3GPP TSG RAN Meeting #27 **RP-050038**
Tokyo, Japan, 9 - 11 March 2005

Title **Endorsed CRs (R99 & Rel-4/Rel-5/Rel-6 CatA) to 25.101, 25.133, 25.215, 25.331, 25.423, 25.433 for the removal of TGPL2**
Source **3GPP TSG RAN WG1, WG2, WG3, WG4**
Agenda Item **8.5.6**

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R4-050034	25.101	393		C	R99	3.17.0	Removal of TGPL2	TEI
R4-050035	25.101	394		A	Rel-4	4.11.0	Removal of TGPL2	TEI
R4-050036	25.101	395		A	Rel-5	5.13.0	Removal of TGPL2	TEI
R4-050037	25.101	396		A	Rel-6	6.6.0	Removal of TGPL2	TEI
R4-050038	25.133	712		C	R99	3.19.0	Removal of TGPL2	TEI
R4-050039	25.133	713		A	Rel-4	4.13.0	Removal of TGPL2	TEI
R4-050040	25.133	714		A	Rel-5	5.13.0	Removal of TGPL2	TEI
R4-050041	25.133	715		A	Rel-6	6.8.0	Removal of TGPL2	TEI
R1-050110	25.215	150	1	C	R99	3.12.0	Removal of TGPL2	TEI
R1-050110	25.215	151	1	A	Rel-4	4.7.0	Removal of TGPL2	TEI
R1-050110	25.215	152	1	A	Rel-5	5.5.0	Removal of TGPL2	TEI
R1-050110	25.215	153	1	A	Rel-6	6.1.0	Removal of TGPL2	TEI
R2-050585	25.331	2488	2	C	R99	3.21.0	Removal of TGPL2	TEI
R2-050586	25.331	2489	2	A	Rel-4	4.16.0	Removal of TGPL2	TEI
R2-050587	25.331	2490	2	C	Rel-5	5.11.0	Removal of TGPL2	TEI
R2-050588	25.331	2491	2	C	Rel-6	6.4.0	Removal of TGPL2	TEI
R3-050246	25.423	1022	1	C	R99	3.14.2	Removal of TGPL2	TEI
R3-050247	25.423	1023	1	A	Rel-4	4.12.1	Removal of TGPL2	TEI
R3-050248	25.423	1024	1	A	Rel-5	5.12.0	Removal of TGPL2	TEI

WG Tdoc	Spec	CR	R	Cat	Rel	Curr Ver	Title	Work Item
R3-050249	25.423	1025	1	A	Rel-6	6.4.1	Removal of TGPL2	TEI
R3-050250	25.433	1071	1	A	R99	3.14.2	Removal of TGPL2	TEI
R3-050251	25.433	1072	1	A	Rel-4	4.13.0	Removal of TGPL2	TEI
R3-050252	25.433	1073	1	A	Rel-5	5.11.0	Removal of TGPL2	TEI
R3-050253	25.433	1074	1	A	Rel-6	6.4.0	Removal of TGPL2	TEI

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050034**

Scottsdale, US 14 - 18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.101** **CR** **393** ⌘ **rev** ⌘ Current version: **3.17.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**C**
Release:	⌘	R99

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	A5			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.133, 25.215, 25.331, 25.423, 25.433
		X /	Test specifications		34.108, 34.121, 34.123-1
		/ **X**	O&M Specifications		
Other comments:	⌘				

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

A.5 DL reference compressed mode parameters

Parameters described in Table A.21 are used in some test specified in TS 25.101 while parameters described in Table A.22 are used in some tests specified in TS 25.133.

Set 1 parameters in Table A.21 are applicable when compressed mode by spreading factor reduction is used in downlink. Set 2 parameters in Table A.21 are applicable when compressed mode by puncturing is used in downlink.

Table A.21: Compressed mode reference pattern 1 parameters

Parameter	Set 1	Set 2	Note
TGSN (Transmission Gap Starting Slot Number)	11	11	
TGL1 (Transmission Gap Length 1)	7	7	
TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

Table A.22: Compressed mode reference pattern 2 parameters

Parameter	Set 1	Set 2	Set 3	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	10	
TGL1 (Transmission Gap Length 1)	7	7	10	
TGL2 (Transmission Gap Length 2)	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	0	
TGPL1 (Transmission Gap Pattern Length)	3	12	11	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	DL & UL	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	SF/2	
DL compressed mode method	SF/2	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11B	11A	
Scrambling code change	No	No	No	
RPP (Recovery period power control mode)	0	0	0	
ITP (Initial transmission power control mode)	0	0	0	

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050035**

Scottsdale, US 14 - 18 February 2005

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CHANGE REQUEST

⌘ **25.101** **CR** **394** ⌘ **rev** ⌘ Current version: **4.11.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-4

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	A5			
Other specs affected:	⌘	Y / N X / X / / X	Other core specifications Test specifications O&M Specifications	⌘	25.133, 25.215, 25.331, 25.423, 25.433 34.108, 34.121, 34.123-1
Other comments:	⌘				

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

A.5 DL reference compressed mode parameters

Parameters described in Table A.21 are used in some test specified in TS 25.101 while parameters described in Table A.22 are used in some tests specified in TS 25.133.

Set 1 parameters in Table A.21 are applicable when compressed mode by spreading factor reduction is used in downlink. Set 2 parameters in Table A.21 are applicable when compressed mode by puncturing is used in downlink.

Table A.21: Compressed mode reference pattern 1 parameters

Parameter	Set 1	Set 2	Note
TGSN (Transmission Gap Starting Slot Number)	11	11	
TGL1 (Transmission Gap Length 1)	7	7	
TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

Table A.22: Compressed mode reference pattern 2 parameters

Parameter	Set 1	Set 2	Set 3	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	10	
TGL1 (Transmission Gap Length 1)	7	7	10	
TGL2 (Transmission Gap Length 2)	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	0	
TGPL1 (Transmission Gap Pattern Length)	3	12	11	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	DL & UL	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	SF/2	
DL compressed mode method	SF/2	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11B	11A	
Scrambling code change	No	No	No	
RPP (Recovery period power control mode)	0	0	0	
ITP (Initial transmission power control mode)	0	0	0	

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050036**

Scottsdale, US 14 - 18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.101** **CR** **395** ⌘ **rev** ⌘ Current version: **5.13.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	A5			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.133, 25.215, 25.331, 25.423, 25.433
		X /	Test specifications		34.108, 34.121, 34.123-1
		/ **X**	O&M Specifications		
Other comments:	⌘				

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

A.5 DL reference compressed mode parameters

Parameters described in Table A.21 are used in some test specified in TS 25.101 while parameters described in Table A.22 are used in some tests specified in TS 25.133.

Set 1 parameters in Table A.21 are applicable when compressed mode by spreading factor reduction is used in downlink. Set 2 parameters in Table A.21 are applicable when compressed mode by puncturing is used in downlink.

Table A.21: Compressed mode reference pattern 1 parameters

Parameter	Set 1	Set 2	Note
TGSN (Transmission Gap Starting Slot Number)	11	11	
TGL1 (Transmission Gap Length 1)	7	7	
TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

Table A.22: Compressed mode reference pattern 2 parameters

Parameter	Set 1	Set 2	Set 3	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	10	
TGL1 (Transmission Gap Length 1)	7	7	10	
TGL2 (Transmission Gap Length 2)	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	0	
TGPL1 (Transmission Gap Pattern Length)	3	12	11	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	DL & UL	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	SF/2	
DL compressed mode method	SF/2	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11B	11A	
Scrambling code change	No	No	No	
RPP (Recovery period power control mode)	0	0	0	
ITP (Initial transmission power control mode)	0	0	0	

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050037**

Scottsdale, US 14 - 18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.101** **CR** **396** ⌘ **rev** ⌘ Current version: **6.6.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
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R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

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Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	A5			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ 25.133, 25.215, 25.331, 25.423, 25.433
affected:		**X**		Test specifications	34.108, 34.121, 34.123-1
			X	O&M Specifications	
Other comments:	⌘				

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A.5 DL reference compressed mode parameters

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Table A.21: Compressed mode reference pattern 1 parameters

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TGL2 (Transmission Gap Length 2)	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	Only one gap in use.
TGPL1 (Transmission Gap Pattern Length)	4	4	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	2 configurations possible DL &UL / DL
UL compressed mode method	SF/2	SF/2	
DL compressed mode method	SF/2	Puncturing	
Downlink frame type and Slot format	11B	11A	
Scrambling code change	No	No	
RPP (Recovery period power control mode)	0	0	
ITP (Initial transmission power control mode)	0	0	

Table A.22: Compressed mode reference pattern 2 parameters

Parameter	Set 1	Set 2	Set 3	Set 4	Note
TGSN (Transmission Gap Starting Slot Number)	4	4	10	8	
TGL1 (Transmission Gap Length 1)	7	7	10	14	
TGL2 (Transmission Gap Length 2)	-	-	-	-	Only one gap in use.
TGD (Transmission Gap Distance)	0	0	0	0	
TGPL1 (Transmission Gap Pattern Length)	3	12	11	4	
~~TGPL2 (Transmission Gap Pattern Length)~~	~~-~~	~~-~~	~~-~~		~~Only one pattern in use.~~
TGPRC (Transmission Gap Pattern Repetition Count)	NA	NA	NA	NA	Defined by higher layers
TGCFN (Transmission Gap Connection Frame Number):	NA	NA	NA	NA	Defined by higher layers
UL/DL compressed mode selection	DL & UL	DL & UL	DL & UL	DL & UL	2 configurations possible. DL & UL / DL
UL compressed mode method	SF/2	SF/2	SF/2	SF/2	
DL compressed mode method	SF/2	SF/2	Puncturing	SF/2	
Downlink frame type and Slot format	11B	11B	11A	11B	
Scrambling code change	No	No	No	No	
RPP (Recovery period power control mode)	0	0	0	0	
ITP (Initial transmission power control mode)	0	0	0	0	

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050038**

Scottsdale, US 14 - 18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.133** **CR** **712** ⌘ **rev** ⌘ Current version: **3.19.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**C**
Release:	⌘	R99

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

Use one of the following releases:
Ph2 (GSM Phase 2)
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R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	8.1.2.1, 8.1.2.5.2.1, 8.1.5.2.2			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ 25.101, 25.215, 25.331, 25.423, 25.433
affected:		**X**		Test specifications	34.108, 34.121, 34.123-1
			X	O&M Specifications	
Other comments:	⌘				

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8 UE Measurements Procedures

8.1 General Measurement Requirements in CELL_DCH State

8.1.1 Introduction

This section contains requirements on the UE regarding measurement reporting in CELL_DCH state. The requirements are split in FDD intra frequency, FDD inter frequency, TDD and GSM measurements. These measurements may be used by the UTRAN, e.g. for handover decisions. The measurements are defined in TS 25.215, the measurement model is defined in TS 25.302 and measurement accuracies are specified in section 9. Control of measurement reporting is specified in TS 25.331 and parallel measurements are specified in section 8.2. Compressed mode is specified in TS 25.215.

8.1.2 Requirements

8.1.2.1 UE Measurement Capability

In CELL_DCH state the UE shall be able to monitor up to

- 32 intra frequency FDD cells (including active set), and
- 32 inter frequency cells, including
  - FDD cells distributed on up to 2 additional FDD carriers and
  - Depending on UE Capability, TDD cells, distributed on up to 3 TDD carriers and
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.
- Depending on UE capability, the UE shall be able to monitor up to 16 intra frequency cells during IPDL gaps.

If the UE utilises compressed mode for inter-frequency and/or inter-RAT measurements, in order for the requirements in the following subsections to apply the UTRAN must:

- provide transmission gap pattern sequences with TGPL1 > 1, and
- ~~provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2), and~~
- ensure that with the activation of one or more transmission gap pattern sequences, no more than two frames contain a transmission gap within any window of three consecutive frames, and
- ensure that there is a minimum of 8 slots between the end of the first transmission gap and the beginning of the second transmission gap in case of two successive compressed frames..

Performance requirements for different types of transmission gap pattern sequences and different number of cells is defined in the following sections.

The requirements in section 9 are applicable for a UE performing measurements according to this section.

The received CPICH E_c/I_o is defined as

$$\left(\frac{CPICH\_E_c}{I_o}\right)\Big|_{in\ dB} = \left(\frac{CPICH\_E_c}{I_{or}}\right)\Big|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Big|_{in\ dB}$$

and the received SCH E_c/I_o is defined as

$$\left(\frac{SCH\_E_c}{I_o}\right)\Bigg|_{in\ dB} = \left(\frac{SCH\_E_c}{I_{or}}\right)\Bigg|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Bigg|_{in\ dB}$$

********** New Section **********

8.1.2.5 GSM measurements

The requirements in this section apply only to UE supporting FDD and GSM.

Measurements on GSM cells can be requested with BSIC verified or BSIC non-verified.

a) In CELL_DCH state when a transmission gap pattern sequence is provided by the UTRAN the UE shall continuously measure GSM cells and search for new GSM cells given in the monitored set.

b) If the UE does not need compressed mode to perform GSM measurements:

- the UE shall measure all GSM cells present in the monitored set
- the relevant requirements for GSM dedicated mode when a TCH channel is assigned in TS 05.08 shall apply. This is further detailed in the following sub-sections.

8.1.2.5.1 GSM carrier RSSI

a) For a UE requiring compressed mode

A UE supporting GSM measurements using compressed mode shall meet the minimum number of GSM RSSI carrier measurements specified in table 8.4. This measurement shall be based on a transmission gap pattern sequence with purpose "GSM carrier RSSI measurements"

In order for the requirements in this subsection to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM carrier RSSI measurements using the following combinations for TGL1, TGL2 and TGD:

Table 8.3

TGL1 [slots]	TGL2 [slots]	TGD [slots]
3	-	undefined
4	-	undefined
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
3	3	15…269
4	4	15…269
5	5	15…269
7	7	15…269
10	10	15…269
14	14	15…269

In the CELL_DCH state the measurement period, $T_{Measurement\ Period,\ GSM}$, for the GSM carrier RSSI measurement is 480 ms.

The UE shall meet the measurement accuracy requirements stated for RXLEV in TS 05.08, when the given measurement time allows the UE to take at least 3 GSM carrier RSSI samples per GSM carrier in the monitored set during the measurement period.

Table 8.4

TGL	Number of GSM carrier RSSI samples in each gap.
3	1
4	2
5	3
7	6
10	10
14	15

In case the UE is not able to acquire the required number of samples per GSM carrier during one measurement period, the UE shall measure as many GSM carriers as possible during that measurement period using at least 3 samples per GSM carrier. The GSM carriers that were not measured during that measurement period shall be measured in the following measurement periods. This means that, in this particular case, the L1 reporting period to higher layers of a GSM neighbour can be a multiple of the measurement period.

b) For a UE not requiring compressed mode

The samples allocated to each carrier shall as far as possible be uniformly distributed over each measurement period. At least 3 received signal level measurement samples are required per RSSI value. The measurement period is 480 ms.

8.1.2.5.2 BSIC verification

a) For a UE requiring compressed mode

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM Initial BSIC identification or with measurement purpose GSM BSIC re-confirmation, using the following combinations for TGL1, TGL2 and TGD:

Table 8.5

TGL1 [slots]	TGL2 [slots]	TGD [slots]
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
5	5	15…269
7	7	15…269
10	10	15…269
14	14	15…269

The procedure for BSIC verification on a GSM cell can be divided into the following two tasks:

Initial BSIC identification

Includes searching for the BSIC and decoding the BSIC for the first time when there is no knowledge about the relative timing between the FDD and GSM cell. The UE shall trigger the initial BSIC identification within the available transmission gap pattern sequence with purpose "GSM Initial BSIC identification". The requirements for Initial BSIC identification can be found in 8.1.2.5.2.1.

BSIC re-confirmation

Tracking and decoding the BSIC of a GSM cell after initial BSIC identification is performed. The UE shall trigger the BSIC re-confirmation within the available transmission gap pattern sequence with purpose "GSM BSIC re-confirmation". The requirements for BSIC re-confirmation can be found in 8.1.2.5.2.2.

Measurements on a GSM cell can be requested with BSIC verified or BSIC non-verified. If GSM measurements are requested with BSIC verified the UE shall be able to report the GSM cells with BSIC verified for those cells where the verification of BSIC has been successful.

If the network requests measurements on a GSM cell with BSIC verified, the UE shall behave as follows:

- The UE shall perform GSM carrier RSSI measurements according to Section 8.1.2.5.1 when ever a transmission gap pattern sequence with the purposes “GSM carrier RSSI measurements” is provided and the UE shall perform measurement reporting as defined in Section 8.6.7.6 of [16].

- The UE shall perform BSIC identification according to Section 8.1.2.5.2.1 when a “GSM Initial BSIC identification” transmission gap pattern sequence is activated. The UE shall use the last available GSM carrier RSSI measurement results for arranging GSM cells in signal strength order for performing BSIC identification.

- The UE shall perform BSIC re-confirmation according to Section 8.1.2.5.2.2 when a “GSM BSIC re-confirmation” transmission gap pattern sequence is activated.

- If a “GSM BSIC re-confirmation” transmission gap pattern sequence is not activated in parallel to a “GSM Initial BSIC identification” transmission gap pattern sequence or within one frame from the deactivation of a “GSM Initial BSIC identification” transmission gap pattern sequence, the BSIC shall be considered to be non-verified after the UE has performed one event evaluation or periodic reporting evaluation with verified BSIC and the corresponding reporting if reporting is required after the evaluation.

The UE shall perform event evaluation for event-triggered reporting after the BSIC has been verified for a GSM cell. The UE shall use the last available GSM carrier RSSI measurement results in event evaluation and event-triggered reporting. Periodic reports shall be triggered according to the given reporting period even if the BSIC of a GSM cell has not been verified as defined in Sections 8.6.7.5 and 8.6.7.6 of [16]. Non verified BSIC shall be indicated in the measurement report.

The BSIC of a GSM cell is considered to be "verified" if the UE has decoded the SCH of the BCCH carrier and identified the BSIC at least one time (initial BSIC identification) and from that moment the BSIC shall be re-confirmed at least once every $T_{re\text{-}confirm\_abort}$ seconds. Otherwise the BSIC of the GSM cell is considered as "non-verified". If a transmission gap pattern sequence with a purpose “GSM BSIC re-confirmation ” is not activated by the network after BSIC identified or the “GSM BSIC re-confirmation ” transmission gap pattern sequence is deactivated, the UE shall behave as described previously in this section.

The parameters $N_{identify\_abort}$ and $T_{re\text{-}confirm\_abort}$ are defined by higher layers and are signalled to the UE together with the transmission gap pattern sequence. $N_{identify\_abort}$ indicates the maximum number of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure. $T_{re\text{-}confirm\_abort}$ indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure.

The UE shall be able to decode a BSIC within a transmission gap when the time difference between the middle of the received GSM synchronisation burst at the UE and the middle of the effective transmission gap is within the limits specified in table 8.6.

The effective transmission gap is calculated by assuming both UL and DL compressed mode and applying the worst-case values for UL/DL timing offset and pilot field length of last DL gap slot.

Table 8.6: The gap length and maximum time difference for BSIC verification

Gap length [slots]	Maximum time difference [µs]
5	± 500
7	± 1200
10	± 2200
14	± 3500

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 05.05.

b) For a UE not requiring compressed mode

If a BSIC is decoded and matches the expected value, it is considered as “verified”, else it is considered as “non verified”.

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 05.05.

8.1.2.5.2.1 Initial BSIC identification

This measurement shall be based on a transmission gap pattern sequence with the purpose "GSM Initial BSIC identification"

For GSM cells that are requested with BSIC verified the UE shall attempt to decode the SCH on the BCCH carrier of the 8 strongest BCCH carriers of the GSM cells indicated in the measurement control information. The UE shall give priority for BSIC decoding attempts in decreasing signal strength order to BSIC carriers with unknown BSIC. The strongest BCCH carrier is defined as the BCCH carrier having the highest measured GSM carrier RSSI value after layer 3 filtering. The GSM signal strength levels used in BSIC identification for arranging GSM cells in signal strength order shall be based on the latest GSM carrier RSSI measurement results available.

