4] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[5] 3GPP TS 24.292: "IP Multimedia Core Network subsystem Centralized Services; Stage 3".

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.292 [3] apply:

**ICS UE**

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

| | |
|---|---|
| ICS | IMS Centralized Services |
| SCC AS | Service Centralization and Continuity Application Server |
| USSD | Unstructured Supplementary Service Data |

# 4 General description

## 4.1 General

## 4.2 Structure of the protocol

Editor's note: This subclause will describe the protocol structure and overall requirements for each of them.

### 4.2.1 Introduction

### 4.2.2 Application level protocol

### 4.2.3 Transport level protocol

#### 4.2.3.1 USSD as transport level protocol

## 4.3 Functional entities

Editor's note: This subclause will describe the UE, HLR and AS as a functional entity for ICS related to I1 interface.

### 4.3.1 User Equipment (UE)

### 4.3.2 Home Location Register (HLR)

### 4.3.3 Application Server (AS)

# 5 Communication between ICS UE and SCC AS via I1 interface

## 5.1 Introduction

Editor's note: This subclause will provide an introduction to the I1 interface and general behaviours of related roles.

## 5.1.1 General behaviour of ICS UE

## 5.1.2 General behaviour of SCC AS

## 5.2 Session control procedures

Editor's note: This subclause describes the procedures related to session control procedures supported by I1 interface.

## 5.2.1 Session setup

### 5.2.1.1 General

### 5.2.1.2 Detailed behaviour of ICS UE

### 5.2.1.3 Detailed behaviour of SCC AS

## 5.2.2 Session modification

## 5.2.3 Session release

## 5.2.4 Others

## 5.3 Supplementary services control procedures

Editor's note: This subclause describes the procedures related to supplementary services control procedures supported by I1 interface.

## 5.4 Other procedures

Editor's note: This subclause describes other possible procedures supported by I1 interface.

# 6 Protocol specification and implementation

Editor's note: This clause describes detailed protocol specification for the I1 application level protocol.

## 6.1 Introduction

## 6.2 Commands

Editor's note: This subclause describes commands defined for the I1 application level protocol.

## 6.2.1 Introduction

## 6.2.2 Command-code values

## 6.2.3 Example command

# 6.3 Information elements

Editor's note: This subclause describes information elements defined for the I1 application level protocol.

## 6.3.1 General

## 6.3.2 Example information element

# 6.4 Response codes

Editor's note: This subclause describes response codes defined for the I1 application level protocol.

## 6.4.1 General

## 6.4.2 Example code

# Annex A (informative):
# Change history

| Change history | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date | TSG # | TSG Doc. | CR | Rev | Subject/Comment | | Old | New |
| *2008-06* | | | | | *Initial skeleton from rapporteur* | | *-* | *0.0.0* |
| *2008-07* | | | | | *Implemented C1-082674* | | *0.0.0* | *0.1.0* |
| *2008-07* | | | | | *Editorial update to correct wrong implementation in 0.1.0* | | *0.1.0* | *0.1.1* |
| *2008-08* | | | | | *Implemented C1-082966, C1-083326.* | | *0.1.1* | *0.2.0* |
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