# TSG-RAN Meeting #22 Maui, USA, 09-12 December 2003

Title: CRs (R'99 and linked Rel-4/Rel-5) to TS 25.331 (2).

Source: TSG-RAN WG2

Agenda item: 7.3.3

Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Version-New	Doc-2nd-Level	Workitem
25.331	2113	-	R99	Correction to Handling SIB1	F	3.16.0	3.17.0	R2-032558	TEI
25.331	2114	-	Rel-4	Correction to Handling SIB1	Α	4.11.0	4.12.0	R2-032559	TEI
25.331	2115	-	Rel-5	Correction to Handling SIB1	Α	5.6.0	5.7.0	R2-032560	TEI
25.331	2116	-	R99	Measurement Handling In State Transition for UE Positioning	F	3.16.0	3.17.0	R2-032561	TEI
25.331	2117	-	Rel-4	Measurement Handling In State Transition for UE Positioning	Α	4.11.0	4.12.0	R2-032562	TEI
25.331	2118	-	Rel-5	Measurement Handling In State Transition for UE Positioning	Α	5.6.0	5.7.0	R2-032563	TEI
25.331	2119	2	R99	Traffic Volume Measurement Validity	F	3.16.0	3.17.0	R2-032673	TEI
25.331	2120	2	Rel-4	Traffic Volume Measurement Validity	Α	4.11.0	4.12.0	R2-032674	TEI
25.331	2121	2	Rel-4	Traffic Volume Measurement Validity	Α	5.6.0	5.7.0	R2-032675	TEI
25.331	2122	-	R99	Corrections to UE positioning reporting for UE assisted and UE based methods	F	3.16.0	3.17.0	R2-032568	TEI
25.331	2123	-	Rel-4	Corrections to UE positioning reporting for UE assisted and UE based methods	Α	4.11.0	4.12.0	R2-032569	TEI
25.331	2124	-	Rel-5	Corrections to UE positioning reporting for UE assisted and UE based methods	Α	5.6.0	5.7.0	R2-032570	TEI

(Release 5)

(Release 6)

Rel-5 Rel-6

# 3GPP TSG-RAN WG2 Meeting #39 San Diego, USA, 17<sup>th</sup>-21<sup>st</sup> November, 2003

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Reason for change: # IE "CN information elements" in SIB1 consist of IE "CN common GSM-MAP NAS system information" and IE "CN domain system information". These IEs include

LAC/RAC.

be found in 3GPP TR 21.900.

According to CR 1081 in RP-010550 approved in RAN#13, it is stated in the CR that "The UE shall use information in SIB 1 also in connected mode. Though the information shall not be forwarded to higher layers. This in order to not stop the use of e.g. soft handover".

In section 8.1.1.6.1 of TS25.331, it is stated that IE "CN common GSM-MAP NAS system information" is not forwarded to the upper layers in connected mode.

But w.r.t IE "CN domain specific NAS system information", it is not clear how UE should handle this information in connected mode.

Summary of change: ₩

IE "CN common GSM-MAP NAS system information" is changed to "CN domain specific NAS system information" so that UE should not forward IE "CN domain specific NAS system information" to upper layer when it is in connected mode.

Consequences if not approved:

**W** UE's action w.r.t. IE "CN domain specific NAS system information" in connected mode remains ambiguous

## **Isolated Impact Analysis**

The change does not affect the behaviour of the network.

This change clarifies the SIB1 handling procedure in UE.

A UE not behaving as indicated by this correction might forward IE "CN domain specific NAS system information" to upper layer in connected mode. In this case the call may be dropped in the UE by upper layers if the IE includes a forbidden LA/RA.

Clauses affected:	<b>第 8.1.1.6.1</b>
Other specs affected:	Y N  X Other core specifications X Test specifications O&M Specifications
Other comments:	*

## How to create CRs using this form:

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

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# 8.1.1.6.1 System Information Block type 1

The UE should store all relevant IEs included in this system information block if the "PLMN Type" in the variable SELECTED\_PLMN has the value "GSM-MAP" and the IE "PLMN type" in the Master Information Block has the value "GSM-MAP" or "GSM-MAP and ANSI-41". The UE shall also:

- 1> check that the cell, according to information included in IE "CN common GSM-MAP NAS system information", is suitable [4];
- 1> if in connected mode:
  - 2> not forward the content of the IE "CN common GSM-MAP NAS system information" to upper layers.
- 1> if in idle mode:
  - 2> forward the content of the IE "CN common GSM-MAP NAS system information" to upper layers.
- 1> for the IE "CN domain system information list":
  - 2> for each IE "CN domain system information" that is present:
    - 3> check that the cell, according to information included in IE "CN domain specific NAS system information", is suitable [4];
    - 3> if in connected mode:
      - 4> not forward the content of the IE "CN domain specific NAS system information CN common GSM-MAP NAS system information" to upper layers.
    - 3> if in idle mode:
      - 4> forward the content of the IE "CN domain specific NAS system information" and the IE "CN domain identity" to upper layers;
      - 4> use the IE "CN domain specific DRX cycle length coefficient" to calculate frame number for the Paging Occasions as specified in [4];
      - 4> store the value of the IE "CN domain specific DRX cycle length coefficient" for use in connected mode.
  - 2> if an IE "CN domain system information" is not present for a particular CN domain:
    - 3> indicate to upper layers that no CN system information is available for that CN domain.
- 1> if the UE has not yet entered UTRA RRC connected mode:
  - 2> store the values of the IE "UE Timers and constants in connected mode" in the variable TIMERS\_AND\_CONSTANTS.
- 1> use the values stored in the variable TIMERS\_AND\_CONSTANTS for the relevant timers and constants.

# 3GPP TSG-RAN WG2 Meeting #39 San Diego, USA, 17<sup>th</sup>-21<sup>st</sup> November, 2003

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Reason for change: # IE "CN information elements" in SIB1 consist of IE "CN common GSM-MAP NAS system information" and IE "CN domain system information". These IEs include LAC/RAC.

Detailed explanations of the above categories can

be found in 3GPP TR 21.900.

According to CR 1081 in RP-010550 approved in RAN#13, it is stated in the CR that "The UE shall use information in SIB 1 also in connected mode. Though the information shall not be forwarded to higher layers. This in order to not stop the use of e.g. soft handover".

Rel-4

Rel-5

Rel-6

(Release 4)

(Release 5)

(Release 6)

In section 8.1.1.6.1 of TS25.331, it is stated that IE "CN common GSM-MAP NAS system information" is not forwarded to the upper layers in connected mode.

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A UE not behaving as indicated by this correction might forward IE "CN domain specific NAS system information" to upper layer in connected mode. In this case the call may be dropped in the UE by upper layers if the IE includes a forbidden LA/RA.

Clauses affected:	<b>%</b> 8.1.1.6.1
	Y N
Other specs	X Other core specifications  X
affected:	X Test specifications
	X O&M Specifications
Other comments:	lpha

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Clauses affected:	<b>%</b> 8.1.1.6.1
	Y N
Other specs	X Other core specifications  X
affected:	X Test specifications
	X O&M Specifications
Other comments:	lpha

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# 3GPP TSG-RAN WG2 Meeting #39 San Diego, USA, 17<sup>th</sup>-21<sup>st</sup> November, 2003

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Reason for change: # In section 8.4.1.6.7, the UE action is specified w.r.t the IE "Primary CPICH info" and the IE "Primary CCPCH info" when state transition happen. But it is not clear how the UE should behave when the IE "Frequency info" is included in the received or it is not included.

Rel-6

(Release 6)

In fact, if UE selects a cell which is different from the received IEs, if any, like IE "Primary CPICH info", "Primary CCPCH info", or IE "Frequency info", the assistant data in the variable may not be relevant any more and this can lead to inaccurate measurement.

## Summary of change: %

After state transition to common channel states, if UE selects a different frequency than the one that is included in the received message, or if UE selects a different frequency than current one and there is no indicated frequency in the received message, then UE shall delete the assistant data included in the variable UE POSITIONING OTDOA DATA UE BASED and UE POSITIONING OTDOA DATA UE ASSISTED.

## **Isolated Impact Analysis**

This change clarifies the interfrequency transitions to common channel states(CELL\_FACH, CELL\_PCH, URA\_PCH). It only affects the UE implementation.

1. If the UE has not implemented this CR, it may perform inaccurate positioning measurement.

It would not affect implementations behaving like indicated in the CR. It would

Consequences if not approved:	# The UE may perform positioning measurement with inaccurate information.
Clauses affected:	<b>%</b> 8.4.1.6.7
Other specs affected:	Y N  X Other core specifications

affect implementations supporting the corrected functionality otherwise.

## How to create CRs using this form:

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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.

# 8.4.1.6.7 UE positioning measurement

Upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH, the UE shall

1> if the UE does not support UE positioning assisted GPS measurement validity in CELL\_PCH and URA\_PCH states as indicated in the IE "UE positioning capability" included in the IE "UE Radio Access Capability":

2> stop UE positioning measurement reporting for measurements stored in the variable MEASUREMENT\_IDENTITY with the IE "Positioning Methods" set to "GPS".

Upon transition from CELL\_DCH to CELL\_FACH, or upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH and if the UE supports UE positioning assisted GPS measurement validity in CELL\_PCH and URA\_PCH states as indicated in the IE "UE positioning capability" included in the IE "UE Radio Access Capability", the UE shall:

- 1> retrieve each set of measurement control information of measurement type "UE positioning" stored in the variable MEASUREMENT\_IDENTITY; and
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> stop measurement reporting;
    - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL DCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH:
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "UE positioning reporting criteria" and the value of the IE "Measurement interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Measurement interval" as being 64 seconds.
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "Periodical Reporting Criteria" and the value of the IE "Reporting interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Reporting Interval" as being 64 seconds.
    - 3> continue measurement reporting according to its UE positioning measurement reporting capability.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> upon transition from CELL DCH to CELL PCH or URA PCH:
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "UE positioning reporting criteria" and the value of the IE "Measurement interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Measurement interval" as being 64 seconds.
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "Periodical Reporting Criteria" and the value of the IE "Reporting interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Reporting Interval" as being 64 seconds.
    - 3> resume this measurement and associated reporting according to its UP measurement reporting capability.

1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or

- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is due to a reconfiguration message which included the IE "Frequency info", and the UE selects a cell on other frequency than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Frequency info", and the UE can not find a cell on the current frequency, but it selects a cell on other frequency; or
- 1> if the transition is not due to a reconfiguration message:
  - 2> delete the assistance data included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED and UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED.
- 1> if the IE "Positioning Methods" stored in the variable MEASUREMENT\_IDENTITY is set to "OTDOA" or "OTDOA or GPS":
  - 2> if the IE "Method type" stored in the variable MEASUREMENT\_IDENTITY is set to "UE-based" or "UE assisted preferred but UE-based allowed" or "UE-based preferred but UE-assisted allowed":
    - 3> begin monitoring assistance data received in System Information Block type 15.4 and System Information Block type 15.5 according to subclause 8.1.1.6.15.
  - 2> if the IE "Method type" stored in the variable MEASUREMENT\_IDENTITY is set to "UE-assisted":
    - 3> begin monitoring assistance data received in System Information Block type 15.4 according to subclause 8.1.1.6.15.
- 1> if the UE is in CELL\_FACH state:
  - 2> if the IE "UE positioning OTDOA neighbour cell list for UE assisted" stored in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED or UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED contains neighbour cells on other frequencies than the current frequency:
    - 3> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

## The UE may:

- 1> if the IE "Positioning Methods" stored in the variable MEASUREMENT\_IDENTITY is set to "GPS" or "OTDOA or GPS":
  - 2> begin monitoring assistance data received in System Information Block type 15 and/or System Information Block type 15.1 and/or System Information Block type 15.2 and/or System Information Block type 15.3 according to subclause 8.1.1.6.15.

