TSG RAN Meeting #19 **RP-030067**
Birmingham, UK, 11 - 14 March 2003

Title **CRs (Rel-4 and Rel-5 Category A) to TS 25.413, 25.423 and 25.453 (only Rel-5) on Alignment of "Uncertainty Ellipse" with RRC**
Source **TSG RAN WG3**
Agenda Item **8.3.6**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030130	25.413	4.7.0	4.8.0	REL-4	549	-	F	Alignment of "Uncertainty Ellipse" with RRC	TEI4
R3-030131	25.413	5.3.0	5.4.0	REL-5	550	-	A	Alignment of "Uncertainty Ellipse" with RRC	TEI4
R3-030132	25.423	4.7.0	4.8.0	REL-4	795	-	F	Alignment of "Uncertainty Ellipse" with RRC	TEI4
R3-030133	25.423	5.4.0	5.5.0	REL-5	796	-	A	Alignment of "Uncertainty Ellipse" with RRC	TEI4
R3-030134	25.453	5.4.0	5.5.0	REL-5	026	-	F	Alignment of "Uncertainty Ellipse" with RRC	TEI4

3GPP TSG- RAN WG3 Meeting #34 **⌘R3-030130**
Sophia Antipolis, France, February 17th – 21st, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.413** **CR** **549** ⌘**rev** **-** ⌘ Current version: **4.7.0** ⌘

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

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

Title:	⌘	Alignment of "Uncertainty Ellipse" with RRC
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	17/02/03
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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

Reason for change: ⌘ RRC (25.331) considers the value of the *Orientation of major axis* IE to be an integer in the range 0..89. This appears to be correct due to the fact that orientation of a major axis can be represented by an angle within the range 0 to 180 degrees.

Whereas, the type definition of the *Orientation of major axis* IE within the *Geographical Area* IE states that the value shall be an integer in the range 0..179.Thus, there is a discrepancy between RRC and RANAP.

Summary of change: ⌘ In the Semantics Description and ASN.1 of the *Orientation of major axis* IE the comment "The values 90..179 shall not be used" is added.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):
This CR has isolated impact with the previous version of the specification (same release) because clarification of not needed values of the Orientation of major axis is added.
This CR has an impact under functional point of view. The impact can be considered isolated because the change affects one function namely UE positioning.
Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ If this CR is not approved, wrong interpretation of the axis orientation may result in erroneous estimate of the accuracy of the position location or in erroneous interpretation of assistance data, which could in turn increase the time needed to

	achive a position fix.

Clauses affected:	⌘	9.2.3.11, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR550 25.413 Rel-5 CR795 25.423 Rel-4 CR796 25.423 Rel-5 CR026 25.453 Rel-5
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

9.2.3.11 Geographical Area

Geographical Area IE is used to identify an area, as seen from the CN, using geographical coordinates. The reference system is the same as the one used in [20].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Choice **Geographical Area**				
>Point			See below	Ellipsoid point
>Point With Uncertainty			See below	Ellipsoid point with uncertainty circle
>Polygon			See below	List of Ellipsoid points
>Ellipsoid point with uncertainty Ellipse			See below	Ellipsoid point with uncertainty Ellipse
>Ellipsoid point with altitude			See below	Ellipsoid point with altitude
>Ellipsoid point with altitude and uncertainty Ellipsoid			See below	Ellipsoid point with altitude and uncertainty Ellipsoid
>Ellipsoid Arc			See below	Ellipsoid Arc

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Point				
>Geographical Coordinates	M		See below	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Point With Uncertainty				
>Geographical Coordinates	M		See below	
>Uncertainty Code	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Polygon				
>Geographical Coordinates	M	1 to <maxnoofPoints>	See below	

