TSG-RAN Meeting #20 Hämeenlinna, Finland, 03-06 June 2003

Title: CRs (Release '99 and Rel-4/Rel-5 category A) to TS 25.331 (3)

Source: TSG-RAN WG2

Agenda item: 7.2.3

Spec	CR	Rev	Phase	Subject	Cat	Version- Current	Version- New	Doc-2nd- Level	Workitem
25.331	1947	-	R99	IE "Tx diversity mode" in ACTIVE SET UPDATE message	F	3.14.0	3.15.0	R2-031334	TEI
25.331	1948	-	Rel-4	IE "Tx diversity mode" in ACTIVE SET UPDATE message	A	4.8.0	4.9.0	R2-031335	TEI
25.331	1949	-	Rel-5	IE "Tx diversity mode" in ACTIVE SET UPDATE message	A	5.3.0	5.4.0	R2-031336	TEI
25.331	1950	1	R99	Correction to transport channel traffic volume measurement events 4a and 4b	F	3.14.0	3.15.0	R2-031397	TEI
25.331	1951	1	Rel-4	Correction to transport channel traffic volume measurement events 4a and 4b	Α	4.8.0	4.9.0	R2-031398	TEI
25.331	1952	1	Rel-5	Correction to transport channel traffic volume measurement events 4a and 4b	Α	5.3.0	5.4.0	R2-031399	TEI
25.331	1953	-	R99	Maximum Number of GPS Almanac Messages to be Stored in UE_POSITIONING_GPS_DATA	F	3.14.0	3.15.0	R2-031340	TEI
25.331	1954	-	Rel-4	Maximum Number of GPS Almanac Messages to be Stored in UE_POSITIONING_GPS_DATA	A	4.8.0	4.9.0	R2-031341	TEI
25.331	1955	-	Rel-5	Maximum Number of GPS Almanac Messages to be Stored in UE_POSITIONING_GPS_DATA	A	5.3.0	5.4.0	R2-031342	TEI
25.331	1979	-	R99	START values on 2G-3G handover	F	3.14.0	3.15.0	R2-031429	TEI
25.331	1980	-	Rel-4	START values on 2G-3G handover	A	4.8.0	4.9.0	R2-031430	TEI
25.331	1981	-	Rel-5	START values on 2G-3G handover	Α	5.3.0	5.4.0	R2-031431	TEI

CR page 1

R2-031334

TSG-RAN Working Group 2 meeting #36 Paris, France 19th – 23rd May 2003

											CR-Form-v7
ж		<mark>25.331</mark>	CR	1947	жrev	-	ж	Current versi	ion: 3.	e.0	¥
For <u>HELP</u> o	n usi	ng this for	m, see	bottom of ti	his page or	look a	at the	e pop-up text	over the	ж syn	nbols.
Proposed chang	ge af	fects: (JICC a	ipps#	ME	Rac	dio Ad	ccess Networ	k <mark>X</mark> Ca	ore Ne	twork
Title:	ж	IE "Tx div	ersity I	mode" in AC	TIVE SET	JPDA	\TE r	nessage			
Source:	ж	<mark>RAN WG</mark>	2								
Work item code	: Ж	TEI						Date: ೫	May 20	03	
Category:		F (con A (cor B (add C (fun D (edi	rection) respond dition of ctional torial m planatio	ds to a correc feature), modification c odification) ons of the abo	tion in an ea of feature)		elease	e) R96 R97 R98 R99 Rel-4		ase 2) 1996) 1997) 1998) 1999) 4)	eases:

Reason for change: # As expressed in Tdoc R2-031154, several unclarities exist regarding the usage of the IE "Tx Diversity Mode" in the ACTIVE SET UPDATE message:

- 1. It is unclear if Tx diversity can be started with an ACTIVE SET UPDATE message;
- 2. It is unclear what the UE behaviour is when it receives an ACTIVE SET UPDATE message with the IE "Tx Diversity Mode" set to "none" while TX diversity is used on one or more RL's in the active set.

Summary of change: # It is proposed to clarify that:

- 1. Tx diversity can be started with an ACTIVE SET UPDATE message.
- 2. It is clarified that in this case, Tx diversity shall no longer be applied to any RL in the active set.

T1 impact:

No impact on T1 specifications is identified (only codepoint "none" is used so far).

Backward compatibility:

- If the UE does not implement this proposed modification, it might reject an ACTIVE SET UPDATE message clarified to be valid by the proposed changes. If the UTRAN does not implement this proposed modification it will not use the clarified scenario.
- 2) A UE not implementing this CR might incorrectly continue Tx diversity on some of the RL's remaining in the active set.

Consequences if not approved: * The indicated unclarities remain, which might lead to a UTRAN incorrectly assuming certain Tx mode related UE behaviour.

Clauses affected:	8 8.3.4.5, 8.6.6.24, 10.2.1										
	YN										
Other specs affected:	# X Other core specifications # X Test specifications #										
anecieu.	X O&M Specifications										
Other comments:	ж										

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked **#** 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

8.3.4.5 Invalid configuration

If any of the following conditions are valid:

- a radio link indicated by the IE "Downlink DPCH info for each RL" in the IE "Radio link addition information" has a different spreading factor than the spreading factor for the radio links in the active set that will be established at the time indicated by the IE "Activation time"; and/or
- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or
- the IE "Radio Link Removal Information" contains all the radio links which are part of or will be part of the active set at the time indicated by the IE "Activation time"; and/or
- the IE "TX Diversity Mode" is not set to "none" and it indicates a diversity mode that is different from the one currently used (<<u>STTD</u>>, <<u>closed loop mode1></u>, or <<u>closed loop mode2></u>) in all or part of the active set; and/or
- a radio link indicated by the IE "Radio Link Removal Information" does not exist in the active set; and/or
- after the removal of all radio links indicated by the IE "Radio Link Removal Information" and the addition of all
 radio links indicated by the IE "Radio Link Addition Information" the active set would contain more than the
 maximum allowed number of radio links; and/or
- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:
 - 2> the procedure ends on the UE side.

If the following condition is valid:

- the active set update procedure results in active sets that do not contain at least one common radio link before and after a DPCH frame boundary;

the UE behaviour is not specified.

8.6.6.24 Tx Diversity Mode

If the IE "Tx Diversity Mode" is included the UE shall:

- 1> if the value of the IE "Tx Diversity Mode" is STTD:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, ignoring the actual value of IE "Closed loop timing adjustment mode". The UE may apply the Tx diversity mode indicated in IE "Tx Diversity Mode" not only to the radio links for which the IE "Closed loop timing adjustment mode" is included, but also to the remaining radio links in the active set, as specified in [26].
- 1> if the value of the IE "Tx Diversity Mode" is closed loop mode1 or closed loop mode 2:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, using the actual value of IE "Closed loop timing adjustment mode". The UE may apply the Tx diversity mode indicated in the IE "Tx Diversity Mode" not only to the radio links for which the IE "Closed loop timing adjustment mode" is included, but also to the remaining radio links in the active set, as specified in [26]. The UE behaviour is unspecified if different values of the IE "Closed loop timing adjustment mode" are indicated for different radio links of the active set.
- 1> if the value of the IE "Tx Diversity Mode" is "none":

2> configure the Layer 1 not to use Tx diversity for all radio links in the active set.

If the IE "Tx Diversity Mode" is not included, the UE shall:

- 1> continue to use the already configured Tx diversity mode;
- 1> in case no Tx diversity mode has been configured:

2> not apply Tx diversity.

10.2.1 ACTIVE SET UPDATE

NOTE: Only for FDD.

This message is used by UTRAN to add, replace or delete radio links in the active set of the UE.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Message Type	MP		Message Type	
UE information elements				
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36	
Integrity check info	СН		Integrity check info 10.3.3.16	
Activation time	MD		Activation time 10.3.3.1	Default value is "now".
New U-RNTI	OP		U-RNTI 10.3.3.47	
CN information elements				
CN Information info	OP		CN Information info 10.3.1.3	
Phy CH information elements				
Uplink radio resources				
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing "maximum UL TX power.
Downlink radio resources				
Radio link addition information	OP	1 to <maxrl- 1></maxrl- 		Radio link addition information required for each RL to add
>Radio link addition information	MP		Radio link addition information 10.3.6.68	
Radio link removal information	OP	1 to <maxrl></maxrl>		Radio link removal information required for each RL to remove
>Radio link removal information	MP		Radio link removal information 10.3.6.69	
TX Diversity Mode	MD		TX Diversity Mode 10.3.6.86	Default value is the existing TX diversity mode currently used in all or part of the active set.
SSDT information	OP		SSDT information 10.3.6.77	

CR page 1

R2-031335

TSG-RAN Working Group 2 meeting #36 Paris, France 19th – 23rd May 2003

		CHANG	E REQ	UEST			CR-Form-v7
×	<mark>25.331</mark> CF	R <mark>1948</mark>	жrev	- *	Current version:	4.9.0	ж
For <u>HELP</u> on usi Proposed change at	-	ee bottom of th		_	e pop-up text over	_	
Title: %	IE "Tx diversit	y mode" in AC	TIVE SET (JPDATE	message		
Source: ೫	RAN WG2						
Work item code: %	TEI				Date: ೫ Ma	ay 2003	
	Jse <u>one</u> of the f F (correction A (correspond) B (addition C (function D (editorial)	onds to a correct of feature), al modification o modification) tions of the abov	tion in an eai f feature)		e) R96 (Rel R97 (Rel R98 (Rel R99 (Rel Rel-4 (Rel Rel-5 (Rel		ases:
Reason for change:	"Tx Divers 1. It 2. It U	ity Mode" in the is unclear if Tx o essage; is unclear what t	ACTIVE S diversity can the UE beha with the IE	ET UPDA be started viour is wl "Tx Dive	TE message: I with an ACTIVE S nen it receives an Af rsity Mode" set to "	SET UPDAT	ΓE
Summary of change	と. 発 <mark>It is propos</mark>	ed to clarify that	t:				
	2. It th T1 impact No impact Backward 1) If At If cli 2) A	is clarified that i e active set. on T1 specificat: compatibility: the UE does not CTIVE SET UP the UTRAN doe arified scenario.	n this case, ' ions is ident: implement to DATE mess as not impler enting this C	Tx diversit ified (only this propos age clarific nent this p R might ir	EVE SET UPDATE ty shall no longer be codepoint "none" i sed modification, it ed to be valid by the proposed modification	applied to s used so far might reject proposed c on it will no	r). an hanges. t use the

Consequences if not approved: * The indicated unclarities remain, which might lead to a UTRAN incorrectly assuming certain Tx mode related UE behaviour.

Clauses affected:	8 8.3.4.5, 8.6.6.24, 10.2.1										
	YN										
Other specs affected:	# X Other core specifications # X Test specifications #										
anecieu.	X O&M Specifications										
Other comments:	ж										

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.

8.3.4.5 Invalid configuration

If any of the following conditions are valid:

- a radio link indicated by the IE "Downlink DPCH info for each RL" in the IE "Radio link addition information" has a different spreading factor than the spreading factor for the radio links in the active set that will be established at the time indicated by the IE "Activation time"; and/or
- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or
- the IE "Radio Link Removal Information" contains all the radio links which are part of or will be part of the active set at the time indicated by the IE "Activation time"; and/or
- the IE "TX Diversity Mode" is not set to "none" and it indicates a diversity mode that is different from the one currently used (<<u>STTD</u>>, <<u>closed loop mode1></u>, or <<u>closed loop mode2></u>) in all or part of the active set; and/or
- a radio link indicated by the IE "Radio Link Removal Information" does not exist in the active set; and/or
- after the removal of all radio links indicated by the IE "Radio Link Removal Information" and the addition of all radio links indicated by the IE "Radio Link Addition Information" the active set would contain more than the maximum allowed number of radio links; and/or
- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:

2> the procedure ends on the UE side.

If the following condition is valid:

- the active set update procedure results in active sets that do not contain at least one common radio link before and after a DPCH frame boundary:

the UE behaviour is not specified.

8.6.6.24 Tx Diversity Mode

If the IE "Tx Diversity Mode" is included the UE shall:

- 1> if the value of the IE "Tx Diversity Mode" is STTD:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, ignoring the actual value of IE "Closed loop timing adjustment mode". The UE may apply the Tx diversity mode indicated in IE "Tx Diversity Mode" not only to the radio links for which the IE "Closed loop timing adjustment mode" is included, but also to the remaining radio links in the active set, as specified in [26].
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- 1> if the value of the IE "Tx Diversity Mode" is "none":

2> configure the Layer 1 not to use Tx diversity for all radio links in the active set.

If the IE "Tx Diversity Mode" is not included, the UE shall:

- 1> continue to use the already configured Tx diversity mode;
- 1> in case no Tx diversity mode has been configured:

2> not apply Tx diversity.

10.2.1 ACTIVE SET UPDATE

NOTE: Only for FDD.

