# TSG-RAN Meeting #18 New-Orleans, USA, 03 - 06 December 2002

RP-020716

Title: CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.304

Source: TSG-RAN WG2

Agenda item: 7.2.3

Doc-1st-	Status-	Spec	CR	Rev	Phase	Subject	Cat	Versio	Versio
R2-023044	agreed	25.304	102	-	R99	Highest HCS priority	F	3.11.0	3.12.0
R2-023045	agreed	25.304	103	-	Rel-4	Highest HCS priority	Α	4.5.0	4.6.0
R2-023046	agreed	25.304	104	-	Rel-5	Highest HCS priority	Α	5.1.0	5.2.0

# 3GPP TSG-RAN WG2 Meeting #33 Sophia Antipolis, France, November 12 – 15, 2002

	(	CHANGE	EREQ	UE	ST	•		CR-Form-v7
×	25.304 CR	102	жrev	-	¥	Current version:	3.11.0	ж
- 455								

*	<mark>25.304</mark> CF	R 102	жrev	<b>-</b> #	Current vers	ion: <b>3.11.0</b> **
For <u><b>HELP</b></u> on us	ing this form, s	see bottom of this	page or le	ook at the	e pop-up text	over the # symbols.
Proposed change at	ffects: UICC	Capps೫	ME X	Radio Ad	ccess Netwo	k X Core Network
Title: 第	Highest HCS	priority				
Source:	Siemens AG					
Work item code: 第	TEI				Date: ₩	30/10/2002
outogety:	F (correction A (corresponding A (addition C (function D (editorial)	onds to a correction of feature), al modification of fe modification) ations of the above	n in an earl eature)		2	R99 the following releases: (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)
Reason for change:	broadcas the curre serving o However mapped Since a o	nt specification the	rs HCS_P nese parar ring cells. not describ west priori mapping	RIO <sub>s</sub> , HO meters sp ped how to ties. is availab	CS_PRIO <sub>n</sub> are becify the HC the coding of ble in GSM be	e defined. According to S priority level (0-7) for the HCS priority level is
Summary of change	Isolated  If the UE The UE configu  If UTRAN UTRAN expect  If both UT The UE	ied in 5.2.6.1.5 the ighest priority.  Impact change is does not implemed by UTRAN.  In does not implemed by UTRAN.  In does not implemed by UTRAN.  In does not implemed by the UE.  In the implement of the implement of the UE.  In the implement of the implement	analysis: ent the Clue HCS proment the Clue HCS proment the Clue HCS proment imple	R: CR: riority leve	el in a differer vel in a differe	ent way than it is
Consequences if	器 The mea	ning of the HCS i	priority lev	els is not	t clear becaus	se it is not specified

not approved:

whether HCS priority level 0 means lowest priority or highest priority. Thus the UE can misinterpret the HCS priority level configured by the UTRAN, e.g. it can interpret cells with highest priority as lowest priority cells, and vice versa.

Clauses affected:	₩ 5.2.	6.1.5		
Other specs	Y N % X		¥	
affected:	X	Test specifications  O&M Specifications		
Other comments:	*	_		

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <a href="http://www.3gpp.org/specs/CR.htm">http://www.3gpp.org/specs/CR.htm</a>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

# 5.2.6.1.5 Cell reselection parameters in system information broadcasts

The selection of values for network controlled parameters can be optimised by means of different methods. Examples of methods are described in [6]. Cell reselection parameters are broadcast in system information and are read in the serving cell as follows:

#### Qoffset1<sub>s,n</sub>

This specifies the offset between the two cells. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### Qoffset2<sub>s,n</sub>

This specifies the offset between the two cells. It is used for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH Ec/No.

#### Qhyst1s

This specifies the hysteresis value (Qhyst). It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### Qhyst2s

This specifies the hysteresis value (Qhyst). It is used for FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No.

#### HCS\_PRIO<sub>s</sub>, HCS\_PRIO<sub>n</sub>

This specifies the HCS priority level (0-7) for serving cell and neighbouring cells.

HCS priority level 0 means lowest priority and HCS priority level 7 means highest priority.

#### Qhcs<sub>s</sub>, Qhcs<sub>n</sub>

This specifies the quality threshold levels for applying prioritised hierarchical cell re-selection.

#### Qqualmin

This specifies the minimum required quality level in the cell in dB. It is not applicable for TDD cells or GSM cells.

#### **Orxlevmin**

This specifies the minimum required RX level in the cell in dBm.

# PENALTY\_TIME<sub>n</sub>

This specifies the time duration for which the TEMPORARY\_OFFSET<sub>n</sub> is applied for a neighbouring cell.