# 3GPP TSG-RAN WG2 Meeting #39 San Diego USA 17th-21st November 2003

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		CHANGE	REQ	UEST	•	CR-Form-vi
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Source:	RAN WG	62				
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Reason for change: # In section 8.4.1.6.7, the UE action is specified w.r.t the IE "Primary CPICH info" and the IE "Primary CCPCH info" when state transition happen. But it is not clear how the UE should behave when the IE "Frequency info" is included in the received or it is not included.

> In fact, if UE selects a cell which is different from the received IEs, if any, like IE "Primary CPICH info", "Primary CCPCH info", or IE "Frequency info", the assistant data in the variable may not be relevant any more and this can lead to inaccurate measurement.

# Summary of change: %

After state transition to common channel states, if UE selects a different frequency than the one that is included in the received message, or if UE selects a different frequency than current one and there is no indicated frequency in the received message, then UE shall delete the assistant data included in the variable UE POSITIONING OTDOA DATA UE BASED and UE POSITIONING OTDOA DATA UE ASSISTED.

## **Isolated Impact Analysis**

This change clarifies the interfrequency transitions to common channel states(CELL\_FACH, CELL\_PCH, URA\_PCH). It only affects the UE implementation.

1. If the UE has not implemented this CR, it may perform inaccurate positioning measurement.

It would not affect implementations behaving like indicated in the CR. It would

Consequences if not approved:	# The UE may perform positioning measurement with inaccurate information.
Clauses affected:	<b>%</b> 8.4.1.6.7
Other specs affected:	Y N  X Other core specifications

affect implementations supporting the corrected functionality otherwise.

## How to create CRs using this form:

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Other comments:

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

- 1) Fill out the above form. The symbols above marked \( \mathbb{H} \) contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

# 8.4.1.6.7 UE positioning measurement

Upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH, the UE shall

1> if the UE does not support UP assisted GPS measurement validity in CELL\_PCH and URA\_PCH states as indicated in the IE "UE positioning capability" included in the IE "UE Radio Access Capability":

2> stop UE positioning measurement reporting for measurements stored in the variable MEASUREMENT\_IDENTITY with the IE "Positioning Methods" set to "GPS".

Upon transition from CELL\_DCH to CELL\_FACH, or upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH and if the UE supports UP assisted GPS measurement validity in CELL\_PCH and URA\_PCH states as indicated in the IE "UE positioning capability" included in the IE "UE Radio Access Capability", the UE shall:

- 1> retrieve each set of measurement control information of measurement type "UE positioning" stored in the variable MEASUREMENT\_IDENTITY; and
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> stop measurement reporting;
    - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL DCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH:
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "UE positioning reporting criteria" and the value of the IE "Measurement interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Measurement interval" as being 64 seconds;
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "Periodical Reporting Criteria" and the value of the IE "Reporting interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Reporting Interval" as being 64 seconds
    - 3> continue measurement reporting according to its UE positioning measurement reporting capability.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> upon transition from CELL DCH to CELL PCH or URA PCH:
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "UE positioning reporting criteria" and the value of the IE "Measurement interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Measurement interval" as being 64 seconds.
      - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "Periodical Reporting Criteria" and the value of the IE "Reporting interval" included in this IE is less than 64 seconds:
        - 5> consider the value of the IE "Reporting Interval" as being 64 seconds.

3> resume this measurement and associated reporting according to its UE Positioning measurement reporting capability.

- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is due to a reconfiguration message which included the IE "Frequency info", and the UE selects a cell on other frequency than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Frequency info", and the UE can not find a cell on the current frequency, but it selects a cell on other frequency; or
- 1> if the transition is not due to a reconfiguration message:
  - 2> delete the assistance data included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED and UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED.
- 1> if the IE "Positioning Methods" stored in the variable MEASUREMENT\_IDENTITY is set to "OTDOA" or "OTDOA or GPS":
  - 2> if the IE "Method type" stored in the variable MEASUREMENT\_IDENTITY is set to "UE-based" or "UE assisted preferred but UE-based allowed" or "UE-based preferred but UE-assisted allowed":
    - 3> begin monitoring assistance data received in System Information Block type 15.4 and System Information Block type 15.5 according to subclause 8.1.1.6.15.
  - 2> if the IE "Method type" stored in the variable MEASUREMENT\_IDENTITY is set to "UE-assisted":
    - 3> begin monitoring assistance data received in System Information Block type 15.4 according to subclause 8.1.1.6.15.
- 1> if the UE is in CELL\_FACH state:
  - 2> if the IE "UE positioning OTDOA neighbour cell list for UE assisted" stored in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED or UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED contains neighbour cells on other frequencies than the current frequency:
    - 3> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

## The UE may:

- 1> if the IE "Positioning Methods" stored in the variable MEASUREMENT\_IDENTITY is set to "GPS" or "OTDOA or GPS":
  - 2> begin monitoring assistance data received in System Information Block type 15 and/or System Information Block type 15.1 and/or System Information Block type 15.2 and/or System Information Block type 15.3 according to subclause 8.1.1.6.15.

# 3GPP TSG-RAN WG2 Meeting #39 San Diego, USA, 17<sup>th</sup>-21<sup>st</sup> November, 2003

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Reason for change: # In section 8.4.1.6.7, the UE action is specified w.r.t the IE "Primary CPICH info" and the IE "Primary CCPCH info" when state transition happen. But it is not clear how the UE should behave when the IE "Frequency info" is included in the received or it is not included.

Rel-6

(Release 6)

In fact, if UE selects a cell which is different from the received IEs, if any, like IE "Primary CPICH info", "Primary CCPCH info", or IE "Frequency info", the assistant data in the variable may not be relevant any more and this can lead to inaccurate measurement.

## Summary of change: %

After state transition to common channel states, if UE selects a different frequency than the one that is included in the received message, or if UE selects a different frequency than current one and there is no indicated frequency in the received message, then UE shall delete the assistant data included in the variable UE POSITIONING OTDOA DATA UE BASED and UE POSITIONING OTDOA DATA UE ASSISTED.

## **Isolated Impact Analysis**

This change clarifies the interfrequency transitions to common channel states(CELL\_FACH, CELL\_PCH, URA\_PCH). It only affects the UE implementation.

1. If the UE has not implemented this CR, it may perform inaccurate positioning measurement.

It would not affect implementations behaving like indicated in the CR. It would

Consequences if not approved:	# The UE may perform positioning measurement with inaccurate information.
Clauses affected:	<b>%</b> 8.4.1.6.7
Other specs affected:	Y N  X Other core specifications

affect implementations supporting the corrected functionality otherwise.

## How to create CRs using this form:

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Other comments:

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

- 1) Fill out the above form. The symbols above marked \( \mathbb{H} \) contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

# 8.4.1.6.7 UE positioning measurement

Upon transition from CELL\_DCH to CELL\_FACH, the UE shall:

1> retrieve each set of measurement control information of measurement type "UE positioning" stored in the variable MEASUREMENT\_IDENTITY; and

- 2> if the optional IE "measurement validity" for this measurement has not been included:
  - 3> delete the measurement associated with the variable MEASUREMENT IDENTITY.
- 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
  - 3> stop measurement reporting;
  - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_DCH state.
- 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
  - 3> upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH:
    - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "UE positioning reporting criteria" and the value of the IE "Measurement interval" included in this IE is less than 64 seconds:
      - 5> consider the value of the IE "Measurement interval" as being 64 seconds;
    - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "Periodical Reporting Criteria" and the value of the IE "Reporting interval" included in this IE is less than 64 seconds:
      - 5> consider the value of the IE "Reporting Interval" as being 64 seconds
  - 3> continue measurement reporting according to its UE positioning measurement reporting capability.
- 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
  - 3> upon transition from CELL\_DCH to CELL\_PCH or URA\_PCH:
    - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "UE positioning reporting criteria" and the value of the IE "Measurement interval" included in this IE is less than 64 seconds:
      - 5> consider the value of the IE "Measurement interval" as being 64 seconds.
    - 4> if the choice in the IE "Reporting Criteria" included the IE "UE Positioning" stored in the variable MEASUREMENT\_IDENTITY is set to "Periodical Reporting Criteria" and the value of the IE "Reporting interval" included in this IE is less than 64 seconds:
      - 5> consider the value of the IE "Reporting Interval" as being 64 seconds.
  - 3> resume this measurement and associated reporting according to its UE Positioning measurement reporting capability.
- 1> if the transition is due to a reconfiguration message which included the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD), and the UE selects a cell other than that indicated by this IE; or
- 1> if the transition is due to a reconfiguration message which does not include the IE "Primary CPICH info" (for FDD) or "Primary CCPCH info" (for TDD); or
- 1> if the transition is due to a reconfiguration message which included the IE "Frequency info", and the UE selects a cell on other frequency than that indicated by this IE; or

1> if the transition is due to a reconfiguration message which does not include the IE "Frequency info", and the UE can not find a cell on the current frequency, but it selects a cell on other frequency; or

- 1> if the transition is not due to a reconfiguration message:
  - 2> delete the assistance data included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED and UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED.
- 1> if the IE "Positioning Methods" stored in the variable MEASUREMENT\_IDENTITY is set to "OTDOA" or "OTDOA or GPS":
  - 2> if the IE "Method type" stored in the variable MEASUREMENT\_IDENTITY is set to "UE-based" or "UE assisted preferred but UE-based allowed" or "UE-based preferred but UE-assisted allowed":
    - 3> begin monitoring assistance data received in System Information Block type 15.4 and System Information Block type 15.5 according to subclause 8.1.1.6.15.
  - 2> if the IE "Method type" stored in the variable MEASUREMENT\_IDENTITY is set to "UE-assisted":
    - 3> begin monitoring assistance data received in System Information Block type 15.4 according to subclause 8.1.1.6.15.
- 1> if the UE is in CELL FACH state:
  - 2> if the IE "UE positioning OTDOA neighbour cell list for UE assisted" stored in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED or UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED contains neighbour cells on other frequencies than the current frequency:
    - 3> perform measurements on other frequencies according to the IE "FACH measurement occasion info".

## The UE may:

- 1> if the IE "Positioning Methods" stored in the variable MEASUREMENT\_IDENTITY is set to "GPS" or "OTDOA or GPS":
  - 2> begin monitoring assistance data received in System Information Block type 15 and/or System Information Block type 15.1 and/or System Information Block type 15.2 and/or System Information Block type 15.3 according to subclause 8.1.1.6.15.

# 3GPP TSG- RAN2 Meeting #39 San Diego, USA, 17<sup>h</sup>-21<sup>th</sup> November 2003

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Reason for change: 

The specification is ambiguous and contains conflicting requirements for traffic volume measurements set up by a measurement control message with a same measurement identity as the information received in SIB11/12.

In section 8.4.1.3, it is stated that if a TVM measurement is set up through a measurement control message in Cell\_FACH, that this should not be updated by the information in SIB11/12 until explicitly released with another measurement control message. However, if the TVM measurement set up has a validity of 'Cell\_DCH', if the UE moves to Cell\_DCH and back to Cell\_FACH, the TVM information should be overwritten by SIB11/12 TVM information according to clause 8.4.1.6.6. This contradicts 8.4.1.3 because it has not been explicitly released.

Rel-5

Rel-6

(Release 5) (Release 6)

#### Section 8.4.1.3 states:

be found in 3GPP TR 21.900.

- 1> if the UE in CELL\_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT\_IDENTITY:
  - 2> update the stored information with the traffic volume measurement control information in variable MEASUREMENT\_IDENTITY; and
  - 2> refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT\_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message.

i.e. override the TVM previously stored with this identity with the one from this MC

message, and do not use the information from SIB11/12 info until the measurement with this identity has been explicitly released.

This is irrespective of the stated measurement validity. It then also applies to TVM set up with validity of CELL\_DCH, in which case no TVM will then occur before transitioning to cell\_DCH.