When the UE attempts to decode the BSIC of one GSM BCCH carrier with unknown BSIC, the UE shall use all available transmission gaps, within the transmission gap pattern sequence with the purpose "GSM Initial BSIC identification", to attempt to decode the BSIC from that GSM BCCH carrier.

If the BSIC of the GSM BCCH carrier has been successfully decoded the UE shall immediately continue BSIC identification with the next GSM BCCH carrier, in signal strength order, with unknown BSIC. The GSM cell for which the BSIC has been successfully identified shall be moved to the BSIC re-confirmation procedure.

If the UE has not successfully decoded the BSIC of the GSM BCCH carrier within $N_{identify\_abort}$ successive patterns, the UE shall abort the BSIC identification attempts for that GSM BCCH carrier. The UE shall continue to try to perform BSIC identification of the next GSM BCCH carrier in signal strength order. The GSM BCCH carrier for which the BSIC identification failed shall not be re-considered for BSIC identification until BSIC identification attempts have been made for all the rest of the 8 strongest GSM BCCH carriers in the monitored set with unknown BSIC.

$N_{identify\_abort}$ values are given for a set of reference patterns in table 8.7. $T_{identify\_abort}$ is the elapsed time during $N_{identify\_abort}$ transmission gap patterns (informative). The figures given in table 8.7 represent the number of patterns required to guarantee at least two attempts to decode the BSIC for one GSM BCCH carrier.

Table 8.7: The worst-case time for identification of one previously not identified GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{identify\ abort}$ [s]	$N_{identify\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.56	52
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.28	66
Pattern 3	7	7	47	8	~~TGPL1~~	2.88	36
Pattern 4	7	7	38	12	~~TGPL1~~	2.88	24
Pattern 5	14	-	undefined	8	~~TGPL1~~	1.84	23
Pattern 6	14	-	undefined	24	~~TGPL1~~	5.28	22
Pattern 7	14	14	45	12	~~TGPL1~~	1.44	12
Pattern 8	10	-	undefined	8	~~TGPL1~~	2.88	36
Pattern 9	10	10	75	12	~~TGPL1~~	2.88	24

8.1.2.5.2.2 BSIC re-confirmation

The requirements of this section are applicable for BSIC re-confirmation.

The UE shall maintain the timing information of 8 identified GSM cells. Initial timing information is obtained from the initial BSIC identification. The timing information shall be updated every time the BSIC is decoded.

For each transmission gap of a transmission gap pattern sequence with the measurement purpose "GSM BSIC re-confirmation", the UE shall attempt to decode the BSIC falling within the effective gap duration. If more than one BSIC can be decoded within the same gap, priority shall be given to the least recently decoded BSIC.

If the UE fails to decode the BSIC after two successive attempts or if the UE has not been able to re-confirm the BSIC for a GSM cell within $T_{re\text{-}confirm\_abort}$ seconds, the UE shall abort the BSIC re-confirmation attempts for that GSM cell.

The GSM cell shall be treated as a new GSM cell with unidentified BSIC and the GSM cell shall be moved to the initial BSIC identification procedure, see section 8.1.2.5.2.1. The UE shall be able to make BSIC re-confirmation attempts for the 8 strongest GSM cells in the monitored list.

$N_{re\text{-}confirm\_abort}$ is the number of transmission gap patterns executed during $T_{re\text{-}confirm\_abort}$ (informative).

Table 8.8: The worst-case time for BSIC re-confirmation of one GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{re\text{-}confirm\_abort}$ [s]	$N_{re\text{-}confirm\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.32	44
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.04	63
Pattern 3	7	-	undefined	15	~~TGPL1~~	8.1	54
Pattern 4	7	7	69	23	~~TGPL1~~	10.12	44
Pattern 5	7	7	69	8	~~TGPL1~~	2.64	33
Pattern 6	14	-	undefined	8	~~TGPL1~~	1.6	20
Pattern 7	14	14	60	8	~~TGPL1~~	0.80	10
Pattern 8	10	-	undefined	8	~~TGPL1~~	2.64	33
Pattern 9	10	-	undefined	23	~~TGPL1~~	8.05	35
Pattern 10	7	7	47	8	~~TGPL1~~	2.64	33
Pattern 11	7	7	38	12	~~TGPL1~~	2.64	22
Pattern 12	14	-	undefined	24	~~TGPL1~~	5.04	21
Pattern 13	14	14	45	12	~~TGPL1~~	1.20	10
Pattern 14	10	-	undefined	13	~~TGPL1~~	4.94	38
Pattern 15	10	10	75	12	~~TGPL1~~	2.64	22

8.1.2.5.3 Periodic Reporting

Reported measurements in periodically triggered measurement reports shall meet the requirements in section 9.

8.1.2.5.4 Event Triggered Reporting

Reported measurements in event triggered measurement reports shall meet the requirements in section 9.

The UE shall not send any event triggered measurement reports, as long as the reporting criteria is not fulfilled.

The measurement reporting delay is defined as the time between any event that will trigger a measurement report until the UE starts to transmit the measurement report over the Uu interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH . The delay uncertainty is twice the TTI of the uplink DCCH.

The event triggered reporting delay requirement is valid when the UE for each GSM carrier in the monitored set can take the required number of samples during the measurement period $T_{Measurement\ Period,\ GSM}$ (see section 8.1.2.5.1).

The event triggered measurement reporting delay for a GSM cell with verified BSIC, measured without L3 filtering shall be less than $2*T_{Measurement\ Period,\ GSM}$, where $T_{Measurement\ Period,\ GSM}$ is defined in Section 8.1.2.5.1. When L3 filtering is used an additional delay can be expected. For a GSM cell with non-verified BSIC an additional delay according to section 8.1.2.5.2.1 Initial BSIC identification can be expected.

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050039**

Scottsdale, US 14 - 18 February 2005

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CHANGE REQUEST

⌘ **25.133** **CR** **713** ⌘ **rev** ⌘ Current version: **4.13.0** ⌘

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Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-4

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		/ **X**	O&M Specifications		
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  - FDD cells distributed on up to 2 additional FDD carriers and
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- ensure that with the activation of one or more transmission gap pattern sequences, no more than two frames contain a transmission gap within any window of three consecutive frames, and
- ensure that there is a minimum of 8 slots between the end of the first transmission gap and the beginning of the second transmission gap in case of two successive compressed frames.

Performance requirements for different types of transmission gap pattern sequences and different number of cells is defined in the following sections.

The requirements in section 9 are applicable for a UE performing measurements according to this section.

The received CPICH E_c/I_o is defined as

$$\left(\frac{CPICH\_E_c}{I_o}\right)\Bigg|_{in\ dB} = \left(\frac{CPICH\_E_c}{I_{or}}\right)\Bigg|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Bigg|_{in\ dB}$$

and the received SCH E_c/I_o is defined as

$$\left(\frac{SCH\_E_c}{I_o}\right)\Bigg|_{in\ dB} = \left(\frac{SCH\_E_c}{I_{or}}\right)\Bigg|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Bigg|_{in\ dB}$$

********** New Section **********

8.1.2.5 GSM measurements

The requirements in this section apply only to UE supporting FDD and GSM.

Measurements on GSM cells can be requested with BSIC verified or BSIC non-verified.

1) In CELL_DCH state when a transmission gap pattern sequence is provided by the UTRAN the UE shall continuously measure GSM cells and search for new GSM cells given in the monitored set.

2) If the UE does not need compressed mode to perform GSM measurements:

- the UE shall measure all GSM cells present in the monitored set
- the relevant requirements for GSM dedicated mode when a TCH channel is assigned in TS 45.008 shall apply. This is further detailed in the following sub-sections.

8.1.2.5.1 GSM carrier RSSI

1) For a UE requiring compressed mode

A UE supporting GSM measurements using compressed mode shall meet the minimum number of GSM RSSI carrier measurements specified in table 8.4. This measurement shall be based on a transmission gap pattern sequence with purpose "GSM carrier RSSI measurements"

In order for the requirements in this subsection to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM carrier RSSI measurements using the following combinations for TGL1, TGL2 and TGD:

Table 8.3

TGL1 [slots]	TGL2 [slots]	TGD [slots]
3	-	undefined
4	-	undefined
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
3	3	15…269
4	4	15…269
5	5	15…269
7	7	15…269
10	10	15…269
14	14	15…269

In the CELL_DCH state the measurement period, $T_{Measurement\ Period,\ GSM}$, for the GSM carrier RSSI measurement is 480 ms.

The UE shall meet the measurement accuracy requirements stated for RXLEV in TS45.008, when the given measurement time allows the UE to take at least 3 GSM carrier RSSI samples per GSM carrier in the monitored set during the measurement period.

Table 8.4

TGL	Number of GSM carrier RSSI samples in each gap.
3	1
4	2
5	3
7	6
10	10
14	15

In case the UE is not able to acquire the required number of samples per GSM carrier during one measurement period, the UE shall measure as many GSM carriers as possible during that measurement period using at least 3 samples per GSM carrier. The GSM carriers that were not measured during that measurement period shall be measured in the following measurement periods. This means that, in this particular case, the L1 reporting period to higher layers of a GSM neighbour can be a multiple of the measurement period.

2) For a UE not requiring compressed mode

The samples allocated to each carrier shall as far as possible be uniformly distributed over each measurement period. At least 3 received signal level measurement samples are required per RSSI value. The measurement period is 480 ms.

8.1.2.5.2 BSIC verification

1) For a UE requiring compressed mode

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM Initial BSIC identification or with measurement purpose GSM BSIC re-confirmation, using the following combinations for TGL1, TGL2 and TGD:

Table 8.5

TGL1 [slots]	TGL2 [slots]	TGD [slots]
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
5	5	15…269
7	7	15…269
10	10	15…269
14	14	15…269

The procedure for BSIC verification on a GSM cell can be divided into the following two tasks:

Initial BSIC identification

Includes searching for the BSIC and decoding the BSIC for the first time when there is no knowledge about the relative timing between the FDD and GSM cell. The UE shall trigger the initial BSIC identification within the available transmission gap pattern sequence with purpose "GSM Initial BSIC identification". The requirements for Initial BSIC identification can be found in 8.1.2.5.2.1.

BSIC re-confirmation

Tracking and decoding the BSIC of a GSM cell after initial BSIC identification is performed. The UE shall trigger the BSIC re-confirmation within the available transmission gap pattern sequence with purpose "GSM BSIC re-confirmation". The requirements for BSIC re-confirmation can be found in 8.1.2.5.2.2.

Measurements on a GSM cell can be requested with BSIC verified or BSIC non-verified. If GSM measurements are requested with BSIC verified the UE shall be able to report the GSM cells with BSIC verified for those cells where the verification of BSIC has been successful.

If the network requests measurements on a GSM cell with BSIC verified, the UE shall behave as follows:

- The UE shall perform GSM carrier RSSI measurements according to Section 8.1.2.5.1 when ever a transmission gap pattern sequence with the purposes “GSM carrier RSSI measurements” is provided and the UE shall perform measurement reporting as defined in Section 8.6.7.6 of [16].

- The UE shall perform BSIC identification according to Section 8.1.2.5.2.1 when a “GSM Initial BSIC identification” transmission gap pattern sequence is activated. The UE shall use the last available GSM carrier RSSI measurement results for arranging GSM cells in signal strength order for performing BSIC identification.

- The UE shall perform BSIC re-confirmation according to Section 8.1.2.5.2.2 when a “GSM BSIC re-confirmation” transmission gap pattern sequence is activated.

- If a “GSM BSIC re-confirmation” transmission gap pattern sequence is not activated in parallel to a “GSM Initial BSIC identification” transmission gap pattern sequence or within one frame from the deactivation of a “GSM Initial BSIC identification” transmission gap pattern sequence, the BSIC shall be considered to be non-verified after the UE has performed one event evaluation or periodic reporting evaluation with verified BSIC and the corresponding reporting if reporting is required after the evaluation.

The UE shall perform event evaluation for event-triggered reporting after the BSIC has been verified for a GSM cell. The UE shall use the last available GSM carrier RSSI measurement results in event evaluation and event-triggered reporting. Periodic reports shall be triggered according to the given reporting period even if the BSIC of a GSM cell has not been verified as defined in Sections 8.6.7.5 and 8.6.7.6 of [16]. Non verified BSIC shall be indicated in the measurement report.

The BSIC of a GSM cell is considered to be "verified" if the UE has decoded the SCH of the BCCH carrier and identified the BSIC at least one time (initial BSIC identification) and from that moment the BSIC shall be re-confirmed at least once every $T_{re\text{-}confirm\_abort}$ seconds. Otherwise the BSIC of the GSM cell is considered as "non-verified". If a transmission gap pattern sequence with a purpose “GSM BSIC re-confirmation ” is not activated by the network after BSIC identified or the “GSM BSIC re-confirmation ” transmission gap pattern sequence is deactivated, the UE shall behave as described previously in this section.

The parameters $N_{identify\_abort}$ and $T_{re\text{-}confirm\_abort}$ are defined by higher layers and are signalled to the UE together with the transmission gap pattern sequence. $N_{identify\_abort}$ indicates the maximum number of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure. $T_{re\text{-}confirm\_abort}$ indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure.

The UE shall be able to decode a BSIC within a transmission gap when the time difference between the middle of the received GSM synchronisation burst at the UE and the middle of the effective transmission gap is within the limits specified in table 8.6.

The effective transmission gap is calculated by assuming both UL and DL compressed mode and applying the worst-case values for UL/DL timing offset and pilot field length of last DL gap slot.

Table 8.6: The gap length and maximum time difference for BSIC verification

Gap length [slots]	Maximum time difference [μs]
5	± 500
7	± 1200
10	± 2200
14	± 3500

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 45.005.

2) For a UE not requiring compressed mode

If a BSIC is decoded and matches the expected value, it is considered as “verified”, else it is considered as “non verified”.

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 45.005.

8.1.2.5.2.1 Initial BSIC identification

This measurement shall be based on a transmission gap pattern sequence with the purpose "GSM Initial BSIC identification"

For GSM cells that are requested with BSIC verified the UE shall attempt to decode the SCH on the BCCH carrier of the 8 strongest BCCH carriers of the GSM cells indicated in the measurement control information. The UE shall give priority for BSIC decoding attempts in decreasing signal strength order to BSIC carriers with unknown BSIC. The strongest BCCH carrier is defined as the BCCH carrier having the highest measured GSM carrier RSSI value after layer 3 filtering. The GSM signal strength levels used in BSIC identification for arranging GSM cells in signal strength order shall be based on the latest GSM carrier RSSI measurement results available.

When the UE attempts to decode the BSIC of one GSM BCCH carrier with unknown BSIC, the UE shall use all available transmission gaps, within the transmission gap pattern sequence with the purpose "GSM Initial BSIC identification", to attempt to decode the BSIC from that GSM BCCH carrier.

If the BSIC of the GSM BCCH carrier has been successfully decoded the UE shall immediately continue BSIC identification with the next GSM BCCH carrier, in signal strength order, with unknown BSIC. The GSM cell for which the BSIC has been successfully identified shall be moved to the BSIC re-confirmation procedure.

If the UE has not successfully decoded the BSIC of the GSM BCCH carrier within $N_{identify\_abort}$ successive patterns, the UE shall abort the BSIC identification attempts for that GSM BCCH carrier. The UE shall continue to try to perform BSIC identification of the next GSM BCCH carrier in signal strength order. The GSM BCCH carrier for which the BSIC identification failed shall not be re-considered for BSIC identification until BSIC identification attempts have been made for all the rest of the 8 strongest GSM BCCH carriers in the monitored set with unknown BSIC.

$N_{identify\_abort}$ values are given for a set of reference patterns in table 8.7. $T_{identify\_abort}$ is the elapsed time during $N_{identify\_abort}$ transmission gap patterns (informative). The figures given in table 8.7 represent the number of patterns required to guarantee at least two attempts to decode the BSIC for one GSM BCCH carrier.

Table 8.7: The worst-case time for identification of one previously not identified GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{identify\ abort}$ [s]	$N_{identify\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.56	52
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.28	66
Pattern 3	7	7	47	8	~~TGPL1~~	2.88	36
Pattern 4	7	7	38	12	~~TGPL1~~	2.88	24
Pattern 5	14	-	undefined	8	~~TGPL1~~	1.84	23
Pattern 6	14	-	undefined	24	~~TGPL1~~	5.28	22
Pattern 7	14	14	45	12	~~TGPL1~~	1.44	12
Pattern 8	10	-	undefined	8	~~TGPL1~~	2.88	36
Pattern 9	10	10	75	12	~~TGPL1~~	2.88	24

8.1.2.5.2.2 BSIC re-confirmation

The requirements of this section are applicable for BSIC re-confirmation.

The UE shall maintain the timing information of 8 identified GSM cells. Initial timing information is obtained from the initial BSIC identification. The timing information shall be updated every time the BSIC is decoded.

For each transmission gap of a transmission gap pattern sequence with the measurement purpose "GSM BSIC re-confirmation", the UE shall attempt to decode the BSIC falling within the effective gap duration. If more than one BSIC can be decoded within the same gap, priority shall be given to the least recently decoded BSIC.

If the UE fails to decode the BSIC after two successive attempts or if the UE has not been able to re-confirm the BSIC for a GSM cell within $T_{re\text{-}confirm\_abort}$ seconds, the UE shall abort the BSIC re-confirmation attempts for that GSM cell.

The GSM cell shall be treated as a new GSM cell with unidentified BSIC and the GSM cell shall be moved to the initial BSIC identification procedure, see section 8.1.2.5.2.1. The UE shall be able to make BSIC re-confirmation attempts for the 8 strongest GSM cells in the monitored list.

$N_{re\text{-}confirm\_abort}$ is the number of transmission gap patterns executed during $T_{re\text{-}confirm\_abort}$ (informative).

Table 8.8: The worst-case time for BSIC re-confirmation of one GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{re\text{-}confirm\_abort}$ [s]	$N_{re\text{-}confirm\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.32	44
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.04	63
Pattern 3	7	-	undefined	15	~~TGPL1~~	8.1	54
Pattern 4	7	7	69	23	~~TGPL1~~	10.12	44
Pattern 5	7	7	69	8	~~TGPL1~~	2.64	33
Pattern 6	14	-	undefined	8	~~TGPL1~~	1.6	20
Pattern 7	14	14	60	8	~~TGPL1~~	0.80	10
Pattern 8	10	-	undefined	8	~~TGPL1~~	2.64	33
Pattern 9	10	-	undefined	23	~~TGPL1~~	8.05	35
Pattern 10	7	7	47	8	~~TGPL1~~	2.64	33
Pattern 11	7	7	38	12	~~TGPL1~~	2.64	22
Pattern 12	14	-	undefined	24	~~TGPL1~~	5.04	21
Pattern 13	14	14	45	12	~~TGPL1~~	1.20	10
Pattern 14	10	-	undefined	13	~~TGPL1~~	4.94	38
Pattern 15	10	10	75	12	~~TGPL1~~	2.64	22

8.1.2.5.3 Periodic Reporting

Reported measurements in periodically triggered measurement reports shall meet the requirements in section 9.

8.1.2.5.4 Event Triggered Reporting

Reported measurements in event triggered measurement reports shall meet the requirements in section 9.

The UE shall not send any event triggered measurement reports, as long as the reporting criteria is not fulfilled.

The measurement reporting delay is defined as the time between any event that will trigger a measurement report until the UE starts to transmit the measurement report over the Uu interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH . The delay uncertainty is twice the TTI of the uplink DCCH.