This message is used by UTRAN to add, replace or delete radio links in the active set of the UE.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Message Type	MP		Message Type	
UE information elements				
RRC transaction identifier	MP		RRC transaction identifier 10.3.3.36	
Integrity check info	СН		Integrity check info 10.3.3.16	
Activation time	MD		Activation time 10.3.3.1	Default value is "now".
New U-RNTI	OP		U-RNTI 10.3.3.47	
CN information elements				
CN Information info	OP		CN Information info 10.3.1.3	
Phy CH information elements				
Uplink radio resources				
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing "maximum UL TX power.
Downlink radio resources				
Radio link addition information	OP	1 to <maxrl- 1></maxrl- 		Radio link addition information required for each RL to add
>Radio link addition information	MP		Radio link addition information 10.3.6.68	
Radio link removal information	OP	1 to <maxrl></maxrl>		Radio link removal information required for each RL to remove
>Radio link removal information	MP		Radio link removal information 10.3.6.69	
TX Diversity Mode	MD		TX Diversity Mode 10.3.6.86	Default value is the existing TX diversity mode currently used in all or part of the active set.
SSDT information	OP		SSDT information 10.3.6.77	

CR page 1

R2-031336

TSG-RAN Working Group 2 meeting #36 Paris, France 19th – 23rd May 2003

		CHANG	E REQ	UEST	-		CR-Form-v7
ж	25.331	CR 1949	жrev	- *	Current version:	5.4.0	ж
For <u>HELP</u> on us	sing this form	n, see bottom of th	nis page or	look at th	e pop-up text over	the X syr	nbols.
Proposed change a	iffects: UI	CC apps ೫ 	ME X	Radio A	Access Network X	Core Ne	etwork
Title: %	IE "Tx dive	rsity mode" in AC	TIVE SET (JPDATE	message		
Source: %	RAN WG2						
Work item code: %	TEI				Date: ೫ Ma	y 2003	
	F (corre A (corre B (addit C (funct D (edito Detailed expla	e following categori ction) sponds to a correct ion of feature), ional modification o rial modification) anations of the abov GPP <u>TR 21.900</u> .	tion in an ear f feature)		e) R96 (Rele R97 (Rele R98 (Rele R99 (Rele Rel-4 (Rele Rel-5 (Rele		ases:
Reason for change	"Tx Div 1.	ersity Mode" in the It is unclear if Tx of message; It is unclear what t	ACTIVE S diversity can the UE behave with the IE	ET UPDA be started viour is wl "Tx Dive	TE message: I with an ACTIVE SI hen it receives an AC rsity Mode" set to "r	ET UPDAT	ГЕ
Summary of chang	1. 2. T1 impa No impa Backwa 1)	Tx diversity can be It is clarified that i the active set. act: act on T1 specificat ard compatibility: If the UE does not ACTIVE SET UP If the UTRAN doe clarified scenario.	e started with n this case, T ions is identi implement t DATE messa es not impler enting this C	Tx diversit fied (only his propos age clarific nent this p R might ir	IVE SET UPDATE r ty shall no longer be codepoint "none" is sed modification, it n ed to be valid by the proposed modification	applied to used so far night reject proposed c n it will no	r). an hanges. t use the

Consequences if not approved: * The indicated unclarities remain, which might lead to a UTRAN incorrectly assuming certain Tx mode related UE behaviour.

Clauses affected:	8 8.3.4.5, 8.6.6.24, 10.2.1										
	YN										
Other specs affected:	# X Other core specifications # X Test specifications #										
anecieu.	X O&M Specifications										
Other comments:	ж										

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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.

8.3.4.5 Invalid configuration

If any of the following conditions are valid:

- a radio link indicated by the IE "Downlink DPCH info for each RL" in the IE "Radio link addition information" has a different spreading factor than the spreading factor for the radio links in the active set that will be established at the time indicated by the IE "Activation time"; and/or
- a radio link in the IE "Radio link addition information" is also present in the IE "Radio Link Removal Information"; and/or
- the IE "Radio Link Removal Information" contains all the radio links which are part of or will be part of the active set at the time indicated by the IE "Activation time"; and/or
- the IE "TX Diversity Mode" is not set to "none" and it indicates a diversity mode that is different from the one currently used (<<u>STTD</u>>, <<u>closed loop mode1></u>, or <<u>closed loop mode2></u>) in all or part of the active set; and/or
- a radio link indicated by the IE "Radio Link Removal Information" does not exist in the active set; and/or
- after the removal of all radio links indicated by the IE "Radio Link Removal Information" and the addition of all radio links indicated by the IE "Radio Link Addition Information" the active set would contain more than the maximum allowed number of radio links; and/or
- the variable INVALID_CONFIGURATION is set to TRUE:

the UE shall:

- 1> keep the active set as it was before the ACTIVE SET UPDATE message was received;
- 1> transmit an ACTIVE SET UPDATE FAILURE message on the DCCH using AM RLC;
- 1> set the IE "RRC transaction identifier" in the ACTIVE SET UPDATE FAILURE message to the value of "RRC transaction identifier" in the entry for the ACTIVE SET UPDATE message in the table "Accepted transactions" in the variable TRANSACTIONS; and
- 1> clear that entry;
- 1> set the IE "failure cause" to "Invalid configuration";
- 1> When the ACTIVE SET UPDATE FAILURE message has been submitted to lower layers for transmission:

2> the procedure ends on the UE side.

If the following condition is valid:

- the active set update procedure results in active sets that do not contain at least one common radio link before and after a DPCH frame boundary:

the UE behaviour is not specified.

8.6.6.24 Tx Diversity Mode

If the IE "Tx Diversity Mode" is included the UE shall:

- 1> if the value of the IE "Tx Diversity Mode" is STTD:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, ignoring the actual value of IE "Closed loop timing adjustment mode".
- 1> if the value of the IE "Tx Diversity Mode" is closed loop mode 1 or closed loop mode 2:
 - 2> configure the Layer 1 to use the Tx diversity mode indicated in the IE "Tx Diversity Mode" for the radio links for which the IE "Closed loop timing adjustment mode" is included, using the actual value of the IE "Closed loop timing adjustment mode".
- 1> if the value of the IE "Tx Diversity Mode" is "none":
 - 2> configure the Layer 1 not to use Tx diversity for all radio links in the active set.

If the IE "Tx Diversity Mode" is not included, the UE shall:

- 1> continue to use the already configured Tx diversity mode;
- 1> in case no Tx diversity mode has been configured:

2> do not apply Tx diversity.

10.2.1 ACTIVE SET UPDATE

NOTE: Only for FDD.

This message is used by UTRAN to add, replace or delete radio links in the active set of the UE.

RLC-SAP: AM or UM

Logical channel: DCCH

Direction: UTRAN \rightarrow UE

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
Message Type	MP		Message		
UE information elements			Туре		
RRC transaction identifier	MP		RRC transactio n identifier 10.3.3.36		
Integrity check info	СН		Integrity check info 10.3.3.16		
Activation time	MD		Activation time 10.3.3.1	Default value is "now".	
New U-RNTI	OP		U-RNTI 10.3.3.47		
CN information elements					
CN Information info	OP		CN Informatio n info 10.3.1.3		
Phy CH information elements					
Uplink radio resources					
Maximum allowed UL TX power	MD		Maximum allowed UL TX power 10.3.6.39	Default value is the existing "maximum UL TX power.	
Downlink radio resources					
Radio link addition information	OP	1 to <maxrl -1></maxrl 		Radio link addition information required for each RL to add	
>Radio link addition information	MP		Radio link addition informatio n 10.3.6.68		
Radio link removal information	OP	1 to <maxrl ></maxrl 		Radio link removal information required for each RL to remove	
>Radio link removal information	MP		Radio link removal informatio n 10.3.6.69		
TX Diversity Mode	MD		TX Diversity Mode 10.3.6.86	Default value is the existing-TX diversity mode <u>currently used in</u> all or part of the active	

Information Element/Group name	Need	Multi	Type and reference	Semantics description	Version
				<u>set</u> .	
SSDT information	OP		SSDT informatio n 10.3.6.77		
DPC Mode	OP		Enumerat ed (Single TPC, TPC triplet in soft)	"Single TPC" is DPC_Mode=0 and "TPC triplet in soft" is DPC_mode=1 in [29].	REL-5

R2-031397

æ		<mark>25.331</mark>	CR	1950	жrev	1	ж	Current vers	ion: <mark>3.</mark>	<mark>14.0</mark>	ж	
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.												
Proposed chang	je a	offects:	UICC a	apps #	ME X	Rac	A oib	ccess Networ	k <mark>X</mark> (Core Ne	etwork	
Title:	ж	Correctio	on to tra	ansport channe	el traffic vo	olume	e me	asurement ev	ents 4a	and 4t)	
Source:	ж	RAN WO	62									
Work item code:	:Ж	TEI						Date: ೫	12/05	/2003		
Category:		Use <u>one</u> of F (co A (co B (ac C (fu D (co	rrection) rrespon Idition of nctional litorial m xplanatic	ds to a correctio f feature), modification of f podification) ons of the above	n in an ear eature)		elease	e) R96 R97 R98 R99 Rel-4	R99 the follov (GSM P (Releas (Releas (Releas (Releas (Releas (Releas	hase 2) e 1996) e 1997) e 1998) e 1999) e 1999) e 4) e 5)	eases:	

Reason for change: ¥	In clause 14.4.2.1 and 14.4.2.1 UE behaviour regarding evaluation of transport channel traffic volume measurement Reporting event 4A and event 4B is described.
	While it is clearly described how UE shall behave, if TVM is setup or modified or ongoing on an active transport channel, it is not described how UE shall behave, if a TVM is configured and a transport channel is activated afterwards.
	This can happen, if UE changes to CELL_PCH and then for reason "Uplink Data Transmission" to CELL_FACH.
	Due to lack of this description, it could happen that UE behaviour is ambiguous in this case and not event triggered reporting of traffic volume is takes place.
0	
Summary of change: ¥	The correction proposes, that UE should behave on activation of a monitored transport channel in the same way as it behaves on TVM setup or modify.
	Isolated impact analysis:
	The impacted UE functionalities are:
	Evaluation of TVM reporting event 4a,
	Evaluation of TVM reporting event 4b.
	If UE does not implement the CR, evaluation of reporting event 4a or 4b may not work correctly in certain scenarios and therefore, required traffic volume reporting may not take place.
	UEs, which behave in the indicated way, are not affected.

		Test specification: In TS 34.123, in test cases for TVM reporting event 4a and 4b no state changes are included and only setup and modify on existing transport channels is tested. Therefore no impact on test cases is expected.
Consequences if not approved:	ж	Evaluation of reporting event 4a or 4b will not work correctly in certain scenarios and therefore required traffic volume reporting will not take place. In this case it can come to loss of data, because UTRAN will not be able to perform correct decision on physical resources (e.g. use of CELL_FACH or of CELL_DCH). This would result in serious impact on QoS.
Clauses affected:	ж	14.4.2.1, 14.4.2.2

Other specs affected:	۱ ۳	Χ	Other core specifications Test specifications O&M Specifications	ж	
Other comments:	ж				

How to create CRs using this form:

- 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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14.4.2.1 Reporting event 4 A: Transport Channel Traffic Volume becomes larger than an absolute threshold

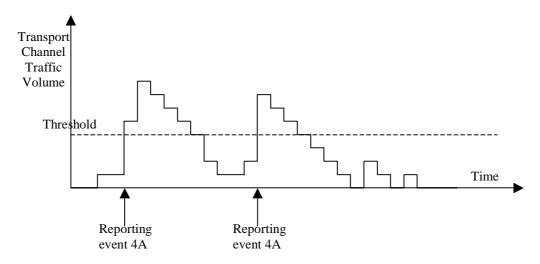


Figure 14.4.2.1-1: Event triggered report when Transport Channel Traffic Volume becomes larger than a certain threshold

If the monitored Transport Channel Traffic Volume (TCTV) [15] is larger than an absolute threshold at TVM setup or modify, or is larger at activation of the monitored transport channel, or becomes larger than an absolute threshold while the event is configured i.e. if TCTV>Reporting threshold, this event could trigger a report. The event could be triggered again only if TCTV becomes smaller than the Reporting threshold and later TCTV>Reporting threshold is verified again.

14.4.2.2 Reporting event 4 B: Transport Channel Traffic Volume becomes smaller than an absolute threshold

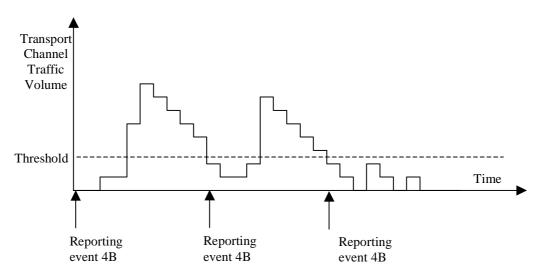


Figure 14.4.2.1-2: Event triggered report when Transport Channel Traffic Volume becomes smaller than certain threshold

If the monitored Transport Channel Traffic Volume (TCTV) [15] is smaller than an absolute threshold at TVM setup or modify, or is smaller at activation of the monitored transport channel, or becomes smaller than an absolute threshold while the event is configured i.e. if TCTV<Reporting threshold, this event could trigger a report. The event could be triggered again only if TCTV becomes bigger than the Reporting threshold and later TCTV<Reporting threshold is verified again.