#### Section 8.4.1.6.6 states:

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_FACH or CELL\_PCH or URA\_PCH states (stored in the variable MEASUREMENT\_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;

I.e. if there is a TVM with the same measurement identity as in SIB11/12 but with validity cell\_DCH, the TVM stored in the variable MEASUREMENT\_IDENTITY, that was valid for CELL\_DCH, will be overwritten with the information from SIB11/12. (assuming measurements are only distinguished based upon their measurement identity, and not taking measurement validity into account) This contradicts with the statement in 8.4.1.3 above.

Section 8.1.1.6.12 on the reception of SIB 12, and similarly 8.1.1.6.11 for SIB 11, states:

- 1> if the IE "Traffic volume measurement system information" was received either in this system information block or in System Information Block type 11:
  - 2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:
    - 3> update the variable MEASUREMENT\_IDENTITY with the measurement information received in that IE.

i.e. irrespective of the measurement validity, the TVM measurement will NOT be updated when reading SIB11/12 in cell\_FACH if the TVM with that identity has been setup explicitly in a MC message.

If the TVM was set-up with measurement validity of cell\_DCH, no TVM will occur before transitioning to cell\_DCH again.

# Section 8.4.1.7.4 states:

Upon transition from CELL\_FACH to CELL\_DCH state, the UE shall:

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_DCH and has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
- 2> begin traffic volume measurement reporting according to the assigned information.

i.e. a measurement in a MC can be assigned the same measurement identity for cell\_DCH as the TVM from SIB11/12.

This clause also states that a TVM assigned with a MC message with for example cell validity "all states except cell\_DCH", is ignored, as the corresponding TVM from SIB11/12 will be stored for future use when transitioning back to cell FACH again.

## Summarizing,

The specification contains conflicting requirements by making inconsistent references to measurement identities and measurement validity. Sections 8.4.1.3 on measurement control and 8.1.1.6.11 and 8.1.1.6.12 on reception of SIB 11 and SIB 12 do not make any reference to the measurement validity of the measurements. Sections 8.4.1.6 and 8.4.1.7 describing measurement set-up after state transition however takes measurement validity into account (only for Traffic Volume Measurements).

Summary of change: # A note is added to 8.4.1.3 that the UE may behave according to the specified behavior in 8.4.1.6.6.

## Isolated impact analysis:

Traffic volume measurements with measurement validity of CELL\_DCH set-up in CELL FACH.

The change is a clarification for UTRAN to avoid the application of the conflicting requirements. No UE impact.

## Impact on test specifications:

No impact. The most relevant testcases are 34.123 8.4.1.18 and 8.4.1.19. Test case 8.4.1.18 tests all state transitions and measurement validity cases. The testcase releases the TVM set by a MEASUREMENT CONTROL message and with measurement validity CELL\_DCH before transitioning to CELL\_FACH from CELL DCH.

Test case 8.4.1.19 is not affected as the TVM explicitly set up by MEASUREMENT CONTROL messages are only set up in CELL\_DCH. All other test cases do not set TVM in the MEASUREMENT CONTROL message and SIB11/12, use different measurement identities, or do not involve the relevant state transition.

# Consequences if not approved:

# The indicated ambiguity and conflicting requirements will remain, and possibly no traffic volume measurements reported in CELL\_DCH.

Clauses affected: Other specs affected:	<ul> <li>** 8.4.1.3</li> <li>** X</li> <li>X Other core specifications</li> <li>X Test specifications</li> <li>X O&amp;M Specifications</li> </ul>
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.
- 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.

# 8.4.1.3 Reception of MEASUREMENT CONTROL by the UE

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.

The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
  - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
  - 2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
    - 3> if the UE is in CELL\_FACH state:
      - 4> the UE behaviour is not specified.
  - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:
    - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS\_IDENTITY; or
    - 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements on at least one supported band of that measurement type:
      - 4> if the measurement is valid in the current RRC state of the UE:
        - 5> begin measurements according to the stored control information for this measurement identity.
- NOTE: The UE is not required to perform measurements on cells for which it needs compressed mode but a suitable compressed mode pattern is not activated.
  - 2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> begin measurements according to the stored control information for this measurement identity.
  - 2> for measurement type "UE positioning measurement":
    - 3> if the UE is in CELL\_FACH state:
      - 4> if IE "Positioning Method" is set to "OTDOA":
        - 5> if IE "Method Type" is set to "UE assisted":
          - 6> if IE "UE positioning OTDOA assistance data for UE assisted" is not included:
            - 7> if System Information Block type 15.4 is broadcast:
              - 8> read System Information Block type 15.4.
            - 7> act as specified in subclause 8.6.7.19.2.
        - 5> if IE "Method Type" is set to "UE based":
          - 6> if IE "UE positioning OTDOA assistance data for UE based" is not included:
            - 7> if System Information Block type 15.5 is broadcast:

- 8> read System Information Block type 15.5.
- 7> act as specified in subclause 8.6.7.19.2a.
- 2> for any other measurement type:
  - 3> if the measurement is valid in the current RRC state of the UE:
    - 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "Measurement command" has the value "modify":
  - 2> for all IEs present in the MEASUREMENT CONTROL message:
    - 3> if a measurement was stored in the variable MEASUREMENT\_IDENTITY associated to the identity by the IE "measurement identity":
      - 4> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
        - 5> if the UE is in CELL FACH state:
          - 6> the UE behaviour is not specified.
      - 4> if measurement type is set to "intra-frequency measurement", for any of the optional IEs "Intra-frequency measurement objects list", "Intra-frequency measurement quantity", "Intra-frequency reporting quantity", "Measurement Validity", "report criteria" and "parameters required for each event" (given "report criteria" is set to "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "inter-frequency measurement", for any of the optional IEs "Inter-frequency measurement quantity", "Inter-frequency reporting quantity", "Measurement Validity", "Inter-frequency set update" and "parameters required for each event" (given "report criteria" is set to either "inter-frequency measurement reporting criteria" or "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "inter-RAT measurement", for any of the optional IEs "Inter-RAT measurement objects list", "Inter-RAT measurement quantity", "Inter-RAT reporting quantity" and "parameters required for each event" (given "report criteria" is set to "inter-RAT measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE positioning measurement" and the IE "UE positioning OTDOA assistance data" is present, for any of the optional IEs "UE positioning OTDOA neighbour cell info for UE-assisted", "UE positioning OTDOA reference cell info for UE-assisted", "UE positioning OTDOA neighbour cell info for UE-based" and "UE positioning" that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE positioning measurement" and the IE "UE positioning GPS assistance data" is present, for any of the optional IEs "UE positioning GPS reference time", "UE positioning GPS reference UE position", "UE positioning GPS DGPS corrections", "UE positioning GPS navigation model", "UE positioning GPS ionospheric model", "UE positioning GPS uTC model", "UE positioning GPS almanac", "UE positioning GPS acquisition assistance", "UE positioning GPS real-time integrity" that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "traffic volume measurement", for any of the optional IEs "Traffic volume measurement Object", "Traffic volume measurement quantity", "Traffic volume reporting quantity", "Measurement Validity" and "parameters required for each event" (given "report criteria" is set to "traffic volume measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "quality measurement", for any of the optional IE "Quality reporting quantity" that is present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE internal measurement", for any of the optional IEs "UE internal measurement quantity", "UE internal reporting quantity" and "parameters required for each event" (given "report criteria" is set to "UE internal measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:

- 5> replace all instances of the IEs listed above (and all their children) stored in variable MEASUREMENT\_IDENTITY associated to the identity indicated by the IE "measurement identity" with the IEs received in the MEASUREMENT CONTROL message;
- 5> leave all other stored information elements unchanged in the variable MEASUREMENT\_IDENTITY.

#### 3> otherwise:

- 4> set the variable CONFIGURATION\_INCOMPLETE to TRUE.
- 2> if measurement type is set to "inter-frequency measurement":
  - 3> if "report criteria" is set to "intra-frequency report criteria" and "reporting criteria" in "inter-frequency measurement quantity" is set to "intra-frequency reporting criteria":
    - 4> leave the currently stored "inter-frequency report criteria" within "report criteria" and "inter-frequency reporting criteria" within "inter-frequency measurement quantity" unchanged, and continue to act on the information stored in these variables, and also store the newly received "intra-frequency report criteria" and intra-frequency reporting criteria.

## 3> otherwise:

- 4> clear the variables associated with the CHOICE "report criteria" and store the received "report criteria" choice;
- 4> if the IE "inter-frequency measurement quantity" is present:
  - 5> clear the variables associated with the choice "reporting criteria" in "inter-frequency measurement quantity" and store the received "reporting criteria" choice.
- NOTE: If the UTRAN wants to modify the inter-frequency cell info list for an inter-frequency measurement configured with event based reporting without repeating any IEs related to the configured events, the only possibility is to set the IE "report criteria" to "intra-frequency report criteria", not include the IE "parameters required for each event", and set the IE "reporting criteria" in the IE "inter-frequency measurement quantity" to "intra-frequency reporting criteria".
  - 2> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
    - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS\_IDENTITY; or
    - 3> if, according to its measurement capabilities, the UE does not require compressed mode, on at least one supported band of that measurement type, to perform the measurements:
      - 4> resume the measurements according to the new stored measurement control information.
  - 2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> resume measurements according to the new stored control information for this measurement identity.
  - 2> for any other measurement type:
    - 3> resume the measurements according to the new stored measurement control information.
- 1> if the IE "measurement command" has the value "release":
  - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
  - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY.

- 1> if the IE "DPCH Compressed Mode Status Info" is present:
  - 2> if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE 'TGMP' in variable TGPS\_IDENTITY):
    - 3> set the variable CONFIGURATION INCOMPLETE to TRUE.
  - 2> if there is any pending "TGPS reconfiguration CFN" or any pending "TGCFN":
    - 3> the UE behaviour is unspecified;
  - 2> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS\_IDENTITY):
    - 3> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
      - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;
      - 4> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS\_IDENTITY to "inactive".
    - 3> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
      - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message.
- NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.
  - 2> after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
    - 3> activate the pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in this message is set to "activate" at the time indicated by IE "TGCFN"; and
    - 3> set the corresponding "Current TGPS status flag" for this pattern sequence in the variable TGPS\_IDENTITY to "active"; and
    - 3> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
    - 3> if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:
      - 4> start the concerned pattern sequence immediately at that CFN.
  - 2> not alter pattern sequences stored in variable TGPS\_IDENTITY, if the pattern sequence is not identitifed in IE "TGPSI" in the received message.
- 1> if the UE in CELL\_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT\_IDENTITY:
  - 2> update the stored information with the traffic volume measurement control information in variable MEASUREMENT\_IDENTITY; and
  - 2> refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT\_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message.
- NOTE: If the IE "measurement validity" is included in the received MEASUREMENT CONTROL message and it has the value "CELL DCH", the UE may update the traffic volume measurement control information associated with this measurement identify in the variable MEASUREMENT\_IDENTITY with the information received in the System Information Block type 12 (or System Information Block type 11) after a transition to CELL\_DCH and a subsequent transition to CELL\_FACH, CELL\_PCH or URA\_PCH (see 8.4.1.6.6.).

- 1> if the IE "Read SFN indicator" included in the IE "Cell info" of an inter-frequency cell is set to TRUE and the variable UE\_CAPABILITY\_TRANSFERRED has the DL "Measurement capability" for "FDD measurements" set to TRUE (the UE requires DL compressed mode in order to perform measurements on FDD):
  - 2> set the variable CONFIGURATION\_INCOMPLETE to TRUE.
- 1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS.

