TSG RAN Meeting #17 **RP-020614**
Biarritz, France, 3 - 6 September, 2002

Title **CRs (Rel-5 only) for Rx Timing Deviation (TDD) corrections**
Source **TSG RAN WG3**
Agenda Item **7.3.5**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-021845	25.423	4.5.0	4.6.0	REL-4	676	-	F	Rx Timing Deviation (TDD) corrections	TEI4
R3-021866	25.433	4.5.0	4.6.0	REL-4	707	-	F	Rx Timing Deviation (TDD) corrections	TEI4
R3-021867	25.433	5.1.0	5.1.0	REL-5	708	-	A	Rx Timing Deviation (TDD) corrections	TEI4
R3-022052	25.423	5.2.0	5.3.0	REL-5	677	1	A	Rx Timing Deviation (TDD) corrections	TEI4

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-021845

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **676** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*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 ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Rx Timing Deviation (TDD) corrections
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	23/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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

Reason for change:	⌘	The Rx Timing Deviation is defined in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" for Events C and D, but the Rx Timing Deviation is not defined for Events C and D (see 9.2.1.38 Measurement Increase/Decrease Threshold). This was decided at the R3#13 meeting (Hawaii, May 2000) so the table must be corrected. Also the Rx Timing Deviation LCR for 1.28Mcps TDD is missing in this table and in the description of *Measurement Threshold* IE.
Summary of change:	⌘	Rx Timing Deviation is removed in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" (section 8.3.11.4) from events C and D. Rx Timing Deviation LCR is added in the same table and in 9.2.1.39 Measurement Threshold and ASN.1. Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the Rx Timing Deviation for Measurements is not correct specified. The impact can be considered isolated because the change affects one function namely the Measurement for Rx Timing Deviation.
Consequences if not approved:	⌘	If this CR is not approved, the allowed combination for Rx Timing Deviation are incorrect and Rx Timing Deviation LCR is missing.

Clauses affected:	⌘	8.3.11.4, 9.2.1.39, 9.3.4

		Y	N			
Other specs	⌘	**X**		Other core specifications	⌘	25.423 v5.2.0 CR 677r1 25.433 v4.5.0 CR 707 25.433 v5.1.0 CR 708
affected:			**X**	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at 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.

8.3.11 Dedicated Measurement Initiation

/* partly omitted */

8.3.11.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type combinations

Dedicated Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
SIR	X	X	X	X	X	X	X	X	
SIR Error	X	X	X	X	X	X	X	X	
Transmitted Code Power	X	X	X	X	X	X	X	X	
RSCP	X	X	X	X	X	X	X	X	
Rx Timing Deviation	X	X	X	X	~~X~~	~~X~~	X	X	
Round Trip Time	X	X	X	X	X	X	X	X	
Rx Timing Deviation LCR	X	X	X	X			X	X	

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [11] or [14] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

/* partly omitted */

9.2.1.39 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Threshold*					-	
>SIR					-	
>>SIR	M		INTEGER(0..63)	According to mapping in ref. [23] and [24].	-	
>SIR Error				FDD Only	-	
>>SIR Error	M		INTEGER(0..125)	According to mapping in [23]	-	
>Transmitted Carrier Power					-	
>>Transmitted Code Power	M		INTEGER(0..127)	According to mapping in ref. [23] and [24].	-	
>RSCP				TDD Only	-	
>>RSCP	M		INTEGER(0..127)	According to mapping in ref. [24]	-	
>Rx Timing Deviation				Applicable to 3.84Mcps TDD Only	-	
>>Rx Timing Deviation	M		INTEGER(0..8191)	According to mapping in [24]	-	
>Round Trip Time				FDD Only	-	
>>Round Trip Time	M		INTEGER(0..32767)	According to mapping in [23]	-	
> $T_{UTRAN-GPS}$ Measurement Threshold Information					-	
>>$T_{UTRAN-GPS}$ Measurement Threshold Information	M		9.2.1.59C		YES	reject
> SFN-SFN Measurement Threshold Information					-	
>>SFN-SFN Measurement Threshold Information	M		9.2.1.52B		YES	reject
>Load					-	
>>Load	M		INTEGER(0..100)	0 is the minimum indicated load, and 100 is the maximum indicated load.	YES	reject
>Transmitted Carrier Power					-	
>>Transmitted Carrier Power	M		INTEGER(0..100)	According to mapping in [23] and [24].	YES	reject
>Received Total Wide Band Power					-	
>>Received Total Wide Band Power	M		INTEGER(0..621)	According to mapping in [23] and [24].	YES	reject
>UL Timeslot ISCP				TDD Only	-	
>>UL Timeslot ISCP	M		INTEGER(0..127)	According to mapping in [24]	YES	Reject
>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only		
>>Rx Timing Deviation LCR	M		INTEGER (0..255)	According to mapping in [24]	YES	reject

