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Foreword

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

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Introduction

The Push Service introduces a means to transmit push data from a push initiator to a push recipient (e.g. a UE) without a previous user action. The push concept, as provided by the SMS teleservice, has been very successful in the GSM second generation, both for text messaging (for user viewing) and for other unstandardized data to the SIM (as a building block used for OTA and other purposes). This TS introduces the Push Service as a generalization of existing network capabilities plus the development of new capabilities. The Push Service should therefore be understood as a building block (network capability), which can be used for new services, both public and private, in 3GPP.

In the normal client/server model, a client requests a service or information from a server, which then responds in transmitting information to the client. This is known as the "pull" technology, the user pulls information from the content provider. The World Wide Web is a typical example of pull technology, where a user enters a URL (the request) that is sent to a server and the server answers by sending a Web page (the response) to the user.

In contrast to this there is also the "push" technology where there is no explicit request from the user before the content provider (push initiator) initiates an information transfer to a user. Another way of saying this is that whereas "pull" transaction of information are always initiated from the user, "push" transactions are content provider initiated. The welcome message received after registration with a visited network whilst roaming is an example of information transfer that has been initiated without a request from the user. Typically, a user signs up with the push initiator and defines their interest, volume of information acceptable and other factors in the push subscription profile. As information becomes available that satisfies the user's push subscription profile, the push initiator delivers it to the user using the Push Service.

The Push service may be used to implement high level services such as IP multimedia services, MMS, etc., and new services including public safety, government, corporate IT, transfer of push data to machines and devices, in addition to infotainment type services.

Another common use for push services is the delivery of notification from e.g. MMS to the user while the user has the option of "pulling" the actual push data from the push initiator.

The PLMN Push function provides the push data to the user agent in the UE. The user agent interprets and presents the push data to a person, device or machine using the UE.

NOTE: The requirements of services such as streaming, conversational services and broadcast are independent from push. Therefore they are not considered appropriate for inclusion here. Push will be available for use in appropriate applications of all high level services.

1 Scope

This Technical Specification defines the Stage 1 description of the Push Service and is the set of requirements that shall be supported for the provision of push, seen primarily from the subscriber's, service providers' and delivery network points of view.

This TS includes information applicable to network operators, service providers, terminal and network manufacturers. It is of use to manufacturers and organisations which have devices or machines benefiting by availability of push service.

This TS contains the core requirements for the Push Service, for operator and external Push Initiators, which are sufficient to provide a complete service capability and service capability feature.

This TS defines the requirements for the Push Service to enable delivery of push data, including such functionality as:

- Transfer of push data from a Push Initiator to a Push Recipient
- Latency and Priority classes,
- Definition of handling of undeliverable push data.

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.
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- [1] 3GPP TS 21.133: "3G security; Security threats and requirements".
- [2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [3] 3GPP TS 22.240: "Service requirements for 3GPP Generic User Profile (GUP); Stage 1".

3 Definitions and abbreviations

Definitions and abbreviations used in the present document are listed in TR 21.905 [2]. For the purposes of this document the following definitions and abbreviations apply:

3.1 Definitions

Push Data: data sent by the push initiator to the push recipient, of a format known to the receiver (push recipient), and not otherwise defined by the push service.

PLMN: the 3GPP network that receives the push data from the push initiator and ensures the delivery of push data to the push recipient. The delivery of the push data may involve other networks.

Push function: the function in the PLMN that receives the Push Data from the Push initiator. The push function is responsible for delivering the push data to the Push recipient.