3GPP TSG-CN Meeting #25 **NP-040373**
8th – 10th September 2004. Palm Springs, USA.

Source: **TSG CN WG1**

Title: **CRs to R99 (with mirror CRs) on Work Item ASCI towards 03.68, 43.068, 03.69 and 43.069**

Agenda item: **7.12**

Document for: **APPROVAL**

This document contains **7 CRs on R99 Work Item "ASCI"**, that have been agreed by TSG CN WG1 CN#35 meeting and forwarded to TSG CN Plenary meeting #25 for approval.

TDoc #	Tdoc Title	Spec	CR #	Rev	CAT	Current version	WI	Rel
N1-041524	Correction on notification for first talker of VGCS call	03.68	A039	1	F	8.3.0	ASCI	R99
N1-041525	Correction on notification for first talker of VGCS call	43.068	17	1	A	4.3.0	ASCI	Rel-4
N1-041526	Correction on notification for first talker of VGCS call	43.068	18	1	A	5.3.0	ASCI	Rel-5
N1-041527	Correction on notification for first talker of VGCS call	43.068	19	1	A	6.1.0	ASCI	Rel-6
N1-041528	Correction on notification procedures for Originator of VBS call	03.69	A028	1	F	8.3.0	ASCI	R99
N1-041529	Correction on notification procedures for Originator of VBS call	43.069	12	1	A	4.3.0	ASCI	Rel-4
N1-041530	Correction on notification procedures for Originator of VBS call	43.069	13	1	A	5.3.0	ASCI	Rel-5

3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041524
(rev of Tdoc N1-041373)

CR-Form-v7

CHANGE REQUEST

⌘ **03.68** **CR** **A039** ⌘ **rev** **1** ⌘ Current version: **8.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification for first talker of VGCS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the first talker in a group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to talkers on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
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1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.3.1.3 Notification procedures

Different notification procedures shall be applied in relation to the mode of the mobile station as presented in table 1 and defined in the following sections.

Table 1: Overview on different information messages for new or on-going calls

Incoming call type: MS states:	~~Group~~VBS or VGCS call	point-to-point call
Idle mode	(section a)	(standard paging)
Group mode, dedicated channel	(section b)	(section c)
group receive mode and group transmit mode	(section b)	(section c)
dedicated mode	(section b)	(standard Call Waiting)

a) Notification for mobile stations in idle mode

Once the voice group call channel has been established in a cell or the network is waiting to receive notification responses to establish a voice group call channel, notifications shall be broadcast on the NCH in that cell.

The position of the NCH is derived from the system information of the BCCH.

The notification messages shall include the group call reference and possibly the description of the voice group call channel, the call priority if eMLPP is applied, and the group cipher key number.

A notification message can contain no, one or more notifications.

The notification process needs to continue throughout the duration of the group call, in order to permit the "late entry" of other mobile stations. Mobile stations moving into the group call area which are in idle mode shall be directed to the voice group call channel by the notification messages, possibly by means of the notification response procedure.

The scheduling of the notification messages in a cell shall be managed by the BSS. Information can be added in the messages to limit the required reception of NCH messages. The following constraints shall be met:

- The three first initial notifications (i.e. the first for a given group call) shall have priority over subsequent notifications (i.e. the messages for an on-going group call) and must be sent as soon as possible;

NOTE 1: In addition initial notification messages for calls with or above an operator defined priority level can be sent on all possible paging or access grant channels to reduce the delay for those mobile stations which are not using Discontinuous reception (DRX).

- Afterwards, an on-going group call in the cell shall be periodically notified on the NCH.

Since the information for the establishment of a voice group call is sent onto the NCH rather than on the PCH as for normal point-to-point calls, the mobile station must listen to the PCH as well as to the NCH. A "reduced NCH monitoring" mechanism can be used to save power in the mobile station when listening to the NCH.

A mobile station able to receive voice group calls either, depending on the implementation:

- can use the "reduced NCH monitoring" mechanism. When entering a cell, the mobile station shall listen to the NCH to get the notifications of the voice group calls on-going in the cell. Afterwards, the mobile station needs to listen to the NCH only if it is informed on the availability of a notification for a new voice group call. This shall be based on the NCH status information provided, as indicated in 3GPP TS 24.008. In situations where conflicts due to other idle mode tasks occur, the mobile station shall fulfil those idle mode tasks with priority in multi-frames which do not correspond to the own paging subgroup;

- do not apply the "reduced NCH monitoring" mechanism and read all possible paging or access grant channels.

b) Notifications for mobile stations in group mode dedicated channel, group receive, group transmit or dedicated mode

In addition to sending initial notification messages on the NCH for the voice group call, the BSS can provide initial notification into on-going voice broadcast, group calls and point to point calls informing mobile stations partaking in these calls of new voice group calls that are being set-up in the cell.