# $TEMPORARY_OFFSET1_n$

This specifies the offset applied to the H and R criteria for a neighbouring cell for the duration of PENALTY\_TIME<sub>n</sub>. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### TEMPORARY\_OFFSET2<sub>n</sub>

This specifies the offset applied to the H and R criteria for a neighbouring cell for the duration of PENALTY\_TIME<sub>n</sub>. It is used for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH Ec/No.

#### $T_{CRmax}$

This specifies the duration for evaluating allowed amount of cell reselection(s).

#### $N_{CR}$

This specifies the maximum number of cell reselections.

#### T<sub>CRmaxHyst</sub>

This specifies the additional time period before the UE can revert to low-mobility measurements.

#### Treselection<sub>s</sub>

This specifies the cell reselection timer value.

#### Ssearch<sub>HCS</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the limit for Srxlev in the serving cell below which the UE shall initiate measurements of all neighbouring cells of the serving cell.

# Ssearch<sub>RAT 1</sub> - Ssearch<sub>RAT k</sub>

This specifies the RAT specific threshold in the serving cell used in the inter-RAT measurement rules.

#### S<sub>HCS,RATm</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the RAT specific threshold in the serving cell used in the inter-RAT measurement rules.

#### Sintrasearch

This specifies the threshold (in dB) for intra frequency measurements and for the HCS measurement rules.

#### Sintersearch

This specifies the threshold (in dB) for inter-frequency measurements and for the HCS measurement rules.

# S<sub>limit,SearchRATm</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the RAT specific threshold (in dB) in the serving UTRA cell above which the UE need not perform any inter-RAT measurements in RAT "m".

# 3GPP TSG-RAN WG2 Meeting #33 Sophia Antipolis, France, November 12 – 15, 2002

		(	CHANGE	REQ	UE	ST	•		CR-Form-v7
¥	25.304	CR	103	жrev	-	¥	Current version:	4.5.0	ж
U	El D on voine this for			,	1 1	- 1 11			11-

*	25.304	CR 103	<b>≋ rev</b>	<b>-</b> #	Current vers	sion:	4.5.0	*
For <u><b>HELP</b></u> on u	sing this for	m, see bottom of the	is page or	look at	the pop-up tex	t over	the # syn	nbols.
Proposed change	·	JICC apps <b></b>	_	_	Access Netwo			
Title: ∺	Highest H	ICS priority						
Source: #	Siemens	AG						
Work item code: ₩	TEI				Date: ₩	30/	/10/2002	
Category:	Use one of a F (corr A (corr B (add C (fundament) D (edit Detailed exp	the following categories rection) responds to a corrective dition of feature), ctional modification of torial modification) blanations of the above 3GPP TR 21.900.	on in an ear feature)		2	the for (GSN) (Relea (Relea (Relea (Relea (Relea	II-4 ollowing rele M Phase 2) ease 1996) ease 1997) ease 1999) ease 4) ease 5) ease 6)	eases:
Reason for change	broad the c servi Howe to hig Since	bclause 5.2.6.1.5, Cdcasts, the parametrurrent specificationing cell and neighboever, it is not describle and lowest pries a description of this ifications this change	ers HCS_F these para uring cells bed how the orities. is mapping	PRIO <sub>s</sub> , lameters ne codir g is avai	HCS_PRIO <sub>n</sub> are specify the HC regions of the HCS prices in GSM because in GSM be	e defi S pri priority	ined. Acco ority level y level is m	rding to (0-7) for napped
Summary of chang	mear	clarified in 5.2.6.1.5  ns highest priority.	·	·	level 0 means l	owes	t priority ar	nd 7
	If UT UT exp	e UE does not implete UE may interpret infigured by UTRAN.  RAN does not implete RAN may configure pected by the UE.  th UTRAN and UE of the UE may interpret infigured by UTRAN.	the HCS p ement the ( the HCS p do not impli the HCS p	riority le	level in a differenthe	ent wa	ay than it i	S
Consequences if	₩ Thou	meaning of the HCS	S priority lo	vale ic	not clear becau	co it i	ie not enco	rified

not approved:

whether HCS priority level 0 means lowest priority or highest priority. Thus the UE can misinterpret the HCS priority level configured by the UTRAN, e.g. it can interpret cells with highest priority as lowest priority cells, and vice versa.