			(CHANGI	E RE	QUI	EST	Γ				CR-Form-v7
ж	25.	<mark>331</mark>	CR	1951	жre	v <mark>1</mark>	ж	Curre	nt versi	ion:	<mark>4.9.0</mark>	ж
For <u>HELP</u> or	n using th	nis foi	m, see	bottom of th	is page	or lool	k at th	he pop-	up text	over t	he X syı	mbols.
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Title:	ж Corr	ectio	<mark>n to tra</mark>	nsport chann	nel traffic	volun	ne me	easurer	nent ev	ents 4	la and 4	D
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Work item code:	ж <mark>ТЕІ</mark>							D	ate: ೫	12/0	5/2003	
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Reason for change: %	In clause 14.4.2.1 and 14.4.2.1 UE behaviour regarding evaluation of transport channel traffic volume measurement Reporting event 4A and event 4B is described.
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	Due to lack of this description, it could happen that UE behaviour is ambiguous in this case and not event triggered reporting of traffic volume is takes place.
Summary of change: #	The correction proposes, that UE should behave on activation of a monitored transport channel in the same way as it behaves on TVM setup or modify.
	Isolated impact analysis:
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	Evaluation of TVM reporting event 4a,
	Evaluation of TVM reporting event 4b.
	If UE does not implement the CR, evaluation of reporting event 4a or 4b may not work correctly in certain scenarios and therefore, required traffic volume reporting may not take place.
	UEs, which behave in the indicated way, are not affected.

		Test specification: In TS 34.123, in test cases for TVM reporting event 4a and 4b no state changes are included and only setup and modify on existing transport channels is tested. Therefore no impact on test cases is expected.
Consequences if not approved:	ж	Evaluation of reporting event 4a or 4b will not work correctly in certain scenarios and therefore required traffic volume reporting will not take place. In this case it can come to loss of data, because UTRAN will not be able to perform correct decision on physical resources (e.g. use of CELL_FACH or of CELL_DCH). This would result in serious impact on QoS.
Clauses affected:	ж	14.4.2.1, 14.4.2.2

Other specs affected:	۱ ۳	Χ	Other core specifications Test specifications O&M Specifications	ж	
Other comments:	ж				

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14.4.2.1 Reporting event 4 A: Transport Channel Traffic Volume becomes larger than an absolute threshold

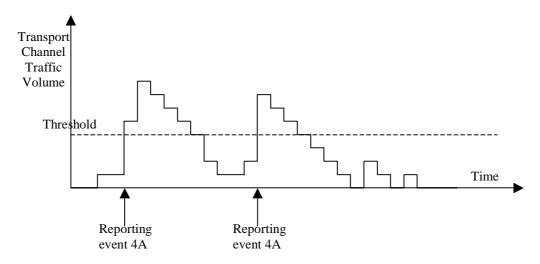


Figure 14.4.2.1-1: Event triggered report when Transport Channel Traffic Volume becomes larger than a certain threshold

If the monitored Transport Channel Traffic Volume (TCTV) [15] is larger than an absolute threshold at TVM setup or modify, or is larger at activation of the monitored transport channel, or becomes larger than an absolute threshold while the event is configured i.e. if TCTV>Reporting threshold, this event could trigger a report. The event could be triggered again only if TCTV becomes smaller than the Reporting threshold and later TCTV>Reporting threshold is verified again.

14.4.2.2 Reporting event 4 B: Transport Channel Traffic Volume becomes smaller than an absolute threshold

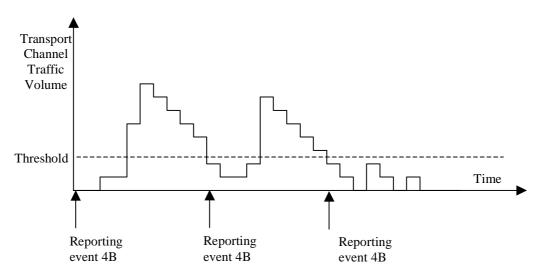


Figure 14.4.2.1-2: Event triggered report when Transport Channel Traffic Volume becomes smaller than certain threshold

If the monitored Transport Channel Traffic Volume (TCTV) [15] is smaller than an absolute threshold at TVM setup or modify, or is smaller at activation of the monitored transport channel, or becomes smaller than an absolute threshold while the event is configured i.e. if TCTV<Reporting threshold, this event could trigger a report. The event could be triggered again only if TCTV becomes bigger than the Reporting threshold and later TCTV<Reporting threshold is verified again.

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ж		25.331	CR	1952	жrev	1	ж	Current vers	ion:	5.4.0	ж	
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Proposed chang	ye a	affects:	JICC a	ipps #	MEX	Rad	dio A	ccess Networ	k X	Core Ne	etwork	
Title:	ж	Correctio	n to tra	Insport channe	el traffic vo	olume	e me	asurement ev	ents 4	4a and 4b)	
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Reason for change: #	In clause 14.4.2.1 and 14.4.2.1 UE behaviour regarding evaluation of transport channel traffic volume measurement Reporting event 4A and event 4B is described. While it is clearly described how UE shall behave, if TVM is setup or modified or
	ongoing on an active transport channel, it is not described how UE shall behave, if a TVM is configured and a transport channel is activated afterwards.
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Consequences if not approved:	ж	Evaluation of reporting event 4a or 4b will not work correctly in certain scenarios and therefore required traffic volume reporting will not take place. In this case it can come to loss of data, because UTRAN will not be able to perform correct decision on physical resources (e.g. use of CELL_FACH or of CELL_DCH). This would result in serious impact on QoS.
Clauses affected:	ж	14.4.2.1, 14.4.2.2

Other specs affected:	۱ ۳	Χ	Other core specifications Test specifications O&M Specifications	ж	
Other comments:	ж				

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14.4.2.1 Reporting event 4 A: Transport Channel Traffic Volume becomes larger than an absolute threshold

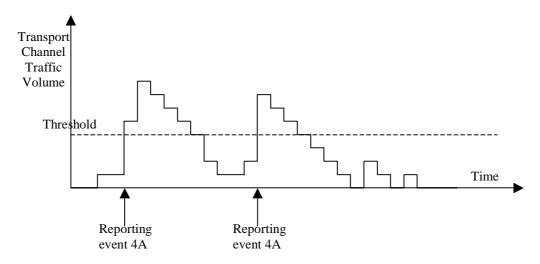


Figure 14.4.2.1-1: Event triggered report when Transport Channel Traffic Volume becomes larger than a certain threshold

If the monitored Transport Channel Traffic Volume (TCTV) [15] is larger than an absolute threshold at TVM setup or modify, or is larger at activation of the monitored transport channel, or becomes larger than an absolute threshold while the event is configured i.e. if TCTV>Reporting threshold, this event could trigger a report. The event could be triggered again only if TCTV becomes smaller than the Reporting threshold and later TCTV>Reporting threshold is verified again.

14.4.2.2 Reporting event 4 B: Transport Channel Traffic Volume becomes smaller than an absolute threshold

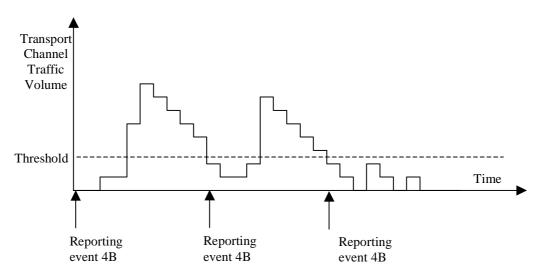


Figure 14.4.2.1-2: Event triggered report when Transport Channel Traffic Volume becomes smaller than certain threshold

If the monitored Transport Channel Traffic Volume (TCTV) [15] is smaller than an absolute threshold at TVM setup or modify, or is smaller at activation of the monitored transport channel, or becomes smaller than an absolute threshold while the event is configured i.e. if TCTV<Reporting threshold, this event could trigger a report. The event could be triggered again only if TCTV becomes bigger than the Reporting threshold and later TCTV<Reporting threshold is verified again.

Paris, France,			,							CR-Form-v7		
	CHANGE REQUEST											
ж	25	5 <mark>.331</mark>	CR	1953	жrev	-	ж	Current versi	on:	<mark>3.14.0</mark> [⋇]		
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Proposed chang	e affeo	cts:	JICC a	pps ೫	MEX	Rad	lio A	ccess Networ	k 📃	Core Network		
Title:				er of GPS Alr		ssage	es to	be Stored in				
	UE	E_POS	ITIONI	NG_GPS_DA	TA							
Source:	Ж <mark>R</mark> /	<mark>N WG</mark>	2									
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Summary of cha	nge:¥	10.3 In cla with stora up to	.10, 'M ause 13 'maxSa age var o a max	ultiplicity value 3.4.28a, one in atAlmanacSto iable can be e timum of 32 se	es and typ nstance of rage' so th extended t atellite ids	e cor f the r hat th o con	ntrair multi e UE ntain	bound value E_POSITIONI GPS Almanad	ʻmax NG_ c ass	Sat' is replaced		

Isolated Impact Change Analysis.

This change extends the UE_POSITIONING_GPS_DATA variable so that a complete set of GPS Almanac assistance data can be accumulated in the UE. It would not affect implementations behaving like indicated in the CR, it would affect implementations supporting the corrected functionality otherwise.

	Impact on Test specifications There is no impact on the test specifications.
Consequences if % not approved:	The UE will be limited to accumulating GPS Almanac assistance data for only 16 satellite ids. As a result, UE implementations depending upon valid GPS Almanac assistance data for key signal acquisition or maintenance functions may not work properly. Furthermore, the behaviour of the UE for receiving and storing GPS Almanac assistance for more than 16 satellite ids will remain unspecified.

Clauses affected:	₩ 10.3.7.89, 10.3.10, 13.4.28a Y N
Other specs affected:	# X Other core specifications # X Test specifications X O&M Specifications
Other comments:	¥

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< NEXT MODIFIED SECTION >

10.3.7.89 UE positioning GPS almanac

This IE contains a reduced-precision subset of the ephemeris and clock correction parameters.

Information Element/Group name	Need	Multi	Type and Reference	Semantics description
WNa	MP		Bit string(8)	Almanac Reference Week [12]
Satellite information	MP	1 to <maxsat></maxsat>		
>DataID	MP		Integer(03)	See [12]
>SatID	MP		Enumerated(063)	Satellite ID
>e	MP		Bit string(16)	Eccentricity [12]
>t _{oa}	MP		Bit string(8)	Reference Time of Almanac [12]
>δi	MP		Bit string(16)	
>OMEGADOT	MP		Bit string(16)	Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles/sec) [12]
>SV Health	MP		Bit string(8)	1/2
>A ^{1/2}	MP		Bit string(24)	Semi-Major Axis (meters) ^{1/2} [12]
>OMEGA ₀	MP		Bit string(24)	Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles) [12]
>M ₀	MP		Bit string(24)	Mean Anomaly at Reference Time (semi-circles) [12]
>00	MP		Bit string(24)	Argument of Perigee (semi- circles) [12]
>af ₀	MP		Bit string(11)	apparent clock correction [12]
>af ₁	MP		Bit string(11)	apparent clock correction [12]
SV Global Health	OP		Bit string(364)	This enables GPS time recovery and possibly extended GPS correlation intervals. It is specified in page 25 of subframes 4 and 5 [12]

< NEXT MODIFIED SECTION >

10.3.10 Multiplicity values and type constraint values

The following table includes constants that are either used as multi bounds (name starting with "max") or as high or low value in a type specification (name starting with "lo" or "hi"). Constants are specified only for values appearing more than once in the RRC specification. In case a constant is related to one or more other constants, an expression is included in the "value" column instead of the actual value.

Constant	Explanation	Value		
CN information	•			
maxCNdomains	Maximum number of CN domains	4		
UTRAN mobility				
information				
maxRAT	Maximum number or Radio Access Technologies	maxOtherRAT + 1		
maxOtherRAT	Maximum number or other Radio Access Technologies	15		
maxURA	Maximum number of URAs in a cell	8		
maxInterSysMessages	Maximum number of Inter System Messages	4		
maxRABsetup	Maximum number of RABs to be established	16		
UE information				
maxtransactions	Maximum number of parallel RRC transactions in downlink	25		
maxPDCPalgoType	Maximum number of PDCP algorithm types	8		
maxDRACclasses	Maximum number of UE classes which would require	8		
	different DRAC parameters			
maxFreqBandsFDD	Maximum number of frequency bands supported by the UE	8		
	as defined in [21]			
maxFreqBandsTDD	Maximum number of frequency bands supported by the UE	4		
	as defined in [22]			
maxFreqBandsGSM	Maximum number of frequency bands supported by the UE	16		
	as defined in [45]			
maxPage1	Number of UEs paged in the Paging Type 1 message	8		
maxSystemCapability	Maximum number of system specific capabilities that can be	16		
	requested in one message.			
RB information				
maxPredefConfig	Maximum number of predefined configurations	16		
maxRB	Maximum number of RBs	32		
maxSRBsetup	Maximum number of signalling RBs to be established	8		
maxRBperRAB	Maximum number of RBs per RAB	8		
maxRBallRABs	Maximum number of non signalling RBs	27		
maxRBMuxOptions	Maximum number of RB multiplexing options	8		
maxLoCHperRLC	Maximum number of logical channels per RLC entity	2		
TrCH information				
maxTrCH	Maximum number of transport channels used in one direction (UL or DL)	32		
maxTrCHpreconf				
maxCCTrCH	Maximum number of CCTrCHs	8		
maxTF	Maximum number of different transport formats that can be	32		
IIIdX I F	included in the Transport format set for one transport channel	52		
maxTF-CPCH	Maximum number of TFs in a CPCH set	16		
maxTFC	Maximum number of Transport Format Combinations	1024		
maxTFCI-1-Combs	Maximum number of TFCI (field 1) combinations	512		
maxTFCI-2-Combs	Maximum number of TFCI (field 2) combinations	512		
maxCPCHsets	Maximum number of CPCH sets per cell	16		
maxSIBperMsg	Maximum number of complete system information blocks per	16		
	SYSTEM INFORMATION message			
maxSIB	Maximum number of references to other system information blocks.	32		
maxSIB-FACH	Maximum number of references to system information blocks on the FACH	8		
PhyCH information				
maxPCPCH-APsubCH	Maximum number of available sub-channels for AP signature on PCPCH	12		

