

Function description

Unite Group Handling

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1 Introduction

This document shows where messaging groups exist in the Unite System. It describes which messaging groups that are comparable to each other, and it also gives advise and solutions on what and when to use special groups in different situations. There are three different types of groups, Standard Groups, Multicast Groups, and Broadcast. Groups are used when the same message is sent to several users. The Standard Group could for example be a Group ID in ESS or a Customized Group Number in System 900.

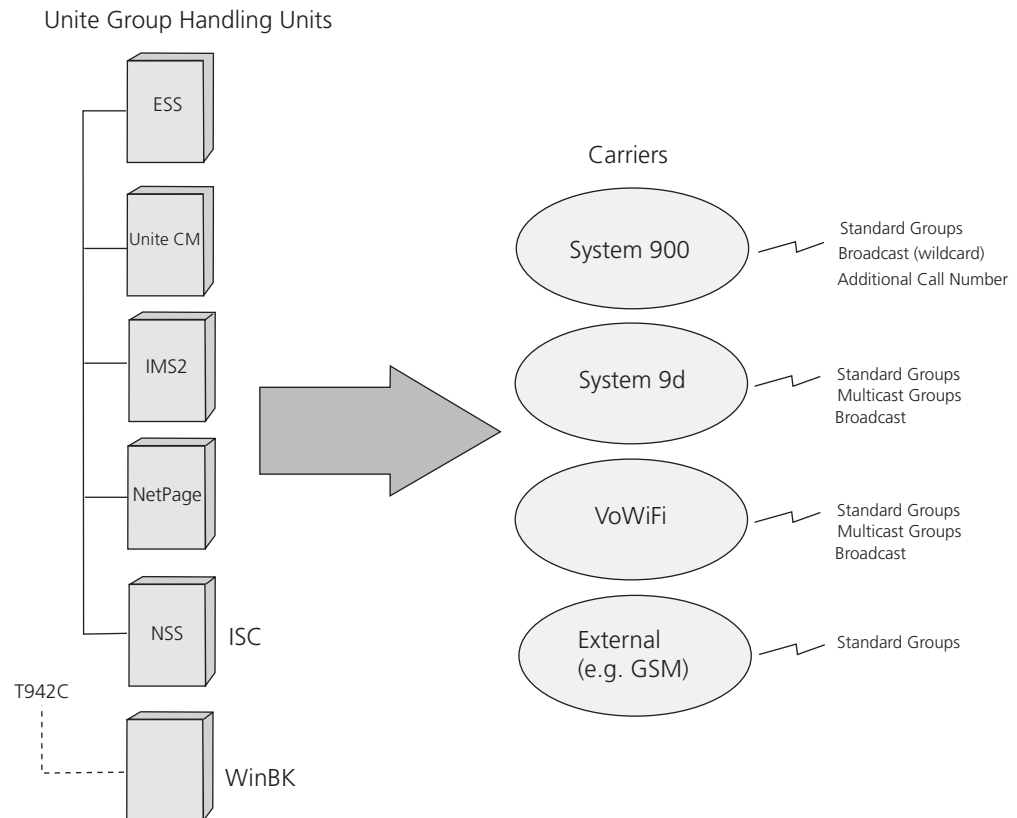


Figure 1. Group Handling in Systems.

In the Ascum Systems there are different types of Group Handling functions to consider when setting up a new system or when adding Group Handling functions to an existing system. The system modules that have the Group Handling function are ESS, Unite CM, IMS2, and NetPage. You can also create groups in T942C in System 900. The teleCARE M System can only create peripheral groups by using TIP.