Clauses affected:	Ж	5	.2.6	3.1.5		
	Ī	Υ	N			
Other specs	ж			Other core specifications	¥	
affected:			X	Test specifications		
			X	O&M Specifications		
Other comments:	¥					

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <a href="http://www.3gpp.org/specs/CR.htm">http://www.3gpp.org/specs/CR.htm</a>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

# 5.2.6.1.5 Cell reselection parameters in system information broadcasts

The selection of values for network controlled parameters can be optimised by means of different methods. Examples of methods are described in [6]. Cell reselection parameters are broadcast in system information and are read in the serving cell as follows:

#### Qoffset1<sub>s,n</sub>

This specifies the offset between the two cells. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

# Qoffset2<sub>s,n</sub>

This specifies the offset between the two cells. It is used for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH Ec/No.

#### Qhyst1s

This specifies the hysteresis value (Qhyst). It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### Qhyst2s

This specifies the hysteresis value (Qhyst). It is used for FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No.

#### HCS PRIOs, HCS PRIOn

This specifies the HCS priority level (0-7) for serving cell and neighbouring cells.

HCS priority level 0 means lowest priority and HCS priority level 7 means highest priority.

#### Qhcs<sub>s</sub>, Qhcs<sub>n</sub>

This specifies the quality threshold levels for applying prioritised hierarchical cell re-selection.

#### Qqualmin

This specifies the minimum required quality level in the cell in dB. It is not applicable for TDD cells or GSM cells.

#### **Orxlevmin**

This specifies the minimum required RX level in the cell in dBm.

# PENALTY\_TIME<sub>n</sub>

This specifies the time duration for which the TEMPORARY\_OFFSET<sub>n</sub> is applied for a neighbouring cell.

# $TEMPORARY_OFFSET1_n$

This specifies the offset applied to the H and R criteria for a neighbouring cell for the duration of PENALTY\_TIME<sub>n</sub>. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### TEMPORARY\_OFFSET2<sub>n</sub>

This specifies the offset applied to the H and R criteria for a neighbouring cell for the duration of PENALTY\_TIME<sub>n</sub>. It is used for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH Ec/No.

#### $T_{CRmax}$

This specifies the duration for evaluating allowed amount of cell reselection(s).

#### $N_{CR}$

This specifies the maximum number of cell reselections.

#### T<sub>CRmaxHyst</sub>

This specifies the additional time period before the UE can revert to low-mobility measurements.

#### Treselection<sub>s</sub>

This specifies the cell reselection timer value.

#### Ssearch<sub>HCS</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the limit for Srxlev in the serving cell below which the UE shall initiate measurements of all neighbouring cells of the serving cell.

# Ssearch<sub>RAT 1</sub> - Ssearch<sub>RAT k</sub>

This specifies the RAT specific threshold in the serving cell used in the inter-RAT measurement rules.

#### S<sub>HCS,RATm</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the RAT specific threshold in the serving cell used in the inter-RAT measurement rules.

#### Sintrasearch

This specifies the threshold (in dB) for intra frequency measurements and for the HCS measurement rules.

#### Sintersearch

This specifies the threshold (in dB) for inter-frequency measurements and for the HCS measurement rules.

# S<sub>limit,SearchRATm</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the RAT specific threshold (in dB) in the serving UTRA cell above which the UE need not perform any inter-RAT measurements in RAT "m".

# 3GPP TSG-RAN WG2 Meeting #33 Sophia Antipolis, France, November 12 – 15, 2002

	(	CHANGE	REQ	UE	ST	•		CR-Form-v7
×	25.304 CR	104	⊭ rev	-	¥	Current version:	5.1.0	*
- 1151.0								

¥ 2	5.304 CR 104	#rev - <sup>#</sup>	Current version	n: <b>5.1.0</b> #
For <b>HELP</b> on using	g this form, see bottom of this	s page or look at ti	he pop-up text o	ver the # symbols.
Proposed change affe	e <b>cts:</b> UICC apps器 <mark> </mark>	_		X Core Network
Title:	lighest HCS priority			
Source: # S	siemens AG			
Work item code:	El		Date: ₩	30/10/2002
De	The of the following categories one one of the following categories one of correction of the corresponds to a correction of the correction	n in an earlier releas eature)	2 (G se) R96 (F R97 (F R98 (F R99 (F Rel-4 (F Rel-5 (F	Rel-5 e following releases: GSM Phase 2) Release 1996) Release 1997) Release 1998) Release 1999) Release 4) Release 5) Release 6)
Reason for change:	In subclause 5.2.6.1.5, Ce broadcasts, the paramete the current specification the serving cell and neighbou However, it is not describe to highest and lowest prio Since a description of this specifications this change	ers HCS_PRIO <sub>s</sub> , Hence parameters of the paramet	$ICS_PRIO_n$ are of specify the HCS $g$ of the HCS priorable in GSM but	defined. According to priority level (0-7) for prity level is mapped
Summary of change:	It is clarified in 5.2.6.1.5 the means highest priority.  Isolated Impact change  If the UE does not implement The UE may interpret the configured by UTRAN.  If UTRAN does not implement UTRAN may configure the expected by the UE.  If both UTRAN and UE does not implement the UE may interpret the configured by UTRAN.	analysis: nent the CR: ne HCS priority leventer ment the CR: the HCS priority leventer o not implement the	vel in a different velocities and different one CR:	way than it is t way than it is
Consequences if	# The meaning of the HCS	priority levels is no	ot clear because	it is not specified