Constant	Explanation	Value
maxPCPCH-CDsubCH	Maximum number of available sub-channels for CD signature on PCPCH	12
maxPCPCH-APsig	Maximum number of available signatures for AP on PCPCH	16
maxPCPCH-CDsig	Maximum number of available signatures for CD on PCPCH	16
maxAC	Maximum number of access classes	16
maxASC	Maximum number of access service classes	8
maxASCmap	Maximum number of access class to access service classes	7
maxASCpersist	mappings Maximum number of access service classes for which	6
	persistence scaling factors are specified	
maxPRACH	Maximum number of PRACHs in a cell	16
maxFACHPCH	Maximum number of FACHs and PCHs mapped onto one secondary CCPCHs	8
maxRL	Maximum number of radio links	8
maxSCCPCH	Maximum number of secondary CCPCHs per cell	16
maxDPDCH-UL	Maximum number of DPDCHs per cell	6
maxDPCH-DLchan	Maximum number of channelisation codes used for DL DPCH	8
maxPUSCH	Maximum number of PUSCHs	(8)
maxPDSCH	Maximum number of PDSCHs	8
maxPDSCHcodes	Maximum number of codes for PDSCH	16
maxPDSCH-TFCIgroups	Maximum number of TFCI groups for PDSCH	256
maxPDSCHcodeGroups	Maximum number of code groups for PDSCH	256
maxPCPCHs	Maximum number of PCPCH channels in a CPCH Set	64
maxPCPCH-SF	Maximum number of available SFs on PCPCH	7
maxTS	Maximum number of timeslots used in one direction (UL or DL)	14
hiPUSCHidentities	Maximum number of PUSCH Identities	64
hiPDSCHidentities	Maximum number of PDSCH Identities	64
Measurement information		
maxTGPS	Maximum number of transmission gap pattern sequences	6
maxAdditionalMeas	Maximum number of additional measurements for a given measurement identity	4
maxMeasEvent	Maximum number of events that can be listed in measurement reporting criteria	8
maxMeasParEvent	Maximum number of measurement parameters (e.g. thresholds) per event	2
maxMeasIntervals	Maximum number of intervals that define the mapping function between the measurements for the cell quality Q of	1
0.1114	a cell and the representing quality value	
maxCellMeas	Maximum number of cells to measure	32
maxReportedGSMCells	Maximum number of GSM cells to be reported	6
maxFreq	Maximum number of frequencies to measure	8
maxSat	Maximum number of satellites to measure	16
maxSatAlmanacStorage	Maximum number of satellites for which to store GPS Almanac information	<u>32</u>
HiRM	Maximum number that could be set as rate matching attribute for a transport channel	256
Frequency information		
maxFDDFreqList	Maximum number of FDD carrier frequencies to be stored in USIM	4
maxTDDFreqList	Maximum number of TDD carrier frequencies to be stored in USIM	4
maxFDDFreqCellList	Maximum number of neighbouring FDD cells to be stored in USIM	32
maxTDDFreqCellList	Maximum number of neighbouring TDD cells to be stored in USIM	32
maxGSMCellList	Maximum number of GSM cells to be stored in USIM	32
Other information		
maxNumGSMFreqRanges	Maximum number of GSM Frequency Ranges to store	32
maxNumFDDFreqs	Maximum number of FDD centre frequencies to store	8
maxNumTDDFreqs	Maximum number of TDD centre frequencies to store	8

< NEXT MODIFIED SECTION >

13.4.28a UE_POSITIONING_GPS_DATA

Information Element/Group name	Need	Multi	Type and reference	Semantics description
GPS Data ciphering info	OP		UE	
	-		positioning	
			Ciphering	
			info	
			10.3.7.86	
GPS Deciphering Keys	OP			
>Current deciphering key	MP		Bit string(56)	
>Next deciphering key	MP		Bit string(56)	
UE positioning GPS reference	OP		UE	
time			positioning	
			GPS	
			reference time	
			10.3.7.96	
UE positioning GPS reference	OP		Ellipsoid	A priori knowledge of UE 3-D
UE position	OF		point with	position.
			altitude and	position.
			uncertainty	
			ellipsoid	
			10.3.8.4c	
UE positioning GPS DGPS	OP		UE	
corrections			positioning	
			GPS DGPS	
			corrections	
			10.3.7.91	
UE positioning GPS navigation	OP	1 to		
model		<maxsat></maxsat>	F (1)	
>SatID	MP		Enumerated(Satellite ID
>GPS Ephemeris and Clock	MP		063) UE	
Correction parameters	1011		positioning	
Concolion parametere			GPS	
			Ephemeris	
			and Clock	
			Correction	
			parameters	
			10.3.7.91a	
UE positioning GPS ionospheric	OP		UE	
model			positioning	
			GPS	
			ionospheric	
			model 10.3.7.92	
UE positioning GPS UTC model	OP		UE	
			positioning	
			GPS UTC	
			model	
			10.3.7.97	
UE positioning GPS almanac	OP			
>SatID	MP	1 to		
		<maxsatal< td=""><td></td><td></td></maxsatal<>		
		manacStor		
	MP	<u>age</u> >		Some co IE in 10.2.7.00
>>WNa >>DataID	MP			Same as IE in 10.3.7.89 Same as IE in 10.3.7.89
>>DataiD >>e	MP			Same as IE in 10.3.7.89
>>t _{oa}	MP			Same as IE in 10.3.7.89
>>δl	MP			Same as IE in 10.3.7.89
~~01	1011	1		

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>OMEGADOT	MP			Same as IE in 10.3.7.89
>>SV Health	MP			Same as IE in 10.3.7.89
>>A ^{1/2}	MP			Same as IE in 10.3.7.89
>>OMEGA ₀	MP			Same as IE in 10.3.7.89
>>M0	MP			Same as IE in 10.3.7.89
>>0	MP			Same as IE in 10.3.7.89
>>af ₀	MP			Same as IE in 10.3.7.89
>>af1	MP			Same as IE in 10.3.7.89
>SV Global Health	OP			Same as IE in 10.3.7.89
UE positioning GPS acquisition assistance	OP		UE positioning GPS acquisition assistance 10.3.7.88	
UE positioning GPS real-time integrity	OP		UE positioning GPS real- time integrity 10.3.7.95	

										CR-Form-v7
		C	CHANGE	E REQ	UE	ST	-			
^ж 2	<mark>5.331</mark>	CR	1954	ж rev	-	ж	Current ver	sion:	4.9.0	ж
For <u>HELP</u> on usin	g this for	rm, see	bottom of th	is page or	look	at th	e pop-up tex	t over	r the 🕷 syr	nbols.
Proposed change affe	ects:	UICC a	pps #	MEX	Rac	dio A	Access Netwo	ork	Core Ne	etwork
			er of GPS Al NG_GPS_DA		ssag	es to	be Stored in	า		
Source: ೫ F	<mark>AN WG</mark>	2								
Work item code: ೫ <mark>T</mark>	El						Date: ៖	6 <mark>19</mark>	May 2003	3
De	e <u>one</u> of F (cor A (cor B (add C (fun D (edi etailed exp	rection) respond dition of actional n itorial ma planatio	wing categorie ds to a correcti feature), modification of odification) ns of the above <u>R 21.900</u> .	on in an eai feature)		eleas	2	f the fo (GSI (Rele (Rele (Rele (Rele (Rele	91-4 5210wing relevant 5220 M Phase 2) 5220 Phase 1996) 5220 Phase 1999) 5220 Phase 1999) 5220 Phase 1999) 5220 Phase 20 5220 Phase 2	pases:
Reason for change:	CON store acco need sate Curr max a co canr X A ne 10.3 In cla with stora up to In cla	VTROL, ed in va ordance d to sto llite ids ently, it Sat=16 mplete not be a w mutli .10, 'Mi ause 13 'maxSa age var o a max auses of ated Im	ac assistanc ASSISTANC riable UE_PC with clause re Almanac a stellite ids satellite ids satellite ids satellite ids satellite ids satellite ids accumulated bound value ultiplicity valu 3.4.28a, one iable can be timum of 32 s 13.4.28a and pact Change e extends the	CE DATA I OSITIONIN 8.6.7.19.3 Issistance ble to stor in variable ac assista in this UE (maxSat/ es and typ instance of prage' so the extended the atellite ids 10.3.7.89, e Analysis	DELIN NG_C 2. O data e GP UE_ nce (i storation the cor f the i hat the o cor	VER BPS Iver t for u S AI POS for e ge v nacS ntrain mult he UI ntain	Y, or SIB 15. _DATA on a time, it is pos- up to a maxin manac assis SITIONING_C entire constel ariable. Storage'=32, nt values'. i bound value E_POSITION GPS Alman rence for para	3 mes per sa ssible num c tance SPS_I lation is ado	ssages is that a UE that a UE of 32 different data for DATA. As of 24-32 s ded to clau cSat' is rep GPS_DA sistance d er 'WNa' is	to be is in may ent GPS a result, satellites) use blaced TA ata for clarified.
	com	plete se	e extends the et of GPS Aln affect impler	nanac assi	stand	ce da	ata can be ad	cumu	ulated in th	ie UE.

affect implementations supporting the corrected functionality otherwise.

	Impact on Test specifications There is no impact on the test specifications.
Consequences if % not approved:	The UE will be limited to accumulating GPS Almanac assistance data for only 16 satellite ids. As a result, UE implementations depending upon valid GPS Almanac assistance data for key signal acquisition or maintenance functions may not work properly. Furthermore, the behaviour of the UE for receiving and storing GPS Almanac assistance for more than 16 satellite ids will remain unspecified.

Clauses affected:	
Other specs affected:	# X Other core specifications # 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 <u>http://www.3gpp.org/specs/CR.htm</u>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked **#** 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

< NEXT MODIFIED SECTION >

10.3.7.89 UE positioning GPS almanac

This IE contains a reduced-precision subset of the ephemeris and clock correction parameters.

Information Element/Group name	Need	Multi	Type and Reference	Semantics description	
WNa	MP		Bit string(8)	Almanac Reference Week [12]	
Satellite information	MP	1 to <maxsat></maxsat>			
>DataID	MP		Integer(03)	See [12]	
>SatID	MP		Enumerated(063)	Satellite ID	
>e	MP		Bit string(16)	Eccentricity [12]	
>t _{oa}	MP		Bit string(8)	Reference Time of Almanac [12]	
>δi	MP		Bit string(16)		
>OMEGADOT	MP		Bit string(16)	Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles/sec) [12]	
>SV Health	MP		Bit string(8)	1/2	
>A ^{1/2}	MP		Bit string(24)	Semi-Major Axis (meters) ^{1/2} [12]	
>OMEGA ₀	MP		Bit string(24)	Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles) [12]	
>M ₀	MP		Bit string(24)	Mean Anomaly at Reference Time (semi-circles) [12]	
>00	MP		Bit string(24)	Argument of Perigee (semi- circles) [12]	
>af ₀	MP		Bit string(11)	apparent clock correction [12]	
>af ₁	MP		Bit string(11)	apparent clock correction [12]	
SV Global Health	OP		Bit string(364)	This enables GPS time recovery and possibly extended GPS correlation intervals. It is specified in page 25 of subframes 4 and 5 [12]	

< NEXT MODIFIED SECTION >

10.3.10 Multiplicity values and type constraint values

The following table includes constants that are either used as multi bounds (name starting with "max") or as high or low value in a type specification (name starting with "lo" or "hi"). Constants are specified only for values appearing more than once in the RRC specification. In case a constant is related to one or more other constants, an expression is included in the "value" column instead of the actual value.