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- M

MaxNrOfUL-DPCHs             ::= INTEGER (1..6)

MAC-c-sh-SDU-Length         ::= INTEGER (1..5000)

MAC-c-sh-SDU-LengthList ::= SEQUENCE(SIZE(1..maxNrOfMACcshSDU-Length)) OF MAC-c-sh-SDU-Length

MaximumAllowedULTxPower     ::= INTEGER (-50..33)

MaxNrDLPhysicalchannels     ::= INTEGER (1..224)

MaxNrTimeslots              ::= INTEGER (1..14)

MaxNrULPhysicalchannels     ::= INTEGER (1..2)

MaxTFCIvalue                ::= INTEGER (1..1023)

MeasurementFilterCoefficient ::=  ENUMERATED{k0, k1, k2, k3, k4, k5, k6, k7, k8, k9, k11, k13, k15, k17, k19,...}
-- Measurement Filter Coefficient to be used for measurement

MeasurementID               ::= INTEGER (0..1048575)

MinimumSpreadingFactor      ::= INTEGER (1..16)

Multi-code-info             ::= INTEGER (1..16)

MultipleURAsIndicator ::= ENUMERATED {
    multiple-URAs-exist,
    single-URA-exists
}

MaxAdjustmentStep           ::= INTEGER(1..10)
-- Unit Slot

MeasurementChangeTime       ::= INTEGER (1..6000,...)
-- The MeasurementChangeTime  gives the MeasurementChangeTime
-- in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
-- Unit is ms, Step is 10 ms

MeasurementHysteresisTime       ::= INTEGER (1..6000,...)
-- The MeasurementHysteresisTime  gives the
-- MeasurementHysteresisTime in number of 10 ms periods.
-- E.g. Value 6000 means 60000ms(1min)
```

```
-- Unit is ms, Step is 10ms

MeasurementIncreaseDecreaseThreshold        ::= CHOICE {
    sir                             SIR-Value-IncrDecrThres,
    sir-error                       SIR-Error-Value-IncrDecrThres,
    transmitted-code-power          Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                            RSCP-Value-IncrDecrThres,
    round-trip-time                 Round-Trip-Time-IncrDecrThres,
    ...,
    extension-MeasurementIncreaseDecreaseThreshold      Extension-MeasurementIncreaseDecreaseThreshold
}

Extension-MeasurementIncreaseDecreaseThreshold  ::= ProtocolIE-Single-Container {{ Extension-MeasurementIncreaseDecreaseThresholdIE }}

Extension-MeasurementIncreaseDecreaseThresholdIE RNSAP-PROTOCOL-IES ::= {
    { ID id-Load-Value-IncrDecrThres    CRITICALITY reject  TYPE Load-Value-IncrDecrThres   PRESENCE mandatory }|
    { ID id-Transmitted-Carrier-Power-Value-IncrDecrThres   CRITICALITY reject  TYPE Transmitted-Carrier-Power-Value-IncrDecrThres   PRESENCE
mandatory }|
    { ID id-Received-Total-Wideband-Power-Value-IncrDecrThres   CRITICALITY reject  TYPE Received-Total-Wideband-Power-Value-IncrDecrThres
    PRESENCE mandatory }|
    { ID id-UL-Timeslot-ISCP-Value-IncrDecrThres    CRITICALITY reject  TYPE UL-Timeslot-ISCP-Value-IncrDecrThres  PRESENCE mandatory }
}

MeasurementThreshold            ::= CHOICE {
    sir                             SIR-Value,
    sir-error                       SIR-Error-Value,
    transmitted-code-power          Transmitted-Code-Power-Value,
    rscp                            RSCP-Value,
    rx-timing-deviation             Rx-Timing-Deviation-Value,
    round-trip-time                 Round-Trip-Time-Value,
    ...,
    extension-MeasurementThreshold  Extension-MeasurementThreshold
}

Extension-MeasurementThreshold  ::= ProtocolIE-Single-Container {{ Extension-MeasurementThresholdIE }}