Range bound	Explanation
maxnoofPoints	Maximum no. of points in polygon. Value is 15.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid point with uncertainty Ellipse				
>Geographical Coordinates	M		See below	
>Uncertainty Ellipse	M		See below	
>Confidence	M		INTEGER(0..127)	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid point with altitude				
>Geographical Coordinates	M		See below	
>Altitude and direction	M		See below	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid point with altitude and uncertainty Ellipsoid				
>Geographical Coordinates	M		See below	
>Altitude and direction	M		See below	
>Uncertainty Ellipse	M		See below	
>Uncertainty Altitude	M		INTEGER(0..127)	
>Confidence	M		INTEGER(0..127)	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid Arc				
>Geographical Coordinates	M		See below	
>Inner radius	M		INTEGER ($0..2^{16}$-1)	The relation between the value (N) and the radius (r) in meters it describes is $5N \leq r < 5(N+1)$, except for $N=2^{16}-1$ for which the range is extended to include all grater values of (r).
>Uncertainty radius	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^{k}-1)$
>Offset angle	M		INTEGER(0..179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$
>Included angle	M		INTEGER(0..179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$
>Confidence	M		INTEGER(0..127)	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Geographical Coordinates				
>Latitude Sign	M		ENUMERATED (North, South)	
>Degrees Of Latitude	M		INTEGER ($0..2^{23}$-1)	The IE value (N) is derived by this formula: $N \leq 2^{23} X /90 < N+1$ X being the latitude in degree (0°.. 90°)
>Degrees Of Longitude	M		INTEGER ($-2^{23}..2^{23}$-1)	The IE value (N) is derived by this formula: $N \leq 2^{24} X /360 < N+1$ X being the longitude in degree (-180°..+180°)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uncertainty Ellipse				
>Uncertainty semi-major	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
>Uncertainty semi-minor	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
>Orientation of major axis	M		INTEGER(0..179)	The relation between the IE value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$. The values 90..179 shall not be used.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Altitude and direction				
>Direction of Altitude	M		ENUMERATED (Height, Depth)	
>Altitude	M		INTEGER ($0..2^{15}-1$)	The relation between the value (N) and the altitude (a) in meters it describes is $N \leq a < N+1$, except for $N=2^{15}-1$ for which the range is extended to include all grater values of (a).

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- G

GeographicalArea ::= CHOICE {
    point               GA-Point,
    pointWithUnCertainty        GA-PointWithUnCertainty,
    polygon             GA-Polygon,
    ...,
    pointWithUncertaintyEllipse     GA-PointWithUnCertaintyEllipse,
    pointWithAltitude       GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid        GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc        GA-EllipsoidArc
}

GeographicalCoordinates ::= SEQUENCE {
    latitudeSign            ENUMERATED { north, south },
    latitude            INTEGER (0..8388607),
    longitude           INTEGER (-8388608..8388607),
    iE-Extensions           ProtocolExtensionContainer { {GeographicalCoordinates-ExtIEs} } OPTIONAL,
    ...
}

GeographicalCoordinates-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-AltitudeAndDirection ::= SEQUENCE {
    directionOfAltitude     ENUMERATED {height, depth},
    altitude        INTEGER (0..32767),
    ...
}

GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    innerRadius                 INTEGER (0..65535),
    uncertaintyRadius           INTEGER (0..127),
    offsetAngle                 INTEGER (0..179),
    includedAngle               INTEGER (0..179),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs} } OPTIONAL,
    ...
}

GA-EllipsoidArc-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
GA-Point ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    iE-Extensions           ProtocolExtensionContainer { {GA-Point-ExtIEs} } OPTIONAL,
    ...
}

GA-Point-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitude-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    uncertaintyCode         INTEGER (0..127)
}

GA-PointWithUnCertainty-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
```

```
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithUnCertaintyEllipse-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-Polygon ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        geographicalCoordinates     GeographicalCoordinates,
        iE-Extensions           ProtocolExtensionContainer { {GA-Polygon-ExtIEs} } OPTIONAL,
        ...
    }

GA-Polygon-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..179),    -- The values 90..179 shall not be used.
    ...
}

GERAN-BSC-Container             ::= OCTET STRING
        -- GERAN BSC Container as defined in [11] --

GERAN-Classmark                 ::= OCTET STRING
        -- GERAN Classmark as defined in [11] --

GlobalCN-ID ::= SEQUENCE {
    pLMNidentity                PLMNidentity,
    cN-ID               CN-ID
}


GlobalRNC-ID ::= SEQUENCE {
    pLMNidentity                PLMNidentity,
    rNC-ID              RNC-ID
}