Constant	Explanation	Value	Version
CN information			
maxCNdomains	Maximum number of CN domains	4	
UTRAN mobility			
information			
maxRAT	Maximum number or Radio Access Technologies	maxOtherRAT + 1	
maxOtherRAT	Maximum number or other Radio Access	15	
	Technologies		
maxURA	Maximum number of URAs in a cell	8	
maxInterSysMessages	Maximum number of Inter System Messages	4	
maxRABsetup	Maximum number of RABs to be established	16	
UE information			
maxtransactions	Maximum number of parallel RRC transactions in downlink	25	
maxPDCPalgoType	Maximum number of PDCP algorithm types	8	
maxDRACclasses	Maximum number of UE classes which would require different DRAC parameters	8	
maxFreqBandsFDD	Maximum number of frequency bands supported by the UE as defined in [21]	8	
maxFreqBandsTDD	Maximum number of frequency bands supported by the UE as defined in [22]	4	
maxFreqBandsGSM	Maximum number of frequency bands supported by the UE as defined in [45]	16	
maxPage1	Number of UEs paged in the Paging Type 1 message	8	
maxSystemCapability	Maximum number of system specific capabilities that can be requested in one message.	16	
RB information			
maxPredefConfig	Maximum number of predefined configurations	16	
maxRB	Maximum number of RBs	32	
maxSRBsetup	Maximum number of signalling RBs to be established	8	
maxRBperRAB	Maximum number of RBs per RAB	8	
maxRBallRABs	Maximum number of non signalling RBs	27	
maxRBMuxOptions	Maximum number of RB multiplexing options	8	
maxLoCHperRLC	Maximum number of logical channels per RLC entity	2	
MaxROHC-PacketSizes	Maximum number of packet sizes that are allowed to be produced by ROHC.	16	
MaxROHC-Profiles	Maximum number of profiles supported by ROHC on a given RB.	8	
TrCH information			
maxTrCH	Maximum number of transport channels used in one direction (UL or DL)	32	
maxTrCHpreconf	Maximum number of preconfigured Transport channels, per direction	16	
maxCCTrCH	Maximum number of CCTrCHs	8	
maxTF	Maximum number of different transport formats that can be included in the Transport format set for one transport channel	32	
maxTF-CPCH	Maximum number of TFs in a CPCH set	16	
maxTFC	Maximum number of Transport Format Combinations	1024	

Constant	Explanation	Value	Versior
maxTFCsub	Maximum number of Transport Format	1024	
	Combinations Subset		
maxTFCI-1-Combs	Maximum number of TFCI (field 1) combinations	512	
maxTFCI-2-Combs	Maximum number of TFCI (field 2) combinations	512	
maxCPCHsets	Maximum number of CPCH sets per cell	16	
maxSIBperMsg	Maximum number of complete system information blocks per SYSTEM INFORMATION message	16	
maxSIB	Maximum number of references to other system information blocks.	32	
maxSIB-FACH	Maximum number of references to system information blocks on the FACH	8	
PhyCH information			
maxPCPCH-APsubCH	Maximum number of available sub-channels for AP signature on PCPCH	12	
maxPCPCH-CDsubCH	Maximum number of available sub-channels for CD signature on PCPCH	12	
maxPCPCH-APsig	Maximum number of available signatures for AP on PCPCH	16	
maxPCPCH-CDsig	Maximum number of available signatures for CD on PCPCH	16	
maxAC	Maximum number of access classes	16	
maxASC	Maximum number of access service classes	8	
maxASCmap	Maximum number of access class to access service classes mappings	7	
maxASCpersist	Maximum number of access service classes for which persistence scaling factors are specified	6	
maxPRACH	Maximum number of PRACHs in a cell	16	
MaxPRACH_FPACH	Maximum number of PRACH / FPACH pairs in a cell (1.28 Mcps TDD)	8	REL-4
maxFACHPCH	Maximum number of FACHs and PCHs mapped onto one secondary CCPCHs	8	
maxRL	Maximum number of radio links	8	
maxSCCPCH	Maximum number of secondary CCPCHs per cell	16	
maxDPDCH-UL	Maximum number of DPDCHs per cell	6	
maxDPCH-DLchan	Maximum number of channelisation codes used for DL DPCH	8	
maxPUSCH	Maximum number of PUSCHs	(8)	
maxPDSCH	Maximum number of PDSCHs	8	
maxPDSCHcodes	Maximum number of codes for PDSCH	16	
maxPDSCH-TFCIgroups	Maximum number of TFCI groups for PDSCH	256	
maxPDSCHcodeGroups	Maximum number of code groups for PDSCH	256	
maxPCPCHs	Maximum number of PCPCH channels in a CPCH Set	64	
maxPCPCH-SF	Maximum number of available SFs on PCPCH	7	
maxTS	Maximum number of timeslots used in one direction (UL or DL)	14 (3.84 Mcps TDD)	
		6 (1.28 Mcps TDD)	REL-4
hiPUSCHidentities	Maximum number of PUSCH Identities	64	
hiPDSCHidentities	Maximum number of PDSCH Identities	64	
Measurement information			
maxTGPS	Maximum number of transmission gap pattern sequences	6	
maxAdditionalMeas	Maximum number of additional measurements for a given measurement identity	4	
maxMeasEvent	Maximum number of events that can be listed in measurement reporting criteria	8	
maxMeasParEvent	Maximum number of measurement parameters (e.g. thresholds) per event	2	
maxMeasIntervals	Maximum number of intervals that define the mapping function between the measurements for the cell quality Q of a cell and the representing quality value	1	

Constant	Explanation	Value	Version
maxCellMeas	Maximum number of cells to measure	32	
maxReportedGSMCells	Maximum number of GSM cells to be reported	6	
maxFreq	Maximum number of frequencies to measure	8	
maxSat	Maximum number of satellites to measure	16	
maxSatAlmanacStorage	Maximum number of satellites for which to store GPS Almanac information	<u>32</u>	
HiRM	Maximum number that could be set as rate matching attribute for a transport channel	256	
Frequency information			
maxFDDFreqList	Maximum number of FDD carrier frequencies to be stored in USIM	4	
maxTDDFreqList	Maximum number of TDD carrier frequencies to be stored in USIM	4	
maxFDDFreqCellList	Maximum number of neighbouring FDD cells to be stored in USIM	32	
maxTDDFreqCellList	Maximum number of neighbouring TDD cells to be stored in USIM	32	
maxGSMCellList	Maximum number of GSM cells to be stored in USIM	32	
Other information			
maxNumGSMFreqRanges	Maximum number of GSM Frequency Ranges to store	32	
maxNumFDDFreqs	Maximum number of FDD centre frequencies to store	8	
maxNumTDDFreqs	Maximum number of TDD centre frequencies to store	8	
maxNumCDMA200Freqs	Maximum number of CDMA2000 centre frequencies to store	8	

< NEXT MODIFIED SECTION >

13.4.28a UE_POSITIONING_GPS_DATA

Information Element/Group name	Need	Multi	Type and reference	Semantics description
GPS Data ciphering info	OP		UE	
			positioning	
			Ciphering	
			info	
CPS Deciphering Kove	OP		10.3.7.86	
GPS Deciphering Keys >Current deciphering key	MP		Bit string(56)	
>Next deciphering key	MP		Bit string(56)	
UE positioning GPS reference	OP		UE	
time			positioning	
			GPS	
			reference	
			time	
			10.3.7.96	
UE positioning GPS reference	OP		Ellipsoid	A priori knowledge of UE 3-D
UE position			point with	position.
			altitude and	
			uncertainty	
			ellipsoid	
			10.3.8.4c	
UE positioning GPS DGPS	OP		UE	
corrections			positioning	
			GPS DGPS	
			corrections	
UE positioning GPS navigation	OP	1 to	10.3.7.91	
model	UP	<maxsat></maxsat>		
>SatID	MP		Enumerated(Satellite ID
			063)	
>GPS Ephemeris and Clock	MP		UE	
Correction parameters			positioning	
			GPS	
			Ephemeris	
			and Clock	
			Correction	
			parameters	
			10.3.7.91a	
UE positioning GPS ionospheric	OP		UE	
model			positioning	
			GPS ionospheric	
			model	
			10.3.7.92	
UE positioning GPS UTC model	OP		UE	
	0.		positioning	
			GPS UTC	
			model	
			10.3.7.97	
UE positioning GPS almanac	OP			
>SatID	MP	1 to		
		<maxsat<u>Al</maxsat<u>		
		manacStor		
		<u>age</u> >		
>>WNa	MP			Same as IE in 10.3.7.89
>>DataID	MP			Same as IE in 10.3.7.89
>>e	MP			Same as IE in 10.3.7.89
>>t _{oa}	MP			Same as IE in 10.3.7.89
	MP			Same as IE in 10.3.7.89
>>OMEGADOT	MP			Same as IE in 10.3.7.89
>>SV Health	MP			Same as IE in 10.3.7.89

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>A ^{1/2}	MP			Same as IE in 10.3.7.89
>>OMEGA ₀	MP			Same as IE in 10.3.7.89
>>M0	MP			Same as IE in 10.3.7.89
>>ω	MP			Same as IE in 10.3.7.89
>>af ₀	MP			Same as IE in 10.3.7.89
>>af1	MP			Same as IE in 10.3.7.89
>SV Global Health	OP			Same as IE in 10.3.7.89
UE positioning GPS acquisition assistance	OP		UE positioning GPS acquisition assistance 10.3.7.88	
UE positioning GPS real-time integrity	OP		UE positioning GPS real- time integrity 10.3.7.95	

										CR-Form-v7
		C	CHANGE	REQ	UE	ST	-			CIN-I OIIII-VI
ж	25.331	CR	1955	жrev	-	ж	Current vers	sion:	5.4.0	ж
For <u>HELP</u> on usi	ing this for	m, see	bottom of this	s page or	look	at th	ne pop-up text	t over	the ೫ syr	nbols.
Proposed change af	fects: l	JICC a	pps #	ME X	Rad	dio A	Access Netwo	rk	Core Ne	etwork
					_					
			er of GPS Alm		ssag	es to	be Stored in	1		
			NG_GPS_DA	ТА						
Source: %	RAN WG	2								
Work item code: %	TEI						Date: #	3 <mark>19</mark>	May 2003	,
Category: %	Α						Release: #	Re	I-5	
	Jse <u>one</u> of F (con A (cor B (add C (fun D (edi	rection) respond dition of ctional i torial m planatio	wing categories ds to a correctio feature), modification of to odification) ns of the above <u>(R 21.900</u> .	on in an ear feature)		eleas	Use <u>one</u> of 2	the fo (GSI) (Rele (Rele (Rele (Rele (Rele	blowing rele M Phase 2) ease 1996) ease 1997) ease 1998) ease 1999) ease 4) ease 5) ease 6)	ases:
Reason for change: Summary of change	CON store acco satel Curr max a col canr 2 % A ne 10.3. In cla with stora up to In cla	ITROL ed in va ordance d to sto llite ids ently, in Sat=16 mplete not be a w muth 10, 'M ause 13 'maxSa auses a max auses	t is only possil satellite ids in set of Almana accumulated in ibound value, ultiplicity value 3.4.28a, one in atAlmanacSto iable can be e simum of 32 sa 13.4.28a and pact Change	E DATA I SITIONIN 3.6.7.19.3 ssistance ole to stor n variable ac assistan n this UE 'maxSat/ es and typ nstance of rage' so the extended t atellite ids 10.3.7.89,	DELIN NG_C 2. O data e GP UE_ nce (i stora Alman e con f the nat th o cor	VER BPS bver for u POS for e ge v nacS nacS natrai mult	Y, or SIB 15. _DATA on a p time, it is pos up to a maxim Imanac assist SITIONING_G entire constell 'ariable. Storage'=32, i nt values'. i bound value E_POSITION GPS Almana rence for para	3 mes per sa sible num c tance PS_l ation s adc s adc ac ass amete	ssages is t atellite bas that a UE of 32 different data for DATA. As of 24-32 s led to clau (Sat' is rep GPS_DAT sistance data er 'WNa' is	o be is in may ent GPS a result, satellites) se blaced FA ata for clarified.
	com	plete se	e extends the et of GPS Alm affect implem	anac assi	stand	ce da	ata can be ac	cumu	lated in th	e UE.

affect implementations supporting the corrected functionality otherwise.

	Impact on Test specifications There is no impact on the test specifications.
Consequences if % not approved:	The UE will be limited to accumulating GPS Almanac assistance data for only 16 satellite ids. As a result, UE implementations depending upon valid GPS Almanac assistance data for key signal acquisition or maintenance functions may not work properly. Furthermore, the behaviour of the UE for receiving and storing GPS Almanac assistance for more than 16 satellite ids will remain unspecified.

Clauses affected:	
Other specs affected:	# X Other core specifications # X Test specifications # X O&M Specifications #
Other comments:	* *

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< NEXT MODIFIED SECTION >

10.3.7.89 UE positioning GPS almanac

This IE contains a reduced-precision subset of the ephemeris and clock correction parameters.