1.1 Abbreviations and Glossary

A-bus	Serial communication between modules in System 900
AMC	Alarm Management Client: operator's panel with graphical alarm presentation.
AMS	Alarm Management Server: Unite module that enables advanced event handling.
Broadcast	One message is sent to all users in a single transmission
Category	A system or application that can be addressed
CSV	Comma-Separated Values: a common programming language on Internet and web servers that for example can be used to handle data entered by the users.
DECT	Digital Enhanced Cordless Telecommunications: global standard for cordless telephony.
ESS	Enhanced System Services: Unite module that supports advanced message routing, Group Handling, centralised fault handling and logging.
Standard Group	One message is sent individually to each member of the group
GSM	Global System for Mobile communication
GUI	Graphical User Interface: the interface between a user and computer application.
IMS2	Integrated Wireless Messaging and Services: Unite module that enables wireless services to and from portable devices and chargers. It also includes the Device Manager.
LAN	Local Area Network: a group of computers and associated devices that share a common communication line.
LON	Local Operating Network: platform for connection of devices, used in teleCARE M for communication.
Multicast Group	One message is sent to several users in a single transmission.
NetPage	Enables text messages to be sent to a pocket unit from a web standard web browser.
NSS	Nurse Station Server: Unite module used in teleCARE M System to process nurse call system information which can be viewed on its internal web site.
OAS	Open Access Server: Unite module that enables communication with customized applications created with the Open Access Toolkit.
OJS	Open Java Server: Unite module that is an embedded environment for customized Java applications.
PBX	Private Branch Exchange: telephone system within an enterprise that switches calls between local lines and allows all users to share a certain number of external lines.
System 900	Generic term for telePROTECT, teleCOURIER, and CTS 900 systems
System 9d	Generic term for Ascom DECT System
Unite	Generic term for messaging system that unites different systems, for example System 900, System 9d, and teleCARE M.

Unite CM	Unite Connectivity Manager: Unite module that enables messaging and alarm handling in a system. It also includes the Device Manager.
UNS	Unite Name Server: Unite module component that holds the Unite number plan and Unite destinations.
WinBK	PC-based tools for installation and configuration of System 900
VoWiFi	Voice over Wireless Fidelity: wireless version of VoIP that refers to IEEE 802.11a, 802.11b, 802.11g, or 802.11n network.

2 Capacity Overview

An overview of where groups exist and maximum number of groups, number of group members etc. is listed below.

Note: The number of Groups etc. can be changed without notice. See Data Sheet for actual figures.

ESS

ESS can handle 500 groups with 10 members in each and 50 groups with 100 members in each. These can be a mix of standard groups, multicast groups and broadcast.

Unite CM

Unite CM can handle 500 groups with 10 members in each and 50 groups with 100 members in each.

IMS2

IMS2 can handle 1 group with 50 members and 30 groups with 15 members. It can only handle standard groups.

NetPage

NetPage has its own group configuration. Common group can handle max 30 groups with 50 call numbers each. Local groups ("My Groups") has 1 to 20 groups depending on the size of the group.

System 900

System 900 (T942C) can handle 30 standard groups ("Customized Groups") with 10 numbers each. System 900 also supports up to 5 additional call number per portable (depending on portable model) and broadcast.

teleCARE M

teleCARE M can assign portables/pagers to certain events, typically acted by a peripheral. This is from group handling point of view equivalent to standard groups as each message is sent individually. The configuration is stored within teleCARE and not in ESS/Unite CM.

2.1 Speed

The time for a message to be delivered differ depending on the size of the group, the type of group, and how many characters the message contains. A message that is sent to a standard group does not have to take longer to send than it does to a multicast group. A multicast group should contain more than 5 members to be more efficient than a standard group.

Multicast Groups / Broadcasts

		System 9d DCT 1800-GAP	System 900 Additional Call ID
The time for all portables to be called*	No of portables in the group:	Time in seconds: (± 0.5 s)	Time in seconds: (± 0.5 s)
Messages with 20 characters	Independent	3	3
Messages with 120 characters	Independent	4	6
Messages with 240 characters	Independent	7	-
Messages with 500 characters	Independent	14	-

Standard Groups

		System 9d DCT 1800-GAP	System 900	VoWiFi
The time for all portables to be called*	No of portables in the group:	Time in seconds: (± 0.5 s)	Time in seconds: (± 0.5 s)	Time in seconds: (± 0.5 s)
Messages with 20 characters	1	4	3	1
	10	6	5	1
	30	14	-	-
	100	43	-	-
Messages with 120 characters	1	5	6	1
	10	7	8	1
	30	17	-	-
	100	56	-	-

See also System Description Ascom 9d, TD 91931GB.

* Times are approximate and assumes a system in idle. In System 900 a 2 s pre-amble time is assumed and Code level 2. The times state when the first transmission is received by all portables in the group.

2.2 ESS/Unite CM Groups

The Unite groups are defined in the ESS/Unite CM. There are three different types of groups that can be set up in the ESS: standard group, multicast group and broadcast. In Unite CM it is only possible to set up standard groups.