The event triggered reporting delay requirement is valid when the UE for each GSM carrier in the monitored set can take the required number of samples during the measurement period $T_{Measurement\ Period,\ GSM}$ (see section 8.1.2.5.1).

The event triggered measurement reporting delay for a GSM cell with verified BSIC, measured without L3 filtering shall be less than $2*T_{Measurement\ Period,\ GSM}$, where $T_{Measurement\ Period,\ GSM}$ is defined in Section 8.1.2.5.1. When L3 filtering is used an additional delay can be expected. For a GSM cell with non-verified BSIC an additional delay according to section 8.1.2.5.2.1 Initial BSIC identification can be expected.

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050040**

Scottsdale, US 14 - 18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.133** **CR** **714** ⌘ **rev** ⌘ Current version: **5.13.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	8.1.2.1, 8.1.2.5.2.1, 8.1.5.2.2			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ 25.101, 25.215, 25.331, 25.423, 25.433
		X		Test specifications	34.108, 34.121, 34.123-1
			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 http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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 UE Measurements Procedures

8.1 General Measurement Requirements in CELL_DCH State

8.1.1 Introduction

This section contains requirements on the UE regarding measurement reporting in CELL_DCH state. The requirements are split in FDD intra frequency, FDD inter frequency, TDD and GSM measurements. These measurements may be used by the UTRAN, e.g. for handover decisions. The measurements are defined in TS 25.215, the measurement model is defined in TS 25.302 and measurement accuracies are specified in section 9. Control of measurement reporting is specified in TS 25.331 and parallel measurements are specified in section 8.2. Compressed mode is specified in TS 25.215.

8.1.2 Requirements

8.1.2.1 UE Measurement Capability

In CELL_DCH state the UE shall be able to monitor up to

- 32 intra frequency FDD cells (including active set), and
- 32 inter frequency cells, including
  - FDD cells distributed on up to 2 additional FDD carriers and
  - Depending on UE Capability, TDD cells, distributed on up to 3 TDD carriers and
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.
- Depending on UE capability, the UE shall be able to monitor up to 16 intra frequency cells during IPDL gaps.

If the UE utilises compressed mode for inter-frequency and/or inter-RAT measurements, in order for the requirements in the following subsections to apply the UTRAN must:

- provide transmission gap pattern sequences with TGPL1 > 1, and
- ~~provide the patterns within a transmission gap pattern sequence are identical (i.e., TGPL1 = TGPL2), and~~
- ensure that with the activation of one or more transmission gap pattern sequences, no more than two frames contain a transmission gap within any window of three consecutive frames, and
- ensure that there is a minimum of 8 slots between the end of the first transmission gap and the beginning of the second transmission gap in case of two successive compressed frames.

Performance requirements for different types of transmission gap pattern sequences and different number of cells is defined in the following sections.

The requirements in section 9 are applicable for a UE performing measurements according to this section.

The received CPICH E_c/I_o is defined as

$$\left(\frac{CPICH\_E_c}{I_o}\right)\Bigg|_{in\ dB} = \left(\frac{CPICH\_E_c}{I_{or}}\right)\Bigg|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Bigg|_{in\ dB}$$

and the received SCH E_c/I_o is defined as

$$\left.\left(\frac{SCH\_E_c}{I_o}\right)\right|_{in\ dB} = \left.\left(\frac{SCH\_E_c}{I_{or}}\right)\right|_{in\ dB} - \left.\frac{I_o}{\left(\hat{I}_{or}\right)}\right|_{in\ dB}$$

********** New Section **********

8.1.2.5 GSM measurements

The requirements in this section apply only to UE supporting FDD and GSM.

Measurements on GSM cells can be requested with BSIC verified or BSIC non-verified.

1) In CELL_DCH state when a transmission gap pattern sequence is provided by the UTRAN the UE shall continuously measure GSM cells and search for new GSM cells given in the monitored set.

2) If the UE does not need compressed mode to perform GSM measurements:

- the UE shall measure all GSM cells present in the monitored set
- the relevant requirements for GSM dedicated mode when a TCH channel is assigned in TS 45.008 shall apply. This is further detailed in the following sub-sections.

8.1.2.5.1 GSM carrier RSSI

1) For a UE requiring compressed mode

A UE supporting GSM measurements using compressed mode shall meet the minimum number of GSM RSSI carrier measurements specified in table 8.4. This measurement shall be based on a transmission gap pattern sequence with purpose "GSM carrier RSSI measurements"

In order for the requirements in this subsection to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM carrier RSSI measurements using the following combinations for TGL1, TGL2 and TGD:

Table 8.3

TGL1 [slots]	TGL2 [slots]	TGD [slots]
3	-	undefined
4	-	undefined
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
3	3	15…269
4	4	15…269
5	5	15…269
7	7	15…269
10	10	41…269
14	14	45…269

In the CELL_DCH state the measurement period, $T_{Measurement\ Period,\ GSM}$, for the GSM carrier RSSI measurement is 480 ms.

The UE shall meet the measurement accuracy requirements stated for RXLEV in TS45.008, when the given measurement time allows the UE to take at least 3 GSM carrier RSSI samples per GSM carrier in the monitored set during the measurement period.

Table 8.4

TGL	Number of GSM carrier RSSI samples in each gap.
3	1
4	2
5	3
7	6
10	10
14	15

In case the UE is not able to acquire the required number of samples per GSM carrier during one measurement period, the UE shall measure as many GSM carriers as possible during that measurement period using at least 3 samples per GSM carrier. The GSM carriers that were not measured during that measurement period shall be measured in the following measurement periods. This means that, in this particular case, the L1 reporting period to higher layers of a GSM neighbour can be a multiple of the measurement period.

2) For a UE not requiring compressed mode

The samples allocated to each carrier shall as far as possible be uniformly distributed over each measurement period. At least 3 received signal level measurement samples are required per RSSI value. The measurement period is 480 ms.

8.1.2.5.2 BSIC verification

1) For a UE requiring compressed mode

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM Initial BSIC identification or with measurement purpose GSM BSIC re-confirmation, using the following combinations for TGL1, TGL2 and TGD:

Table 8.5

TGL1 [slots]	TGL2 [slots]	TGD [slots]
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
5	5	15…269
7	7	15…269
10	10	41…269
14	14	45…269

The procedure for BSIC verification on a GSM cell can be divided into the following two tasks:

Initial BSIC identification

Includes searching for the BSIC and decoding the BSIC for the first time when there is no knowledge about the relative timing between the FDD and GSM cell. The UE shall trigger the initial BSIC identification within the available transmission gap pattern sequence with purpose "GSM Initial BSIC identification". The requirements for Initial BSIC identification can be found in 8.1.2.5.2.1.

BSIC re-confirmation

Tracking and decoding the BSIC of a GSM cell after initial BSIC identification is performed. The UE shall trigger the BSIC re-confirmation within the available transmission gap pattern sequence with purpose "GSM BSIC re-confirmation". The requirements for BSIC re-confirmation can be found in 8.1.2.5.2.2.

Measurements on a GSM cell can be requested with BSIC verified or BSIC non-verified. If GSM measurements are requested with BSIC verified the UE shall be able to report the GSM cells with BSIC verified for those cells where the verification of BSIC has been successful.

If the network requests measurements on a GSM cell with BSIC verified, the UE shall behave as follows:

- The UE shall perform GSM carrier RSSI measurements according to Section 8.1.2.5.1 when ever a transmission gap pattern sequence with the purposes “GSM carrier RSSI measurements” is provided and the UE shall perform measurement reporting as defined in Section 8.6.7.6 of [16].

- The UE shall perform BSIC identification according to Section 8.1.2.5.2.1 when a “GSM Initial BSIC identification” transmission gap pattern sequence is activated. The UE shall use the last available GSM carrier RSSI measurement results for arranging GSM cells in signal strength order for performing BSIC identification.

- The UE shall perform BSIC re-confirmation according to Section 8.1.2.5.2.2 when a “GSM BSIC re-confirmation” transmission gap pattern sequence is activated.

- If a “GSM BSIC re-confirmation” transmission gap pattern sequence is not activated in parallel to a “GSM Initial BSIC identification” transmission gap pattern sequence or within one frame from the deactivation of a “GSM Initial BSIC identification” transmission gap pattern sequence, the BSIC shall be considered to be non-verified after the UE has performed one event evaluation or periodic reporting evaluation with verified BSIC and the corresponding reporting if reporting is required after the evaluation.

The UE shall perform event evaluation for event-triggered reporting after the BSIC has been verified for a GSM cell. The UE shall use the last available GSM carrier RSSI measurement results in event evaluation and event-triggered reporting. Periodic reports shall be triggered according to the given reporting period even if the BSIC of a GSM cell has not been verified as defined in Sections 8.6.7.5 and 8.6.7.6 of [16]. Non verified BSIC shall be indicated in the measurement report.

The BSIC of a GSM cell is considered to be "verified" if the UE has decoded the SCH of the BCCH carrier and identified the BSIC at least one time (initial BSIC identification) and from that moment the BSIC shall be re-confirmed at least once every $T_{re\text{-}confirm\_abort}$ seconds. Otherwise the BSIC of the GSM cell is considered as "non-verified". If a transmission gap pattern sequence with a purpose “GSM BSIC re-confirmation ” is not activated by the network after BSIC identified or the “GSM BSIC re-confirmation ” transmission gap pattern sequence is deactivated, the UE shall behave as described previously in this section.

The parameters $N_{identify\_abort}$ and $T_{re\text{-}confirm\_abort}$ are defined by higher layers and are signalled to the UE together with the transmission gap pattern sequence. $N_{identify\_abort}$ indicates the maximum number of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure. $T_{re\text{-}confirm\_abort}$ indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure.

The UE shall be able to decode a BSIC within a transmission gap when the time difference between the middle of the received GSM synchronisation burst at the UE and the middle of the effective transmission gap is within the limits specified in table 8.6.

The effective transmission gap is calculated by assuming both UL and DL compressed mode and applying the worst-case values for UL/DL timing offset and pilot field length of last DL gap slot.

Table 8.6: The gap length and maximum time difference for BSIC verification

Gap length [slots]	Maximum time difference [µs]
5	± 500
7	± 1200
10	± 2200
14	± 3500

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 45.005.

2) For a UE not requiring compressed mode

If a BSIC is decoded and matches the expected value, it is considered as “verified”, else it is considered as “non verified”.

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 45.005.

8.1.2.5.2.1 Initial BSIC identification

This measurement shall be based on a transmission gap pattern sequence with the purpose "GSM Initial BSIC identification"

For GSM cells that are requested with BSIC verified the UE shall attempt to decode the SCH on the BCCH carrier of the 8 strongest BCCH carriers of the GSM cells indicated in the measurement control information. The UE shall give priority for BSIC decoding attempts in decreasing signal strength order to BSIC carriers with unknown BSIC. The strongest BCCH carrier is defined as the BCCH carrier having the highest measured GSM carrier RSSI value after layer 3 filtering. The GSM signal strength levels used in BSIC identification for arranging GSM cells in signal strength order shall be based on the latest GSM carrier RSSI measurement results available.

When the UE attempts to decode the BSIC of one GSM BCCH carrier with unknown BSIC, the UE shall use all available transmission gaps, within the transmission gap pattern sequence with the purpose "GSM Initial BSIC identification", to attempt to decode the BSIC from that GSM BCCH carrier.

If the BSIC of the GSM BCCH carrier has been successfully decoded the UE shall immediately continue BSIC identification with the next GSM BCCH carrier, in signal strength order, with unknown BSIC. The GSM cell for which the BSIC has been successfully identified shall be moved to the BSIC re-confirmation procedure.

If the UE has not successfully decoded the BSIC of the GSM BCCH carrier within $N_{identify\_abort}$ successive patterns, the UE shall abort the BSIC identification attempts for that GSM BCCH carrier. The UE shall continue to try to perform BSIC identification of the next GSM BCCH carrier in signal strength order. The GSM BCCH carrier for which the BSIC identification failed shall not be re-considered for BSIC identification until BSIC identification attempts have been made for all the rest of the 8 strongest GSM BCCH carriers in the monitored set with unknown BSIC.

$N_{identify\_abort}$ values are given for a set of reference patterns in table 8.7. $T_{identify\_abort}$ is the elapsed time during $N_{identify\_abort}$ transmission gap patterns (informative). The figures given in table 8.7 represent the number of patterns required to guarantee at least two attempts to decode the BSIC for one GSM BCCH carrier.

Table 8.7: The worst-case time for identification of one previously not identified GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{identify\ abort}$ [s]	$N_{identify\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.56	**52**
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.28	66
Pattern 3	7	7	47	8	~~TGPL1~~	2.88	36
Pattern 4	7	7	38	12	~~TGPL1~~	2.88	24
Pattern 5	14	-	undefined	8	~~TGPL1~~	1.84	**23**
Pattern 6	14	-	undefined	24	~~TGPL1~~	5.28	22
Pattern 7	14	14	45	12	~~TGPL1~~	1.44	12
Pattern 8	10	-	undefined	12	~~TGPL1~~	2.88	36
Pattern 9	10	10	75	12	~~TGPL1~~	2.88	24

8.1.2.5.2.2 BSIC re-confirmation

The requirements of this section are applicable for BSIC re-confirmation.

The UE shall maintain the timing information of 8 identified GSM cells. Initial timing information is obtained from the initial BSIC identification. The timing information shall be updated every time the BSIC is decoded.

For each transmission gap of a transmission gap pattern sequence with the measurement purpose "GSM BSIC re-confirmation", the UE shall attempt to decode the BSIC falling within the effective gap duration. If more than one BSIC can be decoded within the same gap, priority shall be given to the least recently decoded BSIC.

If the UE fails to decode the BSIC after two successive attempts or if the UE has not been able to re-confirm the BSIC for a GSM cell within $T_{re\text{-}confirm\_abort}$ seconds, the UE shall abort the BSIC re-confirmation attempts for that GSM cell.

The GSM cell shall be treated as a new GSM cell with unidentified BSIC and the GSM cell shall be moved to the initial BSIC identification procedure, see section 8.1.2.5.2.1. The UE shall be able to make BSIC re-confirmation attempts for the 8 strongest GSM cells in the monitored list.

$N_{re\text{-}confirm\_abort}$ is the number of transmission gap patterns executed during $T_{re\text{-}confirm\_abort}$ (informative).

Table 8.8: The worst-case time for BSIC re-confirmation of one GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{re\text{-}confirm\_abort}$ [s]	$N_{re\text{-}confirm\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.32	44
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.04	63
Pattern 3	7	-	undefined	15	~~TGPL1~~	8.1	54
Pattern 4	7	7	69	23	~~TGPL1~~	10.12	44
Pattern 5	7	7	69	8	~~TGPL1~~	2.64	33
Pattern 6	14	-	undefined	8	~~TGPL1~~	1.6	20
Pattern 7	14	14	60	8	~~TGPL1~~	0.80	10
Pattern 8	10	-	undefined	8	~~TGPL1~~	2.64	33
Pattern 9	10	-	undefined	23	~~TGPL1~~	8.05	35
Pattern 10	7	7	47	8	~~TGPL1~~	2.64	33
Pattern 11	7	7	38	12	~~TGPL1~~	2.64	22
Pattern 12	14	-	undefined	24	~~TGPL1~~	5.04	21
Pattern 13	14	14	45	12	~~TGPL1~~	1.20	10
Pattern 14	10	-	undefined	13	~~TGPL1~~	4.94	38
Pattern 15	10	10	75	12	~~TGPL1~~	2.64	22

8.1.2.5.3 Periodic Reporting

Reported measurements in periodically triggered measurement reports shall meet the requirements in section 9.

8.1.2.5.4 Event Triggered Reporting

Reported measurements in event triggered measurement reports shall meet the requirements in section 9.

The UE shall not send any event triggered measurement reports, as long as the reporting criteria is not fulfilled.

The measurement reporting delay is defined as the time between any event that will trigger a measurement report until the UE starts to transmit the measurement report over the Uu interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH . The delay uncertainty is twice the TTI of the uplink DCCH.

The event triggered reporting delay requirement is valid when the UE for each GSM carrier in the monitored set can take the required number of samples during the measurement period $T_{Measurement\ Period,\ GSM}$ (see section 8.1.2.5.1).

The event triggered measurement reporting delay for a GSM cell with verified BSIC, measured without L3 filtering shall be less than $2*T_{Measurement\ Period,\ GSM}$, where $T_{Measurement\ Period,\ GSM}$ is defined in Section 8.1.2.5.1. When L3 filtering is used an additional delay can be expected. For a GSM cell with non-verified BSIC an additional delay according to section 8.1.2.5.2.1 Initial BSIC identification can be expected.

3GPP TSG RAN WG4 (Radio) Meeting #34 **R4-050041**

Scottsdale, US 14 - 18 February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.133** **CR** **715** ⌘ **rev** ⌘ Current version: **6.8.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	3GPP TSG RAN WG4 (Radio)
Work item code:	⌘	TEI
Date:	⌘	28/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-6

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

Use one of the following releases:
Ph2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not

		affected. Would affect UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	8.1.2.1, 8.1.2.5.2.1, 8.1.5.2.2			
Other specs affected:	⌘	Y / N	Other core specifications	⌘	25.101, 25.215, 25.331, 25.423, 25.433
		X /	Test specifications		34.108, 34.121, 34.123-1
		/ 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 http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

8.1.2 Requirements

8.1.2.1 UE Measurement Capability

In CELL_DCH state the UE shall be able to monitor up to

- 32 intra frequency FDD cells (including active set), and
- 32 inter frequency cells, including
  - FDD cells distributed on up to 2 additional FDD carriers and
  - Depending on UE Capability, TDD cells, distributed on up to 3 TDD carriers and
- Depending on UE capability, 32 GSM cells distributed on up to 32 GSM carriers.
- Depending on UE capability, the UE shall be able to monitor up to 16 intra frequency cells during IPDL gaps.

If the UE utilises compressed mode for inter-frequency and/or inter-RAT measurements, in order for the requirements in the following subsections to apply the UTRAN must:

- provide transmission gap pattern sequences with TGPL1 > 1, and
- ~~provide the patterns within a transmission gap pattern sequence are identical (i.e., TGPL1 = TGPL2), and~~
- ensure that with the activation of one or more transmission gap pattern sequences, no more than two frames contain a transmission gap within any window of three consecutive frames, and

- ensure that there is a minimum of 8 slots between the end of the first transmission gap and the beginning of the second transmission gap in case of two successive compressed frames.

Performance requirements for different types of transmission gap pattern sequences and different number of cells is defined in the following sections.

The requirements in section 9 are applicable for a UE performing measurements according to this section.

The received CPICH E_c/I_o is defined as

$$\left(\frac{CPICH\_E_c}{I_o}\right)\Big|_{in\ dB} = \left(\frac{CPICH\_E_c}{I_{or}}\right)\Big|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Big|_{in\ dB}$$

and the received SCH E_c/I_o is defined as

$$\left(\frac{SCH\_E_c}{I_o}\right)\Big|_{in\ dB} = \left(\frac{SCH\_E_c}{I_{or}}\right)\Big|_{in\ dB} - \frac{I_o}{\left(\hat{I}_{or}\right)}\Big|_{in\ dB}$$

********** **New Section** **********

8.1.2.5 GSM measurements

The requirements in this section apply only to UE supporting FDD and GSM.

Measurements on GSM cells can be requested with BSIC verified or BSIC non-verified.

1) In CELL_DCH state when a transmission gap pattern sequence is provided by the UTRAN the UE shall continuously measure GSM cells and search for new GSM cells given in the monitored set.

2) If the UE does not need compressed mode to perform GSM measurements:

- the UE shall measure all GSM cells present in the monitored set
- the relevant requirements for GSM dedicated mode when a TCH channel is assigned in TS 45.008 shall apply. This is further detailed in the following sub-sections.