Extension-MeasurementThresholdIE RNSAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject  TYPE TUTRANGPSMeasurementThresholdInformation   PRESENCE mandatory }|
    { ID id-SFNSFNMeasurementThresholdInformation   CRITICALITY reject  TYPE SFNSFNMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-Load-Value  CRITICALITY reject  TYPE Load-Value     PRESENCE mandatory }|
    { ID id-Transmitted-Carrier-Power-Value     CRITICALITY reject  TYPE Transmitted-Carrier-Power-Value     PRESENCE mandatory }|
    { ID id-Received-Total-Wideband-Power-Value     CRITICALITY reject  TYPE Received-Total-Wideband-Power-Value    PRESENCE mandatory }|
    { ID id-UL-Timeslot-ISCP-Value      CRITICALITY reject  TYPE UL-Timeslot-ISCP-Value     PRESENCE mandatory }|
    { ID id-Rx-Timing-Deviation-Value-LCR   CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-LCR   PRESENCE mandatory}
}

MidambleConfigurationBurstType1And3 ::=     ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::=     ENUMERATED {v3, v6}
```

/* partly omitted */

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-022052

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **677** ⌘ **rev** **1** ⌘ Current version: **5.2.0** ⌘

*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:	⌘	Rx Timing Deviation (TDD) corrections		
Source:	⌘	RAN WG3		
Work item code:	⌘	TEI4	***Date:*** ⌘	23/08/2002
Category:	⌘	**A**	***Release:*** ⌘	Rel-5

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

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

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

Reason for change:	⌘	The Rx Timing Deviation is defined in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" for Events C and D, but the Rx Timing Deviation is not defined for Events C and D (see 9.2.1.38 Measurement Increase/Decrease Threshold). This was decided at the R3#13 meeting (Hawaii, May 2000) so the table must be corrected. Also the Rx Timing Deviation LCR for 1.28Mcps TDD is missing in this table and in the description of *Measurement Threshold* IE.
Summary of change:	⌘	Rx Timing Deviation is removed in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" (section 8.3.11.4) from events C and D. Rx Timing Deviation LCR is added in the same table and in 9.2.1.39 Measurement Threshold and ASN.1. Rev.1: The CR is now based on TS25.423 v5.2.0. Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the Rx Timing Deviation for Measurements is not correct specified. The impact can be considered isolated because the change affects one function namely the Measurement for Rx Timing Deviation.
Consequences if	⌘	If this CR is not approved, the allowed combinations for Rx Timing Deviation are

not approved:		incorrect and Rx Timing Deviation LCR is missing.

Clauses affected:	⌘	8.3.11.4, 9.2.1.39, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ 25.423 v4.5.0 CR 676 25.433 v4.5.0 CR 707 25.433 v5.1.0 CR 708
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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

8.3.11 Dedicated Measurement Initiation

/* partly omitted */

8.3.11.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type combinations

Dedicated Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
SIR	X	X	X	X	X	X	X	X	
SIR Error	X	X	X	X	X	X	X	X	
Transmitted Code Power	X	X	X	X	X	X	X	X	
RSCP	X	X	X	X	X	X	X	X	
Rx Timing Deviation	X	X	X	X	~~X~~	~~X~~	X	X	
Round Trip Time	X	X	X	X	X	X	X	X	
Rx Timing Deviation LCR	X	X	X	X			X	X	

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [11] or [14] to be measured on the Dedicated Measurement Object Type received in the DEDICATED MEASUREMENT INITIATION REQUEST message the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

If the *CFN* IE is included in the DEDICATED MEASUREMENT INITIATION REQUEST message and the *Report Characteristics* IE is other than "Periodic" or "On Demand", the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

/* partly omitted */

9.2.1.39 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Threshold*					-	
>SIR					-	
>>SIR	M		INTEGER(0..63)	According to mapping in ref. [23] and [24].	-	
>SIR Error				FDD Only	-	
>>SIR Error	M		INTEGER(0..125)	According to mapping in [23]	-	
>Transmitted Carrier Power					-	
>>Transmitted Code Power	M		INTEGER(0..127)	According to mapping in ref. [23] and [24].	-	
>RSCP				TDD Only	-	
>>RSCP	M		INTEGER(0..127)	According to mapping in ref. [24]	-	
>Rx Timing Deviation				Applicable to 3.84Mcps TDD Only	-	
>>Rx Timing Deviation	M		INTEGER(0..8191)	According to mapping in [24]	-	
>Round Trip Time				FDD Only	-	
>>Round Trip Time	M		INTEGER(0..32767)	According to mapping in [23]	-	
> $T_{UTRAN-GPS}$ Measurement Threshold Information					-	
>>$T_{UTRAN-GPS}$ Measurement Threshold Information	M		9.2.1.59C		YES	reject
> SFN-SFN Measurement Threshold Information					-	
>>SFN-SFN Measurement Threshold Information	M		9.2.1.52B		YES	reject
>Load					-	
>>Load	M		INTEGER(0..100)	0 is the minimum indicated load, and 100 is the maximum indicated load.	YES	reject
>Transmitted Carrier Power					-	
>>Transmitted Carrier Power	M		INTEGER(0..100)	According to mapping in [23] and [24].	YES	reject
>Received Total Wide Band Power					-	
>>Received Total Wide Band Power	M		INTEGER(0..621)	According to mapping in [23] and [24].	YES	reject
>UL Timeslot ISCP				TDD Only	-	
>>UL Timeslot ISCP	M		INTEGER(0..127)	According to mapping in [24]	YES	reject
>RT Load					-	
>>RT Load	M		INTEGER(0..100)		YES	reject
>NRT Load Information					-	
>>NRT Load Information	M		INTEGER(0..3)		YES	Reject
>Rx Timing				Applicable to		

Deviation LCR				1.28Mcps TDD Only		
>>Rx Timing Deviation LCR	M		INTEGER(0..255)	According to mapping in [24]	YES	Reject

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- M
```