2.2.1 Standard Group

A message to a standard group is sent individually to each portable in that group. A standard group can include other groups (nested groups), multicast groups and broadcast.

The advantage with a standard group is that since the message will be sent individually, you can get a delivery receipt.

A disadvantage could be when large groups are used. It will result in a high system load, which means that it can take some time before all users get the message.

A standard group is the only choice when the group that you are going to send a message to does not support multicast or broadcast, and have mixed interfaces with for example e-mail addresses, GSM numbers, and DECT numbers.

2.2.2 Multicast Group

Messages sent to a multicast group will be sent to Pocket Units that have a group number programmed. Only one message per carrier can be sent to each portable. The carrier has to support multicast.

The advantage with a multicast group is that you instantly can send a message to a large number of people.

The disadvantages are that you do not get a delivery receipt and it is not possible to send personal diversions. However, it is possible to get manual acknowledge. It is recommended to use a standard group if a delivery receipt is necessary.

A combination of a multicast group and a standard group is very useful in emergency situations. Multicast gives a very fast notification, and sending the message to a standard group as well will give the security.

For more information about multicast and DECT, see System Description, Ascom 9d, TD 91931GB.

2.2.3 Broadcast

Messages sent by broadcast will be sent to all Pocket Units within specified carriers. The carriers has to support broadcast messaging.

The advantage with broadcast is that you can send a message to all users at the same time.

A disadvantage might be that you do not get a delivery receipt.

For more information about broadcast and DECT, see System Description, Ascom 9d, TD 91931GB.

2.3 IMS2 Groups

The IMS2 groups are comparable with the standard group in the ESS/Unite CM where messages are sent individually to each portable. Only DECT portables can be included in the group.

2.3.1 IMS2 and ESS/Unite CM in Combination

To simplify the administration it is recommended to use the Group Handler in the ESS/Unite CM when ESS/Unite CM is used in the system.

Note that IMS2 supports wildcard in the last position, for example, 234*.

2.4 NetPage Groups

When a message is sent to a group in NetPage, the group will first be split up and then be sent individually to each member.

There are two types of groups in NetPage, "Common Groups" and "My groups".

- Common Groups
can be used by all NetPage users but only authorized persons can make changes in the Common Groups.
- My Groups
are stored locally on the users PC and intended for personnel use.

2.4.1 NetPage and ESS/Unite CM in Combination

It is recommended to use the Group Handler in the ESS/Unite CM for Common Groups. The NetPage groups cannot be shown in the ESS/Unite CM.

2.5 System 900 Groups

There are three types of groups in System 900: customized group number, additional call number, and wildcard pagings. Customized group number uses lists defined in the T942C.

- The customized group number is created in WinBK by creating a list of individual call numbers. A paging is sent to the individual number of each pocket unit. The customized group is comparable with the Standard Group in ESS/Unite CM.
- The additional call number is programmed into the pocket unit. The programming is normally done with Pocket Unit Programmer in WinBK. A paging to this group number results in one transmission, which will be received by all pocket units with this number activated. The additional call number is comparable with the Multicast Group ID.
- Wildcard pagings
You can make wildcard pagings (* / E) in System 900. The wildcard paging is sent by broadcast. If the wildcard paging is specified with for example Call ID "123*", the message will be sent to all users with call numbers that start with 1230 up to 1239. It is also possible to add the * between the numbers, for example "12*5", and then the paging will be sent to all users that have the numbers 1205, 1215, and so on up to 1295.

2.5.1 System 900 and ESS/Unite CM in Combination

To simplify the administration it is recommended to use the Group Handler in the ESS/Unite CM for easier number planning.

2.6 teleCARE M Groups

Refer to the documentation for teleCARE M.

3 System Outline

The examples below use the Group Handler in the ESS to set up groups.

3.1 Example 1: Standard Group

A standard group is mainly used for small groups and groups with mixed carriers. It can also be used for large groups when delivery receipt is necessary.