NOTE 2: The additional notification into on-going voice broadcast and group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

In order to do this the BSS sends initial notification messages on FACCH to all on-going voice broadcast, group calls, and point to point calls in the cell. The initial notification message on FACCH shall contain the group call reference, the priority level if eMLPP applies and possibly the TCH description which allows the mobile station to connect directly to the new call without reading the NCH.

An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group mode dedicated channel, group receive, group transmit or dedicated mode in order to be notified on other voice group calls.

NOTE 3: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice group calls without degradation of the received speech quality.

c) Paging into on-going voice group calls

Paging into on-going voice group calls shall be provided as an implementation option.

In addition to establishing the links for the voice group call, the network can provide paging information into on-going voice group calls informing mobile stations partaking in a voice group call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the group calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged group calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

NOTE 4: Mobile stations may require an additional receiver to read its PCH subchannel in order to ensure a higher probability of receiving all relevant paging messages without degradation of the received speech quality. The additional receiver may be the same as used for reception of the NCH described under b) above.

3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041525
(rev of Tdoc N1-041374)

CR-Form-v7

CHANGE REQUEST

⌘ **43.068** **CR** **017** ⌘ **rev** **1** ⌘ Current version: **4.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification for first talker of VGCS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the first talker in a group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to talkers on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

		Y	N		
Other specs affected:	⌘		X	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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11.3.1.3 Notification procedures

Different notification procedures shall be applied in relation to the mode of the mobile station as presented in table 1 and defined in the following sections.

Table 1: Overview on different information messages for new or on-going calls

Incoming call type: MS states:	~~Group~~VBS or VGCS call	point-to-point call
Idle mode	(section a)	(standard paging)
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group receive mode and group transmit mode	(section b)	(section c)
dedicated mode	(section b)	(standard Call Waiting)

a) Notification for mobile stations in idle mode

Once the voice group call channel has been established in a cell or the network is waiting to receive notification responses to establish a voice group call channel, notifications shall be broadcast on the NCH in that cell.

The position of the NCH is derived from the system information of the BCCH.

The notification messages shall include the group call reference and possibly the description of the voice group call channel, the call priority if eMLPP is applied, and the group cipher key number.

A notification message can contain no, one or more notifications.

The notification process needs to continue throughout the duration of the group call, in order to permit the "late entry" of other mobile stations. Mobile stations moving into the group call area which are in idle mode shall be directed to the voice group call channel by the notification messages, possibly by means of the notification response procedure.

The scheduling of the notification messages in a cell shall be managed by the BSS. Information can be added in the messages to limit the required reception of NCH messages. The following constraints shall be met:

- The three first initial notifications (i.e. the first for a given group call) shall have priority over subsequent notifications (i.e. the messages for an on-going group call) and must be sent as soon as possible;

NOTE 1: In addition initial notification messages for calls with or above an operator defined priority level can be sent on all possible paging or access grant channels to reduce the delay for those mobile stations which are not using Discontinuous reception (DRX).

- Afterwards, an on-going group call in the cell shall be periodically notified on the NCH.

Since the information for the establishment of a voice group call is sent onto the NCH rather than on the PCH as for normal point-to-point calls, the mobile station must listen to the PCH as well as to the NCH. A "reduced NCH monitoring" mechanism can be used to save power in the mobile station when listening to the NCH.

A mobile station able to receive voice group calls either, depending on the implementation:

- can use the "reduced NCH monitoring" mechanism. When entering a cell, the mobile station shall listen to the NCH to get the notifications of the voice group calls on-going in the cell. Afterwards, the mobile station needs to listen to the NCH only if it is informed on the availability of a notification for a new voice group call. This shall be based on the NCH status information provided, as indicated in GSM 04.08. In situations where conflicts due to other idle mode tasks occur, the mobile station shall fulfil those idle mode tasks with priority in multi-frames which do not correspond to the own paging subgroup;

- do not apply the "reduced NCH monitoring" mechanism and read all possible paging or access grant channels.

b) Notifications for mobile stations in group mode dedicated channel, group receive, group transmit or dedicated mode

In addition to sending initial notification messages on the NCH for the voice group call, the BSS can provide initial notification into on-going voice broadcast, group calls and point to point calls informing mobile stations partaking in these calls of new voice group calls that are being set-up in the cell.