8.1.2.5.1 GSM carrier RSSI

1) For a UE requiring compressed mode

A UE supporting GSM measurements using compressed mode shall meet the minimum number of GSM RSSI carrier measurements specified in table 8.4. This measurement shall be based on a transmission gap pattern sequence with purpose "GSM carrier RSSI measurements"

In order for the requirements in this subsection to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM carrier RSSI measurements using the following combinations for TGL1, TGL2 and TGD:

Table 8.3

TGL1 [slots]	TGL2 [slots]	TGD [slots]
3	-	undefined
4	-	undefined
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
3	3	15…269
4	4	15…269
5	5	15…269
7	7	15…269
10	10	41…269
14	14	45…269

In the CELL_DCH state the measurement period, $T_{Measurement\ Period,\ GSM}$, for the GSM carrier RSSI measurement is 480 ms.

The UE shall meet the measurement accuracy requirements stated for RXLEV in TS45.008, when the given measurement time allows the UE to take at least 3 GSM carrier RSSI samples per GSM carrier in the monitored set during the measurement period.

Table 8.4

TGL	Number of GSM carrier RSSI samples in each gap.
3	1
4	2
5	3
7	6
10	10
14	15

In case the UE is not able to acquire the required number of samples per GSM carrier during one measurement period, the UE shall measure as many GSM carriers as possible during that measurement period using at least 3 samples per GSM carrier. The GSM carriers that were not measured during that measurement period shall be measured in the following measurement periods. This means that, in this particular case, the L1 reporting period to higher layers of a GSM neighbour can be a multiple of the measurement period.

2) For a UE not requiring compressed mode

The samples allocated to each carrier shall as far as possible be uniformly distributed over each measurement period. At least 3 received signal level measurement samples are required per RSSI value. The measurement period is 480 ms.

8.1.2.5.2 BSIC verification

1) For a UE requiring compressed mode

In order for the requirements in the following subsections to apply the UTRAN must provide a transmission gap pattern sequence with measurement purpose GSM Initial BSIC identification or with measurement purpose GSM BSIC re-confirmation, using the following combinations for TGL1, TGL2 and TGD:

Table 8.5

TGL1 [slots]	TGL2 [slots]	TGD [slots]
5	-	undefined
7	-	undefined
10	-	undefined
14	-	undefined
5	5	15…269
7	7	15…269
10	10	41…269
14	14	45…269

The procedure for BSIC verification on a GSM cell can be divided into the following two tasks:

Initial BSIC identification

Includes searching for the BSIC and decoding the BSIC for the first time when there is no knowledge about the relative timing between the FDD and GSM cell. The UE shall trigger the initial BSIC identification within the available transmission gap pattern sequence with purpose "GSM Initial BSIC identification". The requirements for Initial BSIC identification can be found in 8.1.2.5.2.1.

BSIC re-confirmation

Tracking and decoding the BSIC of a GSM cell after initial BSIC identification is performed. The UE shall trigger the BSIC re-confirmation within the available transmission gap pattern sequence with purpose "GSM BSIC re-confirmation". The requirements for BSIC re-confirmation can be found in 8.1.2.5.2.2.

Measurements on a GSM cell can be requested with BSIC verified or BSIC non-verified. If GSM measurements are requested with BSIC verified the UE shall be able to report the GSM cells with BSIC verified for those cells where the verification of BSIC has been successful.

If the network requests measurements on a GSM cell with BSIC verified, the UE shall behave as follows:

- The UE shall perform GSM carrier RSSI measurements according to Section 8.1.2.5.1 when ever a transmission gap pattern sequence with the purposes “GSM carrier RSSI measurements” is provided and the UE shall perform measurement reporting as defined in Section 8.6.7.6 of [16].

- The UE shall perform BSIC identification according to Section 8.1.2.5.2.1 when a “GSM Initial BSIC identification” transmission gap pattern sequence is activated. The UE shall use the last available GSM carrier RSSI measurement results for arranging GSM cells in signal strength order for performing BSIC identification.

- The UE shall perform BSIC re-confirmation according to Section 8.1.2.5.2.2 when a “GSM BSIC re-confirmation” transmission gap pattern sequence is activated.

- If a “GSM BSIC re-confirmation” transmission gap pattern sequence is not activated in parallel to a “GSM Initial BSIC identification” transmission gap pattern sequence or within one frame from the deactivation of a “GSM Initial BSIC identification” transmission gap pattern sequence, the BSIC shall be considered to be non-verified after the UE has performed one event evaluation or periodic reporting evaluation with verified BSIC and the corresponding reporting if reporting is required after the evaluation.

The UE shall perform event evaluation for event-triggered reporting after the BSIC has been verified for a GSM cell. The UE shall use the last available GSM carrier RSSI measurement results in event evaluation and event-triggered reporting. Periodic reports shall be triggered according to Sections 8.6.7.5 and 8.6.7.6 of [16].

The BSIC of a GSM cell is considered to be "verified" if the UE has decoded the SCH of the BCCH carrier and identified the BSIC at least one time (initial BSIC identification) and from that moment the BSIC shall be re-confirmed at least once every $T_{re\text{-}confirm\_abort}$ seconds. Otherwise the BSIC of the GSM cell is considered as "non-verified". If a transmission gap pattern sequence with a purpose “GSM BSIC re-confirmation ” is not activated by the network after BSIC identified or the “GSM BSIC re-confirmation ” transmission gap pattern sequence is deactivated, the UE shall behave as described previously in this section.

The parameters $N_{identify\_abort}$ and $T_{re\text{-}confirm\_abort}$ are defined by higher layers and are signalled to the UE together with the transmission gap pattern sequence. $N_{identify\_abort}$ indicates the maximum number of patterns that the UE shall use to

attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure. $T_{re\text{-}confirm\_abort}$ indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure.

The UE shall be able to decode a BSIC within a transmission gap when the time difference between the middle of the received GSM synchronisation burst at the UE and the middle of the effective transmission gap is within the limits specified in table 8.6.

The effective transmission gap is calculated by assuming both UL and DL compressed mode and applying the worst-case values for UL/DL timing offset and pilot field length of last DL gap slot.

Table 8.6: The gap length and maximum time difference for BSIC verification

Gap length [slots]	Maximum time difference [μs]
5	± 500
7	± 1200
10	± 2200
14	± 3500

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 45.005.

2) For a UE not requiring compressed mode

If a BSIC is decoded and matches the expected value, it is considered as “verified”, else it is considered as “non verified”.

The UE shall be able to perform BSIC verification at levels down to the reference sensitivity level or reference interference levels as specified in TS 45.005.

8.1.2.5.2.1 Initial BSIC identification

This measurement shall be based on a transmission gap pattern sequence with the purpose "GSM Initial BSIC identification"

For GSM cells that are requested with BSIC verified the UE shall attempt to decode the SCH on the BCCH carrier of the 8 strongest BCCH carriers of the GSM cells indicated in the measurement control information. The UE shall give priority for BSIC decoding attempts in decreasing signal strength order to BSIC carriers with unknown BSIC. The strongest BCCH carrier is defined as the BCCH carrier having the highest measured GSM carrier RSSI value after layer 3 filtering. The GSM signal strength levels used in BSIC identification for arranging GSM cells in signal strength order shall be based on the latest GSM carrier RSSI measurement results available.

When the UE attempts to decode the BSIC of one GSM BCCH carrier with unknown BSIC, the UE shall use all available transmission gaps, within the transmission gap pattern sequence with the purpose "GSM Initial BSIC identification", to attempt to decode the BSIC from that GSM BCCH carrier.

If the BSIC of the GSM BCCH carrier has been successfully decoded the UE shall immediately continue BSIC identification with the next GSM BCCH carrier, in signal strength order, with unknown BSIC. The GSM cell for which the BSIC has been successfully identified shall be moved to the BSIC re-confirmation procedure.

If the UE has not successfully decoded the BSIC of the GSM BCCH carrier within $N_{identify\_abort}$ successive patterns, the UE shall abort the BSIC identification attempts for that GSM BCCH carrier. The UE shall continue to try to perform BSIC identification of the next GSM BCCH carrier in signal strength order. The GSM BCCH carrier for which the BSIC identification failed shall not be re-considered for BSIC identification until BSIC identification attempts have been made for all the rest of the 8 strongest GSM BCCH carriers in the monitored set with unknown BSIC.

$N_{identify\_abort}$ values are given for a set of reference patterns in table 8.7. $T_{identify\_abort}$ is the elapsed time during $N_{identify\_abort}$ transmission gap patterns (informative). The figures given in table 8.7 represent the number of patterns required to guarantee at least two attempts to decode the BSIC for one GSM BCCH carrier.

Table 8.7: The worst-case time for identification of one previously not identified GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{identify\ abort}$ [s]	$N_{identify\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.56	**52**
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.28	66
Pattern 3	7	7	47	8	~~TGPL1~~	2.88	36
Pattern 4	7	7	38	12	~~TGPL1~~	2.88	24
Pattern 5	14	-	undefined	8	~~TGPL1~~	1.84	**23**
Pattern 6	14	-	undefined	24	~~TGPL1~~	5.28	22
Pattern 7	14	14	45	12	~~TGPL1~~	1.44	12
Pattern 8	10	-	undefined	12	~~TGPL1~~	2.88	36
Pattern 9	10	10	75	12	~~TGPL1~~	2.88	24

8.1.2.5.2.2 BSIC re-confirmation

The requirements of this section are applicable for BSIC re-confirmation.

The UE shall maintain the timing information of 8 identified GSM cells. Initial timing information is obtained from the initial BSIC identification. The timing information shall be updated every time the BSIC is decoded.

For each transmission gap of a transmission gap pattern sequence with the measurement purpose "GSM BSIC re-confirmation", the UE shall attempt to decode the BSIC falling within the effective gap duration. If more than one BSIC can be decoded within the same gap, priority shall be given to the least recently decoded BSIC.

If the UE fails to decode the BSIC after two successive attempts or if the UE has not been able to re-confirm the BSIC for a GSM cell within $T_{re\text{-}confirm\_abort}$ seconds, the UE shall abort the BSIC re-confirmation attempts for that GSM cell. The GSM cell shall be treated as a new GSM cell with unidentified BSIC and the GSM cell shall be moved to the initial BSIC identification procedure, see section 8.1.2.5.2.1. The UE shall be able to make BSIC re-confirmation attempts for the 8 strongest GSM cells in the monitored list.

$N_{re\text{-}confirm\_abort}$ is the number of transmission gap patterns executed during $T_{re\text{-}confirm\_abort}$ (informative).

Table 8.8: The worst-case time for BSIC re-confirmation of one GSM cell

	TGL1 [slots]	TGL2 [slots]	TGD [slots]	TGPL1 [frames]	~~TGPL2 [frames]~~	$T_{re\text{-}confirm\_abort}$ [s]	$N_{re\text{-}confirm\_abort}$ [patterns]
Pattern 1	7	-	undefined	3	~~TGPL1~~	1.32	44
Pattern 2	7	-	undefined	8	~~TGPL1~~	5.04	63
Pattern 3	7	-	undefined	15	~~TGPL1~~	8.1	54
Pattern 4	7	7	69	23	~~TGPL1~~	10.12	44
Pattern 5	7	7	69	8	~~TGPL1~~	2.64	33
Pattern 6	14	-	undefined	8	~~TGPL1~~	1.6	20
Pattern 7	14	14	60	8	~~TGPL1~~	0.80	10
Pattern 8	10	-	undefined	8	~~TGPL1~~	2.64	33
Pattern 9	10	-	undefined	23	~~TGPL1~~	8.05	35
Pattern 10	7	7	47	8	~~TGPL1~~	2.64	33
Pattern 11	7	7	38	12	~~TGPL1~~	2.64	22
Pattern 12	14	-	undefined	24	~~TGPL1~~	5.04	21
Pattern 13	14	14	45	12	~~TGPL1~~	1.20	10
Pattern 14	10	-	undefined	13	~~TGPL1~~	4.94	38
Pattern 15	10	10	75	12	~~TGPL1~~	2.64	22

8.1.2.5.3 Periodic Reporting

Reported measurements in periodically triggered measurement reports shall meet the requirements in section 9.

8.1.2.5.4 Event Triggered Reporting

Reported measurements in event triggered measurement reports shall meet the requirements in section 9.

The UE shall not send any event triggered measurement reports, as long as the reporting criteria is not fulfilled.

The measurement reporting delay is defined as the time between any event that will trigger a measurement report until the UE starts to transmit the measurement report over the Uu interface. This requirement assumes that that the measurement report is not delayed by other RRC signalling on the DCCH. This measurement reporting delay excludes a delay uncertainty resulted when inserting the measurement report to the TTI of the uplink DCCH . The delay uncertainty is twice the TTI of the uplink DCCH.

The event triggered reporting delay requirement is valid when the UE for each GSM carrier in the monitored set can take the required number of samples during the measurement period $T_{Measurement\ Period,\ GSM}$ (see section 8.1.2.5.1).

The event triggered measurement reporting delay for a GSM cell with verified BSIC, measured without L3 filtering shall be less than $2*T_{Measurement\ Period,\ GSM}$, where $T_{Measurement\ Period,\ GSM}$ is defined in Section 8.1.2.5.1. When L3 filtering is used an additional delay can be expected. For a GSM cell with non-verified BSIC an additional delay according to section 8.1.2.5.2.1 Initial BSIC identification can be expected.

3GPP TSG-RAN WG1 Meeting #40
Scottsdale, AZ, USA, 14 – 18 February 2005

Tdoc ⌘R1-050110

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CHANGE REQUEST

⌘ **25.215** **CR** **150** ⌘ **rev** **1** ⌘ Current version: **3.12.0** ⌘

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

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

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	26/01/2005
Category:	⌘	**C**
Release:	⌘	R99

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed from the specification.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specifications.

Clauses affected:	⌘	6.1.1.2			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.101, 25.133,, 25.331, 25.423, 25.433
		X /	Test specifications		34.108, 34.121, 34.123-1
		/ X	O&M Specifications		
Other comments:	⌘				

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6 Measurements for UTRA FDD

6.1 UE measurements

6.1.1 Compressed mode

6.1.1.1 Use of compressed mode for monitoring

On command from the UTRAN, a UE shall monitor cells on other FDD frequencies and on other modes and radio access technologies that are supported by the UE (i.e. TDD, GSM). To allow the UE to perform measurements, UTRAN shall command that the UE enters in compressed mode, depending on the UE capabilities.

The UE capabilities define whether a UE requires compressed mode in order to monitor cells on other FDD frequencies and on other modes and radio access technologies. UE capabilities indicate the need for compressed mode separately for the uplink and downlink and for each mode, radio access technology and frequency band.

A UE shall support compressed mode for all cases for which the UE indicates that compressed mode is required.

A UE does not need to support compressed mode for cases for which the UE indicates that compressed mode is not required. For these cases, the UE shall support an alternative means of making the measurements.

The UE shall support one single measurement purpose for one transmission gap pattern sequence. The measurement purpose of the transmission gap pattern sequence is signalled by higher layers.

The following subclause provides rules to parameterise the compressed mode.

6.1.1.2 Parameterisation of the compressed mode

In response to a request from higher layers, the UTRAN shall signal to the UE the compressed mode parameters.

A transmission gap pattern sequence consists of ~~alternating~~ consecutive occurrences of transmission gap pattern~~s~~ 1 ~~and 2~~, ~~each of these~~ where transmission gap pattern~~s~~ 1 ~~in turn~~ consists of one or two transmission gaps. See figure 1.

The following parameters characterise a transmission gap pattern:

- TGSN (Transmission Gap Starting Slot Number): A transmission gap pattern begins in a radio frame, henceforward called first radio frame of the transmission gap pattern, containing at least one transmission gap slot. TGSN is the slot number of the first transmission gap slot within the first radio frame of the transmission gap pattern;

- TGL1 (Transmission Gap Length 1): This is the duration of the first transmission gap within the transmission gap pattern, expressed in number of slots;

- TGL2 (Transmission Gap Length 2): This is the duration of the second transmission gap within the transmission gap pattern, expressed in number of slots. If this parameter is not explicitly set by higher layers, then TGL2 = TGL1;

- TGD (Transmission Gap start Distance): This is the duration between the starting slots of two consecutive transmission gaps within a transmission gap pattern, expressed in number of slots. The resulting position of the second transmission gap within its radio frame(s) shall comply with the limitations of [2]. If this parameter is not set by higher layers, then there is only one transmission gap in the transmission gap pattern;

- TGPL1 (Transmission Gap Pattern Length): This is the duration of transmission gap pattern 1, expressed in number of frames;

- ~~TGPL2 (Transmission Gap Pattern Length): This is the duration of transmission gap pattern 2, expressed in number of frames. If this parameter is not explicitly set by higher layers, then TGPL2 = TGPL1.~~

The following parameters control the transmission gap pattern sequence start and repetition:

- TGPRC (Transmission Gap Pattern Repetition Count): This is the number of transmission gap patterns within the transmission gap pattern sequence;

- TGCFN (Transmission Gap Connection Frame Number): This is the CFN of the first radio frame of the first pattern 1 within the transmission gap pattern sequence.

In addition to the parameters defining the positions of transmission gaps, each transmission gap pattern sequence is characterised by:

- UL/DL compressed mode selection: This parameter specifies whether compressed mode is used in UL only, DL only or both UL and DL;

- UL compressed mode method: The methods for generating the uplink compressed mode gap are spreading factor division by two or higher layer scheduling and are described in [2];

- DL compressed mode method: The methods for generating the downlink compressed mode gap are puncturing, spreading factor division by two or higher layer scheduling and are described in [2];

- downlink frame type: This parameter defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode. The frame structures are defined in [2];

- scrambling code change: This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'. Alternative scrambling codes are described in [3];

- RPP: Recovery Period Power control mode specifies the uplink power control algorithm applied during recovery period after each transmission gap in compressed mode. RPP can take 2 values (0 or 1). The different power control modes are described in [4];

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The UE shall support simultaneous compressed mode pattern sequences which can be used for different measurements. The following measurement purposes can be signalled from higher layers:

- FDD

- TDD

- GSM carrier RSSI measurement

- Initial BSIC identification

- BSIC re-confirmation.

The UE shall support one compressed mode pattern sequence for each measurement purpose while operating in FDD mode, assuming the UE needs compressed mode to perform the respective measurement. In case the UE supports several of the measurement purposes, it shall support in parallel one compressed mode pattern sequence for each supported measurement purpose where the UE needs compressed mode to perform the measurement. The capability of the UE to operate in compressed mode in uplink and downlink is given from the UE capabilities.

The GSM measurements Initial BSIC identification and BSIC re-confirmation are defined in [20].

Higher layers will ensure that the compressed mode gaps do not overlap and are not scheduled to overlap the same frame. The behaviour when an overlap occurs is described in [11]. UE is not required to support two compressed mode gaps in a frame.

In all cases, higher layers have control of individual UE parameters. Any pattern sequence can be stopped on higher layers' command.

The parameters TGSN, TGL1, TGL2, TGD, TGPL1, ~~TGPL2,~~ TGPRC and TGCFN shall all be integers.