Information Element/Group name	Need	Multi	Type and Reference	Semantics description
WNa	MP		Bit string(8)	Almanac Reference Week [12]
Satellite information	MP	1 to <maxsat></maxsat>		
>DataID	MP		Integer(03)	See [12]
>SatID	MP		Enumerated(063)	Satellite ID
>e	MP		Bit string(16)	Eccentricity [12]
>t _{oa}	MP		Bit string(8)	Reference Time of Almanac [12]
>δi	MP		Bit string(16)	
>OMEGADOT	MP		Bit string(16)	Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles/sec) [12]
>SV Health	MP		Bit string(8)	10
>A ^{1/2}	MP		Bit string(24)	Semi-Major Axis (meters) ^{1/2} [12]
>OMEGA ₀	MP		Bit string(24)	Longitude of Ascending Node of Orbit Plane at Weekly Epoch (semi-circles) [12]
>M ₀	MP		Bit string(24)	Mean Anomaly at Reference Time (semi-circles) [12]
>00	MP		Bit string(24)	Argument of Perigee (semi- circles) [12]
>af ₀	MP		Bit string(11)	apparent clock correction [12]
>af ₁	MP		Bit string(11)	apparent clock correction [12]
SV Global Health	OP		Bit string(364)	This enables GPS time recovery and possibly extended GPS correlation intervals. It is specified in page 25 of subframes 4 and 5 [12]

< NEXT MODIFIED SECTION >

10.3.10 Multiplicity values and type constraint values

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Constant	Explanation	Value	Version	
CN information				
maxCNdomains	Maximum number of CN domains	4		
UTRAN mobility				
information				
maxRAT	Maximum number or Radio Access Technologies	maxOtherRAT + 1		
maxOtherRAT	Maximum number or other Radio Access Technologies	15		
maxURA	Maximum number of URAs in a cell	8		
maxInterSysMessages	Maximum number of Inter System Messages	4		
maxRABsetup	Maximum number of RABs to be established	16		
UE information				
maxtransactions	Maximum number of parallel RRC transactions in downlink	25		
maxPDCPalgoType	Maximum number of PDCP algorithm types	8		
maxDRACclasses	Maximum number of UE classes which would	8		
	require different DRAC parameters			
maxFreqBandsFDD	Maximum number of frequency bands supported by the UE as defined in [21]	8		
maxFreqBandsTDD	Maximum number of frequency bands supported by the UE as defined in [22]	4		
maxFreqBandsGSM	Maximum number of frequency bands supported by the UE as defined in [45]	frequency bands supported 16		
maxPage1	Number of UEs paged in the Paging Type 1 message	8		
maxSystemCapability	Maximum number of system specific capabilities that can be requested in one message.	16		
MaxURNTIgroup	Maximum number of U-RNTI groups in one message	8	REL-5	
RB information				
maxPredefConfig	Maximum number of predefined configurations	16		
maxRB	Maximum number of RBs	32		
maxSRBsetup	Maximum number of signalling RBs to be established	8		
maxRBperRAB	Maximum number of RBs per RAB	8		
maxRBallRABs	Maximum number of non signalling RBs	27		
maxRBMuxOptions	Maximum number of RB multiplexing options	8		
maxLoCHperRLC	Maximum number of logical channels per RLC entity	2		
MaxROHC-PacketSizes	Maximum number of packet sizes that are allowed to be produced by ROHC.	16		
MaxROHC-Profiles	Maximum number of profiles supported by ROHC on a given RB.	8		
maxRFC 3095-CID	Maximum number of available CID values per 16384 radio bearer		REL-5	
TrCH information			1	
MaxHProcesses	Maximum number of H-ARQ processes	8	REL-5	
MaxHSDSCH_TB_index	Maximum number of TB set size configurations for the HS-DSCH. 64 (FDD and 1.28 MCPS TDD); 512 (3.84 Mcps TDD)		REL-5	
maxMACdPDUSizes	Maximum number of MAC-d PDU sizes per queue permitted for MAC-hs	8	REL-5	
maxTrCH	Maximum number of transport channels used in one direction (UL or DL)	32		
maxTrCHpreconf	Maximum number of preconfigured Transport	16		

Constant	Explanation	Value	Version
	channels, per direction		
maxCCTrCH	Maximum number of CCTrCHs	8	
maxQueueID	Maximum number of Mac-hs queues	8	REL-5
MaxTF	Maximum number of different transport formats	32	
	that can be included in the Transport format set for		
maxTF-CPCH	one transport channel Maximum number of TFs in a CPCH set	16	
maxTFC	Maximum number of Transport Format	1024	
MaxIFC	Combinations	1024	
maxTFCsub	Maximum number of Transport Format	1024	
	Combinations Subset		
maxTFCI-1-Combs	Maximum number of TFCI (field 1) combinations	512	
maxTFCI-2-Combs	Maximum number of TFCI (field 2) combinations	512	
maxCPCHsets	Maximum number of CPCH sets per cell	16	
maxSIBperMsg	Maximum number of complete system information	16	
	blocks per SYSTEM INFORMATION message		
maxSIB	Maximum number of references to other system information blocks.	32	
maxSIB-FACH	Maximum number of references to system	8	
	information blocks on the FACH		
PhyCH information			
maxHSSCCHcodes	Maximum number of HSSCCH codes that can be	4	REL-5
	assigned to a UE		
maxPCPCH-APsubCH	Maximum number of available sub-channels for	12	
	AP signature on PCPCH	40	
maxPCPCH-CDsubCH	Maximum number of available sub-channels for	12	
maxPCPCH-APsig	CD signature on PCPCH Maximum number of available signatures for AP	16	
maxpupun-Apsiy	on PCPCH	10	
maxPCPCH-CDsig	Maximum number of available signatures for CD	16	
	on PCPCH		
maxAC	Maximum number of access classes	16	
maxASC	Maximum number of access service classes	8	
maxASCmap	Maximum number of access class to access	7	
100	service classes mappings		
maxASCpersist	Maximum number of access service classes for	6	
mayDDACH	which persistence scaling factors are specified	16	
maxPRACH MaxPRACH_FPACH	Maximum number of PRACHs in a cell Maximum number of PRACH / FPACH pairs in a	16 8	REL-4
MaxFRACH_FFACH	cell (1.28 Mcps TDD)	0	REL-4
maxFACHPCH	Maximum number of FACHs and PCHs mapped	8	
	onto one secondary CCPCHs		
maxRL	Maximum number of radio links	8	
maxSCCPCH	Maximum number of secondary CCPCHs per cell	16	
maxDPDCH-UL	Maximum number of DPDCHs per cell	6	
maxDPCH-DLchan	Maximum number of channelisation codes used	8	
	for DL DPCH		
maxPUSCH	Maximum number of PUSCHs	(8)	
maxPDSCH	Maximum number of PDSCHs	8	
maxPDSCH	Maximum number of codes for PDSCH	0 16	
maxPDSCH-TFCIgroups	Maximum number of TFCI groups for PDSCH	256	
maxPDSCHcodeGroups	Maximum number of code groups for PDSCH	256	
maxPCPCHs	Maximum number of PCPCH channels in a CPCH	64	
	Set		
maxPCPCH-SF	Maximum number of available SFs on PCPCH	7	
maxTS	Maximum number of timeslots used in one	14 (3.84 Mcps	
	direction (UL or DL)	TDD)	
		6 (1.28 Mcps	REL-4
		TDD)	
hiPUSCHidentities	Maximum number of PUSCH Identities	64	
hiPDSCHidentities	Maximum number of PDSCH Identities	64	
Measurement information			
maxTGPS	Maximum number of transmission gap pattern	6	

Constant	Explanation	Value	Version
	sequences		
maxAdditionalMeas	Maximum number of additional measurements for	4	
	a given measurement identity	-	
maxMeasEvent	Maximum number of events that can be listed in measurement reporting criteria	8	
maxMeasParEvent		2	
maximeasParEvent	Maximum number of measurement parameters (e.g. thresholds) per event	2	
maxMeasIntervals	Maximum number of intervals that define the mapping function between the measurements for the cell quality Q of a cell and the representing quality value	1	
maxCellMeas	Maximum number of cells to measure	32	
maxReportedGSMCells	Maximum number of GSM cells to be reported	6	
maxFreq	Maximum number of frequencies to measure	8	
maxSat	Maximum number of satellites to measure	16	
maxSatAlmanacStorage	Maximum number of satellites for which to store GPS Almanac information	<u>32</u>	
HiRM	Maximum number that could be set as rate matching attribute for a transport channel	256	
Frequency information			
maxFDDFreqList	Maximum number of FDD carrier frequencies to be stored in USIM	4	
maxTDDFreqList	Maximum number of TDD carrier frequencies to be stored in USIM	4	
maxFDDFreqCellList	Maximum number of neighbouring FDD cells to be stored in USIM	32	
maxTDDFreqCellList	Maximum number of neighbouring TDD cells to be stored in USIM	32	
maxGSMCellList	Maximum number of GSM cells to be stored in USIM	32	
Other information			
maxGERANSI	Maximum number of GERAN SI blocks that can be provided as part of NACC information	8	REL-5
maxNumGSMFreqRanges	Maximum number of GSM Frequency Ranges to store	32	
maxNumFDDFreqs	Maximum number of FDD centre frequencies to store	8	
maxNumTDDFreqs	Maximum number of TDD centre frequencies to store	8	
maxNumCDMA200Freqs	Maximum number of CDMA2000 centre frequencies to store	8	

< NEXT MODIFIED SECTION >

13.4.28a UE_POSITIONING_GPS_DATA

Information Element/Group name	Need	Multi	Type and reference	Semantics description
GPS Data ciphering info	OP		UE	
Of O Data opticiting the	01		positioning	
			Ciphering	
			info	
			10.3.7.86	
GPS Deciphering Keys	OP		10.0.7.00	
>Current deciphering key	MP		Bit string(56)	
>Next deciphering key	MP		Bit string(56)	
UE positioning GPS reference	OP		UE	
time			positioning	
			GPS	
			reference	
			time	
			10.3.7.96	
UE positioning GPS reference	OP		Ellipsoid	A priori knowledge of UE 3-D
UE position	01		point with	position.
OE position			altitude and	position.
			uncertainty	
			ellipsoid	
	OP		10.3.8.4c UE	
UE positioning GPS DGPS corrections	UP			
corrections			positioning GPS DGPS	
			corrections	
	0.0		10.3.7.91	
UE positioning GPS navigation	OP	1 to		
model	MP	<maxsat></maxsat>		Satellite ID
>SatID	IVIP		Enumerated(Satellite ID
	MD		063) UE	
>GPS Ephemeris and Clock	MP		-	
Correction parameters			positioning	
			GPS	
			Ephemeris	
			and Clock	
			Correction	
			parameters	
	0.5		10.3.7.91a	
UE positioning GPS ionospheric	OP		UE	
model			positioning	
			GPS	
			ionospheric	
			model	
			10.3.7.92	
UE positioning GPS UTC model	OP		UE	
			positioning	
			GPS UTC	
			model	
			10.3.7.97	ļ
UE positioning GPS almanac	OP			
>SatID	MP	1 to		
		<maxsatal< td=""><td></td><td> </td></maxsatal<>		
		manacStor		
		<u>age</u> >		
>>WN _a	MP			Same as IE in 10.3.7.89
>>DataID	MP			Same as IE in 10.3.7.89
>>e	MP			Same as IE in 10.3.7.89
>>t _{oa}	MP			Same as IE in 10.3.7.89
>>ðl	MP			Same as IE in 10.3.7.89
>>OMEGADOT	MP			Same as IE in 10.3.7.89
>>SV Health	MP			Same as IE in 10.3.7.89
		1	I	

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>A ^{1/2}	MP			Same as IE in 10.3.7.89
>>OMEGA ₀	MP			Same as IE in 10.3.7.89
>>M0	MP			Same as IE in 10.3.7.89
>>ω	MP			Same as IE in 10.3.7.89
>>af ₀	MP			Same as IE in 10.3.7.89
>>af1	MP			Same as IE in 10.3.7.89
>SV Global Health	OP			Same as IE in 10.3.7.89
UE positioning GPS acquisition assistance	OP		UE positioning GPS acquisition assistance 10.3.7.88	
UE positioning GPS real-time integrity	OP		UE positioning GPS real- time integrity 10.3.7.95	

Tdoc **#***R2-031429*

Proposed change affects: UICC apps% ME X Radio Access Network Core Network Title: # START values on 2G-3G handover Source: # RAN WG2 Work item code: # TEI Date: # 20/05/2003 Category: # F Release: # R99 Use one of the following categories: Use one of the following releases: F (correction) A (corresponds to a correction in an earlier release) R96 (Release 1996)			CHANGE		UESI	Г		CR-Form-v7
Proposed change affects: UICC apps% ME X Radio Access Network Core Network Title: % START values on 2G-3G handover Source: % RAN WG2 Work item code: % TEI Date: % 20/05/2003 Category: % F Use one of the following categories: Use one of the following releases: F (correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996)	ж	25.331	CR 1979	жrev	- *	Current vers	^{ion:} 3.e.0	ж
Title: # START values on 2G-3G handover Source: # RAN WG2 Work item code: # TEI Date: # 20/05/2003 Category: # F Use one of the following categories: Use one of the following releases: F (correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996)	For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.							
Source: # RAN WG2 Work item code: TEI Date: # 20/05/2003 Category: # F Release: # R99 Use one of the following categories: Use one of the following releases: F (correction) Use one of the following releases: A (corresponds to a correction in an earlier release) R96 (Release 1996)	Proposed cha	nge affects:	UICC apps ೫	ME X	Radio /	Access Networ	k Core Ne	etwork
Work item code: # TEI Date: # 20/05/2003 Category: # F Release: # R99 Use one of the following categories: Use one of the following releases: F Correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996)	Title:	<mark>೫ </mark> START ۱	alues on 2G-3G hand	over				
Category: # F Release: # R99 Use one of the following categories: Use one of the following releases: F (correction) 2 (GSM Phase 2) A (corresponds to a correction in an earlier release) R96 (Release 1996)	Source:	<mark>೫ RAN W</mark>	G2					
Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996)	Work item cod	de: ೫ TEI				Date: ೫	20/05/2003	
C(functional modification of feature)R98(Release 1998)D(editorial modification)R99(Release 1999)Detailed explanations of the above categories canRel-4(Release 4)be found in 3GPPTR 21.900.Rel-5(Release 5)Rel-6(Release 6)	Category:	Use <u>one</u> (F (c A (c B (a C (f D (e Detailed e	orrection) corresponds to a correction addition of feature), unctional modification of editorial modification) explanations of the above	on in an ear feature)		Use <u>one</u> of 2 R96 R97 R98 R99 Rel-4 Rel-5	the following rele (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	eases:

Reason for change: #	When a RRC connection is established, the UE retrieves the current START values from the USIM (or UE in case of SIM) and sets them to THRESHOLD. This prevents the re-usage of START values on (e.g.) power off.
	However, this currently not required upon completion of a 2G-3G handover.
Summary of change: #	upon completion of handover.
	Impact Analysis: The change only affects the UE. A UE implementation that does not already do this will require changing.
Consequences if % not approved:	A security breach will remain because the START values can be re-used after 2G-3G handover. The requirements descirbed in section 6.8.2.4 of 33.102 will not be fulfilled.
Clauses offected	

Clauses affected:	¥
Other specs affected:	Y N X Other core specifications % X Test specifications % X O&M Specifications
Other comments:	¥

How to create CRs using this form:

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- 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

8.3.6.3 Reception of HANDOVER TO UTRAN COMMAND message by the UE

The UE shall be able to receive a HANDOVER TO UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target UTRAN cell and/or frequency.