NOTE 2: The additional notification into on-going voice broadcast and group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

In order to do this the BSS sends initial notification messages on FACCH to all on-going voice broadcast, group calls, and point to point calls in the cell. The initial notification message on FACCH shall contain the group call reference, the priority level if eMLPP applies and possibly the TCH description which allows the mobile station to connect directly to the new call without reading the NCH.

An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group mode dedicated channel, group receive, group transmit or dedicated mode in order to be notified on other voice group calls.

NOTE 3: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice group calls without degradation of the received speech quality.

c) Paging into on-going voice group calls

Paging into on-going voice group calls shall be provided as an implementation option.

In addition to establishing the links for the voice group call, the network can provide paging information into on-going voice group calls informing mobile stations partaking in a voice group call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the group calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged group calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

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3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041526
(rev of Tdoc N1-041375)

CR-Form-v7

CHANGE REQUEST

⌘ **43.068** **CR** **018** ⌘ **rev** **1** ⌘ Current version: **5.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification for first talker of VGCS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the first talker in a group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to talkers on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

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a) Notification for mobile stations in idle mode

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b) Notifications for mobile stations in group mode dedicated channel, group receive, group transmit or dedicated mode

In addition to sending initial notification messages on the NCH for the voice group call, the BSS can provide initial notification into on-going voice broadcast, group calls and point to point calls informing mobile stations partaking in these calls of new voice group calls that are being set-up in the cell.

NOTE 2: The additional notification into on-going voice broadcast and group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

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An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group mode dedicated channel, group receive, group transmit or dedicated mode in order to be notified on other voice group calls.

NOTE 3: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice group calls without degradation of the received speech quality.

c) Paging into on-going voice group calls

Paging into on-going voice group calls shall be provided as an implementation option.

In addition to establishing the links for the voice group call, the network can provide paging information into on-going voice group calls informing mobile stations partaking in a voice group call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the group calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged group calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

NOTE 4: Mobile stations may require an additional receiver to read its PCH subchannel in order to ensure a higher probability of receiving all relevant paging messages without degradation of the received speech quality. The additional receiver may be the same as used for reception of the NCH described under b) above.

3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041527
(rev of Tdoc N1-041376)

CR-Form-v7

CHANGE REQUEST

⌘ **43.068** **CR** **019** ⌘ **rev** **1** ⌘ Current version: **6.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification for first talker of VGCS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
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R97	*(Release 1997)*
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R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the first talker in a group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to talkers on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.3.1.3 Notification procedures

Different notification procedures shall be applied in relation to the mode of the mobile station as presented in table 1 and defined in the following sections.

Table 1: Overview on different information messages for new or on-going calls

Incoming call type: MS states:	~~Group~~VBS or VGCS call	point-to-point call
Idle mode	(section a)	(standard paging)
Group mode, dedicated channel	(section b)	(section c)
group receive mode and group transmit mode	(section b)	(section c)
dedicated mode	(section b)	(standard Call Waiting)

a) Notification for mobile stations in idle mode

Once the voice group call channel has been established in a cell or the network is waiting to receive notification responses to establish a voice group call channel, notifications shall be broadcast on the NCH in that cell.

The position of the NCH is derived from the system information of the BCCH.

The notification messages shall include the group call reference and possibly the description of the voice group call channel, the call priority if eMLPP is applied, and the group cipher key number.

A notification message can contain no, one or more notifications.

The notification process needs to continue throughout the duration of the group call, in order to permit the "late entry" of other mobile stations. Mobile stations moving into the group call area which are in idle mode shall be directed to the voice group call channel by the notification messages, possibly by means of the notification response procedure.

The scheduling of the notification messages in a cell shall be managed by the BSS. Information can be added in the messages to limit the required reception of NCH messages. The following constraints shall be met:

- The three first initial notifications (i.e. the first for a given group call) shall have priority over subsequent notifications (i.e. the messages for an on-going group call) and must be sent as soon as possible;

NOTE 1: In addition initial notification messages for calls with or above an operator defined priority level can be sent on all possible paging or access grant channels to reduce the delay for those mobile stations which are not using Discontinuous reception (DRX).

