

# ETSI TS 181 006 V1.1.1 (2006-10)

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*Technical Specification*

## **Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); Direct Communication Service in NGN; Service Description**

[Endorsement of OMA-ERELED-PoC-V1]

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Reference

DTS/TISPAN-01035-NGN-R2

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# Contents

Intellectual Property Rights .....	4
Foreword.....	4
Introduction .....	4
1 Scope .....	5
2 References .....	5
3 Definitions and abbreviations.....	5
3.1 Definitions .....	5
3.2 Abbreviations .....	5
4 Endorsement of OMA (Open Mobile Alliance) OMA-ERELED-PoC-V1; Enabler Release Definition for Push-to-Talk over Cellular .....	6
4.1 Modifications to OMA-ERELED-PoC-V1 .....	6
5 Endorsement of OMA (Open Mobile Alliance) OMA-RD-PoC-V1; Push to Talk over Cellular Requirements.....	7
5.1 Modifications to OMA-RD-PoC-V1 .....	7
<b>Annex A (informative): Bibliography.....</b>	<b>9</b>
History .....	10

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## Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document describes the requirements for NGN Direct Communication of TISPAN NGN Release 2.

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## Introduction

TISPAN NGN bases the provision of communication services on the 3GPP specified IMS. This is a flexible tool that can provide a wide range of service interactions between terminals and networks. Direct Communication provides the use of the generic capabilities of the IMS and the Push to Talk Service defined by OMA. The present document provides requirements to provide Direct Communication.

The specific services and interactions described in the present document are based on other service specifications. The IMS is an inherently multimedia service control platform, and should be able to provide all of these services.

The services and capabilities provided by a TISPAN NGN are described in TS 181 013 [3].

The requirements for services, described in the present document, also take account of the interactions required between interconnected networks - both between NGN and the interconnection of NGN with legacy networks.

The aim of the present document is to assist network operators and service providers to deploy NGN multimedia services.

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# 1 Scope

The present document defines the requirements for a Direct Communication which may be supported by a TISPAN NGN. These requirements form the basis for the definition of network capabilities. These requirements are an endorsement of the OMA requirements specifications.

The present document only provides requirements for IP multimedia based networks. Services provided by a TISPAN NGN to support legacy terminals and interfaces (PSTN/ISDN emulation) are defined in existing PSTN/ISDN documents. Requirements for PSTN/ISDN emulation are out of scope of the present document and are described in other documents.

The requirements in the present document are described from the user point of view. The requirements do not take into account capabilities of existing protocols defined for the IMS. The evolution or modifications to these protocols are beyond the scope of the present document.

NOTE: The present document uses the term "NGN" only in the context of TISPAN.

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# 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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

- [1] OMA (Open Mobile Alliance) OMA-RD-PoC-V1: "Push to Talk over Cellular Requirements, Version 1".
- [2] OMA (Open Mobile Alliance) OMA-ERELED-PoC-V1: "Enabler Release Definition for Push-to-Talk over Cellular, Version 1".
- [3] ETSI TS 181 005: "Telecommunications and Internet Converged Services and Protocols for Advanced Networking (TISPAN); Service Requirements and Network Capabilities".

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# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in OMA-RD-PoC-V1 [1] apply.

## 3.2 Abbreviations

For the purposes of the present document, the following abbreviation applies:

DC                      Direct Communication

## 4 Endorsement of OMA (Open Mobile Alliance) OMA-EREILD-PoC-V1; Enabler Release Definition for Push-to-Talk over Cellular

The elements of OMA-EREILD-PoC-V1 [2] apply, with the following modification:

Replace references as shown below.

Reference no.	OMA-EREILD-PoC-V1	Applicable reference in the present document
OMA RD PoC	"OMA-EREILD-PoC-V1, V1", Open Mobile Alliance	ETSI TS 181 006

### 4.1 Modifications to OMA-EREILD-PoC-V1

General:

Throughout the present document:

- "Push-to-Talk over Cellular" is replaced by "Direct Communication";
- "PoC" is replaced by "DC";
- "3GPP IMS" is replaced by "3GPP/TISPAN IMS".

#### Clause 3.2

Modify the definition of **Service Instance** by:

Service Instance: a Service Instance is the instantiation of a logical connection across the ~~radio user- network interface (UNI)~~ associated with a particular protocol stack. Service Instances, as logical connections, are mapped onto the ~~physical layer radio connections~~. A Service Instance may be closely tied to a single application level flow, e.g. a voice service instance, or may support multiple application level flows, e.g. a best effort packet data service instance.

#### Clause 7:

Add optional requirement to PoC Client:

Replace:

SIP/IP core: IP Multimedia Subsystem (IMS) – comment: Chapter 5-Architecture (under Table1) states that "...SHALL utilize SIP/IP core from IMS as specified in 3GPP and 3GPP2".