GTP-TEI                 ::= OCTET STRING (SIZE (4))
-- Reference: xx.xxx

GuaranteedBitrate           ::= INTEGER (0..16000000)
-- Unit is bits per sec
```

3GPP TSG- RAN WG3 Meeting #34 **⌘R3-030131**
Sophia Antipolis, France, February 17th – 21st, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.413** **CR** **550** ⌘**rev** **-** ⌘ Current version: **5.3.0** ⌘

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

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

Title:	⌘	Alignment of "Uncertainty Ellipse" with RRC
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	17/02/03
Category:	⌘	**A**
Release:	⌘	Rel-5

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

Reason for change: ⌘ RRC (25.331) considers the value of the *Orientation of major axis* IE to be an integer in the range 0..89. This appears to be correct due to the fact that orientation of a major axis can be represented by an angle within the range 0 to 180 degrees.

Whereas, the type definition of the *Orientation of major axis* IE within the *Geographical Area* IE states that the value shall be an integer in the range 0..179.Thus, there is a discrepancy between RRC and RANAP.

ummary of change: ⌘ In the Semantics Description and ASN.1 of the *Orientation of major axis* IE the comment "The values 90..179 shall not be used" is added.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):
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Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ If this CR is not approved, wrong interpretation of the axis orientation may result in erroneous estimate of the accuracy of the position location or in erroneous interpretation of assistance data, which could in turn increase the time needed to

	achieve a position fix.

Clauses affected:	⌘	9.2.3.11, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR549 25.413 Rel-4
					CR795 25.423 Rel-4
					CR796 25.423 Rel-5
					CR026 25.453 Rel-5
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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Geographical Area IE is used to identify an area, as seen from the CN, using geographical coordinates. The reference system is the same as the one used in [20].

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Choice **Geographical Area**				
>Point			See below	Ellipsoid point
>Point With Uncertainty			See below	Ellipsoid point with uncertainty circle
>Polygon			See below	List of Ellipsoid points
>Ellipsoid point with uncertainty Ellipse			See below	Ellipsoid point with uncertainty Ellipse
>Ellipsoid point with altitude			See below	Ellipsoid point with altitude
>Ellipsoid point with altitude and uncertainty Ellipsoid			See below	Ellipsoid point with altitude and uncertainty Ellipsoid
>Ellipsoid Arc			See below	Ellipsoid Arc

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Point				
>Geographical Coordinates	M		See below	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Point With Uncertainty				
>Geographical Coordinates	M		See below	
>Uncertainty Code	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Polygon				
>Geographical Coordinates	M	1 to <maxnoofPoints>	See below	

Range bound	Explanation
maxnoofPoints	Maximum no. of points in polygon. Value is 15.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid point with uncertainty Ellipse				
>Geographical Coordinates	M		See below	
>Uncertainty Ellipse	M		See below	
>Confidence	M		INTEGER(0..127)	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid point with altitude				
>Geographical Coordinates	M		See below	
>Altitude and direction	M		See below	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid point with altitude and uncertainty Ellipsoid				
>Geographical Coordinates	M		See below	
>Altitude and direction	M		See below	
>Uncertainty Ellipse	M		See below	
>Uncertainty Altitude	M		INTEGER(0..127)	
>Confidence	M		INTEGER(0..127)	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Ellipsoid Arc				
>Geographical Coordinates	M		See below	
>Inner radius	M		INTEGER ($0..2^{16}$-1)	The relation between the value (N) and the radius (r) in meters it describes is $5N \leq r < 5(N+1)$, except for $N=2^{16}-1$ for which the range is extended to include all grater values of (r).
>Uncertainty radius	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^{k}-1)$
>Offset angle	M		INTEGER(0..179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$
>Included angle	M		INTEGER(0..179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$
