DX 200

BSC3153
Nokia GSM/EDGE BSS, Rel. BSS13, BSC and TCSM, Rel. S13, Product Documentation, v.1

EC - SMS Cell Broadcast Handling
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Contents

Contents 3
List of tables 4
List of figures 5
Summary of changes 7
EC - SMS CELL BROADCAST HANDLING 11
ECA CREATE MESSAGE WITH EDITOR 13
ECB CREATE/MODIFY MESSAGE TEXT PAGE BY PAGE 23
ECM MODIFY MESSAGE WITH EDITOR 37
ECR MODIFY MESSAGE PARAMETERS 41
ECS ACTIVATE MESSAGE 49
ECE DEACTIVATE MESSAGE 53
ECC DEACTIVATE BTS(S) 57
ECD DELETE MESSAGE(S) 59
ECP DISPLAY MESSAGE(S) 61
ECL DISPLAY BTS WORK LOAD 71
List of tables
List of figures
Summary of changes

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made to previous issues.

Changes made between issues 14-0 and 13-0

The duplicate list of commands of the command group in section EC: SMS CELL BROADCAST HANDLING has been removed as part of general streamlining in the MML command reference documents.

Changes made between issues 13-0 and 12-0

<table>
<thead>
<tr>
<th>Command Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECB CREATE/MODIFY MESSAGE TEXT PAGE BY PAGE</td>
<td>The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i.</td>
</tr>
<tr>
<td>ECM MODIFY MESSAGE WITH EDITOR</td>
<td>The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i.</td>
</tr>
<tr>
<td>ECR MODIFY MESSAGE PARAMETERS</td>
<td>The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i.</td>
</tr>
<tr>
<td>ECS ACTIVATE MESSAGE</td>
<td>The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i. The value range of the parameter BTS identification was extended to 2000.</td>
</tr>
</tbody>
</table>
ECE  DEACTIVATE MESSAGE(S)
The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i.

The value range of the parameter BTS identification was extended to 2000.

ECC  DEACTIVATE BTS(S)
The value range of the parameter BTS identification was extended to 2000.

ECD  DELETE MESSAGE(S)
The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i.

ECP  DISPLAY MESSAGE(S)
The value range of the parameter message index was extended to 8068 for BSCi/BSC2i and 15000 for BSC3i.

The value range of the parameter BTS identification was extended to 2000.

ECL  DISPLAY BTS WORK LOAD
The value range of the parameter BTS identification was extended to 2000.

Changes made between issues 12-0 and 11-0

ECA  CREATE MESSAGE WITH EDITOR
One execution printout was modified. One note was moved to another location.

ECB  CREATE/MODIFY MESSAGE TEXT PAGE BY PAGE
The value range of the parameter message index was extended to 5400.

ECM  MODIFY MESSAGE WITH EDITOR
The value range of the parameter message index was extended to 5400. One note on coding groups was removed. One execution printout was modified.

ECR  MODIFY MESSAGE PARAMETERS
The value range of the parameter message index was extended to 5400.
ECS ACTIVATE MESSAGE
The value range of the parameter message index was extended to 5400. The value range of the parameter BTS identifier BTS was updated.

ECE DEACTIVATE MESSAGE(S)
The value range of the parameter message index was extended to 5400. The value range of the parameter BTS identifier BTS was updated.

ECC DEACTIVATE BTS(S)
The value range of the parameter BTS identifier BTS was updated.

ECD DELETE MESSAGE(S)
The value range of the parameter message index was extended to 5400.

ECP DISPLAY MESSAGE(S)
The value range of the parameter message index MI was extended to 8069. The value range of the parameter BTS identifier BTS was updated.

ECL DISPLAY BTS WORK LOAD
The value range of the parameter BTS identifier BTS was updated.
EC - SMS CELL BROADCAST HANDLING

With this command group you manage cell broadcast messages. You can create, modify, activate, deactivate, delete, and display messages.

Menu of the command group:

SMC CELL BROADCAST HANDLING COMMANDS

? ...... DISPLAY MENU
A: ...... CREATE MESSAGE WITH EDITOR
B: ...... CREATE/MODIFY MESSAGE TEXT PAGE BY PAGE
M: ...... MODIFY MESSAGE WITH EDITOR
R: ...... MODIFY MESSAGE PARAMETERS
S: ...... ACTIVATE MESSAGE
E: ...... DEACTIVATE MESSAGE(S)
C: ...... DEACTIVATE BTS(S)
D: ...... DELETE MESSAGE(S)
P: ...... DISPLAY MESSAGE(S)
L: ...... DISPLAY BTS WORK LOAD
Z: ...... RETURN TO MAIN LEVEL
ECA CREATE MESSAGE WITH EDITOR

Function
With the ECA command you create a new cell broadcast message.

Parameters
message identifier: message code: geographical scope: coding group, language identifier, message class, alphabet identifier: repetition rate;

Syntax
ECA: <message identifier> :

<message code> :

<geographical scope> :

<coding group> ,
{<language identifier> | <message class>, <alphabet identifier>}:

<repetition rate> ;

Parameter explanations

message identifier
The value range is from 0 to 999 for short messages of all types, and from 4096 to 4351 for cell broadcast data download to the SIM messages.

The parameter is obligatory.

message code
The value range is from 0 to 1023. The value is used for differentiating between messages which have the same message identifier and thus share the same source and type.

The parameter is obligatory.

geographical scope
The geographical scope indicates the geographical area over which the message code is unique as well as the display mode of the mobile.

The parameter can have the following values:

1 ... CELL WIDE, DISPLAY MODE IMMEDIATE
2 ... PLMN WIDE, DISPLAY MODE NORMAL
3 ... LOCATION AREA WIDE, DISPLAY MODE NORMAL
4 ... CELL WIDE, DISPLAY MODE NORMAL

The parameter is obligatory.

**coding group**

The coding group indicates the data coding scheme used to indicate the intended handling of the message at the MS, the alphabet/coding, and the language (when applicable). The coding groups of the cell broadcast data coding scheme are defined in 3GPP TS 23.038.

If the message identifier is from 0 to 999, the parameter can have the following values:

1 ... GROUP 0000: DEFAULT ALPHABET, SELECT LANGUAGE
2 ... GROUP 0001: DEFAULT ALPHABET/UCS2 TEXT, MESSAGE PRECEDED BY LANGUAGE IDENTIFICATION
3 ... GROUP 0100: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, NO MESSAGE CLASS
4 ... GROUP 0101: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, WITH MESSAGE CLASS
5 ... GROUP 1111: 8-BIT DATA OR DEFAULT ALPHABET TEXT, MESSAGE CLASS

If the message identifier is in the range of 4096 to 4351, the parameter can have the following values:

4 ... GROUP 0101: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, WITH MESSAGE CLASS
5 ... GROUP 1111: 8-BIT DATA OR DEFAULT ALPHABET TEXT, MESSAGE CLASS

The parameter is obligatory.
**Coding group 0000** is the recommended choice for the coding group because it is understood by all mobiles that can receive cell broadcast messages. Earlier releases' messages belong to this coding group. In this coding group, you can choose the language from a list of 13 languages, the alphabet is automatically the default 7-bit alphabet, and there are 93 characters per page in a message.

**Coding group 0001** is recommended when you want to define the language of the message, but the language is not among the 13 languages defined in the coding group 0000. In this coding group, the two-letter language identifier (defined in the ISO 639 standard) is written at the beginning of the message so that the first two letters are followed by \\

\[<CR> = \text{0D H}\]. You must also choose the alphabet used in the message. You can choose either the 7-bit default alphabet or the 16-bit UCS2 characters.

---

**Note**

The language identifier used in coding group 0001 must be written in lower case letters.

---

If you choose the default alphabet, you can write 90 characters on the first page of the message and 93 characters on the following pages of the message. Mobiles which have software complying with ETSI GSM phase 2 standards will display only the message text, not the language identifier.

If you choose the UCS2 characters, you can write 40 characters on the first page of the message and 41 characters on the following pages of the message. Mobiles which have software complying with ETSI GSM phase 2 standards will display only the language identifier and the text is displayed as an apparently random string of characters.

**Coding group 0100** is recommended when you want to send uncompressed 8-bit data or uncompressed text by using the default alphabet or UCS2 characters but you do not want to define the language used or the routing of the message in the receiving mobile. In this coding group, the maximum number of characters per page is 93 for default alphabet, 41 for UCS2 characters, and 82 for 8-bit data. Mobiles which have software complying with ETSI GSM phase 2 standards will be able to display only texts written with the default alphabet.

**Coding group 0101** is otherwise similar to coding group 0100 except that you can define the routing of the message in the receiving mobile. Mobiles which have software complying with ETSI GSM phase 2 standards will not be able to display messages belonging to this group.
Coding group 1111 is recommended when you want to send 8-bit data or messages written with the default alphabet and you do not want to define the language used. In this coding group, you can also define the routing of the message in the receiving mobile or leave the routing open. Mobiles which have software complying with ETSI GSM phase 2 standards will be able to display messages belonging to this group.

Chinese characters belong to the UCS2 character set. To be able to write, for example, Chinese characters you should use coding groups 0001, 0100, or 0101.

language identifier

<table>
<thead>
<tr>
<th>Code</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER</td>
<td>German</td>
</tr>
<tr>
<td>ENG</td>
<td>English</td>
</tr>
<tr>
<td>ITA</td>
<td>Italian</td>
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<tr>
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<td>FIN</td>
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<td>NOR</td>
<td>Norwegian</td>
</tr>
<tr>
<td>GRE</td>
<td>Greek</td>
</tr>
<tr>
<td>TUR</td>
<td>Turkish</td>
</tr>
</tbody>
</table>

The language identifier indicates the language of the short message.

If the coding group is 0000, the parameter is obligatory. Otherwise this parameter will not be asked.

message class

The message class indicates where the mobile equipment (ME) will route the message. The ME user can override the defined default value of the routing.

If the message identifier is from 0 to 999, the parameter can have the following values:
MC0  ... CLASS 0, DIRECT DISPLAY BY MS, NO MEMORY NEEDED
MC1  ... CLASS 1, DIRECT DISPLAY BY MS, MEMORY NEEDED
MC2  ... CLASS 2, SIM-SPECIFIC MESSAGE
MC3  ... CLASS 3, TE-SPECIFIC MESSAGE

In the above, the qualifier 'no memory needed' means that the MS will not store the received message in the ME or SIM. The qualifier 'memory needed', in contrast, means that the MS will store the received message in the ME or SIM.

If the message identifier is from 4096 to 4351, the parameter can have only the following value:

MC2  ... CLASS 2, SIM-SPECIFIC MESSAGE

If the coding group is 0101 or 1111, the parameter is obligatory. Otherwise this parameter will not be asked.