The UE shall act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> store a U-RNTI value (32 bits), which is derived by the IEs "SRNC identity" (12 bits) and "S-RNTI 2" (10 bits) included in IE "U-RNTI-short". In order to produce a full size U-RNTI value, a full size "S-RNTI" (20 bits) shall be derived by padding the IE "S-RNTI 2" with 10 zero bits in the most significant positions; and
- 1> initialise the variable ESTABLISHED_SIGNALLING_CONNECTIONS with the signalling connections that remains after the handover according to the specifications of the source RAT;
- 1> initialise the variable UE_CAPABILITIES_TRANSFERRED with the UE capabilities that have been transferred to the network up to the point prior to the handover, if any;
- 1> initialise the variable TIMERS_AND_CONSTANTS to the default values and start to use those timer and constants values;
- 1> if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Predefined configuration":
 - 2> initiate the radio bearer and transport channel configuration in accordance with the predefined parameters identified by the IE "Predefined configuration identity";
 - 2> initiate the physical channels in accordance with the predefined parameters identified by the IE "Predefined radio configuration identity" and the received physical channel information elements;
 - 2> store information about the established radio access bearers and radio bearers according to the IE "Predefined configuration identity"; and
 - 2> set the IE "RAB Info Post" in the variable ESTABLISHED_RABS and the IE "Re-establishment timer" in the IE "RAB Info" in the variable ESTABLISHED_RABS to "useT314".
- 1> if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Default configuration":
 - 2> initiate the radio bearer and transport channel configuration in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity";
 - 2> initiate the physical channels in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity" and the received physical channel information elements;
- NOTE: IE "Default configuration mode" specifies whether the FDD or TDD version of the default configuration shall be used
 - 2> set the IE "RAB Info Post" in the variable ESTABLISHED_RABS and the IE "Re-establishment timer" in the IE "RAB Info" in the variable ESTABLISHED_RABS to "useT314".
- 1> if IE "Specification mode" is set to "Preconfiguration":
 - 2> use the following values for parameters that are neither signalled within the HANDOVER TO UTRAN COMMAND message nor included within pre-defined or default configuration:
 - 3> 0 dB for the power offset P _{Pilot-DPDCH} bearer in FDD;
 - 3> calculate the Default DPCH Offset Value using the following formula:
 - 3> in FDD:

Default DPCH Offset Value = (SRNTI 2 mod 600) * 512

3> in TDD:

Default DPCH Offset Value = (SRNTI 2 mod 7)

- 3> handle the above Default DPCH Offset Value as if an IE with that value was included in the message, as specified in subclause 8.6.6.21.
- 1> if IE "Specification mode" is set to "Complete specification":
 - 2> initiate the radio bearer, transport channel and physical channel configuration in accordance with the received radio bearer, transport channel and physical channel information elements.
- 1> perform an open loop estimation to determine the UL transmission power according to subclause 8.5.3;
- 1> set the IE "START" for each CN domain, in the IE "START list" in the HANDOVER TO UTRAN COMPLETE message equal to the START value for each CN domain stored in the USIM if the USIM is present, or as stored in the UE for each CN domain if the SIM is present; and then;
- 1> set the value of "THRESHOLD" in the variable "START_THRESHOLD" to the 20 MSBs of the value stored in the USIM [50] for the maximum value of START for each CN Domain, or to the default value in [40] if the SIM is present. Then, set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD;
- 1> if ciphering has been activated and ongoing in the radio access technology from which inter- RAT handover is performed:
 - 2> for the CN domain included in the IE "CN domain identity" which is included in the IE "RAB info" of the IE "RAB information to setup", or the CS domain when these IEs are not present:
 - 3> set the variable LATEST_CONFIGURED_CN_DOMAIN to the value indicated in the IE "CN domain identity", or to the CS domain when this IE is not present;
 - 3> set the 20 MSB of the HFN component of the COUNT-C variable for all radio bearers using RLC-TM and all signalling radio bearers to the "START" value included in the IE "UE security information" in the variable "INTER_RAT_HANDOVER_INFO_TRANSFERRED";
 - 3> set the remaining LSBs of the HFN component of COUNT-C for all radio bearers using RLC-TM and all signalling radio bearers to zero;
 - 3> not increment the HFN component of COUNT-C for radio bearers using RLC-TM, i.e. keep the HFN value fixed without incrementing every CFN cycle;
 - 3> set the CFN component of the COUNT-C variable to the value of the CFN as calculated in subclause 8.5.15;
 - 3> set the IE "Status" in the variable CIPHERING_STATUS to "Started";
 - 3> apply the algorithm according to IE "Ciphering Algorithm" and apply ciphering immediately upon reception of the HANDOVER TO UTRAN COMMAND.
- 1> if ciphering has not been activated and ongoing in the radio access technology from which inter-RAT handover is performed:
 - 2> for the CN domain included in the IE "CN domain identity" which is included in the IE "RAB info" of the IE "RAB information to setup", or the CS domain when these IEs are not present:
 - 3> set the IE "Status" in the variable CIPHERING_STATUS to "Not Started".

If the UE succeeds in establishing the connection to UTRAN, it shall:

- 1> if the IE "Status" in the variable CIPHERING_STATUS of a CN domain is set to "Started" and transparent mode radio bearers have been established by this procedure for that CN domain:
 - 2> Set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD;

- 2> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now", that is a multiple of 8 frames (CFN mod 8 =0) and lies at least 200 frames ahead of the CFN in which the response message is first transmitted;
- 2> at the CFN value as indicated in the response message in the IE "COUNT-C activation time" for radio bearers using RLC-TM:
 - 3> set the 20 MSB of the HFN component of the COUNT-C variable common for all transparent mode radio bearers of this CN domain to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 3> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 3> increment the HFN component of the COUNT-C variable by one even if the "COUNT-C activation time" is equal to zero;
 - 3> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;
 - 3> step the COUNT-C variable, as normal, at each CFN value. The HFN component is no longer fixed in value but incremented at each CFN cycle.
- 1> if the IE "Status" in the variable CIPHERING_STATUS of a CN domain is set to "Not Started" and transparent mode radio bearers have been established by this procedure for that CN domain:
 - 2> initialise the 20 MSB of the HFN component of COUNT-C common for all transparent mode radio bearers of this CN domain with the START value as indicated in the IE "START list" of the response message for the relevant CN domain;
 - 2> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 2> do not increment the COUNT-C value common for all transparent mode radio bearers for this CN domain.
- 1> transmit a HANDOVER TO UTRAN COMPLETE message on the uplink DCCH, using, if ciphering has been started, the new ciphering configuration;
- 1> when the HANDOVER TO UTRAN COMPLETE message has been submitted to lower layers for transmission:
 - 2> enter UTRA RRC connected mode in state CELL_DCH;
 - 2> initialise variables upon entering UTRA RRC connected mode as specified in subclause 13.4;
 - 2> update the variable UE_CAPABILITY_TRANSFERRED with the UE capabilities stored in the variable INTER_RAT_HANDOVER_INFO_TRANSFERRED;
 - 2> for all radio bearers using RLC-AM or RLC-UM:
 - 3> set the 20 MSB of the HFN component of the uplink and downlink COUNT-C variable to the START value indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 3> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 3> increment the HFN component of the COUNT-C variable by one;
 - 3> start incrementing the COUNT-C values.

1> and the procedure ends.

Tdoc **#***R2-031430*

		CHANGE	REQ	UES	бТ			CR-Form-v7
ж	25.331	CR 1980	жrev	- ³	€ Curi	rent versio	^{n:} 4.9.0	ж
For <u>HELP</u>	on using this f	orm, see bottom of this	page or l	look at	the pop	o-up text o	ver the ¥ syr	nbols.
Proposed cha	nge affects:	UICC apps %	MEX	Radic	Acces	s Network	Core Ne	etwork
Title:	<mark>೫ </mark> START v	alues on 2G-3G hando	ver					
Source:	<mark>೫ RAN W</mark>	G2						
Work item cod	de: ೫ TEI					Date: ೫	20/05/2003	
Category:	F (co A (co B (a C (fu D (e Detailed e	of the following categories prection) orresponds to a correction ddition of feature), unctional modification of fe ditorial modification) explanations of the above n 3GPP <u>TR 21.900</u> .	n in an earl eature)		Us	se <u>one</u> of th 2 (C R96 (F R97 (F R98 (F R99 (F Rel-4 (F Rel-5 (F	Rel-4 e following rele GSM Phase 2) Release 1996) Release 1997) Release 1998) Release 1999) Release 4) Release 5) Release 6)	pases:

Reason for change: #	 When a RRC connection is established, the UE retrieves the current START values from the USIM (or UE in case of SIM) and sets them to THRESHOLD. This prevents the re-usage of START values on (e.g.) power off. However, this currently not required upon completion of a 2G-3G handover.
Summary of change: ¥	UE sets the START values in USIM (or UE in the cases of SIM) to THRESHOLD upon completion of handover. Impact Analysis: The change only affects the UE. A UE implementation that does not already do this will require changing.
Consequences if % not approved:	A security breach will remain because the START values can be re-used after 2G-3G handover. The requirements descirbed in section 6.8.2.4 of 33.102 will not be fulfilled.
Clauses affected: #	

Other specs affected:	Y N X Other core specifications X Test specifications X O&M Specifications
Other comments:	<u>#</u>

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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.

8.3.6.3 Reception of HANDOVER TO UTRAN COMMAND message by the UE

The UE shall be able to receive a HANDOVER TO UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target UTRAN cell and/or frequency.

The UE shall act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> store a U-RNTI value (32 bits), which is derived by the IEs "SRNC identity" (12 bits) and "S-RNTI 2" (10 bits) included in IE "U-RNTI-short". In order to produce a full size U-RNTI value, a full size "S-RNTI" (20 bits) shall be derived by padding the IE "S-RNTI 2" with 10 zero bits in the most significant positions; and
- 1> initialise the variable ESTABLISHED_SIGNALLING_CONNECTIONS with the signalling connections that remains after the handover according to the specifications of the source RAT;
- 1> initialise the variable UE_CAPABILITIES_TRANSFERRED with the UE capabilities that have been transferred to the network up to the point prior to the handover, if any;
- 1> initialise the variable TIMERS_AND_CONSTANTS to the default values and start to use those timer and constants values;
- 1> if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Predefined configuration":
 - 2> initiate the radio bearer and transport channel configuration in accordance with the predefined parameters identified by the IE "Predefined configuration identity";
 - 2> initiate the physical channels in accordance with the predefined parameters identified by the IE "Predefined radio configuration identity" and the received physical channel information elements;
 - 2> store information about the established radio access bearers and radio bearers according to the IE "Predefined configuration identity"; and
 - 2> set the IE "RAB Info Post" in the variable ESTABLISHED_RABS and the IE "Re-establishment timer" in the IE "RAB Info" in the variable ESTABLISHED_RABS to "useT314".
- 1> if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Default configuration":
 - 2> initiate the radio bearer and transport channel configuration in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity";
 - 2> initiate the physical channels in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity" and the received physical channel information elements;
- NOTE: IE "Default configuration mode" specifies whether the FDD or TDD version of the default configuration shall be used
 - 2> set the IE "RAB Info Post" in the variable ESTABLISHED_RABS and the IE "Re-establishment timer" in the IE "RAB Info" in the variable ESTABLISHED_RABS to "useT314".
- 1> if IE "Specification mode" is set to "Preconfiguration":
 - 2> use the following values for parameters that are neither signalled within the HANDOVER TO UTRAN COMMAND message nor included within pre-defined or default configuration:
 - 3> 0 dB for the power offset P _{Pilot-DPDCH} bearer in FDD;
 - 3> calculate the Default DPCH Offset Value using the following formula:
 - 3> in FDD:

Default DPCH Offset Value = (SRNTI 2 mod 600) * 512

3> in TDD:

Default DPCH Offset Value = (SRNTI 2 mod 7)

- 3> handle the above Default DPCH Offset Value as if an IE with that value was included in the message, as specified in subclause 8.6.6.21.
- 1> if IE "Specification mode" is set to "Complete specification":
 - 2> initiate the radio bearer, transport channel and physical channel configuration in accordance with the received radio bearer, transport channel and physical channel information elements.
- 1> perform an open loop estimation to determine the UL transmission power according to subclause 8.5.3;
- 1> set the IE "START" for each CN domain, in the IE "START list" in the HANDOVER TO UTRAN COMPLETE message equal to the START value for each CN domain stored in the USIM if the USIM is present, or as stored in the UE for each CN domain if the SIM is present; and then;
- 1> set the value of "THRESHOLD" in the variable "START_THRESHOLD" to the 20 MSBs of the value stored in the USIM [50] for the maximum value of START for each CN Domain, or to the default value in [40] if the SIM is present. Then, set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD;
- 1> if ciphering has been activated and ongoing in the radio access technology from which inter- RAT handover is performed:
 - 2> for the CN domain included in the IE "CN domain identity" which is included in the IE "RAB info" of the IE "RAB information to setup", or the CS domain when these IEs are not present:
 - 3> set the variable LATEST_CONFIGURED_CN_DOMAIN to the value indicated in the IE "CN domain identity", or to the CS domain when this IE is not present;
 - 3> set the 20 MSB of the HFN component of the COUNT-C variable for all radio bearers using RLC-TM and all signalling radio bearers to the "START" value included in the IE "UE security information" in the variable "INTER_RAT_HANDOVER_INFO_TRANSFERRED";
 - 3> set the remaining LSBs of the HFN component of COUNT-C for all radio bearers using RLC-TM and all signalling radio bearers to zero;
 - 3> not increment the HFN component of COUNT-C for radio bearers using RLC-TM, i.e. keep the HFN value fixed without incrementing every CFN cycle;
 - 3> set the CFN component of the COUNT-C variable to the value of the CFN as calculated in subclause 8.5.15;
 - 3> set the IE "Status" in the variable CIPHERING_STATUS to "Started";
 - 3> apply the algorithm according to IE "Ciphering Algorithm" and apply ciphering immediately upon reception of the HANDOVER TO UTRAN COMMAND.
- 1> if ciphering has not been activated and ongoing in the radio access technology from which inter-RAT handover is performed:
 - 2> for the CN domain included in the IE "CN domain identity" which is included in the IE "RAB info" of the IE "RAB information to setup", or the CS domain when these IEs are not present:
 - 3> set the IE "Status" in the variable CIPHERING_STATUS to "Not Started".