/* partly omitted */

```
MeasurementThreshold            ::= CHOICE {
    sir                             SIR-Value,
    sir-error                       SIR-Error-Value,
    transmitted-code-power          Transmitted-Code-Power-Value,
    rscp                            RSCP-Value,
    rx-timing-deviation             Rx-Timing-Deviation-Value,
    round-trip-time                 Round-Trip-Time-Value,
    ...,
    extension-MeasurementThreshold  Extension-MeasurementThreshold
}

Extension-MeasurementThreshold  ::= ProtocolIE-Single-Container {{ Extension-MeasurementThresholdIE }}


Extension-MeasurementThresholdIE RNSAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject  TYPE TUTRANGPSMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-SFNSFNMeasurementThresholdInformation   CRITICALITY reject  TYPE SFNSFNMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-Load-Value  CRITICALITY reject  TYPE Load-Value     PRESENCE mandatory }|
    { ID id-Transmitted-Carrier-Power-Value     CRITICALITY reject  TYPE Transmitted-Carrier-Power-Value     PRESENCE mandatory }|
    { ID id-Received-Total-Wideband-Power-Value     CRITICALITY reject  TYPE Received-Total-Wideband-Power-Value    PRESENCE mandatory }|
    { ID id-UL-Timeslot-ISCP-Value      CRITICALITY reject  TYPE UL-Timeslot-ISCP-Value     PRESENCE mandatory }|
    { ID id-RT-Load-Value   CRITICALITY reject  TYPE RT-Load-Value      PRESENCE mandatory }|
    { ID id-NRT-Load-information-Value  CRITICALITY reject  TYPE NRT-Load-Information-Value     PRESENCE mandatory }|
    { ID id-Rx-Timing-Deviation-Value-LCR   CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-LCR   PRESENCE mandatory},
    …}

MidambleConfigurationBurstType1And3 ::=     ENUMERATED {v4, v8, v16}

MidambleConfigurationBurstType2 ::=     ENUMERATED {v3, v6}
```

/* partly omitted */

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-021866

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **707** ⌘ **rev** **-** ⌘ Current version: **4.5.0** ⌘

*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 ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Rx Timing Deviation (TDD) corrections
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	23/08/2002
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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

Reason for change:	⌘	The Rx Timing Deviation is defined in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" for Events C and D, but the Rx Timing Deviation is not defined for Events C and D (see 9.2.1.43 Measurement Increase/Decrease Threshold). This was decided at the R3#13 meeting (Hawaii, May 2000) so the table must be corrected. Also the Rx Timing Deviation LCR for 1.28Mcps TDD is missing in this table and in section 9.2.1.44 Measurement Threshold.
Summary of change:	⌘	Rx Timing Deviation is removed in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" (section 8.3.8.4) from events C and D. Rx Timing Deviation LCR is added in the same table and in 9.2.1.44 Measurement Threshold and ASN.1. Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the Rx Timing Deviation for Measurements is not correct specified. The impact can be considered isolated because the change affects one function namely the Measurement for Rx Timing Deviation.
Consequences if not approved:	⌘	If this CR is not approved, the allowed combination for Rx Timing Deviation are incorrect and Rx Timing Deviation LCR is missing.

Clauses affected:	⌘	8.3.8.4, 9.2.1.44, 9.3.4

		Y	N			
Other specs	⌘	**X**		Other core specifications	⌘	25.423 v4.5.0 CR 676 25.423 v5.2.0 CR 677r1 25.433 v5.1.0 CR 708
affected:			**X**	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

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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.