*alphabet identifier*

The alphabet identifier indicates the character length used in the message coding. The default alphabet has 7 bits per character and it is defined in 3GPP TS 23.038.

If the message identifier is in the range of 4096 to 4351 and the coding group is 1111, the parameter can have only the following value:

**8BIT ... DATA**

If the message identifier is in the range of 4096 to 4351 and the coding group is 0101, the parameter can have the following values:

**8BIT ... DATA**

**16BIT ... DATA**

If the message identifier is from 0 to 999, the following conditions apply:

With coding group 0001 the parameter can have the following values:

**7BIT ... DEFAULT ALPHABET**

**16BIT ... UCS2**

With coding groups 0100 or 0101 the parameter can have the following values:

**7BIT ... DEFAULT ALPHABET**

**8BIT ... DATA**

**16BIT ... UCS2**
With coding group 1111 the parameter can have the following values:

<table>
<thead>
<tr>
<th>7BIT</th>
<th>8BIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>... DEFAULT ALPHABET</td>
<td>... DATA</td>
</tr>
</tbody>
</table>

If the coding group is any of the above-mentioned coding groups, the parameter is obligatory. With coding group 0000 this parameter will not be asked.

**repetition rate**

The parameter indicates the repetition rate of the message. If the DRX option is in your software build, the value ranges from 1 to 9 and the values correspond to repetition rates of 4, 8, 15, 30, 60, 120, 241, 481, and 963 seconds (time rounded to the nearest second). Otherwise the value ranges from 0 to 9 and the values correspond to the repetition rates of 2, 4, 8, 15, 30, 60, 120, 241, 481, and 963 seconds.

The parameter is obligatory.

**Examples**

1. Create a message in which the message identifier is 100, message code is 20, geographical scope is location area wide, display mode is normal, coding group is 0000, and the language is English. The repetition rate of the message is 8.

ZECA:100:20:3:1,ENG:3;

2. Create a message in which the message identifier is 34, message code is 10, geographical scope is cell wide, display mode is normal, coding group is 0001, and the used alphabet is UCS2 16-bit characters. The repetition rate of the message is 4.

ZECA:34:10:4:2,16BIT:2;;

3. Create a message in which the message identifier is 234, message code is 20, geographical scope is location area wide, display mode is normal, coding group is 0101, message class is 2 (user-defined), and the alphabet is 8-bit user-defined characters. The repetition rate of the message is 8.

ZECA:234:20:3:4,MC2,8BIT:3;

4. Create a message in which the message identifier is 4100, message code is 500, geographical scope is PLMN wide, display mode is normal, coding group is 1111, message class is 2 (no other option), and the used alphabet is UCS2 8-bit characters. The repetition rate of the message is 30.

ZECA:4100:500:2:5,MC2,8BIT:4;
To start a new line in the text that is displayed on the MS, you have to write two # characters into the text. These characters are then converted into <CR> by the MML. This is only possible when you are using the 7-bit default character set. All characters can be entered by using hexadecimal presentation.

Hexadecimal presentation means that you write the hexadecimal code for the character that you want to be displayed by the ME. For 7- and 8-bit characters, the hexadecimal code is a two-figure number whereas the 16-bit characters are represented by four numbers. When using the hexadecimal presentation in the text you write all numbers forming the character in question. For example, the dollar sign’s ($) hexadecimal code is ‘2’. With 7- and 8-bit characters it is written in the text as +02 and with 16-bit characters as +0002.

Correspondingly, if you want to write a + character into the text, you write two + characters which are then converted into one + character by the MML. This is only possible when you are using the 7-bit default alphabet.

If you want to remove characters from the end of the text, you must go to the end of the text and change from overstrike mode to insert mode (ctrl - A) and remove the text by using backspace. If the insert mode is not on when you do this, the text will be overwritten with the space character (20 H) and the message will consist of the remaining text and space characters.

When using 16-bit characters (UCS2), all characters are written using the hexadecimal presentation. If you put keyboard characters in the text, the rest of the text will be illegible when displayed by ME.

You can enter a new message to the edit space. The parameters of the message cannot be edited. If the parameters require editing you have to use the ECR command. The message index is given after the message has been stored. If you accept the message, the program displays the value of the message index.

The execution printout of command example 1 is the following:

```
MESSAGE IDENTIFIER :  100
MESSAGE CODE :  20
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, NORMAL
CODING GROUP :  0000
LANGUAGE :  ENGLISH
REPETITION RATE :  8

MESSAGE IS STORED WITH MESSAGE INDEX  1
```
The execution printout of command example 3 is the following:

MESSAGE IDENTIFIER : 234
MESSAGE CODE : 20
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, NORMAL
CODING GROUP : 0101
MESSAGE CLASS : 2
ALPHABET IDENTIFIER : 8-BIT DATA/USER-DEFINED CHARACTERS
REPETITION RATE : 8
MESSAGE IS STORED WITH MESSAGE INDEX 11

The execution printout of command example 4 is the following:

MESSAGE IDENTIFIER : 4100
MESSAGE CODE : 500
GEOGRAPHICAL SCOPE : PLMN WIDE, NORMAL
CODING GROUP : 1111
MESSAGE CLASS : 2
ALPHABET IDENTIFIER : 8-BIT DATA/USER-DEFINED CHARACTERS
REPETITION RATE : 30
MESSAGE IS STORED WITH MESSAGE INDEX 11

If you reject the message the program displays the following comment:

/*** INTERRUPT ***/

The MML exits the editor automatically when the editor’s buffer is full (4185 characters). Note that the maximum length of the final message is 1395 characters. If the final message is longer than 1395, the rest of the characters are not stored:

/*** MAXIMUM LENGTH OF EDIT BUFFER HAS BEEN REACHED ***/

Semantic error messages

If an error occurs, the general semantic error messages of MML commands are output.

Execution error messages

/*** NOT ENOUGH SPACE FOR THE MESSAGE ***/
There is not enough space to store the short message.

/*** EXECUTION FAILED ***/
/*** TRY AGAIN ***/

The program cannot store the short message.
ECB CREATE/MODIFY MESSAGE TEXT PAGE BY PAGE

Function
With the ECB command you create new cell broadcast messages when the ECA command cannot be used, and modify old cell broadcast messages when the ECM command cannot be used.

Parameters
message identifier: message code: geographical scope: coding group, language identifier, message class, alphabet identifier: repetition rate: message index: page;

Syntax
ECB: < message identifier > :

< message code > :

< geographical scope > :

< coding group > ,

( < language identifier > | < alphabet identifier > | < message class > , < alphabet identifier > ) :

< repetition rate > :

[ < message index > ] :

< page > ;

Parameter explanations
message identifier
The value range is from 0 to 999 for short messages of all types, and from 4096 to 4351 for cell broadcast data download to the SIM messages.

The parameter is obligatory.

message code
The value range is from 0 to 1023. The value is used for differentiating between messages which have the same message identifier and thus share the same source and type.

The parameter is obligatory.

geographical scope

The geographical scope indicates the geographical area over which the message code is unique as well as the display mode of the mobile.

The parameter can have the following values:

1 ... CELL WIDE, DISPLAY MODE IMMEDIATE  
2 ... PLMN WIDE, DISPLAY MODE NORMAL  
3 ... LOCATION AREA WIDE, DISPLAY MODE NORMAL  
4 ... CELL WIDE, DISPLAY MODE NORMAL

The parameter is obligatory.

coding group

The coding group indicates the data coding scheme used to indicate the intended handling of the message at the MS, the alphabet/coding, and the language (when applicable). The coding groups of the cell broadcast data coding scheme are defined in 3GPP TS 23.038.

If the message identifier is from 0 to 999, the parameter can have the following values:

1 ... GROUP 0000: DEFAULT ALPHABET, SELECT LANGUAGE  
2 ... GROUP 0001: DEFAULT ALPHABET/UCS2 TEXT, MESSAGE PRECEDED BY LANGUAGE IDENTIFICATION  
3 ... GROUP 0100: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, NO MESSAGE CLASS  
4 ... GROUP 0101: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, WITH MESSAGE CLASS  
5 ... GROUP 1111: 8-BIT DATA OR DEFAULT ALPHABET TEXT, MESSAGE CLASS

If the message identifier is in the range of 4096 to 4351, the parameter can have the following values:

4 ... GROUP 0101: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, WITH MESSAGE CLASS  
5 ... GROUP 1111: 8-BIT DATA OR DEFAULT ALPHABET TEXT, MESSAGE CLASS
The parameter is obligatory.

*Coding group 0000* is the recommended choice for the coding group because it is understood by all mobiles that can receive cell broadcast messages. Earlier releases' messages belong to this coding group. In this coding group, you can choose the language from a list of 13 languages, the alphabet is automatically the default 7-bit alphabet, and there are 93 characters per page in a message.

*Coding group 0001* is recommended when you want to define the language of the message, but the language is not among the 13 languages defined in the coding group 0000. In this coding group, the two-letter language identifiers (which are defined in the ISO 639 standard) are written at the beginning of the message so that the first two letters are followed by \(<CR> = 0D \text{ H}\). You must also choose the alphabet used in the message. You can choose either the 7-bit default alphabet or the 16-bit UCS2 characters.

**Note**

The language identifier used in coding group 0001 must be written in lower case letters.

If you choose the default alphabet, you can write 90 characters on the first page of the message and 93 characters on the following pages of the message. Mobiles which have software complying with ETSI GSM phase 2 standards will display only the message text, not the language identifier.

If you choose the UCS2 characters, you can write 40 characters on the first page of the message and 41 characters on the following pages of the message. Mobiles which have software complying with ETSI GSM phase 2 standards will display only the language identifier and the text is displayed as an apparently random string of characters.

*Coding group 0100* is recommended when you want to send uncompressed 8-bit data or uncompressed text by using the default alphabet or UCS2 characters but you do not want to define the language used or the routing of the message in the receiving mobile. In this coding group, the maximum number of characters per page is 93 for default alphabet, 41 for UCS2 characters, and 82 for 8-bit data. Mobiles which have software complying with ETSI GSM phase 2 standards will be able to display only texts written with the default alphabet.
Coding group 0101 is otherwise similar to coding group 0100 except that you can define the routing of the message in the receiving mobile. Mobiles which have software complying with ETSI GSM phase 2 standards will not be able to display messages belonging to this group.

Coding group 1111 is recommended when you want to send 8-bit data or messages written with the default alphabet and you do not want to define the language used. In this coding group, you can also define the routing of the message in the receiving mobile or leave the routing open. Mobiles which have software complying with ETSI GSM phase 2 standards will be able to display messages belonging to this group.

Chinese characters belong to the UCS2 character set. To be able to write, for example, Chinese characters you should use coding groups 0001, 0100, or 0101.