>Confidence	M		INTEGER(0..127)	

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Geographical Coordinates				
>Latitude Sign	M		ENUMERATED (North, South)	
>Degrees Of Latitude	M		INTEGER ($0..2^{23}$-1)	The IE value (N) is derived by this formula: $N \leq 2^{23} X /90 < N+1$ X being the latitude in degree (0°.. 90°)
>Degrees Of Longitude	M		INTEGER ($-2^{23}..2^{23}$-1)	The IE value (N) is derived by this formula: $N \leq 2^{24} X /360 < N+1$ X being the longitude in degree (-180°..+180°)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uncertainty Ellipse				
>Uncertainty semi-major	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
>Uncertainty semi-minor	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
>Orientation of major axis	M		INTEGER(0..179)	The relation between the IE value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$. The values 90..179 shall not be used.

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Altitude and direction				
>Direction of Altitude	M		ENUMERATED (Height, Depth)	
>Altitude	M		INTEGER ($0..2^{15}-1$)	The relation between the value (N) and the altitude (a) in meters it describes is $N \leq a < N+1$, except for $N=2^{15}-1$ for which the range is extended to include all grater values of (a).

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
-- G

GeographicalArea ::= CHOICE {
    point               GA-Point,
    pointWithUnCertainty        GA-PointWithUnCertainty,
    polygon             GA-Polygon,
    ...,
    pointWithUncertaintyEllipse     GA-PointWithUnCertaintyEllipse,
    pointWithAltitude       GA-PointWithAltitude,
    pointWithAltitudeAndUncertaintyEllipsoid        GA-PointWithAltitudeAndUncertaintyEllipsoid,
    ellipsoidArc        GA-EllipsoidArc
}

GeographicalCoordinates ::= SEQUENCE {
    latitudeSign            ENUMERATED { north, south },
    latitude            INTEGER (0..8388607),
    longitude           INTEGER (-8388608..8388607),
    iE-Extensions           ProtocolExtensionContainer { {GeographicalCoordinates-ExtIEs} } OPTIONAL,
    ...
}

GeographicalCoordinates-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-AltitudeAndDirection ::= SEQUENCE {
    directionOfAltitude     ENUMERATED {height, depth},
    altitude        INTEGER (0..32767),
    ...
}

GA-EllipsoidArc ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    innerRadius                 INTEGER (0..65535),
    uncertaintyRadius           INTEGER (0..127),
    offsetAngle                 INTEGER (0..179),
    includedAngle               INTEGER (0..179),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-EllipsoidArc-ExtIEs} } OPTIONAL,
    ...
}

GA-EllipsoidArc-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}
```

```
GA-Point ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    iE-Extensions           ProtocolExtensionContainer { {GA-Point-ExtIEs} } OPTIONAL,
    ...
}

GA-Point-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitude ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    altitudeAndDirection        GA-AltitudeAndDirection,
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitude-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitude-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    uncertaintyCode         INTEGER (0..127)
}

GA-PointWithUnCertainty-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
```

```
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithUnCertaintyEllipse-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-Polygon ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        geographicalCoordinates     GeographicalCoordinates,
        iE-Extensions           ProtocolExtensionContainer { {GA-Polygon-ExtIEs} } OPTIONAL,
        ...
    }

GA-Polygon-ExtIEs RANAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..179),    -- The values 90..179 shall not be used.
    ...
}

GERAN-BSC-Container             ::= OCTET STRING
        -- GERAN BSC Container as defined in [11] --

GERAN-Classmark                 ::= OCTET STRING
        -- GERAN Classmark as defined in [11] --

GlobalCN-ID ::= SEQUENCE {
    pLMNidentity                PLMNidentity,
    cN-ID               CN-ID
}


GlobalRNC-ID ::= SEQUENCE {
    pLMNidentity                PLMNidentity,
    rNC-ID              RNC-ID
}

GTP-TEI                 ::= OCTET STRING (SIZE (4))
-- Reference: xx.xxx

GuaranteedBitrate           ::= INTEGER (0..16000000)
-- Unit is bits per sec
```