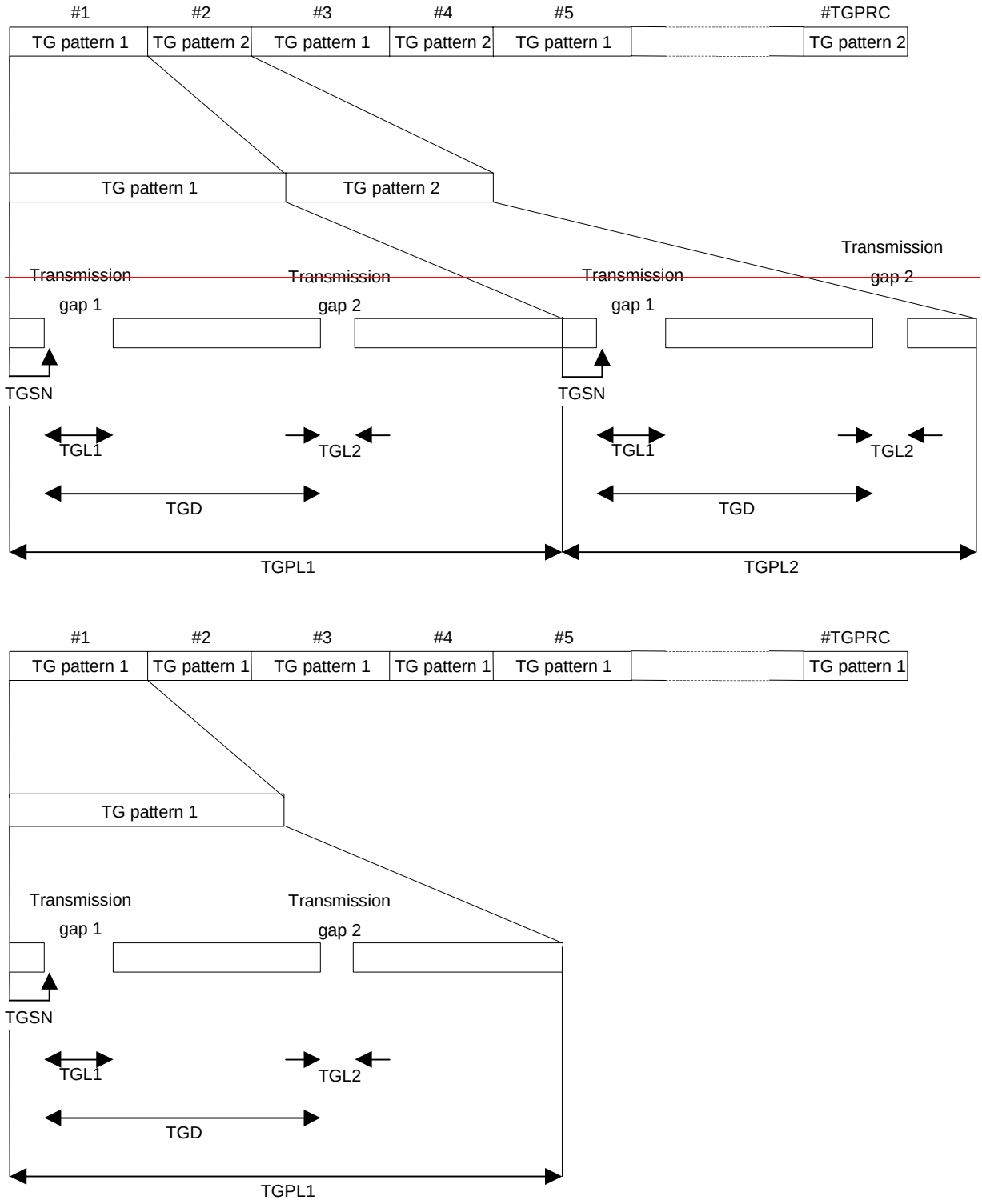

Figure 1: Illustration of compressed mode pattern parameters

3GPP TSG-RAN WG1 Meeting #40
Scottsdale, AZ, USA, 14 – 18 February 2005

Tdoc ⌘R1-050110

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CHANGE REQUEST

⌘ **25.215** **CR** **151** ⌘**rev** **1** ⌘ Current version: **4.7.0** ⌘

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

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

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	26/01/2005
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
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Rel-5 (Release 5)
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Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

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- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

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Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specifications.

Clauses affected:	⌘	6.1.1.2			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.101, 25.133,, 25.331, 25.423, 25.433
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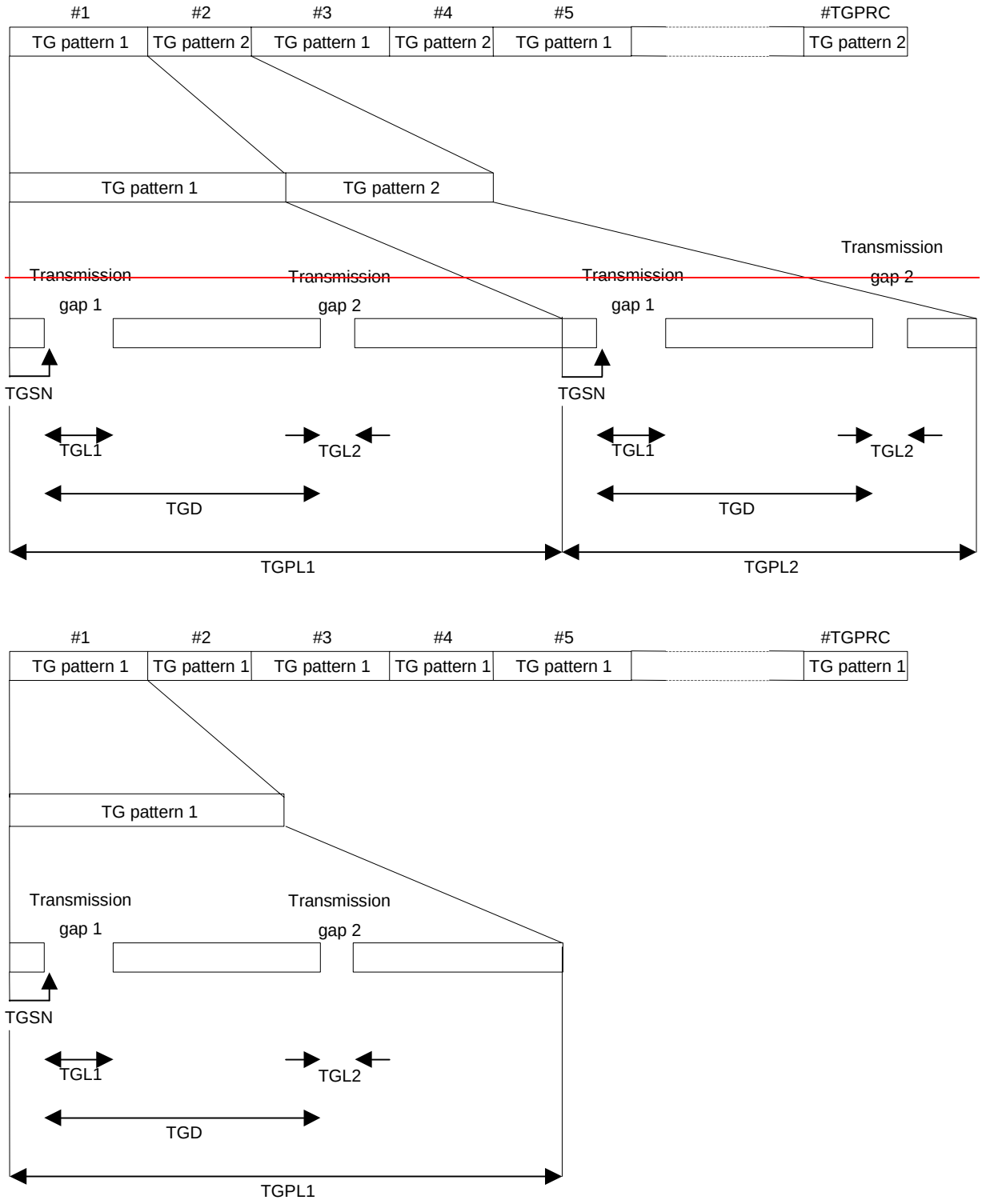
The parameters TGSN, TGL1, TGL2, TGD, TGPL1, ~~TGPL2,~~ TGPRC and TGCFN shall all be integers.



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3GPP TSG-RAN WG1 Meeting #40
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CHANGE REQUEST

⌘ **25.215** **CR** **152** ⌘ **rev** **1** ⌘ Current version: **5.5.0** ⌘

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

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

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	26/01/2005
Category:	⌘	**A**
Release:	⌘	Rel-5

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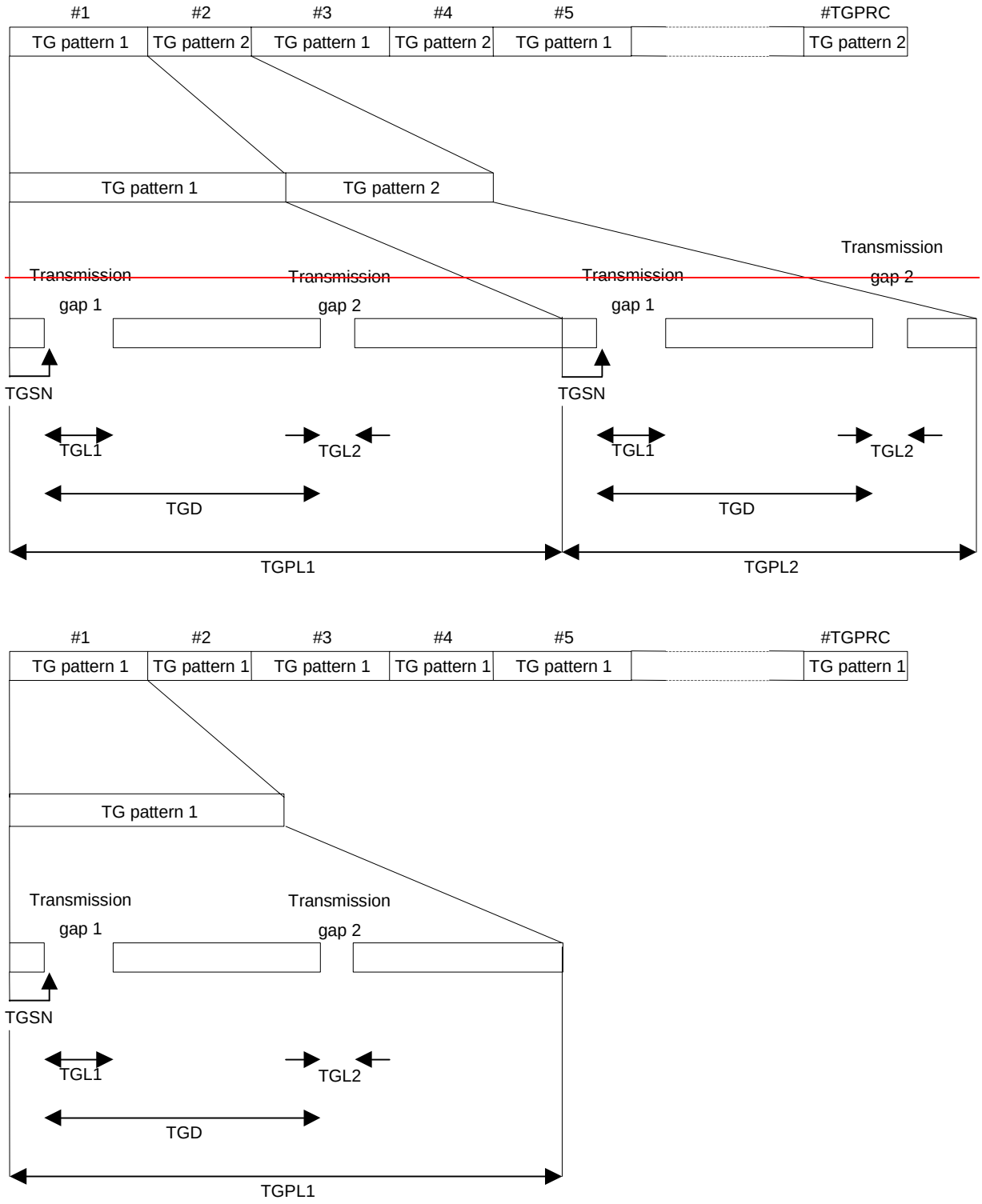

Figure 1: Illustration of compressed mode pattern parameters

3GPP TSG-RAN WG1 Meeting #40
Scottsdale, AZ, USA, 14 – 18 February 2005

Tdoc ⌘R1-050110

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.215** **CR** **153** ⌘ **rev** **1** ⌘ Current version: **6.1.0** ⌘

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

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

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG1
Work item code:	⌘	TEI
Date:	⌘	26/01/2005
Category:	⌘	**A**
Release:	⌘	Rel-6

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R4-040781).

Summary of change: ⌘ TGPL2 is removed from the specification.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specifications.

Clauses affected:	⌘	6.1.1.2			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.101, 25.133,, 25.331, 25.423, 25.433
		X /	Test specifications		34.108, 34.121, 34.123-1
		/ X	O&M Specifications		
Other comments:	⌘				

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6 Measurements for UTRA FDD

6.1 UE measurements

6.1.1 Compressed mode

6.1.1.1 Use of compressed mode for monitoring

On command from the UTRAN, a UE shall monitor cells on other FDD frequencies and on other modes and radio access technologies that are supported by the UE (i.e. TDD, GSM). To allow the UE to perform measurements, UTRAN shall command that the UE enters in compressed mode, depending on the UE capabilities.

The UE capabilities define whether a UE requires compressed mode in order to monitor cells on other FDD frequencies and on other modes and radio access technologies. UE capabilities indicate the need for compressed mode separately for the uplink and downlink and for each mode, radio access technology and frequency band.

A UE shall support compressed mode for all cases for which the UE indicates that compressed mode is required.

A UE does not need to support compressed mode for cases for which the UE indicates that compressed mode is not required. For these cases, the UE shall support an alternative means of making the measurements.

The UE shall support one single measurement purpose for one transmission gap pattern sequence. The measurement purpose of the transmission gap pattern sequence is signalled by higher layers.

The following subclause provides rules to parameterise the compressed mode.

6.1.1.2 Parameterisation of the compressed mode

In response to a request from higher layers, the UTRAN shall signal to the UE the compressed mode parameters.

A transmission gap pattern sequence consists of ~~alternating~~ consecutive occurrences of transmission gap pattern~~s~~ 1 ~~and 2~~, ~~each of these~~ where transmission gap pattern~~s~~ 1 ~~in turn~~ consists of one or two transmission gaps. See figure 1.

The following parameters characterise a transmission gap pattern:

- TGSN (Transmission Gap Starting Slot Number): A transmission gap pattern begins in a radio frame, henceforward called first radio frame of the transmission gap pattern, containing at least one transmission gap slot. TGSN is the slot number of the first transmission gap slot within the first radio frame of the transmission gap pattern;

- TGL1 (Transmission Gap Length 1): This is the duration of the first transmission gap within the transmission gap pattern, expressed in number of slots;

- TGL2 (Transmission Gap Length 2): This is the duration of the second transmission gap within the transmission gap pattern, expressed in number of slots. If this parameter is not explicitly set by higher layers, then TGL2 = TGL1;

- TGD (Transmission Gap start Distance): This is the duration between the starting slots of two consecutive transmission gaps within a transmission gap pattern, expressed in number of slots. The resulting position of the second transmission gap within its radio frame(s) shall comply with the limitations of [2]. If this parameter is not set by higher layers, then there is only one transmission gap in the transmission gap pattern;

- TGPL1 (Transmission Gap Pattern Length): This is the duration of transmission gap pattern 1, expressed in number of frames;

- ~~TGPL2 (Transmission Gap Pattern Length): This is the duration of transmission gap pattern 2, expressed in number of frames. If this parameter is not explicitly set by higher layers, then TGPL2 = TGPL1.~~

The following parameters control the transmission gap pattern sequence start and repetition:

- TGPRC (Transmission Gap Pattern Repetition Count): This is the number of transmission gap patterns within the transmission gap pattern sequence;

- TGCFN (Transmission Gap Connection Frame Number): This is the CFN of the first radio frame of the first pattern 1 within the transmission gap pattern sequence.

In addition to the parameters defining the positions of transmission gaps, each transmission gap pattern sequence is characterised by:

- UL/DL compressed mode selection: This parameter specifies whether compressed mode is used in UL only, DL only or both UL and DL;

- UL compressed mode method: The methods for generating the uplink compressed mode gap are spreading factor division by two or higher layer scheduling and are described in [2];

- DL compressed mode method: The methods for generating the downlink compressed mode gap are puncturing, spreading factor division by two or higher layer scheduling and are described in [2];

- downlink frame type: This parameter defines if frame structure type 'A' or 'B' shall be used in downlink compressed mode. The frame structures are defined in [2];

- scrambling code change: This parameter indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'. Alternative scrambling codes are described in [3];

- RPP: Recovery Period Power control mode specifies the uplink power control algorithm applied during recovery period after each transmission gap in compressed mode. RPP can take 2 values (0 or 1). The different power control modes are described in [4];

- ITP: Initial Transmit Power mode selects the uplink power control method to calculate the initial transmit power after the gap. ITP can take two values (0 or 1) and is described in [4].

The UE shall support simultaneous compressed mode pattern sequences which can be used for different measurements. The following measurement purposes can be signalled from higher layers:

- FDD

- TDD

- GSM carrier RSSI measurement

- Initial BSIC identification

- BSIC re-confirmation.

The UE shall support one compressed mode pattern sequence for each measurement purpose while operating in FDD mode, assuming the UE needs compressed mode to perform the respective measurement. In case the UE supports several of the measurement purposes, it shall support in parallel one compressed mode pattern sequence for each supported measurement purpose where the UE needs compressed mode to perform the measurement. The capability of the UE to operate in compressed mode in uplink and downlink is given from the UE capabilities.

The GSM measurements Initial BSIC identification and BSIC re-confirmation are defined in [20].

Higher layers will ensure that the compressed mode gaps do not overlap and are not scheduled to overlap the same frame. The behaviour when an overlap occurs is described in [11]. UE is not required to support two compressed mode gaps in a frame.

In all cases, higher layers have control of individual UE parameters. Any pattern sequence can be stopped on higher layers' command.

The parameters TGSN, TGL1, TGL2, TGD, TGPL1, ~~TGPL2,~~ TGPRC and TGCFN shall all be integers.