**language identifier**

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<tr>
<th>Code</th>
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<td>NOR</td>
<td>Norwegian</td>
</tr>
<tr>
<td>GRE</td>
<td>Greek</td>
</tr>
<tr>
<td>TUR</td>
<td>Turkish</td>
</tr>
</tbody>
</table>

The language identifier indicates the language of the short message.

If the coding group is 0000, the parameter is obligatory. Otherwise this parameter will not be asked.

**message class**

The message class indicates where the mobile equipment (ME) will route the message. The ME user can override the defined default value of the routing.
If the message identifier is from 0 to 999, the parameter can have the following values:

- **MC0** ... CLASS 0, DIRECT DISPLAY BY MS, NO MEMORY NEEDED
- **MC1** ... CLASS 1, DIRECT DISPLAY BY MS, MEMORY NEEDED
- **MC2** ... CLASS 2, SIM-SPECIFIC MESSAGE
- **MC3** ... CLASS 3, TE-SPECIFIC MESSAGE

In the above, the qualifier 'no memory needed' means that the MS will not store the received message in the ME or SIM. The qualifier 'memory needed', in contrast, means that the MS will store the received message in the ME or SIM.

If the message identifier is in the range of 4096 to 4351, the parameter can have only the following value:

- **MC2** ... CLASS 2, SIM-SPECIFIC MESSAGE

If the coding group is 0101 or 1111, the parameter is obligatory. Otherwise this parameter will not be asked.

**alphabet identifier**

The alphabet identifier indicates the character length used in the message coding. The default alphabet has 7 bits per character and it is defined in 3GPP TS 23.038.

If the message identifier is in the range of 4096 to 4351 and the coding group is 1111, the parameter can only have the following value:

- **8BIT** ... DATA

If the message identifier is in the range of 4096 to 4351 and the coding group is 0101, the parameter can have the following values:

- **8BIT** ... DATA
- **16BIT** ... DATA

If the message identifier is from 0 to 999, the following conditions apply:

With coding group 0001 the parameter can have the following values:

- **7BIT** ... DEFAULT ALPHABET
- **16BIT** ... UCS2

With coding groups 0100 or 0101 the parameter can have the following values:
With coding group 1111 the parameter can have the following values:

7BIT ... DEFAULT ALPHABET
8BIT ... DATA
16BIT ... UCS2

If the coding group is any of the above-mentioned coding groups, the parameter is obligatory. With coding group 0000 this parameter will not be asked.

repetition rate

The parameter indicates the repetition rate of the message. If the DRX option is in your software build, the value ranges from 1 to 9 and the values correspond to repetition rates of 4, 8, 15, 30, 60, 120, 241, 481, and 963 seconds (time rounded to the nearest second). Otherwise the value ranges from 0 to 9 and the values correspond to the repetition rates of 2, 4, 8, 15, 30, 60, 120, 241, 481, and 963 seconds.

The parameter is obligatory.

message index

The value range is from 1 to 8068 for BSCi/BSC2i and from 1 to 15000 for BSC3i. If the message index is missing, a new message is created. Otherwise the index is used for finding the old message that will be modified.

page

A page parameter guide for characters with the 7-bit default alphabet:

```c
/* IDENTIFY PAGE OF MESSAGE */
P1 .... PAGE NUMBER 1
P2 .... PAGE NUMBER 2
P3 .... PAGE NUMBER 3
P4 .... PAGE NUMBER 4
P5 .... PAGE NUMBER 5
P6 .... PAGE NUMBER 6
P7 .... PAGE NUMBER 7
P8 .... PAGE NUMBER 8
P9 .... PAGE NUMBER 9
P10 .... PAGE NUMBER 10
P11 .... PAGE NUMBER 11
P12 .... PAGE NUMBER 12
P13 .... PAGE NUMBER 13
```
A page parameter guide for 8-bit characters:

/* IDENTIFY PAGE OF MESSAGE */

P1A .... FIRST PART OF PAGE 1  P9A .... FIRST PART OF PAGE 9
P1B .... SECOND PART OF PAGE 1  P9B .... SECOND PART OF PAGE 9
P1C .... THIRD PART OF PAGE 1   P9C .... THIRD PART OF PAGE 9
P2A .... FIRST PART OF PAGE 2   P10A .... FIRST PART OF PAGE 10
P2B .... SECOND PART OF PAGE 2  P10B .... SECOND PART OF PAGE 10
P2C .... THIRD PART OF PAGE 2   P10C .... THIRD PART OF PAGE 10
P3A .... FIRST PART OF PAGE 3   P11A .... FIRST PART OF PAGE 11
P3B .... SECOND PART OF PAGE 3  P11B .... SECOND PART OF PAGE 11
P3C .... THIRD PART OF PAGE 3   P11C .... THIRD PART OF PAGE 11
P4A .... FIRST PART OF PAGE 4   P12A .... FIRST PART OF PAGE 12
P4B .... SECOND PART OF PAGE 4  P12B .... SECOND PART OF PAGE 12
P4C .... THIRD PART OF PAGE 4   P12C .... THIRD PART OF PAGE 12
P5A .... FIRST PART OF PAGE 5   P13A .... FIRST PART OF PAGE 13
P5B .... SECOND PART OF PAGE 5  P13B .... SECOND PART OF PAGE 13
P5C .... THIRD PART OF PAGE 5   P13C .... THIRD PART OF PAGE 13
P6A .... FIRST PART OF PAGE 6   P14A .... FIRST PART OF PAGE 14
P6B .... SECOND PART OF PAGE 6  P14B .... SECOND PART OF PAGE 14
P6C .... THIRD PART OF PAGE 6   P14C .... THIRD PART OF PAGE 14
P7A .... FIRST PART OF PAGE 7   P15A .... FIRST PART OF PAGE 15
P7B .... SECOND PART OF PAGE 7  P15B .... SECOND PART OF PAGE 15
P7C .... THIRD PART OF PAGE 7   P15C .... THIRD PART OF PAGE 15
P8A .... FIRST PART OF PAGE 8
P8B .... SECOND PART OF PAGE 8
P8C .... THIRD PART OF PAGE 8

ONE OF PAGES IS OBLIGATORY  */

A page parameter guide for 16-bit characters:

/* IDENTIFY PAGE OF MESSAGE */

P1A .... FIRST PART OF PAGE 1
P1B .... SECOND PART OF PAGE 1
P2A .... FIRST PART OF PAGE 2
P2B .... SECOND PART OF PAGE 2
P3A .... FIRST PART OF PAGE 3
P3B .... SECOND PART OF PAGE 3
P4A .... FIRST PART OF PAGE 4
P4B .... SECOND PART OF PAGE 4
P5A .... FIRST PART OF PAGE 5
P5B .... SECOND PART OF PAGE 5
P6A .... FIRST PART OF PAGE 6
P6B .... SECOND PART OF PAGE 6
P7A .... FIRST PART OF PAGE 7
P7B .... SECOND PART OF PAGE 7
P8A .... FIRST PART OF PAGE 8
The page indicates the page of the message that will be inserted or modified. If the page parameter is given but the text is missing, the page is filled with carriage returns.

If 8-bit characters have been chosen, you can write 36 characters to the first and second parts of a page, and the remaining 10 characters to the third and last part of the page.

An example of a page guide for 8-bit characters, first part:

/* ENTER TEXT OF FIRST PART OF PAGE x
MAX NUMBER OF CHARACTERS:
36 8-BIT CHARACTERS (108 CHARACTERS) */

An example of a page guide for 8-bit characters, second part:

/* ENTER TEXT OF SECOND PART OF PAGE x
MAX NUMBER OF CHARACTERS:
36 8-BIT CHARACTERS (108 CHARACTERS) */

An example of a page guide for 8-bit characters, third part:

/* ENTER TEXT OF THIRD PART OF PAGE x
MAX NUMBER OF CHARACTERS:
10 8-BIT CHARACTERS (27 CHARACTERS) */
If 16-bit characters have been chosen, you can write 22 characters to the first part of the page and the remaining 19 characters to the second and last part of the page.

An example of a page guide for 16-bit characters, first part:

/* ENTER TEXT OF FIRST PART OF PAGE x
MAX NUMBER OF CHARACTERS:
22 16-BIT CHARACTERS (110 CHARACTERS) */

An example of a page guide for 16-bit characters, second part:

/* ENTER TEXT OF SECOND PART OF PAGE x
MAX NUMBER OF CHARACTERS:
19 16-BIT CHARACTERS (95 CHARACTERS) */

If 16-bit characters and coding group 0001 have been chosen, you can write to the first part of page 1 (P1A) the language identifier and 21 characters, and to the second and last part of page 1 (P1B) the remaining 19 characters. All other pages will be written as has been explained above.

An example of a page guide for 16-bit characters, coding group 0001, first part of page 1:

/* ENTER TEXT OF FIRST PART OF PAGE 1
MAX NUMBER OF CHARACTERS:
LANGUAGE IDENTIFIER (2 CHARACTERS) +
21 16-BIT CHARACTERS (105 CHARACTERS) */

An example of a page guide for 16-bit characters, second part:

/* ENTER TEXT OF SECOND PART OF PAGE 1
MAX NUMBER OF CHARACTERS:
19 16-BIT CHARACTERS (95 CHARACTERS) */

One of the pages is obligatory.
Examples

1. Create a message in which the message identifier is 100, message code is 20, geographical scope is location area wide, display mode is normal, coding group is 0000 and the language is English. The repetition rate of the message is 8.

```
ZECB:100:20:3:1,ENG:3::P1=+00TEST##MESSAGE;
```

2. Create a message in which the message identifier is 34, message code is 10, geographical scope is cell wide, display mode is normal, coding group is 0001, and the used alphabet is UCS2 16-bit characters. The repetition rate of the message is 4.

```
ZECB:34:10:4:2,16BIT:2:6:P1A=EN+004D+0045+0053 +0053+0041+0047+0045+0020+0057 +0052+0049+0054 +0045+004E+0020+0057+0049+0054+0048+0020+0055;
```

3. Add the rest of the first page's text to the message created in the previous example.

```
ZECB:34:10:4:2,16BIT:2:6:P1B=+0043+0053+0032+002D +0043+0048+0041+0052+0041 +0043+0054+0045+0052 +0053+0020+0046+0055+004C+004C;
```

4. Add the second page of the message with message index 7 (that is, the message modified in the previous example).

```
ZECB:34:10:4:2,16BIT:2:6:P2A=+0050+0041+0047+0045 +0020+0032+002E;
```