8.3.8 Dedicated Measurement Initiation

/* partly omitted */

8.3.8.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type combinations

Dedicated Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
SIR	X	X	X	X	X	X	X	X	
SIR Error	X	X	X	X	X	X	X	X	
Transmitted Code Power	X	X	X	X	X	X	X	X	
RSCP	X	X	X	X	X	X	X	X	
Rx Timing Deviation	X	X	X	X	~~X~~	~~X~~	X	X	
Round Trip Time	X	X	X	X	X	X	X	X	
Rx Timing Deviation LCR	X	X	X	X			X	X	

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

/* partly omitted */

9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Threshold*					–	
>Received Total Wide Band Power					–	
>>Received Total Wide Band Power	M		INTEGER (0..621)	According to mapping in [22] and [23]	–	
>Transmitted Carrier Power					–	
>>Transmitted Carrier Power	M		INTEGER (0..100)	According to mapping in [22] and [23]	–	
>Acknowledged PRACH Preambles				FDD only	–	
>>Acknowledged PRACH Preambles	M		INTEGER (0..240,…)	According to mapping in [22]	–	
>UL Timeslot ISCP				TDD only	–	
>>UL Timeslot ISCP	M		INTEGER (0..127)	According to mapping in [23]	–	
>SIR					–	
>>SIR	M		INTEGER (0..63)	According to mapping in [22] and [23]	–	
>SIR Error				FDD only	–	
>>SIR Error	M		INTEGER (0..125)	According to mapping in [22]	–	
>Transmitted Code Power					–	
>>Transmitted Code Power	M		INTEGER (0..127)	According to mapping in [22] and [23]	–	
>RSCP				TDD only	–	
>>RSCP	M		INTEGER (0..127)	According to mapping in [23]	–	
>Rx Timing Deviation				Applicable to 3.84Mcps TDD only	–	
>>Rx Timing Deviation	M		INTEGER (0..8191)	According to mapping in [23]	–	
>Round Trip Time				FDD only	–	
>>Round Trip Time	M		INTEGER (0..32767)	According to mapping in [22]	–	
>Acknowledged PCPCH Access Preambles				FDD only	–	
>>Acknowledged PCPCH Access Preambles	M		INTEGER (0..15,…)	According to mapping in [22]	–	
>Detected PCPCH Access Preambles				FDD only	–	
>>Detected PCPCH Access Preambles	M		INTEGER (0..240,…)	According to mapping in [22]	–	
>Additional Measurement Thresholds					–	
>>UTRAN GPS Timing of Cell Frames for UE Positioning					–	
>>>$T_{UTRAN-GPS}$ Measurement Threshold Information	M		9.2.1.64B		YES	reject
>>SFN-SFN Observed Time Difference					–	
>>>SFN-SFN Measurement Threshold	M		9.2.1.53C		YES	Reject

Information						
>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only	-	
>>Rx Timing Deviation LCR	M		INTEGER (0..255)	According to mapping in [23]	YES	reject

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- ========================================
--  R
-- ========================================

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING {
                                        subCh11(0),
                                        subCh10(1),
                                        subCh9(2),
                                        subCh8(3),
                                        subCh7(4),
                                        subCh6(5),
                                        subCh5(6),
                                        subCh4(7),
                                        subCh3(8),
                                        subCh2(9),
                                        subCh1(10),
                                        subCh0(11)
                                        } (SIZE (12))

Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s

ReferenceClockAvailability ::= ENUMERATED {
    available,
    notAvailable
}

ReferenceSFNoffset ::= INTEGER (0..255)

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
```

```
    v64,
    ...
}

RepetitionNumber0 ::= INTEGER (0..255)

RepetitionNumber1 ::= INTEGER (1..256)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                ReportCharacteristicsType-ReportPeriodicity,
    event-a             ReportCharacteristicsType-EventA,
    event-b             ReportCharacteristicsType-EventB,
    event-c             ReportCharacteristicsType-EventC,
    event-d             ReportCharacteristicsType-EventD,
    event-e             ReportCharacteristicsType-EventE,
    event-f             ReportCharacteristicsType-EventF,
    ...,
    extension-ReportCharacteristics     Extension-ReportCharacteristics
}

Extension-ReportCharacteristics ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsIE }}

Extension-ReportCharacteristicsIE NBAP-PROTOCOL-IES ::= {
    { ID id-ReportCharacteristicsType-OnModification    CRITICALITY reject  TYPE ReportCharacteristicsType-OnModification   PRESENCE mandatory }
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime                       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-ExtIEs} }       OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime                       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs} }       OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
```

```
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
    measurementDecreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold              OPTIONAL,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime   OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold              OPTIONAL,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime   OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-OnModification ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-OnModification-ExtIEs} }    OPTIONAL,
        ...
    }

ReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles         Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value-IncrDecrThres,
    sir                         SIR-Value-IncrDecrThres,
    sir-error                   SIR-Error-Value-IncrDecrThres,
    transmitted-code-power          Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                            RSCP-Value-IncrDecrThres,
    round-trip-time                 Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles         Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value,
    sir                         SIR-Value,
    sir-error                   SIR-Error-Value,
    transmitted-code-power          Transmitted-Code-Power-Value,
    rscp                            RSCP-Value,
    rx-timing-deviation             Rx-Timing-Deviation-Value,
    round-trip-time                 Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...,
    extension-ReportCharacteristicsType-MeasurementThreshold        Extension-ReportCharacteristicsType-MeasurementThreshold
}

Extension-ReportCharacteristicsType-MeasurementThreshold    ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementThresholdIE }}

Extension-ReportCharacteristicsType-MeasurementThresholdIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject  TYPE TUTRANGPSMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-SFNSFNMeasurementThresholdInformation   CRITICALITY reject  TYPE SFNSFNMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-Rx-Timing-Deviation-Value-LCR   CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-LCR   PRESENCE mandatory}
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec                MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms
```

```
ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec                MeasurementHysteresisTime-Scaledmsec,
    ...
}
```

/* partly omitted */

3GPP TSG-RAN WG3 Meeting #31
Stockholm, Sweden, 19th – 23rd August 2002

Tdoc ⌘ R3-021867

CR-Form-v7

CHANGE REQUEST

⌘ **25.433** **CR** **708** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*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 ☐ Radio Access Network ☒ Core Network ☐

Title:	⌘	Rx Timing Deviation (TDD) corrections
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	23/08/2002
Category:	⌘	**A**
Release:	⌘	Rel-5

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

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

Reason for change:	⌘	The Rx Timing Deviation is defined in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" for Events C and D, but the Rx Timing Deviation is not defined for Events C and D (see 9.2.1.43 Measurement Increase/Decrease Threshold). This was decided at the R3#13 meeting (Hawaii, May 2000) so the table must be corrected. Also the Rx Timing Deviation LCR for 1.28Mcps TDD is missing in this table and in section 9.2.1.44 Measurement Threshold.
Summary of change:	⌘	Rx Timing Deviation is removed in table 4: "Allowed Dedicated Measurement Type and Report Characteristics Type combinations" (section 8.3.8.4) from events C and D. Rx Timing Deviation LCR is added in the same table and in 9.2.1.44 Measurement Threshold and ASN.1. Impact Analysis: Impact Assessment towards the previous version of the specification (same release): This CR has isolated impact with the previous version of the specification (same release) because the Rx Timing Deviation for Measurements is not correct specified. The impact can be considered isolated because the change affects one function namely the Measurement for Rx Timing Deviation.
Consequences if not approved:	⌘	If this CR is not approved, the allowed combination for Rx Timing Deviation are incorrect and Rx Timing Deviation LCR is missing.

Clauses affected:	⌘	8.3.8.4, 9.2.1.44, 9.3.4

		Y	N			
Other specs	⌘	**X**		Other core specifications	⌘	25.423 v4.5.0 CR 676 25.423 v5.2.0 CR 677r1 25.433 v4.5.0 CR 707
affected:			**X**	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at 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.

8.3.8 Dedicated Measurement Initiation

/* partly omitted */

8.3.8.4 Abnormal Conditions

The allowed combinations of the Dedicated Measurement Type and Report Characteristics Type are shown in the table below marked with "X". For not allowed combinations, the DRNS shall regard the Dedicated Measurement Initiation procedure as failed.

Table 4: Allowed Dedicated Measurement Type and Report Characteristics Type combinations

Dedicated Measurement Type	Report Characteristics Type								
	On Demand	Periodic	Event A	Event B	Event C	Event D	Event E	Event F	On Modification
SIR	X	X	X	X	X	X	X	X	
SIR Error	X	X	X	X	X	X	X	X	
Transmitted Code Power	X	X	X	X	X	X	X	X	
RSCP	X	X	X	X	X	X	X	X	
Rx Timing Deviation	X	X	X	X	~~X~~	~~X~~	X	X	
Round Trip Time	X	X	X	X	X	X	X	X	
Rx Timing Deviation LCR	X	X	X	X			X	X	

