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**Digital cellular telecommunications system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
IP Multimedia Subsystem (IMS) Group Management;  
Stage 1  
(3GPP TS 22.250 version 15.0.0 Release 15)**



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## Foreword

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

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## Introduction

This Technical Specification defines the requirements for the support of IP Multimedia Subsystem (IMS) group management capability. IMS group management capability provides a possibility to manage network based groups. IMS group management allows defining different roles and rights to the members of a group, defining group level information and properties, etc.

The IMS group management is a generic capability that can be utilised together with several different services. Some examples of the services that can use IMS group management are

- Presence service  
Presentity has a control of who is able to see his presence information. The control is carried out via access control lists, which can be managed with IMS group management. Number of presentities can be subscribed via a list of presentities. The list can be managed with IMS group management.
- Chat  
Administrator of the chat is able to control users that are allowed to participate in the chat. The control is carried out via access control lists, which can be managed with IMS group management.
- Messaging  
In messaging the server may be able to distribute the messages to several recipients based on the delivery list. The content of the delivery list can be managed with IMS group management.

The above examples show only very limited set of possibilities where IMS group management can be utilised. The use of IMS group management is not restricted to these

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# 1 Scope

The present document defines the stage one description of the IMS group management. Stage one is the set of requirements which shall be supported for the provision of IMS group management, seen primarily from the subscribers' and service providers' points of view.

The TS includes information applicable to network operator, service provider, terminal and network manufacturer.

Additional functionalities not documented in the TS are considered outside the scope of this TS. Such additional functionality may be on a network-wide basis, nation-wide basis or particular to a group of users. Such additional functionality shall not compromise conformance to the requirements of the IMS group management defined in this specification.

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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, 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 TR21.905: 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Vocabulary for 3GPP Specifications
- [2] 3GPP TS 22.141: 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; Presence Service; Stage 1
- [3] 3GPP TS 22.340: 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; IMS Messaging; Stage 1

**Group administrator:** Group administrator has the full set of rights for viewing and managing the group identifier, group specific information, service specific group information, member identifiers and group member properties.

**Group content:** Group content includes the group identifier, the group specific information, the service specific group information, and the list of group member identifiers with the associated group member properties.

**Group member:** Group member is an entity in the group. Further 3G related definitions are given in 3GPP TR 21.905 [1].

## 3.2 Abbreviations

IP	Internet Protocol
IMS	IP Multimedia Subsystem

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# 4 IMS group management

## 4.1 Informative description of group management

This clause has an informative description of the IMS group management and its role in a few service examples. Furthermore, example characteristics of the group will be described to give an overview of a group and its management.

Group as a concept means a group of persons in this context. Groups can be used by group related services such as conference calls, presence service (c.f. 3GPP TS 22.141 [2]) and messaging (c.f. 3GPP TS 22.340 [3]). This description

does not cover requirements for group services themselves but only management of the groups that can be utilized by the group related services. The driver for specifying generic group management is twofold: the same group created by user (or service provider) can be used in many services and same group management functions can be utilised independently of the service being used.

In conference call, the control machinery in network would use a group to setup a conference call and distribution of group media. In messaging area, group management could be utilized in chat sessions (Figure 1) and distribution lists (Figure 2). A chat session could be created by joining a group. The message distribution would be handled by the messaging server. The user would send messages to a group and the server would distribute the messages. In the context of presence service, the user could create groups of watchers with the group management features and different presence information would be provided to each of the groups. These are only few examples of possible use of IMS group management and they intend to clarify the scope of group management.