5. Create a message in which the message identifier is 50, message code is 10, geographical scope is location area wide, display mode is normal, coding group is 0100, and the used alphabet is UCS2 16-bit characters. The repetition rate of the message is 4.

```
ZECB:50:10:3:3,16BIT:2:9:P1A=+004D+0045+0053+0053 +0041+0047+0045+0020+0057 +0052+0049+0054+0045 +004E+0020+0057+0049+0054+0048+0020+0055+0043;
```

6. Add the rest of the first page's text to the message created in the previous example.

```
ZECB:50:10:4:3,16BIT:2:9:P1B=+0053+0032+002D+0043 +0048+0041+0052+0041+0043 +0054+0045+0052+0053 +0020+0046+0055+004C+004C+002E;
```

7. Create a message in which the message identifier is 234, message code is 20, geographical scope is location area wide, display mode is normal, coding group is 0101, message class is 2 (user-defined), and the alphabet is 8-bit data or user-defined characters. The repetition rate of the message is 15.
8. Add the second part of the first page to the message created in the previous example.

```
ZECB:234:20:3:4,MC2,8BIT:4::P1B=+25+26+27+28+29+2A
+2B+2C+2D+2E+30+31+32 +33+34+35+36+37+38+39+3A
+3B+3C+3D+3E+3F+40+41+42+43+44+45+46+47+48;
```

9. Add the third part of the first page to the message modified in the previous example to make the first page full.

```
ZECB:234:20:3:4,MC2,8BIT:4::P1C=+49+4A+4B+4C+4D+4E
+4F+50+51;
```

**Additional information**

To start a new line in the text that is displayed on the MS, you have to write two # characters to that place in the text. These characters are then converted into <CR> by the MML program. This is only possible when you are using 7-bit default character set. All characters can be entered by using hexadecimal presentation.

Hexadecimal presentation means that you write the hexadecimal code for the character you want to be displayed by the ME. For 7- and 8-bit characters, the hexadecimal code is a two-figure number whereas the 16-bit characters are represented by four numbers. When using the hexadecimal presentation in the text you write all numbers forming the character in question. For example the dollar sign’s ($) hexadecimal code is ‘2’. With 7- and 8-bit characters it will be written in the text as +02 and with 16-bit characters as +0002.

Correspondingly, if you want to write a + character in the text, you write two + characters which are then converted into one + character by the MML program. This also is possible only with 7-bit characters.

If you want to remove or add characters to the middle of the text, you have to change from overstrike mode to write mode (ctrl - A).

When using 16-bit characters (UCS2), all characters are written using the hexadecimal presentation. If you put keyboard characters in the text, the rest of the text will be illegible when displayed by the ME.
Note

This command can only be used for creating and modifying message text, or inserting pages to the messages page by page. It is not possible to remove pages by using this command. If you want to change the message parameters, use the ECR command.

Execution printouts

The execution printout of command example 1 is the following:

MESSAGE IDENTIFIER : 100
MESSAGE CODE : 20
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, NORMAL
CODING GROUP : 0000
LANGUAGE : ENGLISH
REPETITION RATE : 8

MESSAGE IS STORED WITH MESSAGE INDEX 8

The execution printout of command example 3 is the following:

MESSAGE IS STORED WITH MESSAGE INDEX 7

The execution printout of command example 4 is the following:

MESSAGE IS STORED WITH MESSAGE INDEX 11

The execution printout of command example 5 is the following:

MESSAGE IDENTIFIER : 50
MESSAGE CODE : 10
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, NORMAL
CODING GROUP : 0100
ALPHABET IDENTIFIER : 16-BIT UCS2 CHARACTERS
REPETITION RATE : 4

MESSAGE IS STORED WITH MESSAGE INDEX 9

The execution printout of command example 6 is the following:

MESSAGE IS STORED WITH MESSAGE INDEX 13

The execution printout of command example 7 is the following:

MESSAGE IDENTIFIER : 234
MESSAGE CODE : 20
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, NORMAL
CODING GROUP : 1111
MESSAGE CLASS : 2
ALPHABET IDENTIFIER : 8-BIT DATA/USER-DEFINED CHARACTERS
REPETITION RATE : 15
MESSAGE IS STORED WITH MESSAGE INDEX 1

The execution printout of command example 8 is the following:

MESSAGE IS STORED WITH MESSAGE INDEX 2

The execution printout of command example 9 is the following:

MESSAGE IS STORED WITH MESSAGE INDEX 3

Semantic error messages
If an error occurs, the general semantic error messages of MML commands are output.

Execution error messages

/*** CB MESSAGE NOT DEACTIVATED ***/

The short message has to be deactivated completely before modifying.

/*** CB MESSAGE NOT EXISTENT ***/

The program has not found the short message to be modified.

/*** NOT ENOUGH SPACE FOR THE MESSAGE ***/

There is not enough space to store the short message.

/*** ILLEGAL ALPHABET IDENTIFIER CHANGE IN MODIFICATION ***/

The given alphabet identifier is different from the one used in the previous storing of this particular message. This would most likely cause the text of the short message service cell broadcast (SMSCB) message to become distorted.

/*** ILLEGAL CODING GROUP CHANGE IN MODIFICATION ***/

The given coding group is different from the original coding group. This would cause the text of this 16-bit SMSCB message to become distorted. In practise this means that the message originally with coding group 0001 has been given either coding group 0100 or 0101, or the message originally with coding group 0100 or 0101 has been given the coding group 0001.

/*** EXECUTION FAILED ***/
/*** TRY AGAIN ***/
The program cannot store the short message.
ECM MODIFY MESSAGE WITH EDITOR

Function
With the ECM command you modify the text of an existing inactive cell broadcast message.

Parameters
message index;

Syntax
ECM: <message index> ;

Parameter explanations
message index
The value range is from 1 to 8068 for BSCi/BSC2i and from 1 to 15000 for BSC3i. The message index value is used for finding the message to be edited.

The parameter is obligatory.

Examples
1. Find message with message index 15 for editing.
   
   ZECM:15;

2. Find message with message index 1 for editing.
   
   ZECM:1;

3. Find message with message index 11 for editing.
   
   ZECM:11;

Additional information
To start a new line in the text that is displayed on the MS, you have to write two # characters into the text. These characters are then converted into <CR> by the MML. This is only possible when you are using the 7-bit default character set. All characters can be entered by using hexadecimal presentation.

Hexadecimal presentation means that you write the hexadecimal code for the character that you want to be displayed by the ME. For 7- and 8-bit characters, the hexadecimal code is a two-figure number whereas the 16-bit characters are represented by four numbers. When using the
hexadecimal presentation in the text you write all numbers forming the character in question. For example, the dollar sign's ($) hexadecimal code is '2'. With 7- and 8-bit characters it is written in the text as +02 and with 16-bit characters as +0002.

Correspondingly, if you want to write a + character into the text, you write two + characters which are then converted into one + character by the MML. This is only possible when you are using the 7-bit default alphabet.

If you want to remove characters from the end of the text, you must go to the end of the text and change from overstrike mode to insert mode (ctrl - A) and remove the text by using backspace. If the insert mode is not on when you do this, the text will be overwritten with the space character (20 H) and the message will consist of the remaining text and space characters.

When using 16-bit characters (UCS2), all characters are written using the hexadecimal presentation. If you put keyboard characters in the text, the rest of the text will be illegible when displayed by ME.

**Execution printouts**

The execution printout of command example 1 is the following:

OLD MESSAGE INDEX : 15  
MESSAGE IDENTIFIER : 100  
MESSAGE CODE : 20  
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, NORMAL  
CODING GROUP : 0000  
LANGUAGE : ENGLISH  
REPETITION RATE : 16

MESSAGE IS STORED WITH MESSAGE INDEX 8

The execution printout of command example 2 is the following:

OLD MESSAGE INDEX : 1  
MESSAGE IDENTIFIER : 34  
MESSAGE CODE : 10  
GEOGRAPHICAL SCOPE : CELL WIDE, IMMEDIATE  
CODING GROUP : 0001  
ALPHABET IDENTIFIER : 16-BIT UCS2 CHARACTERS  
REPETITION RATE : 8

MESSAGE IS STORED WITH MESSAGE INDEX 10

The execution printout of command example 3 is the following:
If you reject the message the program displays the following comment:

/*** INTERRUPT ***/

The MML exits the editor automatically when the editor’s buffer is full (4185 characters). Note that the maximum length of the final message is 1395 characters. If the final message is longer than 1395, the rest of the characters are not stored:

/*** MAXIMUM LENGTH OF EDIT BUFFER HAS BEEN REACHED ***/

Semantic error messages

If an error occurs, the general semantic error messages of MML commands are output.

Execution error messages

/*** CB MESSAGE NOT DEACTIVATED ***/

The short message has to be deactivated completely before editing.

/*** CB MESSAGE NOT EXISTENT ***/

The program has not found the short message to be modified.

/*** NOT ENOUGH SPACE FOR THE MESSAGE ***/

There is not enough space to store the short message.

/*** EXECUTION FAILED ***/
/*** TRY AGAIN ***/

The program cannot store the short message.
ECR MODIFY MESSAGE PARAMETERS

Function
With the ECR command you modify the parameters of an existing inactive cell broadcast message.

Parameters
message index: new message identifier: new message code: new geographical scope: new coding group, new language identifier, new message class, new alphabet identifier: new repetition rate;

Syntax
ECR:  < message index > :
       < new message identifier > :
       < new message code > :
       < new geographical scope > :
       < new coding group > ,
       (< new language identifier > |
       < new alphabet identifier > |
       < new message class > , < new alphabet identifier >) :
       < new repetition rate > ;

Parameter explanations

message index
The value range is from 1 to 8068 for BSCi/BSC2i and from 1 to 15000 for BSC3i. The value indicates the message whose parameters are to be edited.

The parameter is obligatory.

new message identifier
The value range is from 0 to 999 for short messages of all types, and from 4096 to 4351 for cell broadcast data download to the SIM messages.

The parameter is obligatory.
new message code

The value range is from 0 to 1023. The value is used for differentiating between messages which have the same message identifier and thus share the same source and type.

The parameter is obligatory.

new geographical scope

The geographical scope indicates the geographical area over which the message code is unique as well as the display mode of the mobile.

The parameter can have the following values:

1 ... CELL WIDE, DISPLAY MODE IMMEDIATE
2 ... PLMN WIDE, DISPLAY MODE NORMAL
3 ... LOCATION AREA WIDE, DISPLAY MODE NORMAL
4 ... CELL WIDE, DISPLAY MODE NORMAL

The parameter is obligatory.

new coding group

The coding group indicates the data coding scheme used to indicate the intended handling of the message at the MS, the alphabet/coding, and the language (when applicable). The coding groups of the cell broadcast data coding scheme are defined in 3GPP TS 23.038.