## The UE may:

- 1> if the IE "Measurement command" has the value "setup":
  - 2> for measurement type "UE positioning measurement":
    - 3> if the UE is CELL\_FACH state:
      - 4> if IE "Positioning Method" is set to "GPS":
        - 5> if IE "UE positioning GPS assistance data" is not included and variable UE\_POSITIONING\_GPS\_DATA is empty:
          - 6> if System Information Block types 15, 15.1, 15.2 and 15.3 are broadcast:
            - 7> read System Information Block types 15, 15.1, 15.2 and 15.3.
          - 6> act as specified in subclause 8.6.7.19.3.
- 1> and the procedure ends.

#### 8.4.1.6.6 Traffic volume measurement

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT\_IDENTITY; and
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> stop measurement reporting;
    - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_DCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_FACH or CELL\_PCH or URA\_PCH states (stored in the variable MEASUREMENT\_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;

2> begin traffic volume measurement reporting according to the assigned information.

## 8.4.1.7.4 Traffic volume measurement

Upon transition from CELL\_FACH to CELL\_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT\_IDENTITY;
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> stop measurement reporting; and
    - 3> save the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_FACH/CELL\_PCH/URA\_PCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_DCH and has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
  - 2> begin traffic volume measurement reporting according to the assigned information.

# 3GPP TSG- RAN2 Meeting #39 San Diego, USA, 17<sup>h</sup>-21<sup>th</sup> November 2003

CHANGE REQUEST							
*	25.331 CR	2120	жrev	<b>2</b> *	Current versi	on: <mark>4.11.0</mark>	<b>*</b>
For <u>HELP</u> on u	using this form, see	e bottom of this	page or lo	ook at the	pop-up text	over the <b>%</b> syi	nbols.
Proposed change	affects: UICC a	apps#	ME	Radio Ac	cess Network	k X Core Ne	∍twork
Title: #	Traffic Volume I	Measurement \	/alidity				
Source: #	RAN WG2						
Work item code: ₩	TEI				Date: ₩	November 2	003
Category: 器	Use <u>one</u> of the folk <b>F</b> (correction) <b>A</b> (correspon <b>B</b> (addition of	ds to a correction feature), modification) of foodification	n in an earli eature)	er release,	2 R96 R97 R98 R99 Rel-4	Rel-4 the following relations (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5)	

Reason for change: 

The specification is ambiguous and contains conflicting requirements for traffic volume measurements set up by a measurement control message with a same measurement identity as the information received in SIB11/12.

In section 8.4.1.3, it is stated that if a TVM measurement is set up through a measurement control message in Cell\_FACH, that this should not be updated by the information in SIB11/12 until explicitly released with another measurement control message. However, if the TVM measurement set up has a validity of 'Cell\_DCH', if the UE moves to Cell\_DCH and back to Cell\_FACH, the TVM information should be overwritten by SIB11/12 TVM information according to clause 8.4.1.6.6. This contradicts 8.4.1.3 because it has not been explicitly released.

Rel-6

(Release 6)

#### Section 8.4.1.3 states:

- 1> if the UE in CELL\_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT\_IDENTITY:
  - 2> update the stored information with the traffic volume measurement control information in variable MEASUREMENT\_IDENTITY; and
  - 2> refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT\_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message.

i.e. override the TVM previously stored with this identity with the one from this MC

message, and do not use the information from SIB11/12 info until the measurement with this identity has been explicitly released.

This is irrespective of the stated measurement validity. It then also applies to TVM set up with validity of CELL\_DCH, in which case no TVM will then occur before transitioning to cell\_DCH.

#### Section 8.4.1.6.6 states:

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_FACH or CELL\_PCH or URA\_PCH states (stored in the variable MEASUREMENT\_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;

I.e. if there is a TVM with the same measurement identity as in SIB11/12 but with validity cell\_DCH, the TVM stored in the variable MEASUREMENT\_IDENTITY, that was valid for CELL\_DCH, will be overwritten with the information from SIB11/12. (assuming measurements are only distinguished based upon their measurement identity, and not taking measurement validity into account) This contradicts with the statement in 8.4.1.3 above.

Section 8.1.1.6.12 on the reception of SIB 12, and similarly 8.1.1.6.11 for SIB 11, states:

- 1> if the IE "Traffic volume measurement system information" was received either in this system information block or in System Information Block type 11:
  - 2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:
    - 3> update the variable MEASUREMENT\_IDENTITY with the measurement information received in that IE.

i.e. irrespective of the measurement validity, the TVM measurement will NOT be updated when reading SIB11/12 in cell\_FACH if the TVM with that identity has been setup explicitly in a MC message.

If the TVM was set-up with measurement validity of cell\_DCH, no TVM will occur before transitioning to cell\_DCH again.

# Section 8.4.1.7.4 states:

Upon transition from CELL\_FACH to CELL\_DCH state, the UE shall:

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_DCH and has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
- 2> begin traffic volume measurement reporting according to the assigned information.

i.e. a measurement in a MC can be assigned the same measurement identity for cell\_DCH as the TVM from SIB11/12.

This clause also states that a TVM assigned with a MC message with for example cell validity "all states except cell\_DCH", is ignored, as the corresponding TVM from SIB11/12 will be stored for future use when transitioning back to cell FACH again.

## Summarizing,

The specification contains conflicting requirements by making inconsistent references to measurement identities and measurement validity. Sections 8.4.1.3 on measurement control and 8.1.1.6.11 and 8.1.1.6.12 on reception of SIB 11 and SIB 12 do not make any reference to the measurement validity of the measurements. Sections 8.4.1.6 and 8.4.1.7 describing measurement set-up after state transition however takes measurement validity into account (only for Traffic Volume Measurements).

Summary of change: # A note is added to 8.4.1.3 that the UE may behave according to the specified behavior in 8.4.1.6.6.

# Isolated impact analysis:

Traffic volume measurements with measurement validity of CELL\_DCH set-up in CELL FACH.

The change is a clarification for UTRAN to avoid the application of the conflicting requirements. No UE impact.

## Impact on test specifications:

No impact. The most relevant testcases are 34.123 8.4.1.18 and 8.4.1.19. Test case 8.4.1.18 tests all state transitions and measurement validity cases. The testcase releases the TVM set by a MEASUREMENT CONTROL message and with measurement validity CELL\_DCH before transitioning to CELL\_FACH from CELL DCH.

Test case 8.4.1.19 is not affected as the TVM explicitly set up by MEASUREMENT CONTROL messages are only set up in CELL\_DCH. All other test cases do not set TVM in the MEASUREMENT CONTROL message and SIB11/12, use different measurement identities, or do not involve the relevant state transition.

## Consequences if not approved:

# The indicated ambiguity and conflicting requirements will remain, and possibly no traffic volume measurements reported in CELL\_DCH.

Clauses affected:	<b>%</b> 8.4.1.3 <b>Y N</b>
Other specs affected:	X Other core specifications X Test specifications O&M Specifications
Other comments:	<b>*</b>

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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.

# 8.4.1.3 Reception of MEASUREMENT CONTROL by the UE

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.

#### The UE shall:

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
  - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
  - 2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
    - 3> if the UE is in CELL FACH state:
      - 4> the UE behaviour is not specified.
  - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:
    - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS\_IDENTITY; or
    - 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements on at least one supported band of that measurement type:
      - 4> if the measurement is valid in the current RRC state of the UE:
        - 5> begin measurements according to the stored control information for this measurement identity.
- NOTE: The UE is not required to perform measurements on cells for which it needs compressed mode but a suitable compressed mode pattern is not activated.
  - 2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> begin measurements according to the stored control information for this measurement identity.
  - 2> for measurement type "UE positioning measurement":
    - 3> if the UE is in CELL\_FACH state:
      - 4> if IE "Positioning Method" is set to "OTDOA":
        - 5> if IE "Method Type" is set to "UE assisted":
          - 6> if IE "UE positioning OTDOA assistance data for UE assisted" is not included:
            - 7> if System Information Block type 15.4 is broadcast:
              - 8> read System Information Block type 15.4.
            - 7> act as specified in subclause 8.6.7.19.2.
        - 5> if IE "Method Type" is set to "UE based":
          - 6> if IE "UE positioning OTDOA assistance data for UE based" is not included:

- 7> if System Information Block type 15.5 is broadcast:
  - 8> read System Information Block type 15.5.
- 7> act as specified in subclause 8.6.7.19.2a.
- 2> for any other measurement type:
  - 3> if the measurement is valid in the current RRC state of the UE:
    - 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "Measurement command" has the value "modify":
  - 2> for all IEs present in the MEASUREMENT CONTROL message:
    - 3> if a measurement was stored in the variable MEASUREMENT\_IDENTITY associated to the identity by the IE "measurement identity":
      - 4> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
        - 5> if the UE is in CELL FACH state:
          - 6> the UE behaviour is not specified.
      - 4> if measurement type is set to "intra-frequency measurement", for any of the optional IEs "Intra-frequency measurement objects list", "Intra-frequency measurement quantity", "Intra-frequency reporting quantity", "Measurement Validity", "report criteria" and "parameters required for each event" (given "report criteria" is set to "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "inter-frequency measurement", for any of the optional IEs "Inter-frequency measurement quantity", "Inter-frequency reporting quantity", "Measurement Validity", "Inter-frequency set update" and "parameters required for each event" (given "report criteria" is set to either "inter-frequency measurement reporting criteria" or "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "inter-RAT measurement", for any of the optional IEs "Inter-RAT measurement objects list", "Inter-RAT measurement quantity", "Inter-RAT reporting quantity" and "parameters required for each event" (given "report criteria" is set to "inter-RAT measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE positioning measurement" and the IE "UE positioning OTDOA assistance data" is present, for any of the optional IEs "UE positioning OTDOA neighbour cell info for UE-assisted", "UE positioning OTDOA reference cell info for UE-assisted", "UE positioning OTDOA neighbour cell info for UE-based" and "UE positioning" that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE positioning measurement" and the IE "UE positioning GPS assistance data" is present, for any of the optional IEs "UE positioning GPS reference time", "UE positioning GPS reference UE position", "UE positioning GPS DGPS corrections", "UE positioning GPS navigation model", "UE positioning GPS ionospheric model", "UE positioning GPS ultromodel", "UE positioning GPS almanac", "UE positioning GPS acquisition assistance", "UE positioning GPS real-time integrity" that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "traffic volume measurement", for any of the optional IEs "Traffic volume measurement Object", "Traffic volume measurement quantity", "Traffic volume reporting quantity", "Measurement Validity" and "parameters required for each event" (given "report criteria" is set to "traffic volume measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "quality measurement", for any of the optional IE "Quality reporting quantity" that is present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE internal measurement", for any of the optional IEs "UE internal measurement quantity", "UE internal reporting quantity" and "parameters required for each event"

(given "report criteria" is set to "UE internal measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:

- 5> replace all instances of the IEs listed above (and all their children) stored in variable MEASUREMENT\_IDENTITY associated to the identity indicated by the IE "measurement identity" with the IEs received in the MEASUREMENT CONTROL message;
- 5> leave all other stored information elements unchanged in the variable MEASUREMENT IDENTITY.

#### 3> otherwise:

- 4> set the variable CONFIGURATION INCOMPLETE to TRUE.
- 2> if measurement type is set to "inter-frequency measurement":
  - 3> if "report criteria" is set to "intra-frequency report criteria" and "reporting criteria" in "inter-frequency measurement quantity" is set to "intra-frequency reporting criteria":
    - 4> leave the currently stored "inter-frequency report criteria" within "report criteria" and "inter-frequency reporting criteria" within "inter-frequency measurement quantity" unchanged, and continue to act on the information stored in these variables, and also store the newly received "intra-frequency report criteria" and intra-frequency reporting criteria.