If the UE succeeds in establishing the connection to UTRAN, it shall:

- 1> if the IE "Status" in the variable CIPHERING_STATUS of a CN domain is set to "Started" and transparent mode radio bearers have been established by this procedure for that CN domain:
 - 2> Set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD;

- 2> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now", that is a multiple of 8 frames (CFN mod 8 =0) and lies at least 200 frames ahead of the CFN in which the response message is first transmitted;
- 2> at the CFN value as indicated in the response message in the IE "COUNT-C activation time" for radio bearers using RLC-TM:
 - 3> set the 20 MSB of the HFN component of the COUNT-C variable common for all transparent mode radio bearers of this CN domain to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 3> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 3> increment the HFN component of the COUNT-C variable by one even if the "COUNT-C activation time" is equal to zero;
 - 3> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;
 - 3> step the COUNT-C variable, as normal, at each CFN value. The HFN component is no longer fixed in value but incremented at each CFN cycle.
- 1> if the IE "Status" in the variable CIPHERING_STATUS of a CN domain is set to "Not Started" and transparent mode radio bearers have been established by this procedure for that CN domain:
 - 2> initialise the 20 MSB of the HFN component of COUNT-C common for all transparent mode radio bearers of this CN domain with the START value as indicated in the IE "START list" of the response message for the relevant CN domain;
 - 2> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 2> do not increment the COUNT-C value common for all transparent mode radio bearers for this CN domain.
- 1> transmit a HANDOVER TO UTRAN COMPLETE message on the uplink DCCH, using, if ciphering has been started, the new ciphering configuration;
- 1> when the HANDOVER TO UTRAN COMPLETE message has been submitted to lower layers for transmission:
 - 2> enter UTRA RRC connected mode in state CELL_DCH;
 - 2> initialise variables upon entering UTRA RRC connected mode as specified in subclause 13.4;
 - 2> update the variable UE_CAPABILITY_TRANSFERRED with the UE capabilities stored in the variable INTER_RAT_HANDOVER_INFO_TRANSFERRED;
 - 2> for all radio bearers using RLC-AM or RLC-UM:
 - 3> set the 20 MSB of the HFN component of the uplink and downlink COUNT-C variable to the START value indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 3> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 3> increment the HFN component of the COUNT-C variable by one;
 - 3> start incrementing the COUNT-C values.

1> and the procedure ends.

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CR-Form-vi											
ж	25.331	CR 1981	ж rev	- *	Current vers	^{ion:} 5.4.0	ж				
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.											
Proposed chai	nge affects:	UICC apps ೫	MEX	Radio /	Access Networ	k Core Ne	etwork				
Title:	<mark>೫ START va</mark>	alues on 2G-3G handov	ver								
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Reason for change: #	When a RRC connection is established, the UE retrieves the current START				
	values from the USIM (or UE in case of SIM) and sets them to THRESHOLD.				
	This prevents the re-usage of START values on (e.g.) power off.				
	This prevents the re-usage of OTART values of (e.g.) power off.				
	However, this currently not required upon completion of a 2G-3G handover.				
Summary of change: #	UE sets the START values in USIM (or UE in the cases of SIM) to THRESHOLD				
,	upon completion of handover.				
	Impact Analysis:				
	The change only affects the UE. A UE implementation that does not already do				
	this will require changing.				
	······································				
Consequences if #	A security breach will remain because the START values can be re-used after				
-					
not approved:	2G-3G handover.				
	The requirements descirbed in section 6.8.2.4 of 33.102 will not be fulfilled.				
Clauses affected: #					

oladooo allootoa.						
		Y	Ν			
Other specs	ж		X	Other core specifications	ж	
affected:			Y	Test specifications		
anecieu.			^			
			X	O&M Specifications		
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Other comments:	ж					

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked # 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 <u>ftp://ftp.3gpp.org/specs/</u> 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.

8.3.6.3 Reception of HANDOVER TO UTRAN COMMAND message by the UE

The UE shall be able to receive a HANDOVER TO UTRAN COMMAND message and perform an inter-RAT handover, even if no prior UE measurements have been performed on the target UTRAN cell and/or frequency.

The UE shall act upon all received information elements as specified in subclause 8.6, unless specified otherwise in the following. The UE shall:

- 1> store a U-RNTI value (32 bits), which is derived by the IEs "SRNC identity" (12 bits) and "S-RNTI 2" (10 bits) included in IE "U-RNTI-short". In order to produce a full size U-RNTI value, a full size "S-RNTI" (20 bits) shall be derived by padding the IE "S-RNTI 2" with 10 zero bits in the most significant positions; and
- 1> initialise the variable ESTABLISHED_SIGNALLING_CONNECTIONS with the signalling connections that remains after the handover according to the specifications of the source RAT;
- 1> initialise the variable UE_CAPABILITIES_TRANSFERRED with the UE capabilities that have been transferred to the network up to the point prior to the handover, if any;
- 1> initialise the variable TIMERS_AND_CONSTANTS to the default values and start to use those timer and constants values;
- 1> if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Predefined configuration":
 - 2> initiate the radio bearer and transport channel configuration in accordance with the predefined parameters identified by the IE "Predefined configuration identity";
 - 2> initiate the physical channels in accordance with the predefined parameters identified by the IE "Predefined radio configuration identity" and the received physical channel information elements;
 - 2> store information about the established radio access bearers and radio bearers according to the IE "Predefined configuration identity"; and
 - 2> set the IE "RAB Info Post" in the variable ESTABLISHED_RABS and the IE "Re-establishment timer" in the IE "RAB Info" in the variable ESTABLISHED_RABS to "useT314".
- 1> if IE "Specification mode" is set to "Preconfiguration" and IE "Preconfiguration mode" is set to "Default configuration":
 - 2> initiate the radio bearer and transport channel configuration in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity";
 - 2> initiate the physical channels in accordance with the default parameters identified by the IE "Default configuration mode" and IE "Default configuration identity" and the received physical channel information elements;
- NOTE: IE "Default configuration mode" specifies whether the FDD or TDD version of the default configuration shall be used
 - 2> set the IE "RAB Info Post" in the variable ESTABLISHED_RABS and the IE "Re-establishment timer" in the IE "RAB Info" in the variable ESTABLISHED_RABS to "useT314".
- 1> if IE "Specification mode" is set to "Preconfiguration":
 - 2> use the following values for parameters that are neither signalled within the HANDOVER TO UTRAN COMMAND message nor included within pre-defined or default configuration:
 - 3> 0 dB for the power offset P _{Pilot-DPDCH} bearer in FDD;
 - 3> calculate the Default DPCH Offset Value using the following formula:
 - 3> in FDD:

Default DPCH Offset Value = (SRNTI 2 mod 600) * 512

3> in TDD:

Default DPCH Offset Value = (SRNTI 2 mod 7)

- 3> handle the above Default DPCH Offset Value as if an IE with that value was included in the message, as specified in subclause 8.6.6.21.
- 1> if IE "Specification mode" is set to "Complete specification":
 - 2> initiate the radio bearer, transport channel and physical channel configuration in accordance with the received radio bearer, transport channel and physical channel information elements.
- 1> perform an open loop estimation to determine the UL transmission power according to subclause 8.5.3;
- 1> set the IE "START" for each CN domain, in the IE "START list" in the HANDOVER TO UTRAN COMPLETE message equal to the START value for each CN domain stored in the USIM if the USIM is present, or as stored in the UE for each CN domain if the SIM is present; and then;
- 1> set the value of "THRESHOLD" in the variable "START_THRESHOLD" to the 20 MSBs of the value stored in the USIM [50] for the maximum value of START for each CN Domain, or to the default value in [40] if the SIM is present. Then, set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD;
- 1> if ciphering has been activated and ongoing in the radio access technology from which inter- RAT handover is performed:
 - 2> for the CN domain included in the IE "CN domain identity" which is included in the IE "RAB info" of the IE "RAB information to setup", or the CS domain when these IEs are not present:
 - 3> set the variable LATEST_CONFIGURED_CN_DOMAIN to the value indicated in the IE "CN domain identity", or to the CS domain when this IE is not present;
 - 3> set the 20 MSB of the HFN component of the COUNT-C variable for all radio bearers using RLC-TM and all signalling radio bearers to the "START" value included in the IE "UE security information" in the variable "INTER_RAT_HANDOVER_INFO_TRANSFERRED";
 - 3> set the remaining LSBs of the HFN component of COUNT-C for all radio bearers using RLC-TM and all signalling radio bearers to zero;
 - 3> not increment the HFN component of COUNT-C for radio bearers using RLC-TM, i.e. keep the HFN value fixed without incrementing every CFN cycle;
 - 3> set the CFN component of the COUNT-C variable to the value of the CFN as calculated in subclause 8.5.15;
 - 3> set the IE "Status" in the variable CIPHERING_STATUS to "Started";
 - 3> apply the algorithm according to IE "Ciphering Algorithm" and apply ciphering immediately upon reception of the HANDOVER TO UTRAN COMMAND.
- 1> if ciphering has not been activated and ongoing in the radio access technology from which inter-RAT handover is performed:
 - 2> for the CN domain included in the IE "CN domain identity" which is included in the IE "RAB info" of the IE "RAB information to setup", or the CS domain when these IEs are not present:
 - 3> set the IE "Status" in the variable CIPHERING_STATUS to "Not Started".

If the UE succeeds in establishing the connection to UTRAN, it shall:

- 1> if the IE "Status" in the variable CIPHERING_STATUS of a CN domain is set to "Started" and transparent mode radio bearers have been established by this procedure for that CN domain:
 - 2> Set the START value stored in the USIM [50] if present, and as stored in the UE if the SIM is present for any CN domain to the value "THRESHOLD" of the variable START_THRESHOLD;

- 2> include the IE "COUNT-C activation time" in the response message and specify a CFN value other than the default, "Now", that is a multiple of 8 frames (CFN mod 8 =0) and lies at least 200 frames ahead of the CFN in which the response message is first transmitted;
- 2> at the CFN value as indicated in the response message in the IE "COUNT-C activation time" for radio bearers using RLC-TM:
 - 3> set the 20 MSB of the HFN component of the COUNT-C variable common for all transparent mode radio bearers of this CN domain to the START value as indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 3> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 3> increment the HFN component of the COUNT-C variable by one even if the "COUNT-C activation time" is equal to zero;
 - 3> set the CFN component of the COUNT-C to the value of the IE "COUNT-C activation time" of the response message. The HFN component and the CFN component completely initialise the COUNT-C variable;
 - 3> step the COUNT-C variable, as normal, at each CFN value. The HFN component is no longer fixed in value but incremented at each CFN cycle.
- 1> if the IE "Status" in the variable CIPHERING_STATUS of a CN domain is set to "Not Started" and transparent mode radio bearers have been established by this procedure for that CN domain:
 - 2> initialise the 20 MSB of the HFN component of COUNT-C common for all transparent mode radio bearers of this CN domain with the START value as indicated in the IE "START list" of the response message for the relevant CN domain;
 - 2> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 2> do not increment the COUNT-C value common for all transparent mode radio bearers for this CN domain.
- 1> transmit a HANDOVER TO UTRAN COMPLETE message on the uplink DCCH, using, if ciphering has been started, the new ciphering configuration;
- 1> when the HANDOVER TO UTRAN COMPLETE message has been submitted to lower layers for transmission:
 - 2> enter UTRA RRC connected mode in state CELL_DCH;
 - 2> initialise variables upon entering UTRA RRC connected mode as specified in subclause 13.4;
 - 2> update the variable UE_CAPABILITY_TRANSFERRED with the UE capabilities stored in the variable INTER_RAT_HANDOVER_INFO_TRANSFERRED;
 - 2> for all radio bearers using RLC-AM or RLC-UM:
 - 3> set the 20 MSB of the HFN component of the uplink and downlink COUNT-C variable to the START value indicated in the IE "START list" of the response message for the relevant CN domain; and
 - 3> set the remaining LSBs of the HFN component of COUNT-C to zero;
 - 3> increment the HFN component of the COUNT-C variable by one;
 - 3> start incrementing the COUNT-C values.

1> and the procedure ends.