If the message identifier is from 0 to 999, the parameter can have the following values:

1 ... GROUP 0000: DEFAULT ALPHABET, SELECT LANGUAGE
2 ... GROUP 0001: DEFAULT ALPHABET/UCS2 TEXT, MESSAGE PRECEDED BY LANGUAGE IDENTIFICATION
3 ... GROUP 0100: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, NO MESSAGE CLASS
4 ... GROUP 0101: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, WITH MESSAGE CLASS
5 ... GROUP 1111: 8-BIT DATA OR DEFAULT ALPHABET TEXT, MESSAGE CLASS

If the message identifier is in the range of 4096 to 4351, the parameter can have the following values:
4 ... GROUP 0101: UNCOMPRESSED 8-BIT DATA OR DEFAULT ALPHABET/UCS2 TEXT, WITH MESSAGE CLASS

5 ... GROUP 1111: 8-BIT DATA OR DEFAULT ALPHABET TEXT, MESSAGE CLASS

The parameter is obligatory.

Coding group 0000 is the recommended choice for the coding group because it is understood by all mobiles that can receive cell broadcast messages. Earlier releases' messages belong to this coding group. In this coding group, you can choose the language from a list of 13 languages, the alphabet is automatically the default 7-bit alphabet, and there are 93 characters per page in a message.

Coding group 0001 is recommended when you want to define the language of the message, but the language is not among the 13 languages defined in the coding group 0000. In this coding group, the two-letter language identifiers (which are defined in the ISO 639 standard) are written at the beginning of the message so that the first two letters are followed by \(<CR> = 0D H\). You must also choose the alphabet used in the message. You can choose either the 7-bit default alphabet or the 16-bit UCS2 characters.

Note

The language identifier used in coding group 0001 must be written in lower case letters.

If you choose the default alphabet, you can write 90 characters on the first page of the message and 93 characters on the following pages of the message. Mobiles which have software complying with ETSI GSM phase 2 standards will display only the message text, not the language identifier.

If you choose the UCS2 characters, you can write 40 characters on the first page of the message and 41 characters on the following pages of the message. Mobiles which have software complying with ETSI GSM phase 2 standards will display only the language identifier and the text is displayed as an apparently random string of characters.

Coding group 0100 is recommended when you want to send uncompressed 8-bit data or uncompressed text by using the default alphabet or UCS2 characters but you do not want to define the language used or the routing of the message in the receiving mobile. In this coding
group, the maximum number of characters per page is 93 for default alphabet, 41 for UCS2 characters, and 82 for 8-bit data. Mobiles which have software complying with ETSI GSM phase 2 standards will be able to display only texts written with the default alphabet.

_Coding group 0101_ is otherwise similar to coding group 0100 except that you can define the routing of the message in the receiving mobile. Mobiles which have software complying with ETSI GSM phase 2 standards will not be able to display messages belonging to this group.

_Coding group 1111_ is recommended when you want to send 8-bit data or messages written with the default alphabet and you do not want to define the language used. In this coding group, you can also define the routing of the message in the receiving mobile or leave the routing open. Mobiles which have software complying with ETSI GSM phase 2 standards will be able to display messages belonging to this group.

Chinese characters belong to the UCS2 character set. To be able to write, for example, Chinese characters you should use coding groups 0001, 0100, or 0101.

**new language identifier**

<table>
<thead>
<tr>
<th>Code</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER</td>
<td>German</td>
</tr>
<tr>
<td>ENG</td>
<td>English</td>
</tr>
<tr>
<td>ITA</td>
<td>Italian</td>
</tr>
<tr>
<td>FRE</td>
<td>French</td>
</tr>
<tr>
<td>SPA</td>
<td>Spanish</td>
</tr>
<tr>
<td>DUT</td>
<td>Dutch</td>
</tr>
<tr>
<td>SWE</td>
<td>Swedish</td>
</tr>
<tr>
<td>DAN</td>
<td>Danish</td>
</tr>
<tr>
<td>POR</td>
<td>Portuguese</td>
</tr>
<tr>
<td>FIN</td>
<td>Finnish</td>
</tr>
<tr>
<td>NOR</td>
<td>Norwegian</td>
</tr>
<tr>
<td>GRE</td>
<td>Greek</td>
</tr>
<tr>
<td>TUR</td>
<td>Turkish</td>
</tr>
</tbody>
</table>

The language identifier indicates the language of the short message.

If the coding group is 0000, the parameter is obligatory. Otherwise this parameter will not be asked.

**new message class**
The message class indicates where the mobile equipment (ME) will route the message. The ME user can override the defined default value of the routing.

If the message identifier is from 0 to 999, the parameter can have the following values:

- **MC0** ... CLASS 0, DIRECT DISPLAY BY MS, NO MEMORY NEEDED
- **MC1** ... CLASS 1, DIRECT DISPLAY BY MS, MEMORY NEEDED
- **MC2** ... CLASS 2, SIM-SPECIFIC MESSAGE
- **MC3** ... CLASS 3, TE-SPECIFIC MESSAGE

In the above, the qualifier 'no memory needed' means that the MS will not store the received message in the ME or SIM. The qualifier 'memory needed', in contrast, means that the MS will store the received message in the ME or SIM.

If the message identifier is in the range of 4096 to 4351, the parameter can only have the following value:

- **MC2** ... CLASS 2, SIM-SPECIFIC MESSAGE

If the coding group is 0101 or 1111, the parameter is obligatory. Otherwise this parameter will not be asked.

**new alphabet identifier**

The alphabet identifier indicates the character length used in the message coding. The default alphabet has 7 bits per character and it is defined in 3GPP TS 23.038.

If the message identifier is in the range of 4096 to 4351 and the coding group is 1111, the parameter can only have the following value:

- **8BIT** ... DATA

If the message identifier is in the range of 4096 to 4351 and the coding group is 0101, the parameter can have the following values:

- **8BIT** ... DATA
- **16BIT** ... DATA

If the message identifier is from 0 to 999, the following conditions apply:

With coding group 0001 the parameter can have the following values:

- **7BIT** ... DEFAULT ALPHABET
- **16BIT** ... UCS2
With coding groups 0100 or 0101 the parameter can have the following values:

7BIT ... DEFAULT ALPHABET
8BIT ... DATA
16BIT ... UCS2

With coding group 1111 the parameter can have the following values:

7BIT ... DEFAULT ALPHABET
8BIT ... DATA

If the coding group is any of the above-mentioned coding groups, the parameter is obligatory. With coding group 0000 this parameter will not be asked.

new repetition rate

The parameter indicates the repetition rate of the message. If the DRX option is in your software build, the value ranges from 1 to 9 and the values correspond to repetition rates of 4, 8, 15, 30, 60, 120, 241, 481, and 963 seconds (time rounded to the nearest second). Otherwise the value ranges from 0 to 9 and the values correspond to the repetition rates of 2, 4, 8, 15, 30, 60, 120, 241, 481, and 963 seconds.

The parameter is obligatory.

Examples

1. Modify message with message index 11 into a message which has message identifier 34, message code 10, and whose geographical scope is location area wide, display mode is normal, coding group is 0001, and the used alphabet is UCS2 16-bit characters. The repetition rate of the message is 15.

ZECR:11:34:10:3:2,16BIT:3;

2. Modify message with message index 8 into a message which has message identifier 999, message code 15, and whose geographical scope is cell wide, display mode is normal, coding group is 0000, and the language is Finnish. The repetition rate of the message is 8.

ZECR:8:999:15:4:1,FIN:2;;

Additional information

There are some limitations to parameter modification. The program will NOT implement these limitations but you should be aware of them.

Do not change the alphabet used for the message. If you change the alphabet, the text will either disappear or become totally unreadable.
Changing the coding group of the message is also a sensitive operation. You should first check if the new coding group will support the alphabet used in the message and if it does, you should be extra careful if the alphabet used is UCS2 (16 bit). This is because the text will disappear if you change the coding group from 0100 or 0101 to 0001, and vice versa. With UCS2, the only 'allowed' coding group changes are from 0100 to 0101 and from 0101 to 0100.

**Execution printouts**

The execution printout of command example 1 is the following:

THE MESSAGE IS STORED WITH A NEW MESSAGE INDEX 15

The parameters of the message are stored completely.

**Semantic error messages**

If an error occurs, the general semantic error messages of MML commands are output.

**Execution error messages**

/*** CB MESSAGE NOT DEACTIVATED ***/

The short message has to be deactivated completely before editing.

/*** CB MESSAGE NOT EXISTENT ***/

The program has not found the short message to be modified.

/*** NOT ENOUGH SPACE FOR THE MESSAGE ***/

There is not enough space to store the short message.

/*** ILLEGAL ALPHABET IDENTIFIER CHANGE IN MODIFICATION ***/

The given alphabet identifier is different from the one used in the previous storing of this particular message and would most likely cause the text of the SMSCB (short message service cell broadcast) message to become distorted.

/*** ILLEGAL CODING GROUP CHANGE IN MODIFICATION ***/

The given coding group is different from the original coding group and would cause the text of this 16-bit SMSCB message to become distorted. In other words, the message originally with coding group 0001 has been given either coding group 0100 or 0101, or the message originally with coding group 0100 or 0101 has been given coding group 0001.
/** EXECUTION FAILED **/
/*** TRY AGAIN **/

The program cannot store the short message.
ECS ACTIVATE MESSAGE

Function
With the ECS command you activate an existing message for broadcasting within a certain BTS or BTSs.

Parameters
message index: BTS identification, BTS name;

Syntax
ESC: < message index > :

( BTS = < BTS identification >...| < all > | NAME= < BTS name >... ) ;

Parameter explanations

message index

The value range is from 1 to 8068 for BSCi/BSC2i and from 1 to 15000 for BSC3i. The value is used for finding the message to be activated.

The parameter is obligatory.

BTS identification

BTS = decimal

The value indicates the BTSs that are to be activated for the message. Possible values range from 1 to 2000 (with maximum configuration). Value 0 activates all BTSs for the message. The characters & and && can be used.

If the parameter NAME is given, the parameter BTS cannot be specified.

BTS name

NAME = text string
The name identifies the base transceiver station. The name can contain 1 - 15 characters. Several names can be given at the same time by using the character &.

If the parameter BTS is given, the parameter NAME cannot be specified.

**Examples**

1. Activate message with message index 12 for BTSs CENTRUM1 and LONDON1.

   \[ \text{ZECS:12:NAME=CENTRUM1\&LONDON1;} \]

2. Activate message with message index 1045 for all BTSs.

   \[ \text{ZECS:1045:BTS=0;} \]

3. Activate message with message index 15 for BTSs 40, 41, 42, 43, 44, 45, and 50.

   \[ \text{ZECS:15:BTS=40\&45\&50;} \]

**Additional information**

If the DRX option is switched on, the schedule messages consume a part of the capacity of the cell broadcast channel (CBCH). For that reason, certain combinations of the respective repetition rates of the activated cell broadcast messages are no longer possible.