#### 3> otherwise:

- 4> clear the variables associated with the CHOICE "report criteria" and store the received "report criteria" choice;
- 4> if the IE "inter-frequency measurement quantity" is present:
  - 5> clear the variables associated with the choice "reporting criteria" in "inter-frequency measurement quantity" and store the received "reporting criteria" choice.
- NOTE: If the UTRAN wants to modify the inter-frequency cell info list for an inter-frequency measurement configured with event based reporting without repeating any IEs related to the configured events, the only possibility is to set the IE "report criteria" to "intra-frequency report criteria", not include the IE "parameters required for each event", and set the IE "reporting criteria" in the IE "inter-frequency measurement quantity" to "intra-frequency reporting criteria".
  - 2> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
    - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS\_IDENTITY; or
    - 3> if, according to its measurement capabilities, the UE does not require compressed mode, on at least one supported band of that measurement type, to perform the measurements:
      - 4> resume the measurements according to the new stored measurement control information.
  - 2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> resume measurements according to the new stored control information for this measurement identity.
  - 2> for any other measurement type:
    - 3> resume the measurements according to the new stored measurement control information.
- 1> if the IE "measurement command" has the value "release":
  - 2> terminate the measurement associated with the identity given in the IE "measurement identity";

- 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY.
- 1> if the IE "DPCH Compressed Mode Status Info" is present:
  - 2> if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE 'TGMP' in variable TGPS\_IDENTITY):
    - 3> set the variable CONFIGURATION\_INCOMPLETE to TRUE.
  - 2> if there is any pending "TGPS reconfiguration CFN" or any pending "TGCFN":
    - 3> the UE behaviour is unspecified;
  - 2> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS\_IDENTITY):
    - 3> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
      - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;
      - 4> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS\_IDENTITY to "inactive".
    - 3> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
      - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message.
- NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.
  - 2> after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
    - 3> activate the pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in this message is set to "activate" at the time indicated by IE "TGCFN"; and
    - 3> set the corresponding "Current TGPS status flag" for this pattern sequence in the variable TGPS\_IDENTITY to "active"; and
    - 3> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
    - 3> if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:
      - 4> start the concerned pattern sequence immediately at that CFN.
  - 2> not alter pattern sequences stored in variable TGPS\_IDENTITY, if the pattern sequence is not identitifed in IE "TGPSI" in the received message.
- 1> if the UE in CELL\_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT\_IDENTITY:
  - 2> update the stored information with the traffic volume measurement control information in variable MEASUREMENT\_IDENTITY; and
  - 2> refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT\_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message.

- NOTE: If the IE "measurement validity" is included in the received MEASUREMENT CONTROL message and it has the value "CELL\_DCH", the UE may update the traffic volume measurement control information associated with this measurement identify in the variable MEASUREMENT\_IDENTITY with the information received in the System Information Block type 12 (or System Information Block type 11) after a transition to CELL\_DCH and a subsequent transition to CELL\_FACH, CELL\_PCH or URA\_PCH (see 8.4.1.6.6.).
- 1> if the IE "Read SFN indicator" included in the IE "Cell info" of an inter-frequency cell is set to TRUE and the variable UE\_CAPABILITY\_TRANSFERRED has the DL "Measurement capability" for "FDD measurements" set to TRUE (the UE requires DL compressed mode in order to perform measurements on FDD):
  - 2> set the variable CONFIGURATION\_INCOMPLETE to TRUE.
- 1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS.

#### The UE may:

- 1> if the IE "Measurement command" has the value "setup":
  - 2> for measurement type "UE positioning measurement":
    - 3> if the UE is CELL\_FACH state:
      - 4> if IE "Positioning Method" is set to "GPS":
        - 5> if IE "UE positioning GPS assistance data" is not included and variable UE\_POSITIONING\_GPS\_DATA is empty:
          - 6> if System Information Block types 15, 15.1, 15.2 and 15.3 are broadcast:
            - 7> read System Information Block types 15, 15.1, 15.2 and 15.3.
          - 6> act as specified in subclause 8.6.7.19.3.
- 1> and the procedure ends.

#### 8.4.1.6.6 Traffic volume measurement

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT\_IDENTITY; and
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> stop measurement reporting;
    - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_DCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> resume this measurement and associated reporting.

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_FACH or CELL\_PCH or URA\_PCH states (stored in the variable MEASUREMENT\_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
  - 2> begin traffic volume measurement reporting according to the assigned information.

#### 8.4.1.7.4 Traffic volume measurement

Upon transition from CELL\_FACH to CELL\_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT IDENTITY;
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> stop measurement reporting; and
    - 3> save the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_FACH/CELL\_PCH/URA\_PCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_DCH and has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
  - 2> begin traffic volume measurement reporting according to the assigned information.

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Reason for change: 

The specification is ambiguous and contains conflicting requirements for traffic volume measurements set up by a measurement control message with a same measurement identity as the information received in SIB11/12.

In section 8.4.1.3, it is stated that if a TVM measurement is set up through a measurement control message in Cell\_FACH, that this should not be updated by the information in SIB11/12 until explicitly released with another measurement control message. However, if the TVM measurement set up has a validity of 'Cell\_DCH', if the UE moves to Cell\_DCH and back to Cell\_FACH, the TVM information should be overwritten by SIB11/12 TVM information according to clause 8.4.1.6.6. This contradicts 8.4.1.3 because it has not been explicitly released.

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(Release 6)

#### Section 8.4.1.3 states:

- 1> if the UE in CELL\_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT\_IDENTITY:
  - 2> update the stored information with the traffic volume measurement control information in variable MEASUREMENT\_IDENTITY; and
  - 2> refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT\_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message.

i.e. override the TVM previously stored with this identity with the one from this MC

message, and do not use the information from SIB11/12 info until the measurement with this identity has been explicitly released.

This is irrespective of the stated measurement validity. It then also applies to TVM set up with validity of CELL\_DCH, in which case no TVM will then occur before transitioning to cell\_DCH.

#### Section 8.4.1.6.6 states:

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_FACH or CELL\_PCH or URA\_PCH states (stored in the variable MEASUREMENT\_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;

I.e. if there is a TVM with the same measurement identity as in SIB11/12 but with validity cell\_DCH, the TVM stored in the variable MEASUREMENT\_IDENTITY, that was valid for CELL\_DCH, will be overwritten with the information from SIB11/12. (assuming measurements are only distinguished based upon their measurement identity, and not taking measurement validity into account) This contradicts with the statement in 8.4.1.3 above.

Section 8.1.1.6.12 on the reception of SIB 12, and similarly 8.1.1.6.11 for SIB 11, states:

- 1> if the IE "Traffic volume measurement system information" was received either in this system information block or in System Information Block type 11:
  - 2> if no traffic volume measurement with the measurement identity indicated in the IE "Traffic volume measurement system information" was set up or modified through a MEASUREMENT CONTROL message:
    - 3> update the variable MEASUREMENT\_IDENTITY with the measurement information received in that IE.

i.e. irrespective of the measurement validity, the TVM measurement will NOT be updated when reading SIB11/12 in cell\_FACH if the TVM with that identity has been setup explicitly in a MC message.

If the TVM was set-up with measurement validity of cell\_DCH, no TVM will occur before transitioning to cell\_DCH again.

### Section 8.4.1.7.4 states:

Upon transition from CELL\_FACH to CELL\_DCH state, the UE shall:

- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_DCH and has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
- 2> begin traffic volume measurement reporting according to the assigned information.

i.e. a measurement in a MC can be assigned the same measurement identity for cell\_DCH as the TVM from SIB11/12.

This clause also states that a TVM assigned with a MC message with for example cell validity "all states except cell\_DCH", is ignored, as the corresponding TVM from SIB11/12 will be stored for future use when transitioning back to cell FACH again.

#### Summarizing,

The specification contains conflicting requirements by making inconsistent references to measurement identities and measurement validity. Sections 8.4.1.3 on measurement control and 8.1.1.6.11 and 8.1.1.6.12 on reception of SIB 11 and SIB 12 do not make any reference to the measurement validity of the measurements. Sections 8.4.1.6 and 8.4.1.7 describing measurement set-up after state transition however takes measurement validity into account (only for Traffic Volume Measurements).

Summary of change: # A note is added to 8.4.1.3 that the UE may behave according to the specified behavior in 8.4.1.6.6.

### Isolated impact analysis:

Traffic volume measurements with measurement validity of CELL\_DCH set-up in CELL FACH.

The change is a clarification for UTRAN to avoid the application of the conflicting requirements. No UE impact.

#### Impact on test specifications:

No impact. The most relevant testcases are 34.123 8.4.1.18 and 8.4.1.19. Test case 8.4.1.18 tests all state transitions and measurement validity cases. The testcase releases the TVM set by a MEASUREMENT CONTROL message and with measurement validity CELL\_DCH before transitioning to CELL\_FACH from CELL DCH.

Test case 8.4.1.19 is not affected as the TVM explicitly set up by MEASUREMENT CONTROL messages are only set up in CELL\_DCH. All other test cases do not set TVM in the MEASUREMENT CONTROL message and SIB11/12, use different measurement identities, or do not involve the relevant state transition.

### Consequences if not approved:

# The indicated ambiguity and conflicting requirements will remain, and possibly no traffic volume measurements reported in CELL\_DCH.

Clauses affected:	<b>%</b> 8.4.1.3 <b>Y N</b>
Other specs affected:	X Other core specifications X Test specifications O&M Specifications
Other comments:	<b>*</b>

#### **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.

### 8.4.1.3 Reception of MEASUREMENT CONTROL by the UE

Upon reception of a MEASUREMENT CONTROL message the UE shall perform actions specified in subclause 8.6 unless otherwise specified below.

- 1> read the IE "Measurement command";
- 1> if the IE "Measurement command" has the value "setup":
  - 2> store this measurement in the variable MEASUREMENT\_IDENTITY according to the IE "measurement identity", first releasing any previously stored measurement with that identity if that exists;
  - 2> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
    - 3> if the UE is in CELL\_FACH state:
      - 4> the UE behaviour is not specified.
  - 2> for measurement types "inter-RAT measurement" or "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency:
    - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS\_IDENTITY; or
    - 3> if, according to its measurement capabilities, the UE does not require compressed mode to perform the measurements on at least one supported band of that measurement type:
      - 4> if the measurement is valid in the current RRC state of the UE:
        - 5> begin measurements according to the stored control information for this measurement identity.
- NOTE: The UE is not required to perform measurements on cells for which it needs compressed mode but a suitable compressed mode pattern is not activated.
  - 2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> begin measurements according to the stored control information for this measurement identity.
  - 2> for measurement type "UE positioning measurement":
    - 3> if the UE is in CELL\_FACH state:
      - 4> if IE "Positioning Method" is set to "OTDOA":
        - 5> if IE "Method Type" is set to "UE assisted":
          - 6> if IE "UE positioning OTDOA assistance data for UE assisted" is not included:
            - 7> if System Information Block type 15.4 is broadcast:
              - 8> read System Information Block type 15.4.
            - 7> act as specified in subclause 8.6.7.19.2.
        - 5> if IE "Method Type" is set to "UE based":
          - 6> if IE "UE positioning OTDOA assistance data for UE based" is not included:
            - 7> if System Information Block type 15.5 is broadcast:

- 8> read System Information Block type 15.5.
- 7> act as specified in subclause 8.6.7.19.2a.
- 2> for any other measurement type:
  - 3> if the measurement is valid in the current RRC state of the UE:
    - 4> begin measurements according to the stored control information for this measurement identity.
- 1> if the IE "Measurement command" has the value "modify":
  - 2> for all IEs present in the MEASUREMENT CONTROL message:
    - 3> if a measurement was stored in the variable MEASUREMENT\_IDENTITY associated to the identity by the IE "measurement identity":
      - 4> if the measurement type is quality, UE internal, intra-frequency, inter-frequency or inter-RAT:
        - 5> if the UE is in CELL FACH state:
          - 6> the UE behaviour is not specified.
      - 4> if measurement type is set to "intra-frequency measurement", for any of the optional IEs "Intra-frequency measurement objects list", "Intra-frequency measurement quantity", "Intra-frequency reporting quantity", "Measurement Validity", "report criteria" and "parameters required for each event" (given "report criteria" is set to "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "inter-frequency measurement", for any of the optional IEs "Inter-frequency measurement quantity", "Inter-frequency reporting quantity", "Measurement Validity", "Inter-frequency set update" and "parameters required for each event" (given "report criteria" is set to either "inter-frequency measurement reporting criteria" or "intra-frequency measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "inter-RAT measurement", for any of the optional IEs "Inter-RAT measurement objects list", "Inter-RAT measurement quantity", "Inter-RAT reporting quantity" and "parameters required for each event" (given "report criteria" is set to "inter-RAT measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE positioning measurement" and the IE "UE positioning OTDOA assistance data" is present, for any of the optional IEs "UE positioning OTDOA neighbour cell info for UE-assisted", "UE positioning OTDOA reference cell info for UE-assisted", "UE positioning OTDOA neighbour cell info for UE-based" and "UE positioning" that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE positioning measurement" and the IE "UE positioning GPS assistance data" is present, for any of the optional IEs "UE positioning GPS reference time", "UE positioning GPS reference UE position", "UE positioning GPS DGPS corrections", "UE positioning GPS navigation model", "UE positioning GPS ionospheric model", "UE positioning GPS uTC model", "UE positioning GPS almanac", "UE positioning GPS acquisition assistance", "UE positioning GPS real-time integrity" that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "traffic volume measurement", for any of the optional IEs "Traffic volume measurement Object", "Traffic volume measurement quantity", "Traffic volume reporting quantity", "Measurement Validity" and "parameters required for each event" (given "report criteria" is set to "traffic volume measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "quality measurement", for any of the optional IE "Quality reporting quantity" that is present in the MEASUREMENT CONTROL message:
      - 4> if measurement type is set to "UE internal measurement", for any of the optional IEs "UE internal measurement quantity", "UE internal reporting quantity" and "parameters required for each event" (given "report criteria" is set to "UE internal measurement reporting criteria") that are present in the MEASUREMENT CONTROL message:

- 5> replace all instances of the IEs listed above (and all their children) stored in variable MEASUREMENT\_IDENTITY associated to the identity indicated by the IE "measurement identity" with the IEs received in the MEASUREMENT CONTROL message;
- 5> leave all other stored information elements unchanged in the variable MEASUREMENT\_IDENTITY.

#### 3> otherwise:

- 4> set the variable CONFIGURATION\_INCOMPLETE to TRUE.
- 2> if measurement type is set to "inter-frequency measurement":
  - 3> if "report criteria" is set to "intra-frequency report criteria" and "reporting criteria" in "inter-frequency measurement quantity" is set to "intra-frequency reporting criteria":
    - 4> leave the currently stored "inter-frequency report criteria" within "report criteria" and "inter-frequency reporting criteria" within "inter-frequency measurement quantity" unchanged, and continue to act on the information stored in these variables, and also store the newly received "intra-frequency report criteria" and intra-frequency reporting criteria.

#### 3> otherwise:

- 4> clear the variables associated with the CHOICE "report criteria" and store the received "report criteria" choice;
- 4> if the IE "inter-frequency measurement quantity" is present:
  - 5> clear the variables associated with the choice "reporting criteria" in "inter-frequency measurement quantity" and store the received "reporting criteria" choice.
- NOTE: If the UTRAN wants to modify the inter-frequency cell info list for an inter-frequency measurement configured with event based reporting without repeating any IEs related to the configured events, the only possibility is to set the IE "report criteria" to "intra-frequency report criteria", not include the IE "parameters required for each event", and set the IE "reporting criteria" in the IE "inter-frequency measurement quantity" to "intra-frequency reporting criteria".
  - 2> for measurement types "inter-frequency measurement" that require measurements on a frequency other than the actually used frequency, or that require measurements on another RAT:
    - 3> if, according to its measurement capabilities, the UE requires compressed mode to perform that measurement type and after reception of this message a compressed mode pattern sequence with an appropriate measurement purpose is active according to the IE "Current TGPS Status Flag" in UE variable TGPS\_IDENTITY; or
    - 3> if, according to its measurement capabilities, the UE does not require compressed mode, on at least one supported band of that measurement type, to perform the measurements:
      - 4> resume the measurements according to the new stored measurement control information.
  - 2> for measurement type "inter-frequency measurement" that requires measurements only on the same frequency as the actually used frequency:
    - 3> if the measurement is valid in the current RRC state of the UE:
      - 4> resume measurements according to the new stored control information for this measurement identity.
  - 2> for any other measurement type:
    - 3> resume the measurements according to the new stored measurement control information.
- 1> if the IE "measurement command" has the value "release":
  - 2> terminate the measurement associated with the identity given in the IE "measurement identity";
  - 2> clear all stored measurement control information related associated to this measurement identity in variable MEASUREMENT\_IDENTITY.

- 1> if the IE "DPCH Compressed Mode Status Info" is present:
  - 2> if, as the result of this message, UE will have more than one transmission gap pattern sequence with the same measurement purpose active (according to IE 'TGMP' in variable TGPS\_IDENTITY):
    - 3> set the variable CONFIGURATION INCOMPLETE to TRUE.
  - 2> if there is any pending "TGPS reconfiguration CFN" or any pending "TGCFN":
    - 3> the UE behaviour is unspecified;
  - 2> if pattern sequence corresponding to IE "TGPSI" is already active (according to "Current TGPS Status Flag") in the variable TGPS\_IDENTITY):
    - 3> if the "TGPS Status Flag" in this message is set to "deactivate" for the corresponding pattern sequence:
      - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message;
      - 4> set the "Current TGPS Status Flag" for this pattern sequence in the variable TGPS\_IDENTITY to "inactive".
    - 3> if the "TGPS Status Flag" in this message is set to "activate" for the corresponding pattern sequence:
      - 4> deactivate this pattern sequence at the beginning of the frame indicated by IE "TGPS reconfiguration CFN" received in the message.
- NOTE: The temporary deactivation of pattern sequences for which the status flag is set to "activate" can be used by the network to align the timing of already active patterns with newly activated patterns.
  - 2> after the time indicated by IE "TGPS reconfiguration CFN" has elapsed:
    - 3> activate the pattern sequence corresponding to each IE "TGPSI" for which the "TGPS status flag" in this message is set to "activate" at the time indicated by IE "TGCFN"; and
    - 3> set the corresponding "Current TGPS status flag" for this pattern sequence in the variable TGPS\_IDENTITY to "active"; and
    - 3> begin the inter-frequency and/or inter-RAT measurements corresponding to the pattern sequence measurement purpose of each activated pattern sequence;
    - 3> if the values of IE "TGPS reconfiguration CFN" and IE "TGCFN" are equal:
      - 4> start the concerned pattern sequence immediately at that CFN.
  - 2> not alter pattern sequences stored in variable TGPS\_IDENTITY, if the pattern sequence is not identitifed in IE "TGPSI" in the received message.
- 1> if the UE in CELL\_FACH state receives a MEASUREMENT CONTROL message, which indicates the same measurement identity as that stored in the variable MEASUREMENT\_IDENTITY:
  - 2> update the stored information with the traffic volume measurement control information in variable MEASUREMENT\_IDENTITY; and
  - 2> refrain from updating the traffic volume measurement control information associated with this measurement identity in the variable MEASUREMENT\_IDENTITY with the information received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) until this measurement is explicitly released with another MEASUREMENT CONTROL message.
- NOTE

  If the IE "measurement validity" is included in the received MEASUREMENT CONTROL message and it has the value "CELL DCH", the UE may update the traffic volume measurement control information associated with this measurement identifity in the variable MEASUREMENT\_IDENTITY with the information received in the System Information Block type 12 (or System Information Block type 11) after a transition to CELL\_DCH and a subsequent transition to CELL\_FACH, CELL\_PCH or URA\_PCH (see 8.4.1.6.6.).

- 1> if the IE "Read SFN indicator" included in the IE "Cell info" of an inter-frequency cell is set to TRUE and the variable UE\_CAPABILITY\_TRANSFERRED has the DL "Measurement capability" for "FDD measurements" set to TRUE (the UE requires DL compressed mode in order to perform measurements on FDD):
  - 2> set the variable CONFIGURATION\_INCOMPLETE to TRUE.
- 1> clear the entry for the MEASUREMENT CONTROL message in the table "Accepted transactions" in the variable TRANSACTIONS.

#### The UE may:

- 1> if the IE "Measurement command" has the value "setup":
  - 2> for measurement type "UE positioning measurement":
    - 3> if the UE is CELL\_FACH state:
      - 4> if IE "Positioning Method" is set to "GPS":
        - 5> if IE "UE positioning GPS assistance data" is not included and variable UE\_POSITIONING\_GPS\_DATA is empty:
          - 6> if System Information Block types 15, 15.1, 15.2 and 15.3 are broadcast:
            - 7> read System Information Block types 15, 15.1, 15.2 and 15.3.
          - 6> act as specified in subclause 8.6.7.19.3.
- 1> and the procedure ends.

#### 8.4.1.6.6 Traffic volume measurement

Upon transition from CELL\_DCH to CELL\_FACH or CELL\_PCH or URA\_PCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT\_IDENTITY; and
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> stop measurement reporting;
    - 3> store the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_DCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_FACH or CELL\_PCH or URA\_PCH states (stored in the variable MEASUREMENT\_IDENTITY), which has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;

2> begin traffic volume measurement reporting according to the assigned information.

#### 8.4.1.7.4 Traffic volume measurement

Upon transition from CELL\_FACH to CELL\_DCH state, the UE shall:

- 1> retrieve each set of measurement control information of measurement type "traffic volume" stored in the variable MEASUREMENT\_IDENTITY;
  - 2> if the optional IE "measurement validity" for this measurement has not been included:
    - 3> delete the measurement associated with the variable MEASUREMENT\_IDENTITY.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states except CELL\_DCH":
    - 3> stop measurement reporting; and
    - 3> save the measurement associated with the variable MEASUREMENT\_IDENTITY to be used after the next transition to CELL\_FACH/CELL\_PCH/URA\_PCH state.
  - 2> if the IE "measurement validity" for the measurement has been included, and the IE "UE state" has been assigned to value "all states":
    - 3> continue measurement reporting.
  - 2> if the IE "measurement validity" has been included and the IE "UE state" has been assigned to value "CELL\_DCH":
    - 3> resume this measurement and associated reporting.
- 1> if no traffic volume type measurement has been assigned to the UE with a MEASUREMENT CONTROL message that is valid in CELL\_DCH and has the same identity as the one indicated in the IE "Traffic volume measurement system information":
  - 2> store the measurement control information from the IE "Traffic volume measurement system information" received in System Information Block type 12 (or System Information Block type 11, according to subclause 8.1.1.6.11) in the variable MEASUREMENT\_IDENTITY;
  - 2> begin traffic volume measurement reporting according to the assigned information.

# 3GPP TSG-RAN WG2 Meeting #39 San Diego, USA, November 17<sup>th</sup> – 21<sup>st</sup>, 2003

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a) It will not be able to report correctly in case of positioning method CELL

If UE does not implement the CR:

b) It will not be able to report correctly according to its capability for GPS timing of the cell frames measurement and according the setting of IE "GPS timing of Cell wanted".