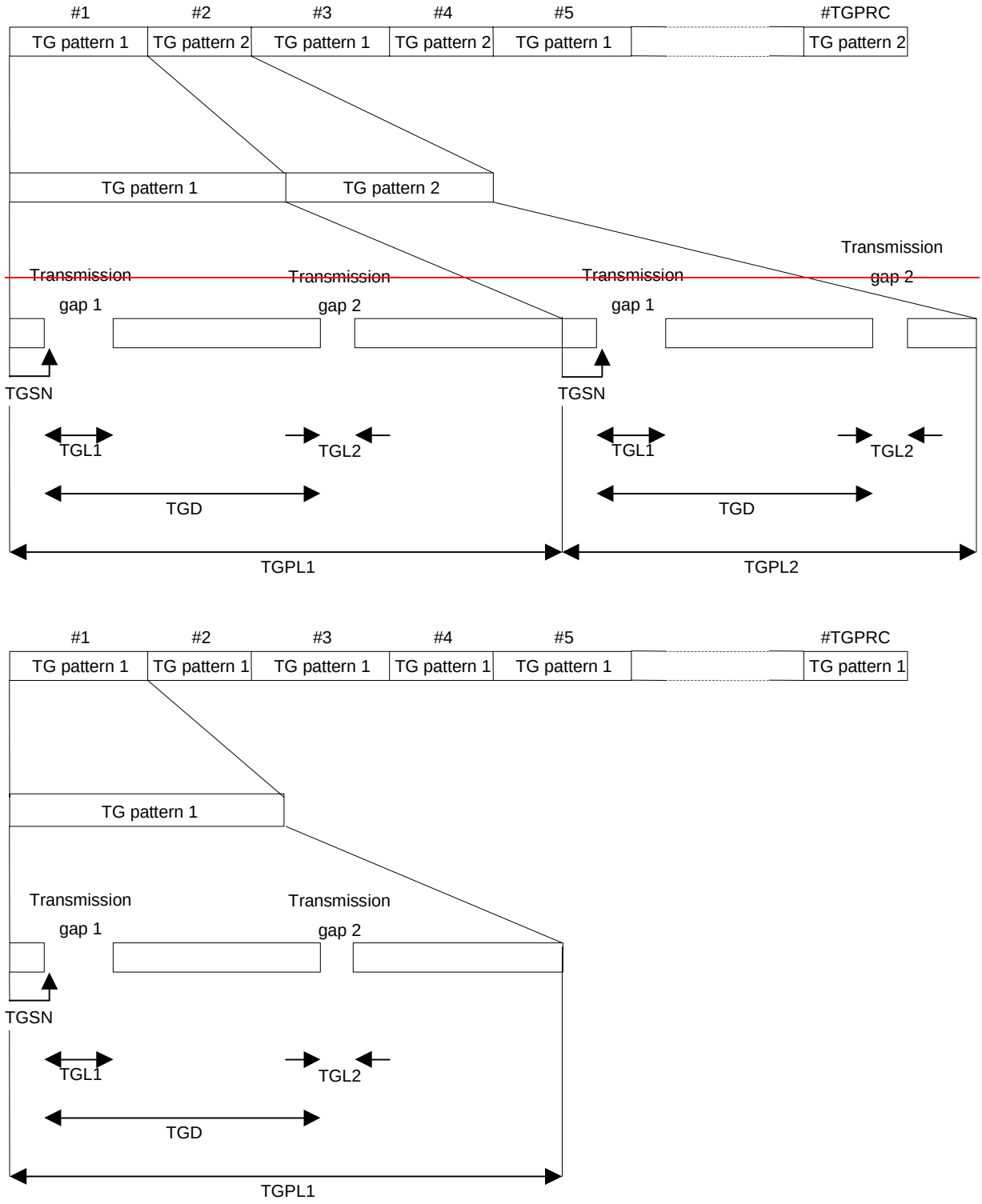

Figure 1: Illustration of compressed mode pattern parameters

3GPP TSG-RAN2 Meeting #46
Scottsdale, USA, February 14th-18th, 2005

Tdoc ⌘R2-050585

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.331** **CR** **2488** ⌘**rev** **2** ⌘ Current version: **3.21.0** ⌘

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

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG2
Work item code:	⌘	TEI
Date:	⌘	27/01/2005
Category:	⌘	**C**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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C *(functional modification of feature)*
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R99 (Release 1999)
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Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R2-042670).

Summary of change: ⌘ TGPL2 is removed from the Tabular description, and changed to "dummy" in ASN.1

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality, and also using this functionality towards a UE.
Consequences if not approved:	⌘	Inconsistency will remain in specfications and using the functionality may lead to a drop call.

Clauses affected:	⌘	10.3.6.33, 11.3			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ 25.101, 25.133, 25.215, 25.423, 25.433
		X		Test specifications	34.108, 34.121, 34.123-1
			X	O&M Specifications	
Other comments:	⌘				

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10.3.6.33 DPCH compressed mode info

NOTE: Only for FDD.

This information element indicates the parameters of the compressed mode to be used by the UE in order to perform inter-frequency and inter-RAT measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Transmission gap pattern sequence	MP	1 to <maxTGPS>		
>TGPSI	MP		TGPSI 10.3.6.82	
>TGPS Status Flag	MP		Enumerated(activate, deactivate)	This flag indicates whether the Transmission Gap Pattern Sequence shall be activated or deactivated.
>TGCFN	CV-*Active*		Integer (0..255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.
>Transmission gap pattern sequence configuration parameters	OP			
>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.
>>TGPRC	MP		Integer (1..511, Infinity)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence.
>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>>TGL1	MP		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots
>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"
>>TGD	MP		Integer(15..269,	Transmission gap distance indicates the number of slots

Information Element/Group name	Need	Multi	Type and reference	Semantics description
			undefined)	between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.
>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.
~~>>TGPL2~~	~~MD~~		~~Integer (1..144)~~	~~The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.~~
>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied
>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.
>>CHOICE *UL/DL mode*	MP			
>>>DL only				Compressed mode used in DL only
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>UL only				Compressed mode used in UL only
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>>UL and DL				Compressed mode used in UL and DL
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>Downlink frame type	MP		Enumerated (A, B)	
>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)
>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.
>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.
>>N Identify abort	CV-*Initial BSIC*		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure
>>T Reconfirm abort	CV-*Re-confirm BSIC*		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Activate" and not needed otherwise.
Initial BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
Re-confirm BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.

```
TGPL ::=                            INTEGER (1..144)

-- TABULAR: In TGPRC, value 0 represents "infinity" in the tabular description.
TGPRC ::=                           INTEGER (0..511)

TGPS-ConfigurationParams ::=        SEQUENCE {
    tgmp                                TGMP,
    tgprc                               TGPRC,
    tgsn                                TGSN,
    tgl1                                TGL,
    tgl2                                TGL                                 OPTIONAL,
    tgd                                 TGD,
    tgpl1                               TGPL,
    -- dummy is not used in this version of the specification, it should
    -- not be sent and if received it may be ignored.
    tgpl2dummy                          TGPL                                OPTIONAL,
    rpp                                 RPP,
    itp                                 ITP,
    -- TABULAR: Compressed mode method is nested inside UL-DL-Mode
    ul-DL-Mode                          UL-DL-Mode,
    dl-FrameType                        DL-FrameType,
    deltaSIR1                           DeltaSIR,
    deltaSIRAfter1                      DeltaSIR,
    deltaSIR2                           DeltaSIR                            OPTIONAL,
    deltaSIRAfter2                      DeltaSIR                            OPTIONAL,
    nidentifyAbort                      NidentifyAbort                      OPTIONAL,
    treconfirmAbort                     TreconfirmAbort                     OPTIONAL
}
```

3GPP TSG-RAN2 Meeting #46 ***Tdoc ⌘R2-050586***
Scottsdale, USA, February 14th-18th, 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.331** **CR** **2489** ⌘**rev** **2** ⌘ Current version: **4.16.0** ⌘

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a

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Source:	⌘	RAN WG2
Work item code:	⌘	TEI
Date:	⌘	27/01/2005
Category:	⌘	**A**
Release:	⌘	Rel-4

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>TGPSI	MP		TGPSI 10.3.6.82	
>TGPS Status Flag	MP		Enumerated(activate, deactivate)	This flag indicates whether the Transmission Gap Pattern Sequence shall be activated or deactivated.
>TGCFN	CV-*Active*		Integer (0..255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.
>Transmission gap pattern sequence configuration parameters	OP			
>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.
>>TGPRC	MP		Integer (1..511, Infinity)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence.
>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>>TGL1	MP		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots
>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"
>>TGD	MP		Integer(15..269,	Transmission gap distance indicates the number of slots

Information Element/Group name	Need	Multi	Type and reference	Semantics description
			undefined)	between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.
>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.
~~>>TGPL2~~	~~MD~~		~~Integer (1..144)~~	~~The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.~~
>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied
>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.
>>CHOICE *UL/DL mode*	MP			
>>>DL only				Compressed mode used in DL only
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>UL only				Compressed mode used in UL only
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>>UL and DL				Compressed mode used in UL and DL
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>Downlink frame type	MP		Enumerated (A, B)	
>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)
>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.
>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.
>>N Identify abort	CV-*Initial BSIC*		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure
>>T Reconfirm abort	CV-*Re-confirm BSIC*		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Activate" and not needed otherwise.
Initial BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
Re-confirm BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.

```
TGPL ::=                            INTEGER (1..144)

-- TABULAR: In TGPRC, value 0 represents "infinity" in the tabular description.
TGPRC ::=                           INTEGER (0..511)

TGPS-ConfigurationParams ::=        SEQUENCE {
    tgmp                                TGMP,
    tgprc                               TGPRC,
    tgsn                                TGSN,
    tgl1                                TGL,
    tgl2                                TGL                                 OPTIONAL,
    tgd                                 TGD,
    tgpl1                               TGPL,
    -- dummy is not used in this version of the specification, it should
    -- not be sent and if received it may be ignored.
    dummy~~tgpl2~~                      TGPL                                OPTIONAL,
    rpp                                 RPP,
    itp                                 ITP,
    -- TABULAR: Compressed mode method is nested inside UL-DL-Mode
    ul-DL-Mode                          UL-DL-Mode,
    dl-FrameType                        DL-FrameType,
    deltaSIR1                           DeltaSIR,
    deltaSIRAfter1                      DeltaSIR,
    deltaSIR2                           DeltaSIR                            OPTIONAL,
    deltaSIRAfter2                      DeltaSIR                            OPTIONAL,
    nidentifyAbort                      NidentifyAbort                      OPTIONAL,
    treconfirmAbort                     TreconfirmAbort                     OPTIONAL
}
```

3GPP TSG-RAN2 Meeting #46
Scottsdale, USA, February 14th-18th, 2005

Tdoc ⌘R2-050587

2490CR-Form-v7.1

CHANGE REQUEST

⌘ **25.331** **CR** **2490** ⌘**rev** **2** ⌘ Current version: **5.12.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☒ Radio Access Network ☒ Core Network ☐
a

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG2
Work item code:	⌘	TEI
Date:	⌘	27/01/2005
Category:	⌘	**C**
Release:	⌘	Rel-5

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R2-042670).

Summary of change: ⌘ TGPL2 is removed from the Tabular description, and changed to "dummy" in ASN.1

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality, and also using this functionality towards a UE.
Consequences if not approved:	⌘	Inconsistency will remain in specfications and using the functionality may lead to a drop call.

Clauses affected:	⌘	10.3.6.33, 11.3, 14.12.4.2			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ 25.101, 25.133, 25.215, 25.423, 25.433
		X		Test specifications	34.108, 34.121, 34.123-1
			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 http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

10.3.6.33 DPCH compressed mode info

NOTE: Only for FDD.

This information element indicates the parameters of the compressed mode to be used by the UE in order to perform inter-frequency and inter-RAT measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Transmission gap pattern sequence	MP	1 to <maxTGPS>		
>TGPSI	MP		TGPSI 10.3.6.82	
>TGPS Status Flag	MP		Enumerated(activate, deactivate)	This flag indicates whether the Transmission Gap Pattern Sequence shall be activated or deactivated.
>TGCFN	CV-*Active*		Integer (0..255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.
>Transmission gap pattern sequence configuration parameters	OP			
>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.
>>TGPRC	MP		Integer (1..511, Infinity)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence.
>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>>TGL1	MP		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots
>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"
>>TGD	MP		Integer(15..269,	Transmission gap distance indicates the number of slots

Information Element/Group name	Need	Multi	Type and reference	Semantics description
			undefined)	between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.
>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.
~~>>TGPL2~~	~~MD~~		~~Integer (1..144)~~	~~The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.~~
>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied
>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.
>>CHOICE *UL/DL mode*	MP			
>>>DL only				Compressed mode used in DL only
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>UL only				Compressed mode used in UL only
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>>UL and DL				Compressed mode used in UL and DL
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>Downlink frame type	MP		Enumerated (A, B)	
>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)
>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.
>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.
>>N Identify abort	CV-*Initial BSIC*		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure
>>T Reconfirm abort	CV-*Re-confirm BSIC*		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Activate" and not needed otherwise.
Initial BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
Re-confirm BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.

```
TGPL ::=                            INTEGER (1..144)

-- TABULAR: In TGPRC, value 0 represents "infinity" in the tabular description.
TGPRC ::=                           INTEGER (0..511)

TGPS-ConfigurationParams ::=        SEQUENCE {
    tgmp                                TGMP,
    tgprc                               TGPRC,
    tgsn                                TGSN,
    tgl1                                TGL,
    tgl2                                TGL                                 OPTIONAL,
    tgd                                 TGD,
    tgpl1                               TGPL,
    -- dummy is not used in this version of the specification, it should
    -- not be sent and if received it may be ignored.
    dummy~~tgpl2~~                      TGPL                                OPTIONAL,
    rpp                                 RPP,
    itp                                 ITP,
    -- TABULAR: Compressed mode method is nested inside UL-DL-Mode
    ul-DL-Mode                          UL-DL-Mode,
    dl-FrameType                        DL-FrameType,
    deltaSIR1                           DeltaSIR,
    deltaSIRAfter1                      DeltaSIR,
    deltaSIR2                           DeltaSIR                            OPTIONAL,
    deltaSIRAfter2                      DeltaSIR                            OPTIONAL,
    nidentifyAbort                      NidentifyAbort                      OPTIONAL,
    treconfirmAbort                     TreconfirmAbort                     OPTIONAL
}
```

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation or a handover/cell reselection from GERAN *Iu mode*.

With the presence or absence of the IE "RB identity for Hard Handover message" the source RNC indicates to the target SRNC whether the source RNC expects to receive the choice "DL DCCH message" in the IE "RRC information, target RNC to source RNC" in case the SRNS relocation is of type "UE involved". Furthermore the target RNC uses this information for the calculation of the MAC-I.

Direction: source RNC/RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
Non RRC IEs					
>RB identity for Handover message	OP		RB identity 10.3.4.16	Gives the id of the radio bearer on which the source RNC will transmit the RRC message in the case the relocation is of type "UE involved". In handover from GERAN *Iu mode* this IE is always set to 2.	
>State of RRC	MP		RRC state indicator, 10.3.3.35a		
>State of RRC procedure	MP		Enumerated (await no RRC message, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, await Transport		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)		
Ciphering related information					
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>			
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>Ciphering status	MP		Enumerated(Not started, Started)		
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.	
>Latest configured CN domain	MP		CN domain identity 10.3.1.1	Value contained in the variable of the same name. In case this variable is empty, the source RNC can set any CN domain identity. In that case, the Ciphering status and the Integrity protection status should be Not started and the target RNC should not initialise the variable Latest configured CN domain.	
>Calculation time for ciphering related information	CV-*Ciphering*			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC. In handover and cell reselection from GERAN *Iu mode* this field is not present.	
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call	
>>SFN	MP		Integer(0..4095)		
>COUNT-C list	OP	1 to <maxCNdomains>		COUNT-C values for radio bearers using transparent mode RLC	
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>COUNT-C	MP		Bit string(32)		
>Ciphering info per radio bearer	OP	1 to		For signalling radio bearers	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
		<maxRB>		this IE is mandatory.	
>>RB identity	MP		RB identity 10.3.4.16		
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
>>Downlink SN	CV-*SRB1*		Bit String(7)	VT(US) of RLC UM	
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
Integrity protection related information					
>Integrity protection status	MP		Enumerated(Not started, Started)		
>Signalling radio bearer specific integrity protection information	CV-*IP*	4 to <maxSRBsetup>			
>>Uplink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value the source would have initalized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source.	
>>Downlink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value the source would have initalized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source. In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	For each SRB, this IE corresponds to the last value received or in the case activation time was not reached for a configuration the value equals (activation time - 1).	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	For each SRB, this IE corresponds to the last value used or in the case activation time was not reached for a configuration the value equals (activation time -1). In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>Implementation specific parameters	OP		Bit string (1..512)		
RRC IEs					
UE Information elements					
>U-RNTI	MP		U-RNTI 10.3.3.47	G-RNTI is placed in this field when performing handover or cell reselection from GERAN *Iu mode.*	
>C-RNTI	OP		C-RNTI 10.3.3.8		
>UE radio access Capability	MP		UE radio access capability 10.3.3.42		
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a		
>Last known UE position	OP				
>>SFN	MP		Integer (0..4095)	Time when position was estimated	
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.	
>>CHOICE *Position estimate*	MP				
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a		
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d		
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e		
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b		
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>UE Specific Behaviour Information 1 idle	OP		UE Specific Behaviour Information idle 1 10.3.3.51	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
>UE Specific Behaviour Information 1 interRAT	OP		UE Specific Behaviour Information 1 interRAT 10.3.3.52	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
Other Information elements					
>UE system specific capability	OP	1 to <maxSystemCapability>			
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7		
UTRAN Mobility Information elements					
>URA Identifier	OP		URA identity 10.3.2.6		
CN Information Elements					
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9		
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain	
>>CN domain identity	MP				
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9		
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6		
Measurement Related Information elements					
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>			
>>Measurement Identity	MP		Measurement identity 10.3.7.48		
>>Measurement Command	MP		Measurement command 10.3.7.46		
>>Measurement Type	CV-*Setup*		Measurement type 10.3.7.50		
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1		
>>CHOICE *Measurement*	OP				
>>>Intra-frequency					
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33		
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38		
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE *report criteria*	OP				
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-frequency					
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13		
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement quantity 10.3.7.18		
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>Inter-frequency set update	OP		Inter-frequency set update 10.3.7.22		
>>>>CHOICE *report criteria*	OP				
>>>>>Intra-frequency			Intra-		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
measurement reporting criteria			frequency measurement reporting criteria 10.3.7.39		
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-RAT					
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23		
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29		
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE *report criteria*	OP				
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Traffic Volume					
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70		
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71		
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE *report criteria*	OP				

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>>>Traffic volume measurement reporting criteria			Traffic volume measurement reporting criteria 10.3.7.72		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Quality					
>>>>Quality measurement quantity	OP		Quality measurement quantity 10.3.7.59		
>>>>CHOICE *report criteria*	OP				
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE internal					
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79		
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82		
>>>>CHOICE *report criteria*	OP				
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE positioning					
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111		
>>>>CHOICE *report criteria*	OP				
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting					
Radio Bearer Information Elements					
>Predefined configuration status	OP		Predefined		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
information			configuration status information 10.3.4.5a		
>Signalling RB information list	MP	1 to <maxSRBsetup>		For each signalling radio bearer	
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24		
>RAB information list	OP	1 to <maxRABsetup>		Information for each RAB	
>>RAB information	MP		RAB information to setup 10.3.4.10		
Transport Channel Information Elements					
Uplink transport channels					
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
>UL transport channel information list	OP	1 to <MaxTrCH>			
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2		
>CHOICE *mode*	OP				
>>FDD					
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5		
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH>			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>>TDD				(no data)	
Downlink transport channels					
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
>DL transport channel information list	OP	1 to <MaxTrCH>			
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
PhyCH information elements					
>TPC Combination Info list	OP	1 to <maxRL>			
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>TPC combination index	MP		TPC combination index 10.3.6.85		
>Transmission gap pattern sequence	OP	1 to <maxTGPS>			REL-5
>>TGPSI	MP		TGPSI 10.3.6.82		
>> Current TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it is active or inactive	
>>TGCFN	CV-*Active*		Integer (0..255)	Connection Frame Number of the latest past frame of the first pattern within the Transmission Gap Pattern Sequence.	
>>Transmission gap pattern sequence configuration parameters	OP				
>>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.	
>>>TGPRC	MP		Integer (1..511, Infinity)	The number of remaining transmission gap patterns within the Transmission Gap Pattern Sequence.	
>>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.	
>>>TGL1	MP		Integer(1..14	The length of the first Transmission Gap within the	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			)	transmission gap pattern expressed in number of slots	
>>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"	
>>>TGD	MP		Integer(15..269, undefined)	Transmission gap distance indicates the number of slots between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.	
>>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.	
~~>>>TGPL2~~	~~MD~~		~~Integer (1..144)~~	~~The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.~~	
>>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied	
>>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.	
>>>CHOICE *UL/DL mode*	MP				
>>>>DL only				Compressed mode used in DL only	
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	
>>>>UL only				Compressed mode used in UL only	
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer	Method for generating uplink compressed mode gap	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			scheduling)		
>>>>UL and DL				Compressed mode used in UL and DL	
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap	
>>>Downlink frame type	MP		Enumerated (A, B)		
>>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)	
>>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.	
>>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.	
>>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.	
>>>N Identify abort	CV-*Initial BSIC*		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>T Reconfirm abort	CV-*Re-confirm BSIC*		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.	
>Scrambling Code Change List	CH-*SF/2*	1 to <maxRL>			REL-5
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>Scrambling code change	MP		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.	
Other Information elements					
>Measurement report	OP		MEASUREMENT REPORT 10.2.1.9		
>Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)	
>Protocol error information	CV-*ProtErr*		Protocol error information 10.3.8.12		

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
Setup	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
Ciphering	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
IP	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
ProtErr	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
SRB1	The IE is mandatory present for RB1. Otherwise it is not needed.
Active	This IE is mandatory present when the value of the IE "Current TGPS Status Flag" is "Active" and not needed otherwise.
Initial BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
Re-confirm BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.
SF/2	The IE is mandatory present if the IE “Transmission Gap Pattern Sequence” is included and has the value “SF/2” as the compressed mode method, and already sent the UE the IE “Scrambling Code Change” for each RL in the active set. Otherwise the IE is not needed.