The activation will become valid in the next schedule period and this will cause a one-minute delay at the maximum. If several activations to the same BTS take place during the same delay time, all activations will become valid at the same time.

---

**Note**

In order to have the cell broadcast messages broadcast, the cell broadcast channel must be determined with the ER command class (see Transceiver Handling) and the short message service cell broadcast (SMSCB) facility switched on with the EQ command class (see Base Transceiver Station Handling in BSC).

---

**Execution printouts**

If no BTSs have been created, the execution printout of command example 2 is the following:

```
*** NO BTS CREATED ***
COMMAND EXECUTED
```

If not all the possible BTSs have been created, the execution printout of command example 2 is the following:
MESSAGE NO. 1045 ACTIVATION

BTS NO.  BTS NAME          STATE
BTS- 1  MAKKYL A1          OK
BTS- 2  LEPPAVAARA1        MESSAGE ALREADY ACTIVATED
BTS- 3  LEPPAVAARA2        CELL BROADCAST NOT SUPPORTED
BTS- 10 PITAJANMAKI        OK
BTS- 11 HELSINKI2          OK
BTS- 12 HELSINKI13         MESSAGE ALREADY ACTIVATED
BTS- 13 HELSINKI15         MESSAGE ALREADY ACTIVATED
BTS- 14 HELSINKI16         OK
BTS- 15 HELSINKI17         OK
BTS- 16 HELSINKI18         CELL BROADCAST NOT OPERATIONAL
BTS- 17 HELSINKI19         CELL BROADCAST NOT OPERATIONAL
BTS- 40 MAKKYL A           CELL BROADCAST NOT SUPPORTED
BTS- 41 LEPPAVAARA         MESSAGE ALREADY ACTIVATED
BTS- 42 PITAJANMAKI        TOTAL LOAD OF BTS EXCEEDS 100%
BTS- 44 HELSINKI11         ERROR IN ACTIVATION
BTS- 45 HELSINKI14         NO SYSTEM BUFFER AVAILABLE
BTS- 46 MAKKYL A2          MESSAGE REFERENCE IS ALREADY USED
BTS- 47 MAKKYL A3          MESSAGE REFERENCE IS ALREADY USED
BTS- 48 MAKKYL A4          MESSAGE ALREADY ACTIVATED
BTS- 49 MAKKYL A5          OK
BTS- 50 HELSINKI6          ACTIVE CB MESSAGE CAPACITY PER BTS EXCEEDED

*** REST OF THE BTS NOT CREATED ***

COMMAND EXECUTED

The text CELL BROADCAST NOT OPERATIONAL means that the BTS in question cannot send any cell broadcast messages due to a blocked CBCH TRX.

The text CELL BROADCAST NOT SUPPORTED means that the cell broadcast facility is not switched on in the BTS in question.

The text MESSAGE REFERENCE IS ALREADY USED means that there is already in the BSC memory an active message for this particular BTS having the same message identifier, message code, and geographical scope.

The execution printout of command example 3 is the following:

MESSAGE NO.  15 ACTIVATION

BTS NO.  BTS NAME          STATE
BTS- 40 MAKKYL A            OK
BTS- 41 LEPPAVAARA          MESSAGE ALREADY ACTIVATED
BTS- 42                        BTS NOT EXISTENT
BTS- 43 PITAJANMAKI         TOTAL LOAD OF BTS EXCEEDS 100%
BTS- 44 HELSINKI11          ERROR IN ACTIVATION
BTS- 45 HELSINKI14          NO SYSTEM BUFFER AVAILABLE
The STATE column shows the acknowledgement choices.

**Semantic error messages**
If an error occurs, the general semantic error messages of MML commands are output.

**Execution error messages**

```*/** CB MESSAGE NOT EXISTENT ***/```

The program has not found the message to be activated.

See also “Execution printouts”.

BTS- 50 HELSINKI6
ACTIVE CB MESSAGE CAPACITY PER BTS EXCEEDED

COMMAND EXECUTED
ECE DEACTIVATE MESSAGE

Function
With the ECE command you deactivate an existing message. After deactivation, the message is no longer broadcast within a BTS or BTSs.

Parameters
message index: BTS identification, BTS name;

Syntax
ECE: <message index> : 
{ BTS = <BTS identification> ... | <all> | name= <BTS name> ... } ;

Parameter explanations
message index
The value range is from 1 to 8068 for BSCi/BSC2i and from 1 to 15000 for BSC3i. The value is used for finding the message to be deactivated.

The parameter is obligatory.

BTS identification
BTS = decimal

The value indicates the BTSs where the message is to be deactivated. Possible values range from 1 to 2000 (with maximum configuration). Value 0 deactivates the message in all BTSs. The characters & and && can be used.

If the parameter NAME is given, the parameter BTS cannot be specified.

BTS name
NAME = text string
The name identifies the base transceiver station. The name can contain 1 - 15 characters. Several names can be given at the same time by using the character &.

If the parameter BTS is given, the parameter NAME cannot be specified.

### Examples

1. Deactivate message with message index 12 in BTS HELSINKI1 and KILO.
   
   ZECE:12:NAME=HELSINKI1&KILO;

2. Deactivate message with message index 1045 in all BTSs.
   
   ZECE:1045:BTS=0;

3. Deactivate message with message index 530 in BTSs 40, 41, 42, 45, and 50.
   
   ZECE:530:BTS=40&&42&45&50;

### Additional information

The deactivation will become valid in the next schedule period and this will cause a one-minute delay at the maximum. If several deactivations to the same BTS take place during the same delay time, all deactivations will become valid at the same time.

### Execution printouts

If no BTSs have been created, the execution printout of command example 2 is the following:

*** NO BTS CREATED ***
COMMAND EXECUTED

If not all the possible BTSs have been created, the execution printout of command example 2 is the following:

```
MESSAGE NO. 1045 DEACTIVATION

BTS NO.  BTS NAME   STATE
BTS-   1  MAKKYLAM  OK
BTS-   2  LEPPAVAARA1 MESSAGE ALREADY DEACTIVATED
BTS-   3  LEPPAVAARA2 OK
BTS-  10  PITAJANMAKI OK
BTS-  11  HELSINKI2 OK
BTS-  12  HELSINKI3 MESSAGE ALREADY DEACTIVATED
BTS-  13  HELSINKI5 MESSAGE ALREADY DEACTIVATED
BTS-  14  HELSINKI6 OK
BTS-  15  HELSINKI7 OK
BTS-  16  HELSINKI8 OK
BTS-  17  HELSINKI9 OK
BTS-  40  MAKKYLAM  OK
BTS-  41  LEPPAVAARA MESSAGE ALREADY DEACTIVATED
BTS-  43  PITAJANMAKI OK
BTS-  44  HELSINKI1 OK
```
The execution printout of command example 3 is the following:

<table>
<thead>
<tr>
<th>MESSAGE NO.</th>
<th>530 DEACTIVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTS NO.</td>
<td>BTS NAME</td>
</tr>
<tr>
<td>BTS- 45</td>
<td>HELSINKI4</td>
</tr>
<tr>
<td>BTS- 46</td>
<td>MAKKYLA2</td>
</tr>
<tr>
<td>BTS- 47</td>
<td>MAKKYLA3</td>
</tr>
<tr>
<td>BTS- 48</td>
<td>MAKKYLA4</td>
</tr>
<tr>
<td>BTS- 49</td>
<td>MAKKYLA5</td>
</tr>
<tr>
<td>BTS- 50</td>
<td>HELSINKI6</td>
</tr>
</tbody>
</table>

COMMAND EXECUTED

The STATE column shows the acknowledgement choices.

Semantic error messages

If an error occurs, the general semantic error messages of MML commands are used.

Execution error messages

/*** CB MESSAGE NOT EXISTENT ***/

The program has not found the message to be deactivated.

See also “Execution printouts”.
ECC DEACTIVATE BTS(S)

Function
With the ECC command you deactivate a BTS or BTSs. All active messages within that particular BTS or BTSs are deactivated.

Parameters
BTS identification, BTS name;

Syntax
ECC: ( BTS = < BTS identification > ... | < all > | NAME = < BTS name > ... ) ;

Parameter explanations

*BTS identification*

BTS = decimal

The value identifies the BTSs that are to be deactivated for short messages. Possible values range from 1 to 2000 (with maximum configuration). Value 0 deactivates all messages within all BTSs. The characters & and && can be used.

If the parameter NAME is given, the parameter BTS cannot be specified.

*BTS name*

NAME = text string

The name identifies the base transceiver station. The name can contain 1 to 15 characters. Several names can be given at the same time by using the character &.

If the parameter BTS is given, the parameter NAME cannot be specified.

Examples

1. Deactivate all messages within BTS KILO.

    ZECC;NAME=KILO;
2. Deactivate all messages within BTSs 17, 18, 19, 20, and 21.

ZECC:BTS=17&&21;

3. Deactivate all messages in all BTSs.

ZECC:BTS=0;

Additional information

The message is used for deactivating a BTS or BTSs. This means that all active messages within that particular BTS or BTSs are deactivated. The deactivation will become valid in the next schedule period and this will cause a one-minute delay at the maximum.

Execution printouts

The execution printout of command example 2 is the following:

BTS DEACTIVATION:

<table>
<thead>
<tr>
<th>BTS NO.</th>
<th>BTS NAME</th>
<th>STATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTS-17</td>
<td>ESP001</td>
<td>OK</td>
</tr>
<tr>
<td>BTS-18</td>
<td>ESP002</td>
<td>BTS ALREADY DEACTIVATED</td>
</tr>
<tr>
<td>BTS-19</td>
<td>ESP003</td>
<td>BTS NOT EXISTENT</td>
</tr>
<tr>
<td>BTS-20</td>
<td>ESP004</td>
<td>NO SYSTEM BUFFER AVAILABLE</td>
</tr>
<tr>
<td>BTS-21</td>
<td>ESP005</td>
<td>ERROR IN DEACTIVATION</td>
</tr>
</tbody>
</table>

COMMAND EXECUTED

The STATE column shows the acknowledgement choices.

Semantic error messages

If an error occurs, the general semantic error messages of MML commands are used.

Execution error messages

See “Execution printouts”.
ECD DELETE MESSAGE(S)

Function
With the ECD command you delete an inactive message or messages.

Parameters
message index;

Syntax
ECD: ( < message index > ... | < all > ) ;

Parameter explanations
message index
The value range is from 0 to 8068 for BSCi/BSC2i and from 0 to 15000 for BSC3i. The message index value is used for finding a message to be deleted. Value 0 deletes all deactivated messages within the BSC.

The parameter is obligatory.

Examples
1. Delete message with message index 1045.
   ZECD:1045;
2. Delete messages with message indexes 401, 454, 455, and 456.
   ZECD:401&454&&456;
3. Delete all deactivated messages.
   ZECD:0;

Additional information
Deletion is not allowed if the message is activated.

Execution printouts
The execution printout of command example 2 is the following:

MESSAGE DELETE:

MESSAGE INDEX  STATE
401               OK
COMMAND EXECUTED

The STATE column shows the acknowledgement choices.

**Semantic error messages**
If an error occurs, the general semantic error messages of MML commands are output.

**Execution error messages**
See “Execution printouts”.
ECP DISPLAY MESSAGE(S)

Function
With the ECP command you display a message or messages on the output device.

Parameters
BTS identification, BTS name, message index: display format;

Syntax
ECP: [[ MI = < message index > ... | 
< all > def ] | 
[ BTS = < BTS identification > | 
NAME = < BTS name > ]] :

[ < SHORT > def | 
[ < LONG > | 
< HEX > ] ] ;

Parameter explanations

message index

MI = decimal

The value is used for finding the message to be displayed. The value range is from 0 to 8068 for BSCi/BSC2i and from 0 to 15000 for BSC3i. The default value 0 displays all messages within the BSC.

If the parameter NAME or BTS is given, the parameter MI cannot be given.

BTS identification

BTS = decimal

The value indicates the BTS whose active short messages are to be displayed. Possible values range from 1 to 2000 (with maximum configuration).

If the parameter MI or NAME is given, the parameter BTS cannot be given.

BTS name
NAME = text string

The name identifies the base transceiver station. The name can contain 1 to 15 characters.

If the parameter MI or BTS is given, the parameter NAME cannot be given.

display format

| SHORT  | Displays information on messages in a short format.          |
| LONG   | Displays information on messages in a long format.           |
| HEX    | Displays information on messages in a hexadecimal format.    |

The default value is SHORT.

If the text is written with 8-bit or 16-bit characters, the message text is always displayed as hexadecimal code.

Examples

1. Display messages 12 and 18 in a short format.
   
   ```
   ZECP:MI=12&18;
   ```

2. Display all active messages within BTS 49 in a long format.
   
   ```
   ZECP:BTS=49:LONG;
   ```

3. Display all active messages within BTS HELSINKI1 in a long format.
   
   ```
   ZECP:NAME=HELSINKI1:LONG;
   ```

4. Display message 18 in a hexadecimal format.
   
   ```
   ZECP:MI=18:HEX;
   ```

5. Display all messages in a short format.
   
   ```
   ZECP;
   ```

Execution printouts

The unknown characters are converted into full stops and all characters on the pages are displayed. If the alphabet is not the default 7-bit alphabet, all characters in the message are displayed in hexadecimal format.

The abbreviations used in all the short format execution printout headers are the following:
NO OF BC is an abbreviation that is only used in the short format of the execution printout header when all active messages in the BTS are displayed. It indicates the number of completed broadcasts, in other words, the number of times the message has been sent to the air.

The execution printout of the commands ZECP;, ZECP:MI=0:SHORT;, and ZECP:MI=0; is the following:

ALL MESSAGES WITHIN THE BSC

<table>
<thead>
<tr>
<th>MSG INDEX</th>
<th>MSG CODE</th>
<th>MESSAGE</th>
<th>REP RATE</th>
<th>GEOGRAPHICAL CODING</th>
<th>LANG/ALPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>652</td>
<td>260</td>
<td>CMD</td>
<td>0000</td>
<td>DAN</td>
</tr>
<tr>
<td>2</td>
<td>115</td>
<td>574</td>
<td>CMD</td>
<td>0001</td>
<td>7BIT</td>
</tr>
<tr>
<td>3</td>
<td>403</td>
<td>4</td>
<td>CMD</td>
<td>0100</td>
<td>7BIT</td>
</tr>
<tr>
<td>4</td>
<td>401</td>
<td>716</td>
<td>03 11 22 33 44 55</td>
<td>963 LA WIDE, NORM</td>
<td>8BIT</td>
</tr>
<tr>
<td>5</td>
<td>900</td>
<td>927</td>
<td>05 11 22 33 44 55</td>
<td>963 CELL WIDE, NORM</td>
<td>8BIT</td>
</tr>
<tr>
<td>6</td>
<td>169</td>
<td>1022</td>
<td>zh 0211 2233 4455</td>
<td>4 CELL WIDE, IMM</td>
<td>16BIT</td>
</tr>
<tr>
<td>7</td>
<td>45</td>
<td>523</td>
<td>0D 0D 0D 0D 0D 0D</td>
<td>4 CELL WIDE, IMM</td>
<td>8BIT</td>
</tr>
<tr>
<td>8</td>
<td>99</td>
<td>146</td>
<td>041A 10A0 10B0 10C0</td>
<td>30 CELL WIDE, IMM</td>
<td>16BIT</td>
</tr>
</tbody>
</table>

COMMAND EXECUTED

If no cell broadcast messages are stored in the BSC memory, the execution printout of the commands ZECP;, ZECP:MI=0:SHORT;, and ZECP:MI=0; is the following:

ALL MESSAGES WITHIN THE BSC

<table>
<thead>
<tr>
<th>MSG INDEX</th>
<th>MSG CODE</th>
<th>MESSAGE</th>
<th>REP RATE</th>
<th>GEOGRAPHICAL CODING</th>
<th>LANG/ALPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO CELL BROADCAST MESSAGES EXIST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMAND EXECUTED

The execution printout of the command ZECP:MI=0:LONG; is the following:

ALL MESSAGES WITHIN THE BSC

<table>
<thead>
<tr>
<th>MESSAGE INDEX</th>
<th>MESSAGE IDENTIFIER</th>
<th>MESSAGE CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>652</td>
<td>260</td>
</tr>
</tbody>
</table>
GEOGRAPHICAL SCOPE : CELL WIDE, IMMEDIATE
CODING GROUP : 0000
LANGUAGE : DANISH
REPETITION RATE : 4

This short message is a test message............................................

MESSAGE INDEX : 2
MESSAGE IDENTIFIER : 115
MESSAGE CODE : 574
GEOGRAPHICAL SCOPE : PLMN WIDE, NORMAL
CODING GROUP : 0001
ALPHABET IDENTIFIER : 7-BIT DEFAULT ALPHABET
REPETITION RATE : 4

This short message is a test message with the first page empty except for the language info...

MESSAGE INDEX : 4
MESSAGE IDENTIFIER : 403
MESSAGE CODE : 41
GEOGRAPHICAL SCOPE : CELL WIDE, IMMEDIATE
CODING GROUP : 0101
ALPHABET IDENTIFIER : 7-BIT DEFAULT ALPHABET
REPETITION RATE : 4

This short message is a test message............................................

MESSAGE INDEX : 5
MESSAGE IDENTIFIER : 401
MESSAGE CODE : 716
GEOGRAPHICAL SCOPE : LOCATION AREA WIDE, IMMEDIATE
CODING GROUP : 0100
ALPHABET IDENTIFIER : 8-BIT DATA/USER-DEFINED CHARACTERS
REPETITION RATE : 4

03 11 22 33 44 55 BB CC DD EE FF 12 23 34 55 66 77 88 99 AA BB CC DD EE FF AE
45 54 28 7D EE 43 42 76 55 C0 3B 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D
0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D
0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D
0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D

MESSAGE INDEX : 6
MESSAGE IDENTIFIER : 900
MESSAGE CODE : 927
GEOGRAPHICAL SCOPE : CELL WIDE, NORMAL
CODING GROUP : 1111
MESSAGE CLASS : 3
ALPHABET IDENTIFIER : 8-BIT DATA/USER-DEFINED CHARACTERS
REPETITION RATE : 963

05 11 22 33 44 55 BB CC DD EE FF 12 23 34 55 66 77 88 99 AA BB CC DD EE FF 0D
0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D

The execution printout of the command `ZECP:MI=1&11:HEX;` is the following:

```
DN9813172  Issue 14-0 en  29/02/2008
COPYRIGHT 2006–2008 Nokia Siemens Networks