not approved:

whether HCS priority level 0 means lowest priority or highest priority. Thus the UE can misinterpret the HCS priority level configured by the UTRAN, e.g. it can interpret cells with highest priority as lowest priority cells, and vice versa.

Clauses affected:	Ж	5	.2.6	3.1.5		
	Ī	Υ	N			
Other specs	ж			Other core specifications	¥	
affected:			X	Test specifications		
			X	O&M Specifications		
Other comments:	¥					

#### How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <a href="http://www.3gpp.org/specs/CR.htm">http://www.3gpp.org/specs/CR.htm</a>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked \$\mathbb{X}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 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.

# 5.2.6.1.5 Cell reselection parameters in system information broadcasts

The selection of values for network controlled parameters can be optimised by means of different methods. Examples of methods are described in [6]. Cell reselection parameters are broadcast in system information and are read in the serving cell as follows:

#### Qoffset1<sub>s,n</sub>

This specifies the offset between the two cells. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

# Qoffset2<sub>s,n</sub>

This specifies the offset between the two cells. It is used for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH Ec/No.

#### Qhyst1s

This specifies the hysteresis value (Qhyst). It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### Qhyst2s

This specifies the hysteresis value (Qhyst). It is used for FDD cells if the quality measure for cell selection and reselection is set to CPICH Ec/No.

#### HCS PRIOs, HCS PRIOn

This specifies the HCS priority level (0-7) for serving cell and neighbouring cells.

HCS priority level 0 means lowest priority and HCS priority level 7 means highest priority.

#### Qhcs<sub>s</sub>, Qhcs<sub>n</sub>

This specifies the quality threshold levels for applying prioritised hierarchical cell re-selection.

#### Qqualmin

This specifies the minimum required quality level in the cell in dB. It is not applicable for TDD cells or GSM cells.

#### **Orxlevmin**

This specifies the minimum required RX level in the cell in dBm.

# PENALTY\_TIME<sub>n</sub>

This specifies the time duration for which the TEMPORARY\_OFFSET<sub>n</sub> is applied for a neighbouring cell.

# $TEMPORARY_OFFSET1_n$

This specifies the offset applied to the H and R criteria for a neighbouring cell for the duration of PENALTY\_TIME<sub>n</sub>. It is used for TDD and GSM cells and for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH RSCP.

#### TEMPORARY\_OFFSET2<sub>n</sub>

This specifies the offset applied to the H and R criteria for a neighbouring cell for the duration of PENALTY\_TIME<sub>n</sub>. It is used for FDD cells in case the quality measure for cell selection and re-selection is set to CPICH Ec/No.

#### $T_{CRmax}$

This specifies the duration for evaluating allowed amount of cell reselection(s).

#### $N_{CR}$

This specifies the maximum number of cell reselections.

#### T<sub>CRmaxHyst</sub>

This specifies the additional time period before the UE can revert to low-mobility measurements.

#### Treselection<sub>s</sub>

This specifies the cell reselection timer value.

#### Ssearch<sub>HCS</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the limit for Srxlev in the serving cell below which the UE shall initiate measurements of all neighbouring cells of the serving cell.

# Ssearch<sub>RAT 1</sub> - Ssearch<sub>RAT k</sub>

This specifies the RAT specific threshold in the serving cell used in the inter-RAT measurement rules.

# S<sub>HCS,RATm</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the RAT specific threshold in the serving cell used in the inter-RAT measurement rules.

#### Sintrasearch

This specifies the threshold (in dB) for intra frequency measurements and for the HCS measurement rules.

#### Sintersearch

This specifies the threshold (in dB) for inter-frequency measurements and for the HCS measurement rules.

# S<sub>limit,SearchRATm</sub>

This threshold is used in the measurement rules for cell re-selection when HCS is used. It specifies the RAT specific threshold (in dB) in the serving UTRA cell above which the UE need not perform any inter-RAT measurements in RAT "m".