- Afterwards, an on-going group call in the cell shall be periodically notified on the NCH.

Since the information for the establishment of a voice group call is sent onto the NCH rather than on the PCH as for normal point-to-point calls, the mobile station must listen to the PCH as well as to the NCH. A "reduced NCH monitoring" mechanism can be used to save power in the mobile station when listening to the NCH.

A mobile station able to receive voice group calls either, depending on the implementation:

- can use the "reduced NCH monitoring" mechanism. When entering a cell, the mobile station shall listen to the NCH to get the notifications of the voice group calls on-going in the cell. Afterwards, the mobile station needs to listen to the NCH only if it is informed on the availability of a notification for a new voice group call. This shall be based on the NCH status information provided, as indicated in GSM 04.08. In situations where conflicts due to other idle mode tasks occur, the mobile station shall fulfil those idle mode tasks with priority in multi-frames which do not correspond to the own paging subgroup;

- do not apply the "reduced NCH monitoring" mechanism and read all possible paging or access grant channels.

b) Notifications for mobile stations in group mode dedicated channel, group receive, group transmit or dedicated mode

In addition to sending initial notification messages on the NCH for the voice group call, the BSS can provide initial notification into on-going voice broadcast, group calls and point to point calls informing mobile stations partaking in these calls of new voice group calls that are being set-up in the cell.

NOTE 2: The additional notification into on-going voice broadcast and group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

In order to do this the BSS sends initial notification messages on FACCH to all on-going voice broadcast, group calls, and point to point calls in the cell. The initial notification message on FACCH shall contain the group call reference, the priority level if eMLPP applies and possibly the TCH description which allows the mobile station to connect directly to the new call without reading the NCH.

An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group mode dedicated channel, group receive, group transmit or dedicated mode in order to be notified on other voice group calls.

NOTE 3: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice group calls without degradation of the received speech quality.

c) Paging into on-going voice group calls

Paging into on-going voice group calls shall be provided as an implementation option.

In addition to establishing the links for the voice group call, the network can provide paging information into on-going voice group calls informing mobile stations partaking in a voice group call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the group calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged group calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

NOTE 4: Mobile stations may require an additional receiver to read its PCH subchannel in order to ensure a higher probability of receiving all relevant paging messages without degradation of the received speech quality. The additional receiver may be the same as used for reception of the NCH described under b) above.

3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041528
(rev of Tdoc N1-041377)

CR-Form-v7

CHANGE REQUEST

⌘ **03.69** **CR** **A028** ⌘ **rev** **1** ⌘ Current version: **8.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification procedures for Originator of VBS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the Originator of a VBS group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to listeners on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

How to create CRs using this form:
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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

11.3.1.3 Notification procedures

Different notification procedures shall be applied in relation to the mode of the mobile station as presented in table 1 and defined in the following clauses.

Table 1: Overview on different information messages for new or on-going calls

Incoming call type: / **MS states:**	~~broadcast~~ VBS or VGCS call	point-to-point call
Idle mode	(section a)	(standard paging)
Originator in dedicated channel mode	(section b)	(section c)
group receive mode	(section b)	(section c)
dedicated mode	(section b)	(standard Call Waiting)

a) Notification for mobile stations in idle mode

Once the voice broadcast channel has been established in a cell or the network is waiting to receive notification responses to establish a voice broadcast channel, notifications shall be broadcast on the NCH in that cell.

The position of the NCH shall be derived from the system information of the BCCH.

The notification messages shall include the broadcast call reference and possibly the description of the voice broadcast channel, the call priority if eMLPP is applied, and the group cipher key number.

A notification message can contain no, one or more notifications.

The notification process needs to continue throughout the duration of the broadcast call, in order to permit the "late entry" of other mobile stations. Mobile stations moving into the group call area which are in idle mode shall be directed to the voice broadcast channel by the notification messages, possibly by means of the notification response procedure.

The scheduling of the notification messages in a cell shall be managed by the BSS. Information can be added in the messages to limit the required reception of NCH messages. The following constraints shall be met:

- The three first initial notifications (i.e. the first for a given broadcast call) shall have priority over subsequent notifications (i.e. the messages for an on-going broadcast call) and must be sent as soon as possible;

NOTE: In addition initial notification messages for calls with or above an operator defined priority level can be sent on all possible paging or access grant channels to reduce the delay for those mobile stations which are not using DRX.