041A 10A0 10B0 10C0 10D0 10E0 10F0 20A0 20B0 20C0 20D0 20E0 20F0 30A0 30B0
30C0 30D0 30E0 30F0 40A0 40B0 40C0 40D0 40E0 40F0 50A0 50B0 50C0 50D0 50E0
50F0 60A0 60B0 60C0 60D0 60E0 60F0 70A0 70B0 70C0 70D0 70E0 70F0 80A0 80B0
80C0 80D0 80E0 80F0 90A0 90B0 90C0 90D0 90E0 90F0 A0A0 A0B0 A0C0 A0D0 A0E0
A0F0 B0A0 B0B0 B0C0 B0D0 B0E0 B0F0 C0A0 C0B0 C0C0 C0D0 C0E0 C0F0 D0A0 D0B0
D0C0 D0E0 D0F0 E0A0 E0B0 E0C0 E0D0 E0E0 E0F0 F0A0 F0B0 F0C0 F0D0 F0E0 F0F0
00A0 00B0 00C0 00D0 00E0 00F0 0100 0120 0130 0140 0150 0160 0170 0180 0190
1010 1020 1030 1040 1050 1060 1070 1080 1090 2010 2020 2030 2040 2050 2060
2070 2080 2090 3010 3020 3030 3040 3050 3060 3070 3080 3090 4010 4020 4030
4040 4050 4060 4070 4080 4090 5010 5020 5030 5040 5050 5060 5070 5080 5090
000D 000D 000D 000D 000D 000D 000D 000D 000D 000D 000D 000D 000D 000D 000D
```

COMMAND EXECUTED

CERTAIN MESSAGE(S) WITHIN THE BSC

MESSAGE INDEX: 1
MESSAGE IDENTIFIER: 652
MESSAGE CODE: 260
GEOGRAPHICAL SCOPE: CELL WIDE, IMMEDIATE
CODING GROUP: 0000
LANGUAGE: DANISH
REPETITION RATE: 4

00000000 54 68 69 73 20 73 68 6F 72 74 20 6D 65 73 73 61 This short messa
00000010 67 65 20 69 73 20 61 20 74 65 73 74 20 6D 65 73 ge is a test mes
00000020 73 61 67 65 2E OD 0D 0D 0D 0D 0D 0D 0D 0D 0D sage............
00000030 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D ................
00000040 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D ................
00000050 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D ...............

MESSAGE INDEX: 11
MESSAGE IDENTIFIER: 99
MESSAGE CODE: 146
GEOGRAPHICAL SCOPE: CELL WIDE, NORMAL
CODING GROUP: 0101
MESSAGE CLASS: 1
ALPHABET IDENTIFIER: 16-BIT UCS2 CHARACTERS
REPETITION RATE: 30

00000000 04 1A 10 A0 10 B0 10 C0 10 D0 10 E0 10 F0 20 A0 .................
00000010 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D .................
00000020 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .................
00000030 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .................
00000040 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D 0D .................
00000050 70 D0
00000052 70 E0 70 F0 80 A0 80 B0 80 C0 80 D0 80 E0 80 F0 .p.p.............
00000062 90 A0 90 B0 90 C0 90 D0 90 E0 90 F0 A0 A0 A0 B0 .................
00000072 A0 C0 A0 D0 A0 E0 A0 F0 B0 A0 B0 B0 B0 C0 B0 D0 .................
00000082 B0 E0 B0 F0 C0 A0 C0 B0 C0 C0 D0 C0 E0 C0 F0 ..................
00000092 D0 A0 D0 B0 D0 C0 D0 E0 D0 F0 E0 A0 E0 B0 E0 C0 ..................
000000A2 E0 D0
000000A4 E0 E0 E0 F0 F0 F0 A0 F0 B0 F0 C0 F0 D0 F0 E0 F0 F0 .............
000000B4 00 A0 00 B0 00 C0 00 D0 00 E0 00 F0 00 10 00 20 ..................
000000C4 00 30 00 40 00 50 00 60 00 70 00 80 00 90 10 10 .p.p................
000000D4 10 20 10 30 10 40 10 50 10 60 10 70 10 80 10 90 .p.p................
000000E4 20 10 20 20 20 20 20 20 20 20 20 20 20 20 20 20 .0 0 P p ....
000000F4 20 90 ..................
000000F6 30 10 30 20 30 30 30 30 30 30 30 30 30 30 30 30 0.0 000800'0p0.
00000106 30 90 40 10 40 20 40 30 40 40 40 40 40 40 40 40 0.8 .8 8880888 Pp
00000116 40 80 40 10 90 50 10 50 20 50 30 50 40 50 50 50 50 50 60 .8 .8 .P P P000000
00000126 50 70 50 80 50 90 50 00 00 00 00 00 00 00 00 00 00 00 00 00 0000
00000136 00 0D 00 0D 00 0D 00 0D 00 0D 00 0D 00 0D 00 0D 00 0D 00 0D 00 0D 00 ...............
00000146 00 0D

COMMAND EXECUTED

The execution printout of the commands ZECP:MI=4:SHORT;, and ZECP:MI=4; is the following:
CERTAIN MESSAGE(S) WITHIN THE BSC

<table>
<thead>
<tr>
<th>MSG INDEX</th>
<th>ID CODE INFORMATION</th>
<th>MESSAGE</th>
<th>REP</th>
<th>GEOGRAPHICAL</th>
<th>CODING M</th>
<th>LANG/INDEX ID CODE INFORMATION</th>
<th>RATE SCOPE</th>
<th>GROUP</th>
<th>C ALPH</th>
<th>INFORMATION RATE SCOPE GROUP C ALPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>403</td>
<td>41</td>
<td>This short message</td>
<td>4 CELL WIDE, IMM 0100</td>
<td>- 7BIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMAND EXECUTED

The execution printout of the command ZECP:MI=4:LONG; is the following:

CERTAIN MESSAGE(S) WITHIN THE BSC

MESSAGE INDEX : 4
MESSAGE IDENTIFIER : 403
MESSAGE CODE : 41
GEOGRAPHICAL SCOPE : CELL WIDE, IMMEDIATE
CODING GROUP : 0101
ALPHABET IDENTIFIER : 7-BIT DEFAULT ALPHABET
REPETITION RATE : 4

This short message is a test message.............................................

COMMAND EXECUTED

The execution printout of the commands ZECP:BTS=2; and ZECP: BTS=2:SHORT; is the following:

ALL ACTIVE MESSAGES WITHIN THE BTS-002 ESPOO2

<table>
<thead>
<tr>
<th>MSG INDEX</th>
<th>ID CODE INFORMATION</th>
<th>MESSAGE</th>
<th>REP</th>
<th>GEOGRAPHICAL</th>
<th>CODING M</th>
<th>LANG/</th>
<th>NO OF</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>900</td>
<td>927</td>
<td>05 11 22 33 44 55</td>
<td>963 CELL WIDE, NORM 1111</td>
<td>3 8BIT 26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>169</td>
<td>1022</td>
<td>zh 0211 2233 4455</td>
<td>4 CELL WIDE, IMM 0001</td>
<td>- 16BIT 20014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>99</td>
<td>146</td>
<td>041A 10A0 10B0 10C0</td>
<td>30 CELL WIDE, IMM 0101</td>
<td>1 16BIT 115</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMMAND EXECUTED

The execution printout of the command ZECP:NAME=ESPOO2:LONG; is the following:

ALL ACTIVE MESSAGES WITHIN THE BTS-002 ESPOO2

MESSAGE INDEX : 6
MESSAGE IDENTIFIER : 900
MESSAGE CODE : 927
GEOGRAPHICAL SCOPE : CELL WIDE, NORMAL
CODING GROUP : 1111
MESSAGE CLASS : 3
ALPHABET IDENTIFIER : 8-BIT DATA/USER-DEFINED CHARACTERS
REPETITION RATE : 963
If there are no active cell broadcast messages in a certain BTS:

ALL ACTIVE MESSAGES WITHIN THE BTS-002 ESP002

NO ACTIVE MESSAGES WITHIN THE BTS

COMMAND EXECUTED
Semantic error messages
If an error occurs, the general semantic error messages of MML commands are output.

Execution error messages

/*** CB MESSAGE NO.4 NOT EXISTENT ***/

The cell broadcast message does not exist.

/*** EXECUTION FAILED ***/
/*** TRY AGAIN ***/

The program cannot display the short message.

/*** BTS NOT EXISTENT ***/

The cell does not exist.
ECL DISPLAY BTS WORK LOAD

Function
With the ECL command you display the workload of a BTS or BTSs.

Parameters
BTS identification, BTS name;

Syntax
ECL: [ BTS = < BTS identification > ... | < all > def | NAME= < BTS name > ... ] ;

Parameter explanations

BTS identification

BTS = decimal

The value indicates the BTSs whose workload is to be displayed. Possible values range from 1 to 2000 (with maximum configuration). The default value 0 displays workloads of all BTSs. The characters & and && can be used.

If the parameter NAME is given, the parameter BTS cannot be given.

BTS name

NAME = text string

The name identifies the base transceiver station. The name can contain 1 to 15 characters. Several names can be given at the same time by using the character &.

If the parameter BTS is given, the parameter NAME cannot be given.

Examples

1. Display the workload of BTS HELSINKI1.

   ZECL:NAME=HELSEINKI1;
2. Display the workload of BTSs 91, 2, and 5.

```
ZECL: BTS=91&2&5;
```

3. Display the workload of all BTSs.

```
ZECL;
```

**Execution printouts**

The execution printout of command example 2 is the following:

```
WORK LOAD OF BTS(S)

<table>
<thead>
<tr>
<th>BTS NO.</th>
<th>BTS NAME</th>
<th>WORK LOAD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTS-1</td>
<td>ROVANIEMI</td>
<td>50</td>
</tr>
<tr>
<td>BTS-2</td>
<td>OULUL1</td>
<td>100</td>
</tr>
<tr>
<td>BTS-5</td>
<td></td>
<td>BTS NOT EXISTENT</td>
</tr>
</tbody>
</table>

COMMAND EXECUTED
```

If no BTSs have been created, the execution printout of command example 3 is the following:

```
*** ALL BTS NOT EXISTENT ***
COMMAND EXECUTED
```

If not all the possible BTSs have been created, the execution printout of command example 3 is the following:

```
WORK LOAD OF BTS(S)

<table>
<thead>
<tr>
<th>BTS NO.</th>
<th>BTS NAME</th>
<th>WORK LOAD (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTS-1</td>
<td>MAKKyla1</td>
<td>25</td>
</tr>
<tr>
<td>BTS-2</td>
<td>OULU</td>
<td>100</td>
</tr>
<tr>
<td>BTS-3</td>
<td>LEPPAVAARA2</td>
<td>90</td>
</tr>
<tr>
<td>BTS-10</td>
<td>PITAJANMAKI</td>
<td>74</td>
</tr>
<tr>
<td>BTS-11</td>
<td>HELSINKI2</td>
<td>12</td>
</tr>
<tr>
<td>BTS-12</td>
<td>HELSINKI3</td>
<td>00</td>
</tr>
<tr>
<td>BTS-13</td>
<td>HELSINKI5</td>
<td>00</td>
</tr>
<tr>
<td>BTS-14</td>
<td>HELSINKI6</td>
<td>10</td>
</tr>
<tr>
<td>BTS-15</td>
<td>HELSINKI7</td>
<td>07</td>
</tr>
<tr>
<td>BTS-16</td>
<td>HELSINKI8</td>
<td>30</td>
</tr>
<tr>
<td>BTS-17</td>
<td>HELSINKI9</td>
<td>38</td>
</tr>
<tr>
<td>BTS-40</td>
<td>MAKKyla</td>
<td>100</td>
</tr>
<tr>
<td>BTS-41</td>
<td>LEPPAVAARA</td>
<td>98</td>
</tr>
<tr>
<td>BTS-43</td>
<td>PITAJANMAKI</td>
<td>00</td>
</tr>
<tr>
<td>BTS-44</td>
<td>HELSINKI1</td>
<td>65</td>
</tr>
<tr>
<td>BTS-45</td>
<td>HELSINKI4</td>
<td>60</td>
</tr>
<tr>
<td>BTS-46</td>
<td>MAKKyla2</td>
<td>50</td>
</tr>
<tr>
<td>BTS-47</td>
<td>MAKKyla3</td>
<td>55</td>
</tr>
<tr>
<td>BTS-48</td>
<td>MAKKyla4</td>
<td>10</td>
</tr>
<tr>
<td>BTS-49</td>
<td>MAKKyla5</td>
<td>23</td>
</tr>
<tr>
<td>BTS-50</td>
<td>HELSINKI6</td>
<td>40</td>
</tr>
<tr>
<td>BTS-91</td>
<td>ROVANIEMI</td>
<td>50</td>
</tr>
</tbody>
</table>
```
*** REST OF THE BTS NOT EXISTENT ***

COMMAND EXECUTED

Semantic error messages
If an error occurs, the general semantic error messages of MML commands are used.

Execution error messages

/*** EXECUTION FAILED ***/
/*** TRY AGAIN ***/

The program cannot display the workload of a BTS or BTSs.

If other errors occur, the general execution error messages of MML commands are used.