\*\*Consequences if not approved:

\*\*Erroneous handling of UE positioning reporting in case of method "CELL ID" Erroneous handling of UE capability "Support for GPS timing of the cell frames measurement" and IE "GPS timing of Cell wanted"

Clauses affected:	₩ 8.6.7.19.1a, 8.6.7.19.1.b
Other specs affected:	Y N  X Other core specifications Test specifications O&M Specifications
Other comments:	<b>x</b>

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

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- 1) Fill out the above form. The symbols above marked \( \mathbb{H} \) contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

### 8.6.7.19.1a UE positioning reporting for UE assisted methods

- 1> when a measurement report is triggered:
  - 2> if the UE was able to perform measurements on at least one neighbour cell included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED in case of OTDOA or one satellite included in the variable UE\_POSITIONING\_GPS\_DATA in case of GPS positioning or one cell from the active set in case of CELL ID:
    - 3> if the IE "Vertical Accuracy" is included:
      - 4> interpret the presence of this IE to indicate that the UTRAN desires to compute a 3-dimensional position estimate.
    - 3> if the IE "Positioning Methods" is set to "GPS":
      - 4> include the IE "UE positioning GPS measured results" in the measurement report and set the contents of the IE as follows:
        - 5> if the UE supports the capability to provide the GPS timing of the cell frames measurement:
          - 6> if the IE "GPS timing of Cell wanted" is set to TRUE:
            - 7> perform the UE GPS timing of cell frames measurement on the serving cell or on one cell of the active set.
            - 7> include the IE "Primary CPICH Info" for FDD or the IE "cell parameters id" for TDD; and
            - 7> include the IE "Reference SFN" and the IE "UE GPS timing of cell frames".
          - 6> if the UE does not support the capability to provide the GPS timing of the cell; or
          - 6> if the IE "GPS timing of Cell wanted" is set to FALSE:
            - 7> include the IE "GPS TOW msec".
        - 5> if the UE does not support the capability to provide the GPS timing of the cell:
          - 6> include the IE "GPS TOW msec".
    - 3> if the IE "Positioning Methods" is set to "OTDOA":
      - 4> include the IE "UE positioning OTDOA measured results" in the measurement report and set the contents of the IE as follows:
        - 5> set IE "SFN" to the SFN when the last measurement was performed;
        - 5> if the UE supports the capability to perform the Rx-Tx time difference type 2 measurement:
          - 6> if the UE is in CELL\_DCH state:
            - 7> if the measured value is equal to "1279.9375":
              - 8> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to "1279.8750".
            - 7> otherwise:
              - 8> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to the measured value.
            - 7> include the IE group "Rx-Tx time difference type 2 info" for the reference cell and for each neighbour cell listed in variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED that belongs to the active set.

- 5> if the UE does not support the capability to perform the Rx-Tx time difference type 2 measurement:
  - 6> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to value "1279.9375" to indicate that the measurement is not supported.
- 4> include IE group "Neighbour" for all neighbour cells listed in variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED on which the SFN-SFN observed time difference type 2 measurement could be performed.
- 3> if IE "Positioning Methods" in the MEASUREMENT CONTROL message has been assigned to value "OTDOA or GPS":
  - 4> the UE may choose to either act as if IE "Positioning Methods" is set to "GPS" or "OTDOA" depending on the method chosen by the UE.
- 3> if the IE "Positioning Methods" is set to "CELL ID":
  - 4> if the UE supports the capability to perform the Rx-Tx time difference type 2 measurement; and
  - 4> if the UE is in CELL\_DCH state:
    - 5> perform the Rx-Tx time difference type 2 measurement on the cells in the active set; and
    - 5> report the measurement results back to the network in the MEASUREMENT REPORT by using IE "UE positioning OTDOA measured results" including measurements on the cells in the active set; and
    - 5> report Rx-Tx time difference type 2 measurement of the reference cell (as designated by the UE); and
    - 5> for all reported neighbour cells:
      - 6> report Rx-Tx time difference type 2 measurement; and
      - 6> set the IE "SFN-SFN observed time difference type 2" and all IEs within the corresponding IE "UE positioning OTDOA quality" in IE "UE positioning OTDOA measured results" to value "0".
- 1> if the UE is not able to report the requested measurement results:
  - 2> include IE "UE positioning error" in the MEASUREMENT REPORT and set the contents of this IE as specified in subclause 8.6.7.19.5.

#### 8.6.7.19.1b UE positioning reporting for UE based methods

- 1> when a measurement report is triggered:
  - 2> if the UE has been able to calculate a position after performing measurements on the cells included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED in case of OTDOA or on the list of satellites included in the variable UE\_POSITIONING\_GPS\_DATA in case of GPS positioning:
    - 3> include IE "UE positioning Position Estimate Info" in the MEASUREMENT REPORT and set the contents of the IE as follows:
      - 4> if the UE supports the capability to perform the UE GPS timing of cell frames measurement UTRAN has requested to report the GPS timing of cell frames; and:
      - 4>5> if the IE "GPS timing of Cell wanted" is set to TRUE:
        - 5>6> perform the UE GPS timing of cell frames measurement on the serving cell or on one cell of the active set.
        - 5→6> include the IE "Primary CPICH Info" for FDD or the IE "cell parameters id" for TDD;

- 5>6≥ include the SFN when the position was determined;
- 5>6> include the IE "UE GPS timing of cell frames".
- 4> if the UE does not support the capability to perform the UE GPS timing of cell frames measurement; or
- $4 \rightarrow 5 \ge$  if the IE "GPS timing of Cell wanted" is set to FALSE:
  - 5>6> include the IE "GPS TOW msec".
- 4> if the UE does not support the capability to provide the GPS timing of the cell:
  - 5> include the IE "GPS TOW msec".
- 4> if IE "Vertical Accuracy" has been included in IE "UE positioning reporting quantity":
  - 5> if the IE "Vertical Accuracy" has been assigned to value "0":
    - 6> if the IE "Horizontal Accuracy" has been assigned a value "0":
      - 7> may include IE "Ellipsoid point with altitude".
    - 6> if the IE "Horizontal Accuracy" has been assigned a value unequal to "0"; and
    - 6> if the UE has been able to calculate a 3-dimensional position
      - 7> include IE "Ellipsoid point with altitude" or IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
    - 6> if the UE has not been able to calculate a 3-dimensional position:
      - 7> may act as if IE "Vertical Accuracy" was not included in IE "UE positioning reporting quantity".
  - 5> if the IE "Vertical Accuracy" has been assigned to a value unequal to "0":
    - 6> if the UE has been able to calculate a 3-dimensional position:
      - 7> include IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
    - 6> if the UE has not been able to calculate a 3-dimensional position:
      - 7> act as if IE "Vertical Accuracy" has not been included in IE "UE positioning reporting quantity".
- 4> if IE "Vertical Accuracy" has not been included in IE "UE positioning reporting quantity":
  - 5> if IE "Horizontal Accuracy" in IE "UE positioning reporting quantity" has been assigned to value "0":
    - 6> may include IE "Ellipsoid point".
  - 5> if IE "Horizontal Accuracy" in IE "UE positioning reporting quantity" has been assigned to a value unequal to 0:
    - 6> include either IE "Ellipsoid point with uncertainty circle" or IE "Ellipsoid point with uncertainty ellipse" or IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
- 1> if the UE was not able to calculate a position:
  - 2> include IE "UE positioning error" in the MEASUREMENT REPORT and set the contents of this IE as specified in subclause 8.6.7.19.5.

# 3GPP TSG-RAN WG2 Meeting #39 San Diego, USA, November 17<sup>th</sup> – 21<sup>st</sup>, 2003

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Consequences if not approved:

# Erroneous handling of UE positioning reporting in case of method "CELL ID" Erroneous handling of of UE capability "Support for GPS timing of the cell frames measurement" and IE "GPS timing of Cell wanted"

Clauses affected:	<b>%</b> 8.6.7.19.1a, 8.6.7.19.1.b
Other specs affected:	Y N  X Other core specifications X Test specifications O&M Specifications
Other comments:	lpha

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### 8.6.7.19.1a UE positioning reporting for UE assisted methods

- 1> when a measurement report is triggered:
  - 2> if the UE was able to perform measurements on at least one neighbour cell included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED in case of OTDOA or one satellite included in the variable UE\_POSITIONING\_GPS\_DATA in case of GPS positioning or one cell from the active set in case of CELL ID:
    - 3> if the IE "Vertical Accuracy" is included:
      - 4> interpret the presence of this IE to indicate that the UTRAN desires to compute a 3-dimensional position estimate.
    - 3> if the IE "Positioning Methods" is set to "GPS":
      - 4> include the IE "UE positioning GPS measured results" in the measurement report and set the contents of the IE as follows:
        - 5> if the UE supports the capability to provide the GPS timing of the cell frames measurement:
          - 6> if the IE "GPS timing of Cell wanted" is set to TRUE:
            - 7> perform the UE GPS timing of cell frames measurement on the serving cell or on one cell of the active set.
            - 7> include the IE "Primary CPICH Info" for FDD or the IE "cell parameters id" for TDD; and
            - 7> include the IE "Reference SFN" and the IE "UE GPS timing of cell frames".
          - 6> if the UE does not support the capability to provide the GPS timing of the cell; or
          - 6> if the IE "GPS timing of Cell wanted" is set to FALSE:
            - 7> include the IE "GPS TOW msec".
        - 5> if the UE does not support the capability to provide the GPS timing of the cell:
          - 6> include the IE "GPS TOW msec".
    - 3> if the IE "Positioning Methods" is set to "OTDOA":
      - 4> include the IE "UE positioning OTDOA measured results" in the measurement report and set the contents of the IE as follows:
        - 5> set IE "SFN" to the SFN when the last measurement was performed;
        - 5> if the UE supports the capability to perform the Rx-Tx time difference type 2 measurement:
          - 6> if the UE is in CELL\_DCH state:
            - 7> if the measured value is equal to "1279.9375":
              - 8> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to "1279.8750".
            - 7> otherwise:
              - 8> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to the measured value.
            - 7> include the IE group "Rx-Tx time difference type 2 info" for the reference cell and for each neighbour cell listed in variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED that belongs to the active set.

- 5> if the UE does not support the capability to perform the Rx-Tx time difference type 2 measurement:
  - 6> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to value "1279.9375" to indicate that the measurement is not supported.
- 4> include IE group "Neighbour" for all neighbour cells listed in variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED on which the SFN-SFN observed time difference type 2 measurement could be performed.
- 3> if IE "Positioning Methods" in the MEASUREMENT CONTROL message has been assigned to value "OTDOA or GPS":
  - 4> the UE may choose to either act as if IE "Positioning Methods" is set to "GPS" or "OTDOA" depending on the method chosen by the UE.
- 3> if the IE "Positioning Methods" is set to "CELL ID":
  - 4> if the UE supports the capability to perform the Rx-Tx time difference type 2 measurement; and
  - 4> if the UE is in CELL\_DCH state:
    - 5> perform the Rx-Tx time difference type 2 measurement on the cells in the active set; and
    - 5> report the measurement results back to the network in the MEASUREMENT REPORT by using IE "UE positioning OTDOA measured results" including measurements on the cells in the active set; and
    - 5> report Rx-Tx time difference type 2 measurement of the reference cell (as designated by the UE); and
    - 5> for all reported neighbour cells:
      - 6> report Rx-Tx time difference type 2 measurement; and
      - 6> set the IE "SFN-SFN observed time difference type 2" and all IEs within the corresponding IE "UE positioning OTDOA quality" in IE "UE positioning OTDOA measured results" to value "0".
- 1> if the UE is not able to report the requested measurement results:
  - 2> include IE "UE positioning error" in the MEASUREMENT REPORT and set the contents of this IE as specified in subclause 8.6.7.19.5.