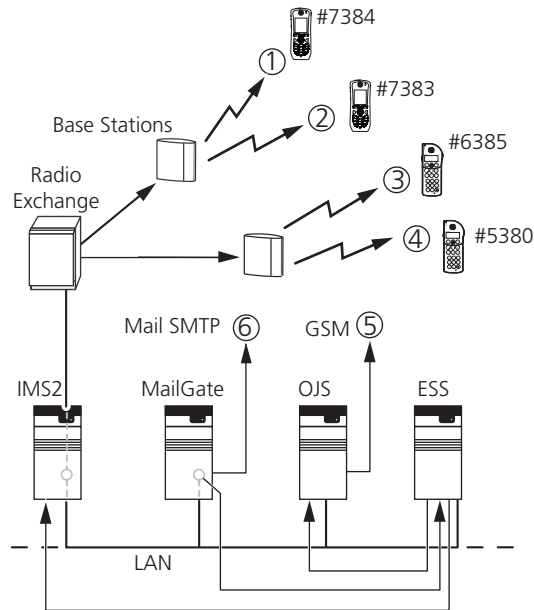


Figure 2. A message is sent individually one by one (1–6).

Example:

The company management is calling for a meeting which all employees have to join. The personnel in the group have mixed categories. The group is given a Group ID in the ESS, and the message is sent out individually to each portable or e-mail address.

The programming of the group is done in the ESS GUI. See Installation and Operation Manual, ESS, TD 92253GB.

3.2 Example 2: Multicast Group

Multicast is used when it is necessary for a specific group to receive the message at the same time.

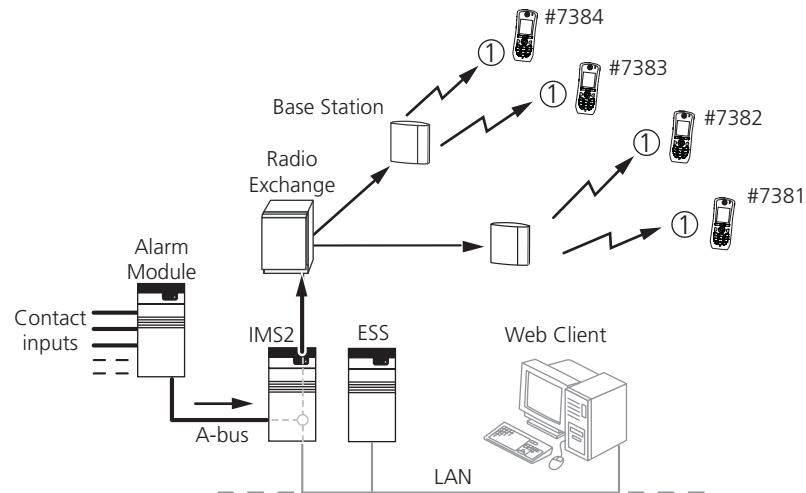


Figure 3. A message is sent to a Multicast Group ID, all at the same time (1).

Example:

There is a production stop, and an alarm message must quickly be sent to a service group. A Multicast Group ID is created in the ESS. The personnel in the service group receives the message at the same time.

The programming of the group is done in the ESS GUI. See Installation and Operation Manual, ESS, TD 92253GB.

3.3 Example 3: Broadcast

Broadcast is used when it is necessary for a message to quickly be sent to all employees at the same time. The categories has to support broadcast messaging.

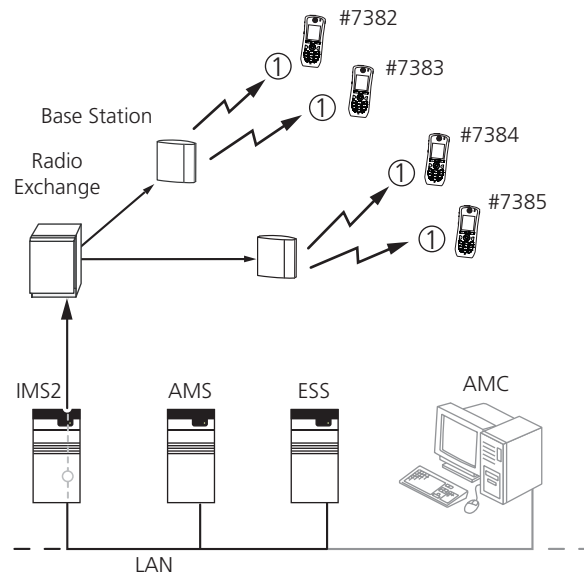


Figure 4. A message is sent by Broadcast, all at the same time (1).