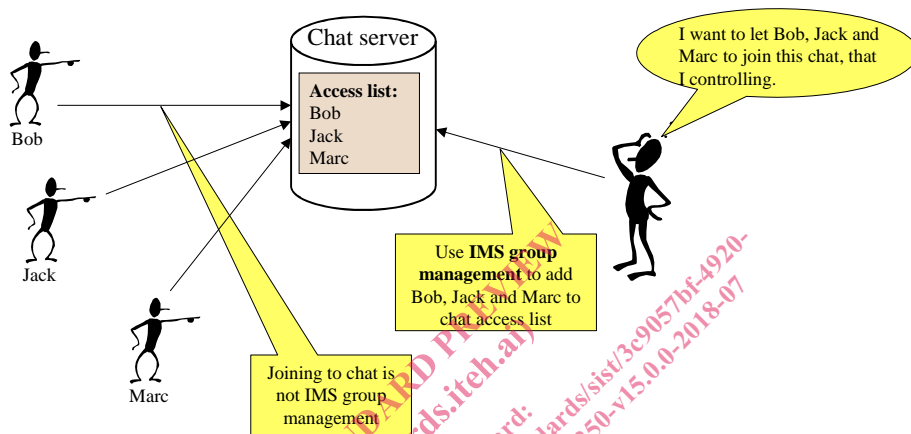


Figure 1. Example: groups in context of chat service

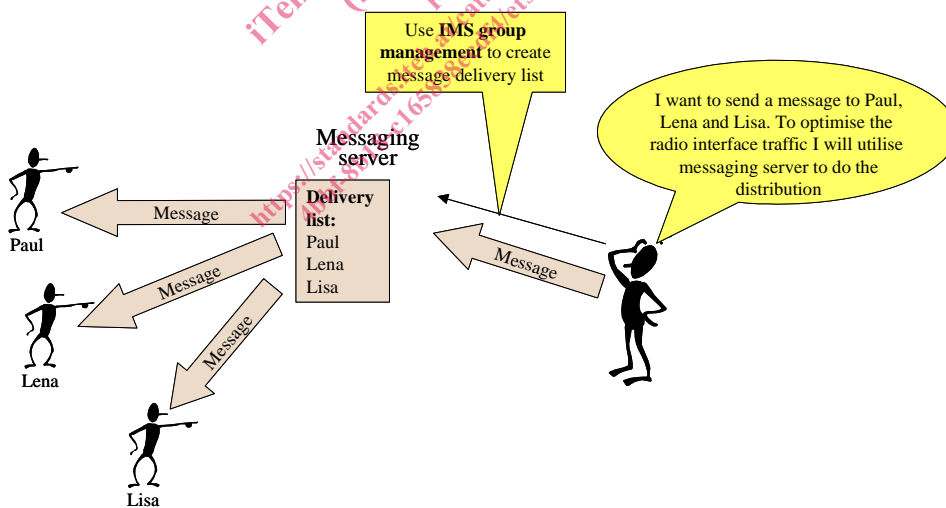


Figure 2. Example: group used as a message delivery list

How the group is used within a service is outside the scope of this document and outside the scope of group management. For example, taking part in a chat session, making a conference call and give access to certain attributes of the presence information are all group service specific issues and therefore outside the scope of group management. However, all of them could use groups managed by generic IMS group management.

The IMS group management is a common set of actions that can be taken by the group administrator of a group or the group members. Typically, the group consists of members who may have varying rights for configuring or seeing the group properties.

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## 5 High level requirements

### 5.1 Group management roles

The IMS group management shall provide the ability for users to create groups that can be utilized in context of different services.

The following roles are identified for IMS Group Management:

- a) group administrator;  
Group administrator shall always have the full set of rights for viewing and managing the group and member properties. Each group shall have at least one group administrator at all times. The group administrator is not a group member by default. The entity creating a group becomes a group administrator.
- b) group member; and  
Group member rights shall be assigned by the one who has rights to do that. Group member can be another group.
- c) others.  
These are services and entities that are external to the group (i.e. not group administrators or members). They may or may not be able to use or access group content depending on the group specific information.

### 5.2 General requirements

The groups controlled by the IMS group management shall be associated with

- a) a group identifier;  
Each group shall have a globally unique, addressable group identifier, which may be suggested by the group administrator when creating the group. The IMS service provider allocates group identifier. The group identifier is used to refer to a specific group (for example when sending a message, when updating the list of group members...).
- b) group specific information; and  
Group specific information is divided into two parts
  - 1) group information; and  
The group information contains informative text. This could be used for example to describe the type and usage of the group.
  - 2) group properties.  
Group properties are:
    - i) group visibility; and  
Group visibility defines who are able to see the group identifier when performing a search. The following classes exist:
      - only the group administrators; and
      - the group administrators and the group members.
    - ii) group duration.  
Once created, a group will exist until either:
      - its expiration time; or
      - administratively removed.



- c) service specific group information.

The service specific group information may give additional information on how the group should be used in the context of a specific service. For example, it may indicate that the group shall be used as an access list in the context of the presence service. Detailed description of the service specific group information is not within the scope of this TS. Possible values can be defined by the terminal manufacturer, operator, service provider, or by other specifications. The service specific group information is transparent to the group management.

## 5.3 Group member requirements

Requirements for the members are

- a) Member identification; and

It shall be possible to identify the members of the group based on the

- 1) member identifier;

Each single entity shall have a globally unique, addressable identifier(s).

- 2) group identifier; or

Member can be a another group(s) which is referred with a group identifier(s).

- 3) commonly known group of entities.

Member can be any entity that has defined characteristics in the identifier field.

- b) group member properties.

It shall be possible to associate properties for each group member. Such properties are

- 1) member rights;

Each member shall be associated with rights. They define which actions the member is allowed to perform.

- 2) anonymity; and

It shall be possible to hide the member identifier.

- 3) service specific member information.

The service specific member information may give additional information on member in the context of a specific service. For example, it may indicate the screen name of the member in context of chat service.

Detailed description of the service specific member information is not within the scope of this TS. Possible values can be defined by the terminal manufacturer, operator, service provider, or by other specifications.

The service specific member information is transparent to the group management.

## 5.4 Management requirements

The IMS group management shall provide following capabilities to manage groups. The rights associated to the members control the capabilities they are able to perform. These capabilities are:

- a) create a group;

The entity creating a group becomes a group administrator. The administrator shall not become group member by default when creating a group. Further, when creating a group it shall be possible to

- 1) define the members of the group;

- 2) define group specific information;

- 3) define service specific group information; and

- 4) define member properties.

- b) delete a group;

It shall be possible to delete a group.

- c) add members to a group;

It shall be possible to add members to a group.

- d) get member list of a group;

It shall be possible to get the list of all members of a group. In case of nested group only the group identifier of the nested group will be provided.