By:

SIP/IP core: IP Multimedia Subsystem (IMS) – comment: Chapter 5-Architecture (under Table1) states that "...SHALL utilize SIP/IP core from IMS as specified in 3GPP, 3GPP2 and ETSI TISPAN".

Replace:

SIP/IP core: Multimedia Domain (MMD) – comment: Chapter 5-Architecture (under Table 1) states that "... SHALL utilize SIP/IP core from IMS as specified in 3GPP and 3GPP2".

By:

SIP/IP core: Multimedia Domain (MMD) – comment: Chapter 5-Architecture (under Table 1) states that "... SHALL utilize SIP/IP core from IMS as specified in 3GPP, 3GPP2 and ETSI TISPAN".

## 5 Endorsement of OMA (Open Mobile Alliance) OMA-RD-PoC-V1; Push to Talk over Cellular Requirements

The references listed in the table below are replaced by references applicable to NGN:

Reference no.	OMA-RD-PoC-V1	Applicable reference in the present document
OMA RD PoC	"OMA-RD-PoC-V1", Open Mobile Alliance	ETSI TS 181 006

### 5.1 Modifications to OMA-RD-PoC-V1

General:

Throughout the present document:

- "Push-to-Talk over Cellular" is replaced by "Direct Communication";
- "PoC" is replaced by "DC";
- "radio resources" is replaced by "radio and/or fixed access resources";
- "mobile network" is replaced by "mobile/fixed network";
- "mobile phone" is replaced by "mobile/fixed phone";
- "mobile subscriber" is replaced by "mobile/fixed subscriber".

#### Clause 6.1.13

Modify as follows:

Legacy ~~Handset~~ Terminal Support

The PoC Service enabler features are only accessible to PoC subscribers, subject to the scope of his PoC service subscription, and his terminal device capabilities.

If special means and/or updates of the PoC subscriber's ~~handset terminal~~ are necessary in order to access any part of the PoC service enabler, it SHOULD be possible for a PoC subscriber to "update" his ~~mobile terminal~~ in an easy way (e.g. for mobile UE, over-the-air download).

#### Clause 6.3.1

Modify as follows:

Interfaces to the ~~PoC~~ DC service entities SHALL make use of open standards. Specifically, it SHALL be possible to make use of relevant network interface standards from 3GPP, 3GPP2 and ETSI TISPAN.

#### Clause 6.3.2:

Modify as follows:

#### 6.3.2 Interoperability between DC and PoC Service Providers & Service Entities:

It SHALL be possible for DC or PoC participants to seamlessly interact with each other within a DC or PoC session (i.e. 1-to-1 and group sessions) regardless of their DC or PoC service providers.

DC or PoC subscribers SHALL be able to seamlessly utilise DC or PoC features involving other DC or PoC subscribers regardless of their PoC service provider. For example, a DC or PoC group session served by one service provider's DC or PoC service entity MAY include PoC participants who are subscribers of another DC or PoC service provider.

An appropriate interface SHOULD be provided between the DC or PoC service entities of different DC or PoC service providers that are interconnected to allow the service providers to manage the set-up, monitoring, maintenance and termination of PoC DC or sessions and DC or PoC groups regardless of the DC or PoC participant's DC or PoC service provider.

#### Clause 6.3.6

Clause 6.3.6 is not applicable.

#### Clause 6.4.4.1

Interfaces between the PoC Client and PoC Application Service Infrastructure MUST:

- Be supported by Mobile Packet Switched Data Networks (e.g. those defined by 3GPP and 3GPP2).
- Be supported by Fixed Packet Switched Data Networks (e.g. those defined by TISPAN).
- Support secure transportation of PoC talk-bursts.
- Support secure signalling and communication connections.
- Support the requirements of performance related signalling protocols (e.g. floor control).
- Support functions related to PoC session initiation, registration, participation and termination.
- Support authentication of PoC Clients/PoC Application Service Infrastructure.
- Support authorization of PoC Clients.
- Support an administration interface to allow PoC subscribers to update PoC group lists and contacts lists.
- Support secure provisioning of PoC service parameters and features.

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## Annex A (informative): Bibliography

- OMA (Open Mobile Alliance): PoC Control Plane Document Version 1, OMA-TS-PoC-Control Plane-V1.
- OMA (Open Mobile Alliance): PoC User Plane Document Version 1, OMA-TS-PoC-User Plane-V1, OMA-TS-PoC-Control Plane-V1.
- OMA (Open Mobile Alliance): PoC Architecture Document Version 1, OMA-AD-PoC-V1.
- Universal Mobile Telecommunications System (UMTS); 3GPP enablers for Open Mobile Alliance (OMA) Push-to-talk over Cellular (PoC) services; Stage 2.

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## History

<b>Document history</b>		
V1.1.1	October 2006	Publication