#### 8.6.7.19.1b UE positioning reporting for UE based methods

- 1> when a measurement report is triggered:
  - 2> if the UE has been able to calculate a position after performing measurements on the cells included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED in case of OTDOA or on the list of satellites included in the variable UE\_POSITIONING\_GPS\_DATA in case of GPS positioning:
    - 3> include IE "UE positioning Position Estimate Info" in the MEASUREMENT REPORT and set the contents of the IE as follows:
      - 4> if the UE supports the capability to perform the UE GPS timing of cell frames measurement: and UTRAN has requested to report the GPS timing of cell frames; and:
      - 4>-5> if the IE "GPS timing of Cell wanted" is set to TRUE:
        - 5>-6> perform the UE GPS timing of cell frames measurement on the serving cell or on one cell of the active set.
        - 5>6> include the IE "Primary CPICH Info" for FDD or the IE "cell parameters id" for TDD;

- 5>6> include the SFN when the position was determined;
- 5>6> include the IE "UE GPS timing of cell frames".
- 4> if the UE does not support the capability to perform the UE GPS timing of cell frames measurement; or
- 4>5> if the IE "GPS timing of Cell wanted" is set to FALSE:
  - 5>6> include the IE "GPS TOW msec".
- 4> if the UE does not support the capability to provide the GPS timing of the cell:
  - 5> include the IE "GPS TOW msec".
- 4> if IE "Vertical Accuracy" has been included in IE "UE positioning reporting quantity":
  - 5> if the IE "Vertical Accuracy" has been assigned to value "0":
    - 6> if the IE "Horizontal Accuracy" has been assigned a value "0":
      - 7> may include IE "Ellipsoid point with altitude".
    - 6> if the IE "Horizontal Accuracy" has been assigned a value unequal to "0"; and
    - 6> if the UE has been able to calculate a 3-dimensional position
      - 7> include IE "Ellipsoid point with altitude" or IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
    - 6> if the UE has not been able to calculate a 3-dimensional position:
      - 7> may act as if IE "Vertical Accuracy" was not included in IE "UE positioning reporting quantity".
  - 5> if the IE "Vertical Accuracy" has been assigned to a value unequal to "0":
    - 6> if the UE has been able to calculate a 3-dimensional position:
      - 7> include IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
    - 6> if the UE has not been able to calculate a 3-dimensional position:
      - 7> act as if IE "Vertical Accuracy" has not been included in IE "UE positioning reporting quantity".
- 4> if IE "Vertical Accuracy" has not been included in IE "UE positioning reporting quantity":
  - 5> if IE "Horizontal Accuracy" in IE "UE positioning reporting quantity" has been assigned to value "0":
    - 6> may include IE "Ellipsoid point".
  - 5> if IE "Horizontal Accuracy" in IE "UE positioning reporting quantity" has been assigned to a value unequal to 0:
    - 6> include either IE "Ellipsoid point with uncertainty circle" or IE "Ellipsoid point with uncertainty ellipse" or IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
- 1> if the UE was not able to calculate a position:
  - 2> include IE "UE positioning error" in the MEASUREMENT REPORT and set the contents of this IE as specified in subclause 8.6.7.19.5.

	CHAN	GE REQUES	CR-Form-v7
ж <mark>2</mark>	5.331 CR 2124	жrev - ж	Current version: 5.6.0 **
For <u>HELP</u> on using	ຖ this form, see bottom of	f this page or look at t	he pop-up text over the <b>%</b> symbols.
Proposed change affe	ects: UICC apps#	ME X Radio	Access Network Core Network
Title: 第 C	orrections to UE position	ing reporting for UE a	ssisted and UE based methods
Source: # R	AN WG2		
Work item code: ₩ T	El		Date: % 17/11/2003
Det	e one of the following categor F (correction)  A (corresponds to a corresponds (addition of feature),  C (functional modification)  tailed explanations of the attempt of the atte	ection in an earlier release of feature)  pove categories can  9.1a UE positioning relation can never become CELL ID". subsequent text in the CLL ID" is selected.  9.1a UE positioning repositioning repositioning repositioning for	Release: # Rel-5  Use one of the following releases: 2 (GSM Phase 2) se) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6) eporting for UE assisted methods", the ne TRUE in case the IE "Positioning e body describes the UE behaviour in eporting for UE assisted methods" and or UE base methods", there is an ng of UE capability "Support for GPS
	timing of the cell f	rames measurement	and IE "GPS timing of Cell wanted"
Summary of change: 8		ition is changed the w	eporting for UE assisted methods", the ay, that it can become TRUE also in
	"8.6.7.19.1b UE p is changed the wa a) UTRAN base case GPS tim b) IE "GPS TOW	positioning reporting for ay that d selection by IE "GP ning of the cell frames	eporting for UE assisted methods" and or UE base methods", the description  S timing of Cell wanted" is possible in measurement is supported.  to the report, if GPS timing of the cell ted.
Consequences if not approved:		f of UE capability "Su	rting in case of method "CELL ID" pport for GPS timing of the cell frames wanted"

Clauses affected:	<b>%</b> 8.6.7.19.1a, 8.6.7.19.1.b
Other specs affected:	Y N  X Other core specifications X Test specifications O&M Specifications
Other comments:	lpha

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

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

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <a href="ftp://ftp.3gpp.org/specs/">ftp://ftp.3gpp.org/specs/</a> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

### 8.6.7.19.1a UE positioning reporting for UE assisted methods

- 1> when a measurement report is triggered:
  - 2> if the UE was able to perform measurements on at least one neighbour cell included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED in case of OTDOA or one satellite included in the variable UE\_POSITIONING\_GPS\_DATA in case of GPS positioning or one cell from the active set in case of CELL ID:
    - 3> if the IE "Vertical Accuracy" is included:
      - 4> interpret the presence of this IE to indicate that the UTRAN desires to compute a 3-dimensional position estimate.
    - 3> if the IE "Positioning Methods" is set to "GPS":
      - 4> include the IE "UE positioning GPS measured results" in the measurement report and set the contents of the IE as follows:
        - 5> if the UE supports the capability to provide the GPS timing of the cell frames measurement:
          - 6> if the IE "GPS timing of Cell wanted" is set to TRUE:
            - 7> perform the UE GPS timing of cell frames measurement on the serving cell or on one cell of the active set.
            - 7> include the IE "Primary CPICH Info" for FDD or the IE "cell parameters id" for TDD; and
            - 7> include the IE "Reference SFN" and the IE "UE GPS timing of cell frames".
          - 6> if the UE does not support the capability to provide the GPS timing of the cell; or
          - 6> if the IE "GPS timing of Cell wanted" is set to FALSE:
            - 7> include the IE "GPS TOW msec".
        - 5> if the UE does not support the capability to provide the GPS timing of the cell:
          - 6> include the IE "GPS TOW msec".
    - 3> if the IE "Positioning Methods" is set to "OTDOA":
      - 4> include the IE "UE positioning OTDOA measured results" in the measurement report and set the contents of the IE as follows:
        - 5> set IE "SFN" to the SFN when the last measurement was performed;
        - 5> if the UE supports the capability to perform the Rx-Tx time difference type 2 measurement:
          - 6> if the UE is in CELL\_DCH state:
            - 7> if the measured value is equal to "1279.9375":
              - 8> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to "1279.8750".
            - 7> otherwise:
              - 8> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to the measured value.
            - 7> include the IE group "Rx-Tx time difference type 2 info" for the reference cell and for each neighbour cell listed in variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED that belongs to the active set.

- 5> if the UE does not support the capability to perform the Rx-Tx time difference type 2 measurement:
  - 6> set the IE "Rx-Tx time difference type 2" in IE "UE positioning OTDOA measured results" for the reference cell to value "1279.9375" to indicate that the measurement is not supported.
- 4> include IE group "Neighbour" for all neighbour cells listed in variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_ASSISTED on which the SFN-SFN observed time difference type 2 measurement could be performed.
- 3> if IE "Positioning Methods" in the MEASUREMENT CONTROL message has been assigned to value "OTDOA or GPS":
  - 4> the UE may choose to either act as if IE "Positioning Methods" is set to "GPS" or "OTDOA" depending on the method chosen by the UE.
- 3> if the IE "Positioning Methods" is set to "CELL ID":
  - 4> if the UE supports the capability to perform the Rx-Tx time difference type 2 measurement; and
  - 4> if the UE is in CELL\_DCH state:
    - 5> perform the Rx-Tx time difference type 2 measurement on the cells in the active set; and
    - 5> report the measurement results back to the network in the MEASUREMENT REPORT by using IE "UE positioning OTDOA measured results" including measurements on the cells in the active set; and
    - 5> report Rx-Tx time difference type 2 measurement of the reference cell (as designated by the UE); and
    - 5> for all reported neighbour cells:
      - 6> report Rx-Tx time difference type 2 measurement; and
      - 6> set the IE "SFN-SFN observed time difference type 2" and all IEs within the corresponding IE "UE positioning OTDOA quality" in IE "UE positioning OTDOA measured results" to value "0".
- 1> if the UE is not able to report the requested measurement results:
  - 2> include IE "UE positioning error" in the MEASUREMENT REPORT and set the contents of this IE as specified in subclause 8.6.7.19.5.

#### 8.6.7.19.1b UE positioning reporting for UE based methods

- 1> when a measurement report is triggered:
  - 2> if the UE has been able to calculate a position after performing measurements on the cells included in the variable UE\_POSITIONING\_OTDOA\_DATA\_UE\_BASED in case of OTDOA or on the list of satellites included in the variable UE\_POSITIONING\_GPS\_DATA in case of GPS positioning:
    - 3> include IE "UE positioning Position Estimate Info" in the MEASUREMENT REPORT and set the contents of the IE as follows:
      - 4> if the UE supports the capability to perform the UE GPS timing of cell frames measurement: and UTRAN has requested to report the GPS timing of cell frames; and:
      - 4>-5> if the IE "GPS timing of Cell wanted" is set to TRUE:
        - 5>-6> perform the UE GPS timing of cell frames measurement on the serving cell or on one cell of the active set.
        - 5>6> include the IE "Primary CPICH Info" for FDD or the IE "cell parameters id" for TDD;

- 5>6> include the SFN when the position was determined;
- 5>6> include the IE "UE GPS timing of cell frames".
- 4> if the UE does not support the capability to perform the UE GPS timing of cell frames measurement; or
- 4>5> if the IE "GPS timing of Cell wanted" is set to FALSE:
  - 5>6> include the IE "GPS TOW msec".
- 4> if the UE does not support the capability to provide the GPS timing of the cell:
  - 5> include the IE "GPS TOW msec".
- 4> if IE "Vertical Accuracy" has been included in IE "UE positioning reporting quantity":
  - 5> if the IE "Vertical Accuracy" has been assigned to value "0":
    - 6> if the IE "Horizontal Accuracy" has been assigned a value "0":
      - 7> may include IE "Ellipsoid point with altitude".
    - 6> if the IE "Horizontal Accuracy" has been assigned a value unequal to "0"; and
    - 6> if the UE has been able to calculate a 3-dimensional position
      - 7> include IE "Ellipsoid point with altitude" or IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
    - 6> if the UE has not been able to calculate a 3-dimensional position:
      - 7> may act as if IE "Vertical Accuracy" was not included in IE "UE positioning reporting quantity".
  - 5> if the IE "Vertical Accuracy" has been assigned to a value unequal to "0":
    - 6> if the UE has been able to calculate a 3-dimensional position:
      - 7> include IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
    - 6> if the UE has not been able to calculate a 3-dimensional position:
      - 7> act as if IE "Vertical Accuracy" has not been included in IE "UE positioning reporting quantity".
- 4> if IE "Vertical Accuracy" has not been included in IE "UE positioning reporting quantity":
  - 5> if IE "Horizontal Accuracy" in IE "UE positioning reporting quantity" has been assigned to value "0":
    - 6> may include IE "Ellipsoid point".
  - 5> if IE "Horizontal Accuracy" in IE "UE positioning reporting quantity" has been assigned to a value unequal to 0:
    - 6> include either IE "Ellipsoid point with uncertainty circle" or IE "Ellipsoid point with uncertainty ellipse" or IE "Ellipsoid point with altitude and uncertainty ellipsoid" as the position estimate.
- 1> if the UE was not able to calculate a position:
  - 2> include IE "UE positioning error" in the MEASUREMENT REPORT and set the contents of this IE as specified in subclause 8.6.7.19.5.