Example:

There is a fire alarm, and the alarm message has to be sent quickly to all employees. By creating a Broadcast ID in the ESS, all users will receive the message at the same time.

The programming of the group is done in the ESS GUI. See Installation and Operation Manual, ESS, TD 92253GB.

4 Move Existing Groups to ESS/Unite CM

The advantage of moving existing groups to the Group Handler in the ESS/Unite CM are that

- it is easier to maintain the number plan when all groups are gathered in one place
- the group members can belong to different categories, which are defined in the Central Unit
- more members can belong to a group.

A disadvantage could be that it might take some time to define a new number plan for ESS/Unite CM, if the existing number plan is huge.

4.1 IMS2 to ESS/Unite CM

If a group is to be moved from IMS2 to ESS/Unite CM, it has to be done manually, that is the groups and the call ID for each group member have to be defined in the ESS/Unite CM.

4.2 NetPage to ESS/Unite CM

Only the Common Groups in NetPage can be moved to the ESS/Unite CM.

If a group is to be moved from NetPage to ESS/Unite CM, it has to be done manually, that is the groups and the call ID for each group member have to be defined in the ESS/Unite CM.

4.3 System 900 to ESS/Unite CM

Since the number plan from WinBK database is stored in a Microsoft Access database, it is possible to export files from System 900. The files are exported as CSV files which can be used to manually transfer the Call IDs from the Win900 database to the Group Handler in the ESS/Unite CM.

The Pocket Units information can also be manually transferred from the WinBK database to the Group Handler in the ESS/Unite CM.

Wildcard numbers is not stored in the Win900 database. The wildcard number must be created in the ESS/Unite CM before they can be used.

There is one disadvantage of moving the groups from System 900 to ESS/Unite CM: the A-bus traffic will increase for very large groups since there is one paging sent per group member.

5 System Requirements

5.1 PC Requirement

Microsoft Internet Explorer

Version 6.0 or later.

5.2 Unite Modules

To be able to use the functionality in the ESS/Unite CM, the following versions of the Unite modules must be used:

- Enhanced System Services (ESS): Software version 1.10 or later.
- Unite Connectivity Manager (Unite CM): Software version 1.00 or later.
- Alarm Management Server (AMS): Software version 5.01 or later.
- Integrated Wireless Messaging and Services (IMS2): Software version 2.62 or later.
- MailGate: Software version 2.10 or later.
- NetPage: Software version 3.10 or later.
- Open Java Server (OJS): Software version 2.10 or later.

5.3 Additional Software Requirements

5.3.1 Support for Broadcast

- DECT System with messaging support
- System 900

Portables

- 9d24 DECT Portable (Messenger & Protector): Software version 3.00 or later.

5.3.2 Support for Multicast Groups

- DCT1800-GAP Stand alone system with CPU2 software version R2A or later.
- DCT1800-GAP EMN system with CPU2 software version R1A or later.

Portables

- 9d24 DECT Portable (Messenger & Protector): Software version 3.00 or later.
- 9d23 MkII Portables (all versions except 9d23 Talker): Software version 2.0 or later.
9d23MkII can be used in the system, but the portable phone does not have support for multicast or broadcast.
- 9d23 MkI cannot be used in a system with neither multicast or broadcast.

Note: Broadcast and Multicast Groups are not supported by PWT systems.

6 Related Documents

Installation and Operation Manual, IMS2	TD 92586GB
Installation and Operation Manual, NetPage	TD 92198GB
Installation and Operation Manual, ESS	TD 92253GB
Installation and Operation Manual, Unite CM (ELISE2)	TD 92718GB
Installation and Operation Manual, Unite CM (ELISE3)	TD 92735GB
System Planning, System 900	TD 90202GB
System Description, Ascom 9d	TD 91931GB
System Description, teleCARE M	TD 91867GB

7 Document History

For details in the latest version, see change bars in the document.

Version	Date	Description
A	7 April 2006	First version.
B	22 December 2010	<ul style="list-style-type: none">• Replaced IMS with IMS2 throughout.• Added VoWiFi in figure 1 on page 1.• Added Unite CM in chapter 2 Capacity Overview on page 4.• Added message delivery times for VoWiFi in chapter 2.1 Speed on page 5.• Added Unite CM in chapter 5 System Requirements on page 13.