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Scottsdale, USA, February 14th-18th, 2005

Tdoc ⌘R2-050588

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.331** **CR** **2491** ⌘**rev** **2** ⌘ Current version: **6.4.0** ⌘

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

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

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN WG2
Work item code:	⌘	TEI
Date:	⌘	27/01/2004
Category:	⌘	**C**
Release:	⌘	Rel-6

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section *6.1.1.2*, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two pattern are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R2-042670).

Summary of change: ⌘ TGPL2 is removed from the Tabular description, and changed to "dummy" in ASN.1

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality, and also using this functionality towards a UE.
Consequences if not approved:	⌘	Inconsistency will remain in specfications and using the functionality may lead to a drop calls.

Clauses affected:	⌘	10.3.6.33, 11.3, 14.12.4.2			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ 25.101, 25.133, 25.215, 25.423, 25.433
		X		Test specifications	34.108, 34.121, 34.123-1
			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 http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

10.3.6.33 DPCH compressed mode info

NOTE: Only for FDD.

This information element indicates the parameters of the compressed mode to be used by the UE in order to perform inter-frequency and inter-RAT measurements.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
Transmission gap pattern sequence	MP	1 to <maxTGPS>		
>TGPSI	MP		TGPSI 10.3.6.82	
>TGPS Status Flag	MP		Enumerated(activate, deactivate)	This flag indicates whether the Transmission Gap Pattern Sequence shall be activated or deactivated.
>TGCFN	CV-*Active*		Integer (0..255)	Connection Frame Number of the first frame of the first pattern within the Transmission Gap Pattern Sequence.
>Transmission gap pattern sequence configuration parameters	OP			
>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.
>>TGPRC	MP		Integer (1..511, Infinity)	The number of transmission gap patterns within the Transmission Gap Pattern Sequence.
>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>>TGL1	MP		Integer(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots
>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"
>>TGD	MP		Integer(15..269,	Transmission gap distance indicates the number of slots

Information Element/Group name	Need	Multi	Type and reference	Semantics description
			undefined)	between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.
>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.
~~>>TGPL2~~	~~MD~~		~~Integer (1..144)~~	~~The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.~~
>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied
>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.
>>CHOICE *UL/DL mode*	MP			
>>>DL only				Compressed mode used in DL only
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>UL only				Compressed mode used in UL only
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>>UL and DL				Compressed mode used in UL and DL
>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap
>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap
>>Downlink frame type	MP		Enumerated (A, B)	
>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)
>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.

Information Element/Group name	Need	Multi	Type and reference	Semantics description
>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.
>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.
>>N Identify abort	CV-*Initial BSIC*		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure
>>T Reconfirm abort	CV-*Re-confirm BSIC*		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.

Condition	Explanation
Active	This IE is mandatory present when the value of the IE "TGPS Status Flag" is "Activate" and not needed otherwise.
Initial BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
Re-confirm BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.

```
TGPL ::=                            INTEGER (1..144)

-- TABULAR: In TGPRC, value 0 represents "infinity" in the tabular description.
TGPRC ::=                           INTEGER (0..511)

TGPS-ConfigurationParams ::=        SEQUENCE {
    tgmp                                TGMP,
    tgprc                               TGPRC,
    tgsn                                TGSN,
    tgl1                                TGL,
    tgl2                                TGL                                 OPTIONAL,
    tgd                                 TGD,
    tgpl1                               TGPL,
    -- dummy is not used in this version of the specification, it should
    -- not be sent and if received it shall be ignored.
    tgpl2dummy                          TGPL                                OPTIONAL,
    rpp                                 RPP,
    itp                                 ITP,
    -- TABULAR: Compressed mode method is nested inside UL-DL-Mode
    ul-DL-Mode                          UL-DL-Mode,
    dl-FrameType                        DL-FrameType,
    deltaSIR1                           DeltaSIR,
    deltaSIRAfter1                      DeltaSIR,
    deltaSIR2                           DeltaSIR                            OPTIONAL,
    deltaSIRAfter2                      DeltaSIR                            OPTIONAL,
    nidentifyAbort                      NidentifyAbort                      OPTIONAL,
    treconfirmAbort                     TreconfirmAbort                     OPTIONAL
}
```

14.12.4.2 SRNS RELOCATION INFO

This RRC message is sent between network nodes when preparing for an SRNS relocation or a handover/cell reselection from GERAN *Iu mode*.

With the presence or absence of the IE "RB identity for Hard Handover message" the source RNC indicates to the target SRNC whether the source RNC expects to receive the choice "DL DCCH message" in the IE "RRC information, target RNC to source RNC" in case the SRNS relocation is of type "UE involved". Furthermore the target RNC uses this information for the calculation of the MAC-I.

Direction: source RNC/RAT→target RNC

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
Non RRC IEs					
>RB identity for Handover message	OP		RB identity 10.3.4.16	Gives the id of the radio bearer on which the source RNC will transmit the RRC message in the case the relocation is of type "UE involved". In handover from GERAN *Iu mode* this IE is always set to 2.	
>State of RRC	MP		RRC state indicator, 10.3.3.35a		
>State of RRC procedure	MP		Enumerated (await no RRC message, await RB Release Complete, await RB Setup Complete, await RB Reconfiguration Complete, await Transport		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			CH Reconfiguration Complete, await Physical CH Reconfiguration Complete, await Active Set Update Complete, await Handover Complete, send Cell Update Confirm, send URA Update Confirm, , others)		
Ciphering related information					
>Ciphering status for each CN domain	MP	<1 to maxCNDomains>			
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>Ciphering status	MP		Enumerated(Not started, Started)		
>>START	MP		START 10.3.3.38	START value to be used in this CN domain.	
>Latest configured CN domain	MP		CN domain identity 10.3.1.1	Value contained in the variable of the same name. In case this variable is empty, the source RNC can set any CN domain identity. In that case, the Ciphering status and the Integrity protection status should be Not started and the target RNC should not initialise the variable Latest configured CN domain.	
>Calculation time for ciphering related information	CV-*Ciphering*			Time when the ciphering information of the message were calculated, relative to a cell of the target RNC. In handover and cell reselection from GERAN *Iu mode* this field is not present.	
>>Cell Identity	MP		Cell Identity 10.3.2.2	Identity of one of the cells under the target RNC and included in the active set of the current call	
>>SFN	MP		Integer(0..4095)		
>COUNT-C list	OP	1 to <maxCNdomains>		COUNT-C values for radio bearers using transparent mode RLC	
>>CN domain identity	MP		CN domain identity 10.3.1.1		
>>COUNT-C	MP		Bit string(32)		
>Ciphering info per radio bearer	OP	1 to		For signalling radio bearers	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
		<maxRB>		this IE is mandatory.	
>>RB identity	MP		RB identity 10.3.4.16		
>>Downlink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
>>Downlink SN	CV-*SRB1*		Bit String(7)	VT(US) of RLC UM	
>>Uplink HFN	MP		Bit string(20..25)	This IE is either RLC AM HFN (20 bits) or RLC UM HFN (25 bits)	
Integrity protection related information					
>Integrity protection status	MP		Enumerated(Not started, Started)		
>Signalling radio bearer specific integrity protection information	CV-*IP*	4 to <maxSRBsetup>			
>>Uplink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value the source would have initalized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source.	
>>Downlink RRC HFN	MP		Bit string (28)	For each SRB, in the case activation times for the next IP configuration to be applied on this SRB have already been reached this IE corresponds to the last value used. Else this value corresponds to the value the source would have initalized the HFN to at the activation time. Increment of HFN due to RRC SN roll over is taken care of by target based on value sent by the source. In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.	
>>Uplink RRC Message sequence number	MP		Integer (0..15)	For each SRB, this IE corresponds to the last value received or in the case activation time was not reached for a configuration the value equals (activation time - 1).	
>>Downlink RRC Message sequence number	MP		Integer (0..15)	For each SRB, this IE corresponds to the last value used or in the case activation time was not reached for a configuration the value equals (activation time -1). In particular, for SRB2, this IE should not take into account the RRC message that will trigger the relocation.	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>Implementation specific parameters	OP		Bit string (1..512)		
RRC IEs					
UE Information elements					
>U-RNTI	MP		U-RNTI 10.3.3.47	G-RNTI is placed in this field when performing handover or cell reselection from GERAN *Iu mode.*	
>C-RNTI	OP		C-RNTI 10.3.3.8		
>UE radio access Capability	MP		UE radio access capability 10.3.3.42		
>UE radio access capability extension	OP		UE radio access capability extension 10.3.3.42a		
>Last known UE position	OP				
>>SFN	MP		Integer (0..4095)	Time when position was estimated	
>>Cell ID	MP		Cell identity; 10.3.2.2	Indicates the cell, the SFN is valid for.	
>>CHOICE *Position estimate*	MP				
>>>Ellipsoid Point			Ellipsoid Point; 10.3.8.4a		
>>>Ellipsoid point with uncertainty circle			Ellipsoid point with uncertainty circle 10.3.8.4d		
>>>Ellipsoid point with uncertainty ellipse			Ellipsoid point with uncertainty ellipse 10.3.8.4e		
>>>Ellipsoid point with altitude			Ellipsoid point with altitude 10.3.8.4b		
>>>Ellipsoid point with altitude and uncertainty ellipsoid			Ellipsoid point with altitude and uncertainty ellipsoid 10.3.8.4c		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>UE Specific Behaviour Information 1 idle	OP		UE Specific Behaviour Information idle 1 10.3.3.51	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
>UE Specific Behaviour Information 1 interRAT	OP		UE Specific Behaviour Information 1 interRAT 10.3.3.52	This IE should be included if received via the "INTER RAT HANDOVER INFO", the "RRC CONNECTION REQUEST", the IE "SRNS RELOCATION INFO" or the "Inter RAT Handover Info with Inter RAT Capabilities"	
Other Information elements					
>UE system specific capability	OP	1 to <maxSystemCapability>			
>>Inter-RAT UE radio access capability	MP		Inter-RAT UE radio access capability 10.3.8.7		
UTRAN Mobility Information elements					
>URA Identifier	OP		URA identity 10.3.2.6		
CN Information Elements					
>CN common GSM-MAP NAS system information	MP		NAS system information (GSM-MAP) 10.3.1.9		
>CN domain related information	OP	1 to <MaxCNdomains>		CN related information to be provided for each CN domain	
>>CN domain identity	MP				
>>CN domain specific GSM-MAP NAS system info	MP		NAS system information (GSM-MAP) 10.3.1.9		
>>CN domain specific DRX cycle length coefficient	MP		CN domain specific DRX cycle length coefficient, 10.3.3.6		
Measurement Related Information elements					
>For each ongoing measurement reporting	OP	1 to <MaxNoOfMeas>			
>>Measurement Identity	MP		Measurement identity 10.3.7.48		
>>Measurement Command	MP		Measurement command 10.3.7.46		
>>Measurement Type	CV-*Setup*		Measurement type 10.3.7.50		
>>Measurement Reporting Mode	OP		Measurement reporting mode 10.3.7.49		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>Additional Measurements list	OP		Additional measurements list 10.3.7.1		
>>CHOICE *Measurement*	OP				
>>>Intra-frequency					
>>>>Intra-frequency cell info	OP		Intra-frequency cell info list 10.3.7.33		
>>>>Intra-frequency measurement quantity	OP		Intra-frequency measurement quantity 10.3.7.38		
>>>>Intra-frequency reporting quantity	OP		Intra-frequency reporting quantity 10.3.7.41		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE *report criteria*	OP				
>>>>>Intra-frequency measurement reporting criteria			Intra-frequency measurement reporting criteria 10.3.7.39		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-frequency					
>>>>Inter-frequency cell info	OP		Inter-frequency cell info list 10.3.7.13		
>>>>Inter-frequency measurement quantity	OP		Inter-frequency measurement quantity 10.3.7.18		
>>>>Inter-frequency reporting quantity	OP		Inter-frequency reporting quantity 10.3.7.21		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>Inter-frequency set update	OP		Inter-frequency set update 10.3.7.22		
>>>>CHOICE *report criteria*	OP				
>>>>>Intra-frequency			Intra-		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
measurement reporting criteria			frequency measurement reporting criteria 10.3.7.39		
>>>>>Inter-frequency measurement reporting criteria			Inter-frequency measurement reporting criteria 10.3.7.19		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Inter-RAT					
>>>>Inter-RAT cell info	OP		Inter-RAT cell info list 10.3.7.23		
>>>>Inter-RAT measurement quantity	OP		Inter-RAT measurement quantity 10.3.7.29		
>>>>Inter-RAT reporting quantity	OP		Inter-RAT reporting quantity 10.3.7.32		
>>>>Reporting cell status	OP		Reporting cell status 10.3.7.61		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE *report criteria*	OP				
>>>>>Inter-RAT measurement reporting criteria			Inter-RAT measurement reporting criteria 10.3.7.30		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Traffic Volume					
>>>>Traffic volume measurement Object	OP		Traffic volume measurement object 10.3.7.70		
>>>>Traffic volume measurement quantity	OP		Traffic volume measurement quantity 10.3.7.71		
>>>>Traffic volume reporting quantity	OP		Traffic volume reporting quantity 10.3.7.74		
>>>>Measurement validity	OP		Measurement validity 10.3.7.51		
>>>>CHOICE *report criteria*	OP				

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>>>Traffic volume measurement reporting criteria			Traffic volume measurement reporting criteria 10.3.7.72		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>Quality					
>>>>Quality measurement quantity	OP		Quality measurement quantity 10.3.7.59		
>>>>CHOICE *report criteria*	OP				
>>>>>Quality measurement reporting criteria			Quality measurement reporting criteria 10.3.7.58		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE internal					
>>>>UE internal measurement quantity	OP		UE internal measurement quantity 10.3.7.79		
>>>>UE internal reporting quantity	OP		UE internal reporting quantity 10.3.7.82		
>>>>CHOICE *report criteria*	OP				
>>>>>UE internal measurement reporting criteria			UE internal measurement reporting criteria 10.3.7.80		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting			NULL		
>>>UE positioning					
>>>>LCS reporting quantity	OP		LCS reporting quantity 10.3.7.111		
>>>>CHOICE *report criteria*	OP				
>>>>>LCS reporting criteria			LCS reporting criteria 10.3.7.110		
>>>>>Periodical reporting			Periodical reporting criteria 10.3.7.53		
>>>>>No reporting					
Radio Bearer Information Elements					
>Predefined configuration status	OP		Predefined		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
information			configuration status information 10.3.4.5a		
>Signalling RB information list	MP	1 to <maxSRBsetup>		For each signalling radio bearer	
>>Signalling RB information	MP		Signalling RB information to setup 10.3.4.24		
>RAB information list	OP	1 to <maxRABsetup>		Information for each RAB	
>>RAB information	MP		RAB information to setup 10.3.4.10		
Transport Channel Information Elements					
Uplink transport channels					
>UL Transport channel information common for all transport channels	OP		UL Transport channel information common for all transport channels 10.3.5.24		
>UL transport channel information list	OP	1 to <MaxTrCH>			
>>UL transport channel information	MP		Added or reconfigured UL TrCH information 10.3.5.2		
>CHOICE *mode*	OP				
>>FDD					
>>>CPCH set ID	OP		CPCH set ID 10.3.5.5		
>>>Transport channel information for DRAC list	OP	1 to <MaxTrCH>			
>>>>DRAC static information	MP		DRAC static information 10.3.5.7		
>>TDD				(no data)	
Downlink transport channels					
>DL Transport channel information common for all transport channels	OP		DL Transport channel information common for all transport channels 10.3.5.6		
>DL transport channel information list	OP	1 to <MaxTrCH>			
>>DL transport channel information	MP		Added or reconfigured DL TrCH information 10.3.5.1		

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
PhyCH information elements					
>TPC Combination Info list	OP	1 to <maxRL>			
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>TPC combination index	MP		TPC combination index 10.3.6.85		
>Transmission gap pattern sequence	OP	1 to <maxTGPS>			REL-5
>>TGPSI	MP		TGPSI 10.3.6.82		
>> Current TGPS Status Flag	MP		Enumerated(active, inactive)	This flag indicates the current status of the Transmission Gap Pattern Sequence, whether it is active or inactive	
>>TGCFN	CV-*Active*		Integer (0..255)	Connection Frame Number of the latest past frame of the first pattern within the Transmission Gap Pattern Sequence.	
>>Transmission gap pattern sequence configuration parameters	OP				
>>>TGMP	MP		Enumerated(TDD measurement, FDD measurement, GSM carrier RSSI measurement, GSM Initial BSIC identification, GSM BSIC re-confirmation, Multi-carrier measurement)	Transmission Gap pattern sequence Measurement Purpose.	
>>>TGPRC	MP		Integer (1..511, Infinity)	The number of remaining transmission gap patterns within the Transmission Gap Pattern Sequence.	
>>>TGSN	MP		Integer (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.	
>>>TGL1	MP		Integer(1..14	The length of the first Transmission Gap within the	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			)	transmission gap pattern expressed in number of slots	
>>>TGL2	MD		Integer (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1. The value of TGL2 shall be ignored if TGD is set to "undefined"	
>>>TGD	MP		Integer(15..269, undefined)	Transmission gap distance indicates the number of slots between starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to undefined.	
>>>TGPL1	MP		Integer (1..144)	The duration of transmission gap pattern 1.	
~~>>>TGPL2~~	~~MD~~		~~Integer (1..144)~~	~~The duration of transmission gap pattern 2. If omitted, then TGPL2=TGPL1.~~	
>>>RPP	MP		Enumerated (mode 0, mode 1).	Recovery Period Power control mode during the frame after the transmission gap within the compressed frame. Indicates whether normal PC mode or compressed PC mode is applied	
>>>ITP	MP		Enumerated (mode 0, mode 1).	Initial Transmit Power is the uplink power control method to be used to compute the initial transmit power after the compressed mode gap.	
>>>CHOICE *UL/DL mode*	MP				
>>>>DL only				Compressed mode used in DL only	
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	
>>>>UL only				Compressed mode used in UL only	
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer	Method for generating uplink compressed mode gap	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
			scheduling)		
>>>>UL and DL				Compressed mode used in UL and DL	
>>>>>Downlink compressed mode method	MP		Enumerated (puncturing, SF/2, higher layer scheduling)	Method for generating downlink compressed mode gap	
>>>>>Uplink compressed mode method	MP		Enumerated (SF/2, higher layer scheduling)	Method for generating uplink compressed mode gap	
>>>Downlink frame type	MP		Enumerated (A, B)		
>>>DeltaSIR1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)	
>>>DeltaSIRafter1	MP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the first transmission gap in the transmission gap pattern.	
>>>DeltaSIR2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1.	
>>>DeltaSIRafter2	OP		Real(0..3 by step of 0.1)	Delta in DL SIR target value to be set in the UE one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1.	
>>>N Identify abort	CV-*Initial BSIC*		Integer(1..128)	Indicates the maximum number of repeats of patterns that the UE shall use to attempt to decode the unknown BSIC of the GSM cell in the initial BSIC identification procedure	

Information Element/Group Name	Need	Multi	Type and reference	Semantics description	Version
>>>T Reconfirm abort	CV-*Re-confirm BSIC*		Real(0.5..10.0 by step of 0.5)	Indicates the maximum time allowed for the re-confirmation of the BSIC of one GSM cell in the BSIC re-confirmation procedure. The time is given in steps of 0.5 seconds.	
>Scrambling Code Change List	CH-*SF/2*	1 to <maxRL>			REL-5
>>Primary CPICH info	MP		Primary CPICH info 10.3.6.60		
>>Scrambling code change	MP		Enumerated (code change, no code change)	Indicates whether the alternative scrambling code is used for compressed mode method 'SF/2'.	
Other Information elements					
>Measurement report	OP		MEASUREMENT REPORT 10.2.1.9		
>Failure cause	OP		Failure cause 10.3.3.13	Diagnostics information related to an earlier SRNC Relocation request (see NOTE 2 in 14.12.0a)	
>Protocol error information	CV-*ProtErr*		Protocol error information 10.3.8.12		
MBMS joined information	OP			Included if the UE has joined one or more MBMS services	REL-6
>P-TMSI	OP		P-TMSI (GSM-MAP) 10.3.1.13	In case the UE is in PMM- Idle	REL-6

Multi Bound	Explanation
MaxNoOfMeas	Maximum number of active measurements, upper limit 16

Condition	Explanation
Setup	The IE is mandatory present when the IE Measurement command has the value "Setup", otherwise the IE is not needed.
Ciphering	The IE is mandatory present when the IE Ciphering Status has the value "started" and the ciphering counters need not be reinitialised, otherwise the IE is not needed.
IP	The IE is mandatory present when the IE Integrity protection status has the value "started" and the integrity protection counters need not be reinitialised, otherwise the IE is not needed.
ProtErr	This IE is mandatory present if the IE "Protocol error indicator" is included and has the value "TRUE". Otherwise it is not needed.
SRB1	The IE is mandatory present for RB1. Otherwise it is not needed.
Active	This IE is mandatory present when the value of the IE "Current TGPS Status Flag" is "Active" and not needed otherwise.
Initial BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM Initial BSIC identification" and not needed otherwise.
Re-confirm BSIC	This IE is mandatory present when the value of the IE "TGMP" is set to "GSM BSIC re-confirmation" and not needed otherwise.
SF/2	The IE is mandatory present if the IE “Transmission Gap Pattern Sequence” is included and has the value “SF/2” as the compressed mode method, and already sent the UE the IE “Scrambling Code Change” for each RL in the active set. Otherwise the IE is not needed.