3GPP TSG- RAN WG3 Meeting #34 **⌘R3-030132**
Sophia Antipolis, France, February 17th – 21st, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **795** ⌘ **rev** **-** ⌘ Current version: **4.7.0** ⌘

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

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

Title:	⌘	Alignment of "Uncertainty Ellipse" with RRC
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	17/02/03
Category:	⌘	**F**
Release:	⌘	Rel-4

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

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

Reason for change: ⌘ RRC (25.331) considers the value of the *Orientation of major axis* IE to be an integer in the range 0..89. This appears to be correct due to the fact that orientation of a major axis can be represented by an angle within the range 0 to 180 degrees.

Whereas, the type definition of the *Orientation of major axis* IE within the *Uncertainty Ellipse* IE in RNSAP states that the value shall be an integer in the range 0..179.Thus, there is a discrepancy between RRC and RNSAP.

Summary of change: ⌘ In the Semantics Description and ASN.1 of the *Orientation of major axis* IE the comment "The values 90..179 shall not be used" is added.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):
This CR has isolated impact with the previous version of the specification (same release) because clarification of not needed values of the Orientation of major axis is added.
This CR has an impact under functional point of view. The impact can be considered isolated because the change affects one function namely UE positioning.
Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ If this CR is not approved, wrong interpretation of the axis orientation may result in erroneous estimate of the accuracy of the position location or in erroneous

	interpretation of assistance data, which could in turn increase the time needed to achive a position fix.

Clauses affected:	⌘	9.2.1.68A, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR549 25.413 Rel-4 CR550 25.413 Rel-5 CR796 25.423 Rel-5 CR026 25.453 Rel-5
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

9.2.1.68A Uncertainty Ellipse

This IE contains the uncertainty ellipse used to describe a possible shape of the geographical area of a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uncertainty semi-major	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
Uncertainty semi-minor	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
Orientation of major axis	M		INTEGER(0..179)	The relation between the IE value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$. The values 90..179 shall not be used.

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithUnCertaintyEllipse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..179),    -- The values 90..179 shall not be used.
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyCode         INTEGER (0..127),
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    ...
}
```

/* partly omitted */

3GPP TSG- RAN WG3 Meeting #34 **⌘*R3-030133***
Sophia Antipolis, France, February 17th – 21st, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.423** **CR** **796** ⌘ **rev** **-** ⌘ Current version: **5.4.0** ⌘

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

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

Title:	⌘	Alignment of "Uncertainty Ellipse" with RRC
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	17/02/03
Category:	⌘	**A**
Release:	⌘	Rel-5

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

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

Reason for change: ⌘ RRC (25.331) considers the value of the *Orientation of major axis* IE to be an integer in the range 0..89. This appears to be correct due to the fact that orientation of a major axis can be represented by an angle within the range 0 to 180 degrees.

Whereas, the type definition of the *Orientation of major axis* IE within the *Uncertainty Ellipse* IE in RNSAP states that the value shall be an integer in the range 0..179.Thus, there is a discrepancy between RRC and RNSAP.

Summary of change: ⌘ In the Semantics Description and ASN.1 of the *Orientation of major axis* IE the comment "The values 90..179 shall not be used" is added.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):
This CR has isolated impact with the previous version of the specification (same release) because clarification of not needed values of the Orientation of major axis is added.
This CR has an impact under functional point of view. The impact can be considered isolated because the change affects one function namely UE positioning.
Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if not approved: ⌘ If this CR is not approved, wrong interpretation of the axis orientation may result in erroneous estimate of the accuracy of the position location or in erroneous

	interpretation of assistance data, which could in turn increase the time needed to achieve a position fix.

Clauses affected:	⌘	9.2.1.68A, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR549 25.413 Rel-4 CR550 25.413 Rel-5 CR795 25.423 Rel-4 CR026 25.453 Rel-5
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

9.2.1.68A Uncertainty Ellipse

This IE contains the uncertainty ellipse used to describe a possible shape of the geographical area of a cell.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Uncertainty semi-major	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
Uncertainty semi-minor	M		INTEGER(0..127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
Orientation of major axis	M		INTEGER(0..179)	The relation between the IE value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$. The values 90..179 shall not be used.

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithUnCertaintyEllipse-ExtIEs RNSAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..179),    -- The values 90..179 shall not be used.
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinate,
    uncertaintyCode         INTEGER (0..127),
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    ...
}
```

/* partly omitted */

3GPP TSG- RAN WG3 Meeting #34 **⌘*R3-030134***
Sophia Antipolis, France, February 17th – 21st, 2003