- Afterwards, an on-going broadcast call in the cell shall be periodically notified on the NCH.

Since the information for the establishment of a voice broadcast call is sent onto the NCH rather than on the PCH as for normal point-to-point calls, the mobile station must listen to the PCH as well as to the NCH. A "reduced NCH monitoring" mechanism can be used to save power in the mobile station when listening to the NCH.

A mobile station able to receive voice broadcast calls either, depending on the implementation:

- can use the "reduced NCH monitoring" mechanism. When entering a cell, the mobile station shall listen to the NCH to get the notifications of the voice broadcast calls on-going in the cell. Afterwards, the mobile station needs to listen to the NCH only if it is informed on the availability of a notification for a new voice broadcast call. This shall be based on the NCH status information provided, as indicated in 3GPP TS 24.008. In situations where conflicts due to other idle mode tasks occur, the mobile station shall fulfil those idle mode tasks with priority in multiframes which do not correspond to the own paging subgroup;

- do not apply the "reduced NCH monitoring" mechanism and read all possible paging or access grant channels.

b) Notification for mobile stations in group receive mode, ~~group transmit or~~ dedicated mode or originator in dedicated channel mode

In addition to sending initial notification messages on the NCH for the voice broadcast call, the BSS can provide initial notification into on-going voice broadcast, group calls, and point to point calls informing mobile stations partaking in these calls of new voice broadcast calls that are being set-up in the cell.

NOTE: The additional notification into on-going voice broadcast, group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

In order to do this the BSS sends initial notification messages on FACCH to all on-going voice broadcast, group calls, and point to point calls in the cell. The initial notification message on FACCH shall contain the broadcast call reference, the priority level if eMLPP applies and possibly the TCH description which allows the mobile station to connect directly to the new call without reading the NCH.

An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group receive mode, ~~group transmit or~~ dedicated mode or originator in dedicated channel mode in order to be notified on other voice broadcast calls.

NOTE: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice broadcast calls without degradation of the received speech quality.

c) Paging into on-going voice broadcast calls

Paging into on-going voice broadcast calls shall be provided as an implementation option.

In addition to establishing the links for the voice broadcast call, the network can provide paging information into on-going voice broadcast calls informing mobile stations partaking in a voice broadcast call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the broadcast calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged broadcast calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

NOTE: Mobile stations may require an additional receiver to read its PCH subchannel in order to ensure a higher probability of receiving all relevant paging messages without degradation of the received speech quality. The additional receiver may be the same as used for reception of the NCH described under b) above.

3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041529
(rev of Tdoc N1-041378)

CR-Form-v7

CHANGE REQUEST

⌘ **43.069** **CR** **012** ⌘ **rev** **1** ⌘ Current version: **4.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification procedures for Originator of VBS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the Originator of a VBS group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to listeners on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

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11.3.1.3 Notification procedures

Different notification procedures shall be applied in relation to the mode of the mobile station as presented in table 1 and defined in the following clauses.

Table 1: Overview on different information messages for new or on-going calls

Incoming call type: **MS states:**	~~broadcast group~~ VBS or VGCS call	point-to-point call
Idle mode	(section a)	(standard paging)
~~First talker~~Originator in dedicated channel mode	(section b)	(section c)
group receive mode	(section b)	(section c)
dedicated mode	(section b)	(standard Call Waiting)

a) Notification for mobile stations in idle mode

Once the voice broadcast channel has been established in a cell or the network is waiting to receive notification responses to establish a voice broadcast channel, notifications shall be broadcast on the NCH in that cell.

The position of the NCH shall be derived from the system information of the BCCH.

The notification messages shall include the broadcast call reference and possibly the description of the voice broadcast channel, the call priority if eMLPP is applied, and the group cipher key number.

A notification message can contain no, one or more notifications.

The notification process needs to continue throughout the duration of the broadcast call, in order to permit the "late entry" of other mobile stations. Mobile stations moving into the group call area which are in idle mode shall be directed to the voice broadcast channel by the notification messages, possibly by means of the notification response procedure.

The scheduling of the notification messages in a cell shall be managed by the BSS. Information can be added in the messages to limit the required reception of NCH messages. The following constraints shall be met:

- The three first initial notifications (i.e. the first for a given broadcast call) shall have priority over subsequent notifications (i.e. the messages for an on-going broadcast call) and must be sent as soon as possible;

NOTE: In addition initial notification messages for calls with or above an operator defined priority level can be sent on all possible paging or access grant channels to reduce the delay for those mobile stations which are not using DRX.