If the Dedicated Measurement Type received in the *Dedicated Measurement Type* IE is not defined in ref. [4] or [5] to be measured on the Dedicated Measurement Object Type received in the *Dedicated Measurement Object Type* IE in the DEDICATED MEASUREMENT INITIATION REQUEST message, the Node B shall regard the Dedicated Measurement Initiation procedure as failed.

/* partly omitted */

9.2.1.44 Measurement Threshold

The Measurement Threshold defines which threshold that shall trigger Event A, B, E, F or On Modification.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description	Criticality	Assigned Criticality
CHOICE *Measurement Threshold*					–	
>Received Total Wide Band Power					–	
>>Received Total Wide Band Power	M		INTEGER (0..621)	According to mapping in [22] and [23]	–	
>Transmitted Carrier Power					–	
>>Transmitted Carrier Power	M		INTEGER (0..100)	According to mapping in [22] and [23]	–	
>Acknowledged PRACH Preambles				FDD only	–	
>>Acknowledged PRACH Preambles	M		INTEGER (0..240,…)	According to mapping in [22]	–	
>UL Timeslot ISCP				TDD only	–	
>>UL Timeslot ISCP	M		INTEGER (0..127)	According to mapping in [23]	–	
>SIR					–	
>>SIR	M		INTEGER (0..63)	According to mapping in [22] and [23]	–	
>SIR Error				FDD only	–	
>>SIR Error	M		INTEGER (0..125)	According to mapping in [22]	–	
>Transmitted Code Power					–	
>>Transmitted Code Power	M		INTEGER (0..127)	According to mapping in [22] and [23]	–	
>RSCP				TDD only	–	
>>RSCP	M		INTEGER (0..127)	According to mapping in [23]	–	
>Rx Timing Deviation				Applicable to 3.84Mcps TDD only	–	
>>Rx Timing Deviation	M		INTEGER (0..8191)	According to mapping in [23]	–	
>Round Trip Time				FDD only	–	
>>Round Trip Time	M		INTEGER (0..32767)	According to mapping in [22]	–	
>Acknowledged PCPCH Access Preambles				FDD only	–	
>>Acknowledged PCPCH Access Preambles	M		INTEGER (0..15,…)	According to mapping in [22]	–	
>Detected PCPCH Access Preambles				FDD only	–	
>>Detected PCPCH Access Preambles	M		INTEGER (0..240,…)	According to mapping in [22]	–	
>Additional Measurement Thresholds					–	
>>UTRAN GPS Timing of Cell Frames for UE Positioning					–	
>>>$T_{UTRAN-GPS}$ Measurement Threshold Information	M		9.2.1.64B		YES	reject
>>SFN-SFN Observed Time Difference					–	
>>>SFN-SFN Measurement Threshold	M		9.2.1.53C		YES	Reject

Information						
>Rx Timing Deviation LCR				Applicable to 1.28Mcps TDD Only	-	
>>Rx Timing Deviation LCR	M		INTEGER (0..255)	According to mapping in [23]	YES	reject

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- ========================================
--  R
-- ========================================

RACH-SlotFormat ::= ENUMERATED {
    v0,
    v1,
    v2,
    v3,
    ...
}

RACH-SubChannelNumbers ::= BIT STRING {
                                        subCh11(0),
                                        subCh10(1),
                                        subCh9(2),
                                        subCh8(3),
                                        subCh7(4),
                                        subCh6(5),
                                        subCh5(6),
                                        subCh4(7),
                                        subCh3(8),
                                        subCh2(9),
                                        subCh1(10),
                                        subCh0(11)
                                        } (SIZE (12))

Range-Correction-Rate ::= INTEGER (-127..127)
-- scaling factor 0.032 m/s

ReferenceClockAvailability ::= ENUMERATED {
    available,
    notAvailable
}

ReferenceSFNoffset ::= INTEGER (0..255)

RepetitionLength ::= INTEGER (1..63)

RepetitionPeriod ::= ENUMERATED {
    v1,
    v2,
    v4,
    v8,
    v16,
    v32,
```

```
    v64,
    ...
}

RepetitionNumber0 ::= INTEGER (0..255)

RepetitionNumber1 ::= INTEGER (1..256)

RefTFCNumber ::= INTEGER (0..3)

ReportCharacteristics ::= CHOICE {
    onDemand                NULL,
    periodic                ReportCharacteristicsType-ReportPeriodicity,
    event-a             ReportCharacteristicsType-EventA,
    event-b             ReportCharacteristicsType-EventB,
    event-c             ReportCharacteristicsType-EventC,
    event-d             ReportCharacteristicsType-EventD,
    event-e             ReportCharacteristicsType-EventE,
    event-f             ReportCharacteristicsType-EventF,
    ...,
    extension-ReportCharacteristics     Extension-ReportCharacteristics
}

Extension-ReportCharacteristics ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsIE }}

Extension-ReportCharacteristicsIE NBAP-PROTOCOL-IES ::= {
    { ID id-ReportCharacteristicsType-OnModification    CRITICALITY reject  TYPE ReportCharacteristicsType-OnModification   PRESENCE mandatory }
}

ReportCharacteristicsType-EventA ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime                       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventA-ExtIEs} }       OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventA-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventB ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime                       OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventB-ExtIEs} }       OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventB-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventC ::= SEQUENCE {
    measurementIncreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
```

```
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventC-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventC-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventD ::= SEQUENCE {
    measurementDecreaseThreshold    ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold,
    measurementChangeTime           ReportCharacteristicsType-ScaledMeasurementChangeTime,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventD-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventD-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventE ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold              OPTIONAL,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime   OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventE-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventE-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-EventF ::= SEQUENCE {
    measurementThreshold1           ReportCharacteristicsType-MeasurementThreshold,
    measurementThreshold2           ReportCharacteristicsType-MeasurementThreshold              OPTIONAL,
    measurementHysteresisTime       ReportCharacteristicsType-ScaledMeasurementHysteresisTime   OPTIONAL,
    reportPeriodicity               ReportCharacteristicsType-ReportPeriodicity                 OPTIONAL,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-EventF-ExtIEs} }         OPTIONAL,
    ...
    }

ReportCharacteristicsType-EventF-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
    ...
}

ReportCharacteristicsType-OnModification ::= SEQUENCE {
    measurementThreshold            ReportCharacteristicsType-MeasurementThreshold,
    iE-Extensions                   ProtocolExtensionContainer { { ReportCharacteristicsType-OnModification-ExtIEs} }    OPTIONAL,
        ...
    }

ReportCharacteristicsType-OnModification-ExtIEs NBAP-PROTOCOL-EXTENSION ::= {
```

```
    ...
}

ReportCharacteristicsType-MeasurementIncreaseDecreaseThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value-IncrDecrThres,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles         Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value-IncrDecrThres,
    sir                         SIR-Value-IncrDecrThres,
    sir-error                   SIR-Error-Value-IncrDecrThres,
    transmitted-code-power          Transmitted-Code-Power-Value-IncrDecrThres,
    rscp                            RSCP-Value-IncrDecrThres,
    round-trip-time                 Round-Trip-Time-IncrDecrThres,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...
}

ReportCharacteristicsType-MeasurementThreshold ::= CHOICE {
    received-total-wide-band-power                          Received-total-wide-band-power-Value,
    transmitted-carrier-power       Transmitted-Carrier-Power-Value,
    ackowledged-prach-preambles         Acknowledged-PRACH-preambles-Value,
    uL-TimeslotISCP                 UL-TimeslotISCP-Value,
    sir                         SIR-Value,
    sir-error                   SIR-Error-Value,
    transmitted-code-power          Transmitted-Code-Power-Value,
    rscp                            RSCP-Value,
    rx-timing-deviation             Rx-Timing-Deviation-Value,
    round-trip-time                 Round-Trip-Time-Value,
    acknowledged-PCPCH-access-preambles     Acknowledged-PCPCH-access-preambles,
    detected-PCPCH-access-preambles         Detected-PCPCH-access-preambles,
    ...,
    extension-ReportCharacteristicsType-MeasurementThreshold        Extension-ReportCharacteristicsType-MeasurementThreshold
}

Extension-ReportCharacteristicsType-MeasurementThreshold    ::= ProtocolIE-Single-Container {{ Extension-ReportCharacteristicsType-
MeasurementThresholdIE }}

Extension-ReportCharacteristicsType-MeasurementThresholdIE NBAP-PROTOCOL-IES ::= {
    { ID id-TUTRANGPSMeasurementThresholdInformation    CRITICALITY reject  TYPE TUTRANGPSMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-SFNSFNMeasurementThresholdInformation   CRITICALITY reject  TYPE SFNSFNMeasurementThresholdInformation    PRESENCE mandatory }|
    { ID id-Rx-Timing-Deviation-Value-LCR   CRITICALITY reject  TYPE Rx-Timing-Deviation-Value-LCR   PRESENCE mandatory}
}

ReportCharacteristicsType-ScaledMeasurementChangeTime ::= CHOICE {
    msec                MeasurementChangeTime-Scaledmsec,
    ...
}

MeasurementChangeTime-Scaledmsec ::= INTEGER (1..6000,...)
-- MeasurementChangeTime-Scaledmsec = Time * 10
-- Unit ms, Range 10ms .. 60000ms(1min), Step 10ms
```

```
ReportCharacteristicsType-ScaledMeasurementHysteresisTime ::= CHOICE {
    msec                MeasurementHysteresisTime-Scaledmsec,
    ...
}
```

/* partly omitted */