CR-Form-v7

CHANGE REQUEST

⌘ **25.453** **CR** **026** ⌘**rev** **-** ⌘ Current version: **5.4.0** ⌘

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

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

Title:	⌘	Alignment of "Uncertainty Ellipse" with RRC
Source:	⌘	RAN WG3
Work item code:	⌘	TEI4
Date:	⌘	17/02/03
Category:	⌘	**F**
Release:	⌘	Rel-5

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

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

Reason for change: ⌘ RRC (25.331) considers the value of the *Orientation of major axis* IE to be an integer in the range 0..89. This appears to be correct due to the fact that orientation of a major axis can be represented by an angle within the range 0 to 180 degrees.

Whereas, the type definition of the *Orientation of major axis* IE within the *Uncertainty Ellipse* IE in PCAP states that the value shall be an integer in the range 0..179.Thus, there is a discrepancy between RRC and PCAP.

Summary of change: ⌘ IIE type and referemce and ASN.1 of the *Orientation of major axis* IE is changed to 0..89.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):

This CR has isolated impact with the previous version of the specification (same release) because clarification of not needed values of the Orientation of major axis is added.

This CR has an impact under functional point of view. The impact can be considered isolated because the change affects one function namely UE positioning.

Would not affect implementations behaving like indicated in the CR, would affect implementations supporting the corrected functionality otherwise.

Consequences if ⌘ If this CR is not approved, wrong interpretation of the axis orientation may result in

not approved:	erroneous estimate of the accuracy of the position location or in erroneous interpretation of assistance data, which could in turn increase the time needed to achieve a position fix.

Clauses affected:	⌘	9.2.2.30, 9.3.4			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ CR549 25.413 Rel-4
					CR550 25.413 Rel-5
					CR795 25.423 Rel-4
					CR796 25.423 Rel-5
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

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

9.2.2.30 Uncertainty Ellipse

This IE contains the uncertainty ellipse of a geographical area.

Table 68

IE/Group Name	Presence	Range	IE type and reference	Semantics description
Uncertainty semi-major	M		INTEGER(0...127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
Uncertainty semi-minor	M		INTEGER(0...127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10x(1.1^k-1)$
Orientation of major axis	M		INTEGER(0...~~179~~89)	The relation between the IE value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$

/* partly omitted */

9.3.4 Information Element Definitions

/* partly omitted */

```
GA-PointWithAltitudeAndUncertaintyEllipsoid ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    altitudeAndDirection        GA-AltitudeAndDirection,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    uncertaintyAltitude         INTEGER (0..127),
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithAltitudeAndUncertaintyEllipsoid-ExtIEs PCAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertainty ::=SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    iE-Extensions           ProtocolExtensionContainer { {GA-PointWithUnCertainty-ExtIEs} } OPTIONAL,
    uncertaintyCode         INTEGER (0..127)
}

GA-PointWithUnCertainty-ExtIEs PCAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-PointWithUnCertaintyEllipse ::= SEQUENCE {
    geographicalCoordinates     GeographicalCoordinates,
    uncertaintyEllipse          GA-UncertaintyEllipse,
    confidence                  INTEGER (0..127),
    iE-Extensions               ProtocolExtensionContainer { { GA-PointWithUnCertaintyEllipse-ExtIEs} } OPTIONAL,
    ...
}

GA-PointWithUnCertaintyEllipse-ExtIEs PCAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-Polygon ::= SEQUENCE (SIZE (1..maxNrOfPoints)) OF
    SEQUENCE {
        geographicalCoordinates     GeographicalCoordinates,
        iE-Extensions           ProtocolExtensionContainer { {GA-Polygon-ExtIEs} } OPTIONAL,
        ...
    }
```

```
GA-Polygon-ExtIEs PCAP-PROTOCOL-EXTENSION ::= {
    ...
}

GA-UncertaintyEllipse ::= SEQUENCE {
    uncertaintySemi-major       INTEGER (0..127),
    uncertaintySemi-minor       INTEGER (0..127),
    orientationOfMajorAxis      INTEGER (0..17989),
    ...
}
```