3GPP TSG-RAN WG3 Meeting #46 **Tdoc ⌘R3-050246**
Scottsdale, USA, 14th- 18th February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.423** **CR** **1022** ⌘**rev** **1** ⌘ Current version: **3.14.2** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN3
Work item code:	⌘	TEI
Date:	⌘	14/02/2005
Category:	⌘	**C**
Release:	⌘	R99

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.47A, 9.3.4			
		Y	**N**		
Other specs affected:	⌘	**X**		Other core specifications	⌘ 25.101, 25.133, 25.215, 25.133, 25.433
			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 http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		*1..<MaxTGPS>*		
>TGPSI Identifier	M		INTEGER(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		INTEGER (1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER (1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL mode	M		ENUMERATED (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (puncturing, SF/2, higher layer scheduling, …)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, higher layer scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,…)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of

				the bit-rate increase) Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is "DL only" or "UL/DL".

Range bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences.

9.3.4 Information Element Definitions

```
-- **************************************************************
--
-- Information Element Definitions
--
-- **************************************************************

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Unchanged parts not shown

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1      DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2      DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unchanged parts not shown

END
```

3GPP TSG-RAN WG3 Meeting #46 **Tdoc ⌘R3-050247**
Scottsdale, USA, 14th- 18th February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.423** **CR** **1023** ⌘**rev** **1** ⌘ Current version: **4.12.1** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN3
Work item code:	⌘	TEI
Date:	⌘	14/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-4

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

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

	UTRAN implementations supporting the removed functionality.
Consequences if ⌘[H17 not approved:	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.47A, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ 25.101, 25.133, 25.215, 25.133, 25.433
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
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3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		1..< *maxTGPS* >		
>TGPSI Identifier	M		INTEGER(1. .<MaxTGPS >)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER(1. .14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		INTEGER (1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER (1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL mode	M		ENUMERATED (UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (puncturing, SF/2, higher layer scheduling, …)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, higher layer scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,...)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of

				the bit-rate increase) Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL".

Range bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences.

9.3.4 Information Element Definitions

```
-- **************************************************************
--
-- Information Element Definitions
--
-- **************************************************************

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Unchanged parts not shown

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1      DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2      DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unchanged parts not shown

END
```

3GPP TSG-RAN WG3 Meeting #46
Scottsdale, USA, 14th- 18th February 2005

Tdoc ⌘R3-050248

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.423** **CR** **1024** ⌘**rev** **1** ⌘ Current version: **5.12.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN3
Work item code:	⌘	TEI
Date:	⌘	14/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.47A, 9.3.4				
Other specs affected:	⌘	**Y**	**N**			
		X		Other core specifications	⌘	25.101, 25.133, 25.215, 25.133, 25.433
			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 http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		*1..<maxTGPS>*		
>TGPSI Identifier	M		INTEGER(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER(0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER(1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		INTEGER(1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER(1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL mode	M		ENUMERATED(UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED(puncturing, SF/2, higher layer scheduling, …)	Method for generating downlink compressed mode gap .
>Uplink Compressed Mode Method	C-UL		ENUMERATED(SF/2, higher layer scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED(A, B,...)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER(0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)

				Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL".

Range bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences.

9.3.4 Information Element Definitions

```
-- **************************************************************
--
-- Information Element Definitions
--
-- **************************************************************

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Unchanged parts not shown

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1      DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2      DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unchanged parts not shown

END
```

3GPP TSG-RAN WG3 Meeting #46 **Tdoc ⌘R3-050249**
Scottsdale, USA, 14th- 18th February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.423** **CR** **1025** ⌘**rev** **1** ⌘ Current version: **6.4.1** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2		
Source:	⌘	RAN3		
Work item code:	⌘	TEI	***Date:*** ⌘	14/02/2005
Category:	⌘	**A**	***Release:*** ⌘	Rel-6

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

Use one of the following releases:
Ph2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*
Rel-7 *(Release 7)*

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.47A, 9.3.4				
Other specs affected:	⌘	**Y**	**N**			
		X		Other core specifications	⌘	25.101, 25.133, 25.215, 25.133, 25.433
			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

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Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

9.2.2.47A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see [16].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		*1..<maxTGPS>*		
>TGPSI Identifier	M		INTEGER(1..<MaxTGPS>)	Transmission Gap Pattern Sequence Identifier Establish a reference to the compressed mode pattern sequence. Up to <MaxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER(0..14)	Transmission Gap Starting Slot Number The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER(1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER(1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission gap distance indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to 0 (0 =undefined).
>TGPL1	M		INTEGER(1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER(1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL mode	M		ENUMERATED(UL only, DL only, UL/DL)	Defines whether only DL, only UL, or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED(puncturing, SF/2, higher layer scheduling, …)	Method for generating downlink compressed mode gap .
>Uplink Compressed Mode Method	C-UL		ENUMERATED(SF/2, higher layer scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED(A, B,...)	Defines if frame type 'A' or 'B' shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER(0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase)

				Step 0.1 dB, Range 0-3dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the first transmission gap in the transmission gap pattern,. Step 0.1 dB, Range 0-3dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase) When omitted, DeltaSIR2 = DeltaSIR1. Step 0.1 dB, Range 0-3dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the DRNS one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Step 0.1 dB, Range 0-3dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL".

Range bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences.

9.3.4 Information Element Definitions

```
-- **************************************************************
--
-- Information Element Definitions
--
-- **************************************************************

RNSAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) rnsap (1) version1 (1) rnsap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

Unchanged parts not shown

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the value of the UL/DL mode IE is "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1      DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2      DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

Unchanged parts not shown
END
```

3GPP TSG-RAN WG3 Meeting #46
Scottsdale, USA, 14th- 18th February 2005

Tdoc ⌘R3-050250

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.433** **CR** **1071** ⌘**rev** **1** ⌘ Current version: **3.14.2** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN3
Work item code:	⌘	TEI
Date:	⌘	14/02/2005
Category:	⌘	**C**
Release:	⌘	R99

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.53A, 9.3.4			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.101, 25.133, 25.215, 25.331, 25.423
			Test specifications		
			O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. 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 ftp://ftp.3gpp.org/specs/ 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.

9.2.2.53A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		*1..<maxTGPS>*		
>TGPS Identifier	M		INTEGER (1..maxTGPS)	Transmission Gap Pattern Sequence Identifier: Establish a reference to the compressed mode pattern sequence. Up to <maxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number: The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER (1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission Gap Distance: indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to "0" ("0" =undefined).
>TGPL1	M		INTEGER (1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER (1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL Mode	M		ENUMERATED (UL only, DL only, UL/DL)	Defines whether only DL, only UL or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (Puncturing, SF/2, Higher Layer Scheduling, …)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, Higher Layer Scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,…)	Defines if frame structure type "A" or "B" shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). Unit: dB

				Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). When omitted, DeltaSIR2 = DeltaSIR1. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Unit: dB Range: 0..3 dB Step: 0.1 dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL".

Range Bound	Explanation
MaxTGPS	Maximum number of transmission gap pattern sequences

9.2.2.53B Transmission Gap Pattern Sequence Code Information

This IE indicates whether the alternative scrambling code shall used for the Downlink compressed mode method or not in the Transmission Gap Pattern Sequence. For details see [9].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Code Information			ENUMERATED (Code Change, No Code Change)	Indicates whether the alternative scrambling code is used for compressed mode method "SF/2".

9.3.4 Information Elements Definitions

```
--**************************************************************************
--
-- Information Element Definitions
--
--**************************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

Unchanged parts not shown

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1          DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2          DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

Unchanged parts not shown

END
```

3GPP TSG-RAN WG3 Meeting #46 **Tdoc ⌘R3-050251**
Scottsdale, USA, 14th- 18th February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.433** **CR** **1072** ⌘**rev** **1** ⌘ Current version: **4.13.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN3
Work item code:	⌘	TEI
Date:	⌘	14/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-4

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

Use one of the following releases:
Ph2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
Rel-4 (Release 4)
Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.53A, 9.3.4			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.101, 25.133, 25.215, 25.331, 25.423
			Test specifications		
			O&M Specifications		
Other comments:	⌘				

How to create CRs using this form:

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9.2.2.53A Transmission Gap Pattern Sequence Information

Defines the parameters for the compressed mode gap pattern sequence. For details see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		*1..<maxTGPS>*		
>TGPS Identifier	M		INTEGER (1..maxTGPS)	Transmission Gap Pattern Sequence Identifier: Establish a reference to the compressed mode pattern sequence. Up to <maxTGPS> simultaneous compressed mode pattern sequences can be used.
>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number: The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER (1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission Gap Distance: indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to "0" ("0" =undefined).
>TGPL1	M		INTEGER (1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER (1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL Mode	M		ENUMERATED (UL only, DL only, UL/DL)	Defines whether only DL, only UL or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (Puncturing, SF/2, Higher Layer Scheduling, …)	Method for generating downlink compressed mode gap None means that compressed mode pattern is stopped.
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, Higher Layer Scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,…)	Defines if frame structure type "A" or "B" shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase).

				Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). When omitted, DeltaSIR2 = DeltaSIR1. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Unit: dB Range: 0..3 dB Step: 0.1 dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL".

Range Bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences

9.3.4 Information Elements Definitions

```
--**************************************************************************
--
-- Information Element Definitions
--
--**************************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

Unchanged parts not shown


Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1          DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2          DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

Unchanged parts not shown

END
```

3GPP TSG-RAN WG3 Meeting #46
Scottsdale, USA, 14th- 18th February 2005

Tdoc ⌘R3-050252

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.433** **CR** **1073** ⌘**rev** **1** ⌘ Current version: **5.11.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Removal of TGPL2
Source:	⌘	RAN3
Work item code:	⌘	TEI
Date:	⌘	14/02/2005
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
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A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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Use one of the following releases:
Ph2 (GSM Phase 2)
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R98 (Release 1998)
R99 (Release 1999)
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Rel-5 (Release 5)
Rel-6 (Release 6)
Rel-7 (Release 7)

Reason for change: ⌘ In RAN1 specification TS 25.215, section 6.1.1.2, the compressed mode parameters are defined. Parameter TGPL2 makes it possible for the network to set two different compressed mode patterns that alternate. The only difference between pattern 1 and 2 is that they have different length (TGPL1 and TGPL2 respectively)

In 25.133, paragraph 8.1.2.1, Appendix C, there is defined a general limitation for the measurement requirements in chapter 8 to apply:

- *provide the patterns within a transmission gap pattern sequence that are identical (i.e., TGPL1 = TGPL2),*

Thus, there are no measurement performance requirements when two patterns are used (i.e TGPL2 is not equal to TGPL1 in the RRC signalling to the UE) within one compressed mode pattern sequence. Hence, UTRAN cannot use TGPL2 if it's different than TGPL1 since there are no measurement performance requirements specified for the case when TGPL1≠TGPL2. No gain has been showed using the second pattern defined by TGPL2.

The conclusion of RAN4 is that the parameter TGPL2 can be removed from the specifications (Ref R3-050030).

Summary of change: ⌘ TGPL2 is changed to "Not-to-be-used-1" in the Tabular description and in ASN.1.

Isolated Impact Analysis
Functionality corrected: Compressed mode

Isolated impact statement: Correction to a function where specifications are inconsistent. Since functionality is removed, UE implementations are not affected. Would affect

		UTRAN implementations supporting the removed functionality.
Consequences if not approved:	⌘	Inconsistency will remain in specfications.

Clauses affected:	⌘	9.2.2.53A, 9.3.4			
Other specs affected:	⌘	**Y** / **N**	Other core specifications	⌘	25.101, 25.133, 25.215, 25.331, 25.423
		X /			
		´ / **X**	Test specifications		
		/ **X**	O&M Specifications		
Other comments:	⌘				

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Defines the parameters for the compressed mode gap pattern sequence. For details see ref. [18].

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Transmission Gap Pattern Sequence Information		*1..<maxTGPS>*		
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>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number: The slot number of the first transmission gap slot within the TGCFN.
>TGL1	M		INTEGER (1..14)	The length of the first Transmission Gap within the transmission gap pattern expressed in number of slots.
>TGL2	O		INTEGER (1..14)	The length of the second Transmission Gap within the transmission gap pattern. If omitted, then TGL2=TGL1.
>TGD	M		INTEGER (0, 15.. 269)	Transmission Gap Distance: indicates the number of slots between the starting slots of two consecutive transmission gaps within a transmission gap pattern. If there is only one transmission gap in the transmission gap pattern, this parameter shall be set to "0" ("0" =undefined).
>TGPL1	M		INTEGER (1..144,…)	The duration of transmission gap pattern 1 in frames.
>Not-to-be-used-1~~TGPL2~~	O		INTEGER (1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL Mode	M		ENUMERATED (UL only, DL only, UL/DL)	Defines whether only DL, only UL or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (Puncturing, SF/2, Higher Layer Scheduling, …)	Method for generating downlink compressed mode gap
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, Higher Layer Scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,…)	Defines if frame structure type "A" or "B" shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase).

				Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). When omitted, DeltaSIR2 = DeltaSIR1. Unit: dB Range: 0..3 dB Step: 0.1 dB
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Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
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Range Bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences

9.3.4 Information Elements Definitions

```
--**************************************************************************
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-- Information Element Definitions
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--**************************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
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DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

Unchanged parts not shown

Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1          DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2          DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

Unchanged parts not shown

END
```

3GPP TSG-RAN WG3 Meeting #46 **Tdoc ⌘R3-050253**
Scottsdale, USA, 14th- 18th February 2005

CR-Form-v7.1

CHANGE REQUEST

⌘ **25.433** **CR** **1074** ⌘**rev** **1** ⌘ Current version: **6.4.0** ⌘

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Date:	⌘	14/02/2005
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			Test specifications		
			O&M Specifications		
Other comments:	⌘				

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Transmission Gap Pattern Sequence Information		*1..<maxTGPS>*		
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>TGSN	M		INTEGER (0..14)	Transmission Gap Starting Slot Number: The slot number of the first transmission gap slot within the TGCFN.
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>Not-to-be-used-1~~TGPL2~~	O		INTEGER (1..144,…)	~~The duration of transmission gap pattern 2 in frames. If omitted, then TGPL2=TGPL1.~~ This IE shall never be included in the IE group. If received it shall be ignored.
>UL/DL Mode	M		ENUMERATED (UL only, DL only, UL/DL)	Defines whether only DL, only UL or combined UL/DL compressed mode is used.
>Downlink Compressed Mode Method	C-DL		ENUMERATED (Puncturing, SF/2, Higher Layer Scheduling, …)	Method for generating downlink compressed mode gap
>Uplink Compressed Mode Method	C-UL		ENUMERATED (SF/2, Higher Layer Scheduling, …)	Method for generating uplink compressed mode gap.
>Downlink Frame Type	M		ENUMERATED (A, B,…)	Defines if frame structure type "A" or "B" shall be used in downlink compressed mode.
>DeltaSIR1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the first transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase).

				Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter1	M		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the first transmission gap in the transmission gap pattern. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIR2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B during the frame containing the start of the second transmission gap in the transmission gap pattern (without including the effect of the bit-rate increase). When omitted, DeltaSIR2 = DeltaSIR1. Unit: dB Range: 0..3 dB Step: 0.1 dB
>DeltaSIRafter2	O		INTEGER (0..30)	Delta in SIR target value to be set in the Node B one frame after the frame containing the start of the second transmission gap in the transmission gap pattern. When omitted, DeltaSIRafter2 = DeltaSIRafter1. Unit: dB Range: 0..3 dB Step: 0.1 dB

Condition	Explanation
UL	The IE shall be present if the *UL/DL mode* IE is set to "UL only" or "UL/DL".
DL	The IE shall be present if the *UL/DL mode* IE is set to "DL only" or "UL/DL".

Range Bound	Explanation
maxTGPS	Maximum number of transmission gap pattern sequences

9.3.4 Information Elements Definitions

```
--**************************************************************************
--
-- Information Element Definitions
--
--**************************************************************************

NBAP-IEs {
itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)
umts-Access (20) modules (3) nbap (2) version1 (1) nbap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN

Unchanged parts not shown


Transmission-Gap-Pattern-Sequence-Information ::= SEQUENCE (SIZE (1..maxTGPS)) OF
    SEQUENCE {
        tGPSID          TGPSID,
        tGSN            TGSN,
        tGL1            GapLength,
        tGL2            GapLength   OPTIONAL,
        tGD             TGD,
        tGPL1           GapDuration,
        not-to-be-used-1tGPL2           GapDuration OPTIONAL,
            -- This IE shall never be included in the SEQUENCE. If received it shall be ignored
        uL-DL-mode      UL-DL-mode,
        downlink-Compressed-Mode-Method     Downlink-Compressed-Mode-Method     OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "DL only" or "UL/DL"
        uplink-Compressed-Mode-Method       Uplink-Compressed-Mode-Method       OPTIONAL,
            -- This IE shall be present if the UL/DL mode IE is set to "UL only" or "UL/DL"
        dL-FrameType        DL-FrameType,
        delta-SIR1          DeltaSIR,
        delta-SIR-after1    DeltaSIR,
        delta-SIR2          DeltaSIR    OPTIONAL,
        delta-SIR-after2    DeltaSIR    OPTIONAL,
        iE-Extensions           ProtocolExtensionContainer { {Transmission-Gap-Pattern-Sequence-Information-ExtIEs} } OPTIONAL,
        ...
    }

Transmission-Gap-Pattern-Sequence-Information-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

Unchanged parts not shown

END
```