- Afterwards, an on-going broadcast call in the cell shall be periodically notified on the NCH.

Since the information for the establishment of a voice broadcast call is sent onto the NCH rather than on the PCH as for normal point-to-point calls, the mobile station must listen to the PCH as well as to the NCH. A "reduced NCH monitoring" mechanism can be used to save power in the mobile station when listening to the NCH.

A mobile station able to receive voice broadcast calls either, depending on the implementation:

- can use the "reduced NCH monitoring" mechanism. When entering a cell, the mobile station shall listen to the NCH to get the notifications of the voice broadcast calls on-going in the cell. Afterwards, the mobile station needs to listen to the NCH only if it is informed on the availability of a notification for a new voice broadcast call. This shall be based on the NCH status information provided, as indicated in GSM 04.08. In situations where conflicts due to other idle mode tasks occur, the mobile station shall fulfil those idle mode tasks with priority in multiframes which do not correspond to the own paging subgroup;

- do not apply the "reduced NCH monitoring" mechanism and read all possible paging or access grant channels.

b) Notification for mobile stations in group receive mode, ~~group transmit or~~ dedicated mode or originator in dedicated channel mode

In addition to sending initial notification messages on the NCH for the voice broadcast call, the BSS can provide initial notification into on-going voice broadcast, group calls, and point to point calls informing mobile stations partaking in these calls of new voice broadcast calls that are being set-up in the cell.

NOTE: The additional notification into on-going voice broadcast, group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

In order to do this the BSS sends initial notification messages on FACCH to all on-going voice broadcast, group calls, and point to point calls in the cell. The initial notification message on FACCH shall contain the broadcast call reference, the priority level if eMLPP applies and possibly the TCH description which allows the mobile station to connect directly to the new call without reading the NCH.

An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group receive mode, ~~group transmit or~~ dedicated mode or originator in dedicated channel mode in order to be notified on other voice broadcast calls.

NOTE: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice broadcast calls without degradation of the received speech quality.

c) Paging into on-going voice broadcast calls

Paging into on-going voice broadcast calls shall be provided as an implementation option.

In addition to establishing the links for the voice broadcast call, the network can provide paging information into on-going voice broadcast calls informing mobile stations partaking in a voice broadcast call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the broadcast calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged broadcast calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

NOTE: Mobile stations may require an additional receiver to read its PCH subchannel in order to ensure a higher probability of receiving all relevant paging messages without degradation of the received speech quality. The additional receiver may be the same as used for reception of the NCH described under b) above.

3GPP TSG-CN1 Meeting #35
Sophia Antipolis, France, 16-20 August 2004

Tdoc N1-041530
(rev of Tdoc N1-041379)

CR-Form-v7

CHANGE REQUEST

⌘ **43.069** **CR** **013** ⌘ **rev** **1** ⌘ Current version: **5.3.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ [ ] ME [X] Radio Access Network [X] Core Network [ ]

Title:	⌘	Correction on notification procedures for Originator of VBS call
Source:	⌘	Nortel Networks, Siemens
Work item code:	⌘	ASCI
Date:	⌘	07/30/04
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change:	⌘	Original specification does not clearly state how the Originator of a VBS group call should be notified of an incoming point-to-point call.
Summary of change:	⌘	Proposed to clarify the standard in order to use the same procedure as applied to listeners on a shared group channel. i.e. FACCH notification.
Consequences if not approved:	⌘	If different vendors interpret and implement the standard in different ways, the MS may receive the notification on a wrong channel and ignore it. Then the notification procedure fails.

Clauses affected:	⌘	11.3.1.3

	Y	N		
Other specs affected: ⌘		X	Other core specifications	⌘
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘

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11.3.1.3 Notification procedures

Different notification procedures shall be applied in relation to the mode of the mobile station as presented in table 1 and defined in the following clauses.

Table 1: Overview on different information messages for new or on-going calls

Incoming call type: **MS states:**	~~broadcast group~~ VBS or VGCS call	point-to-point call
Idle mode	(section a)	(standard paging)
~~First talker~~Originator in dedicated channel mode	(section b)	(section c)
group receive mode	(section b)	(section c)
dedicated mode	(section b)	(standard Call Waiting)

a) Notification for mobile stations in idle mode

Once the voice broadcast channel has been established in a cell or the network is waiting to receive notification responses to establish a voice broadcast channel, notifications shall be broadcast on the NCH in that cell.

The position of the NCH shall be derived from the system information of the BCCH.

The notification messages shall include the broadcast call reference and possibly the description of the voice broadcast channel, the call priority if eMLPP is applied, and the group cipher key number.

A notification message can contain no, one or more notifications.

The notification process needs to continue throughout the duration of the broadcast call, in order to permit the "late entry" of other mobile stations. Mobile stations moving into the group call area which are in idle mode shall be directed to the voice broadcast channel by the notification messages, possibly by means of the notification response procedure.

The scheduling of the notification messages in a cell shall be managed by the BSS. Information can be added in the messages to limit the required reception of NCH messages. The following constraints shall be met:

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NOTE: In addition initial notification messages for calls with or above an operator defined priority level can be sent on all possible paging or access grant channels to reduce the delay for those mobile stations which are not using DRX.

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Since the information for the establishment of a voice broadcast call is sent onto the NCH rather than on the PCH as for normal point-to-point calls, the mobile station must listen to the PCH as well as to the NCH. A "reduced NCH monitoring" mechanism can be used to save power in the mobile station when listening to the NCH.

A mobile station able to receive voice broadcast calls either, depending on the implementation:

- can use the "reduced NCH monitoring" mechanism. When entering a cell, the mobile station shall listen to the NCH to get the notifications of the voice broadcast calls on-going in the cell. Afterwards, the mobile station needs to listen to the NCH only if it is informed on the availability of a notification for a new voice broadcast call. This shall be based on the NCH status information provided, as indicated in GSM 04.08. In situations where conflicts due to other idle mode tasks occur, the mobile station shall fulfil those idle mode tasks with priority in multiframes which do not correspond to the own paging subgroup;

- do not apply the "reduced NCH monitoring" mechanism and read all possible paging or access grant channels.

b) Notification for mobile stations in group receive mode, ~~group transmit or~~ dedicated mode or originator in dedicated channel mode

In addition to sending initial notification messages on the NCH for the voice broadcast call, the BSS can provide initial notification into on-going voice broadcast, group calls, and point to point calls informing mobile stations partaking in these calls of new voice broadcast calls that are being set-up in the cell.

NOTE: The additional notification into on-going voice broadcast, group calls and point to point calls should be provided by the BSS if the priority level of the new call is equal or higher than the O&M defined priority level.

In order to do this the BSS sends initial notification messages on FACCH to all on-going voice broadcast, group calls, and point to point calls in the cell. The initial notification message on FACCH shall contain the broadcast call reference, the priority level if eMLPP applies and possibly the TCH description which allows the mobile station to connect directly to the new call without reading the NCH.

An indication of change of notifications in the current cell may be provided on SACCH by the BSS.

As a mobile station option, the mobile station may read the NCH of the current cell while in group receive mode, ~~group transmit or~~ dedicated mode or originator in dedicated channel mode in order to be notified on other voice broadcast calls.

NOTE: Mobile stations may require an additional receiver to read the NCH in order to ensure a higher probability of receiving notifications for all present voice broadcast calls without degradation of the received speech quality.

c) Paging into on-going voice broadcast calls

Paging into on-going voice broadcast calls shall be provided as an implementation option.

In addition to establishing the links for the voice broadcast call, the network can provide paging information into on-going voice broadcast calls informing mobile stations partaking in a voice broadcast call of new incoming point-to-point calls.

The mobile station shall be ready to receive a paging message on the FACCH containing the mobile subscriber identity and the priority level if eMLPP applies.

The mechanism for the MSC to select the broadcast calls to be paged as well as the mechanism for the MSC to inform the concerned BSS of paged broadcast calls is still for further study.

In the event of a reorganisation of the PCH the BSS shall inform the mobile stations via the FACCH that paging reorganisation has occurred. A mobile station receiving this indication shall decode the BCCH in order to obtain the new paging configuration.

As a mobile station option, the mobile station may read its paging subchannel in the current cell in group receive mode or group transmit mode in order to receive paging messages.

NOTE: Mobile stations may require an additional receiver to read its PCH subchannel in order to ensure a higher probability of receiving all relevant paging messages without degradation of the received speech quality. The additional receiver may be the same as used for reception of the NCH described under b) above.