TSG RAN Meeting #23   **RP-040053**
Phoenix, Arizona, USA, 10 - 12 March 2004

Title   **CRs (Rel-4 and Rel-5/Rel-6 Category A) to TS 25.423, TS 25.423 and (Rel-5 and Rel-6 Category A) to TS 25.453 on Alignment with 23.032 correction of Included Angle for Ellipsoid Arc**
Source   **TSG RAN WG3**
Agenda Item   **7.4.6**

RAN3 Tdoc	CR.	Rev.	Cat	Spec.	curr. Vers.	new Vers.	REL	Work Item	Title
R3-040282	639	-	F	25.413	4.11.0	4.12.0	REL-4	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040283	640	-	A	25.413	5.7.0	5.8.0	REL-5	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040284	641	-	A	25.413	6.0.0	6.1.0	REL-6	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040316	923	-	F	25.423	4.11.0	4.12.0	REL-4	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040317	924	-	A	25.423	5.8.0	5.9.0	REL-5	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040318	925	-	A	25.423	6.0.0	6.1.0	REL-6	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040319	67	-	F	25.453	5.8.0	5.9.0	REL-5	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc
R3-040320	68	-	A	25.453	6.3.0	6.4.0	REL-6	TEI4	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc

CR-Form-v7

CHANGE REQUEST

⌘ **25.413 CR 639** ⌘ **rev** **-** ⌘ Current version: **4.11.0** ⌘

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

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

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code:⌘	TEI4	***Date:*** ⌘ 10/02/2004
Category: ⌘ **F**		***Release:*** ⌘ Rel-4

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

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

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval.

Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number:
$2 N < a_i \leq 2 (N+1)$, Accepted values for a_i are within the range from 0,0...1 to 360 degrees.
the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from $2N \leq a < 2(N+1)$ to $2N < a \leq 2(N+1)$. |
| ***Summary of change:***⌘ | The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from $2N \leq a < 2(N+1)$ to $2N < a \leq 2(N+1)$.

<u>Impact assessment towards the previous version of the specification (same release):</u>

This CR has isolated impact towards the previous version of the specification (same release).

This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc.

This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting.

The impact can be considered isolated because it only affects the relation |

		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.3.11		
		Y	**N**	
Other specs	⌘	**X**		Other core specifications ⌘ CR640 25.413 Rel-5, CR641 25.413 Rel-6, CR923 25.423 Rel-4, CR924 25.423 Rel-5, CR925 25.423 Rel-6, CR067 25.453 Rel-5, CR068 25.453 Rel-6
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 $5N \le r < 5(N+1)$, 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 $r = 10 \times (1.1^k - 1)$
>Offset angle	M		INTEGER(0..179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \le a < 2(N+1)$
>Included angle	M		INTEGER(0..179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \le a \le 2(N+1)$
>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).

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.413** CR **640** | ⌘**rev** | **-** | ⌘ | Current version: | **5.7.0** | ⌘ |

*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 **X** Core Network **X**

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code:⌘	TEI4	***Date:*** ⌘ 10/02/2004
Category: ⌘	**A**	***Release:*** ⌘ Rel-5

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

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

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval. Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number: 2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees. the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).
Summary of change:⌘	The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1). Impact assessment towards the previous version of the specification (same release): This CR has isolated impact towards the previous version of the specification (same release). This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc. This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting. The impact can be considered isolated because it only affects the relation

		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.3.11		

		Y	**N**			
Other specs	⌘	X		Other core specifications	⌘	CR639 25.413 Rel-4, CR641 25.413 Rel-6, CR923 25.423 Rel-4, CR924 25.423 Rel-5, CR925 25.423 Rel-6, CR067 25.453 Rel-5, CR068 25.453 Rel-6
affected:			X	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	

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

9.2.3.11 Geographical Area

The *Geographical Area* IE is used to identify an area 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 $r = 10 \times (1.1^k - 1)$

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 $r = 10 \times (1.1^k-1)$
>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 $2N \leq a \leq 2(N+1)$
>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).

CR-Form-v7

CHANGE REQUEST

| ⌘ | **25.413 CR 641** | ⌘**rev** | **-** | ⌘ | Current version: | **6.0.0** | ⌘ |

*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 **X** Core Network **X**

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code:⌘	TEI4	***Date:*** ⌘ 10/02/2004
Category: ⌘ **A**		***Release:*** ⌘ Rel-6

Use one of the following categories:	*Use one of the following releases:*
F *(correction)*	*2 (GSM Phase 2)*
A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
B *(addition of feature),*	*R97 (Release 1997)*
C *(functional modification of feature)*	*R98 (Release 1998)*
D *(editorial modification)*	*R99 (Release 1999)*
Detailed explanations of the above categories can	*Rel-4 (Release 4)*
be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
	Rel-6 (Release 6)

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval.
	Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number:
	2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees.
	the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).
Summary of change:⌘	The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).
	<u>Impact assessment towards the previous version of the specification (same release):</u>
	This CR has isolated impact towards the previous version of the specification (same release).
	This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc.
	This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting.
	The impact can be considered isolated because it only affects the relation

		between the signalled value and the represented Included Angle.	
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.	

Clauses affected:	⌘	9.2.3.11			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘	CR639 25.413 Rel-4, CR640 25.413 Rel-5, CR923 25.423 Rel-4, CR924 25.423 Rel-5, CR925 25.423 Rel-6, CR067 25.453 Rel-5, CR068 25.453 Rel-6
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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

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

The *Geographical Area* IE is used to identify an area 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 $r = 10 \times (1.1^k - 1)$

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 $r = 10 \times (1.1^{k}-1)$
>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 $2N \leq a \leq 2(N+1)$
>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).

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CHANGE REQUEST

| ⌘ | **25.423** CR **923** | ⌘**rev** | **-** | ⌘ | Current version: | **4.11.0** | ⌘ |

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

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

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code: ⌘	TEI4	***Date:*** ⌘ 10/02/2004
Category: ⌘ **F**		***Release:*** ⌘ Rel-4

Use one of the following categories:	Use one of the following releases:
F (correction)	2 (GSM Phase 2)
A (corresponds to a correction in an earlier release)	R96 (Release 1996)
B (addition of feature),	R97 (Release 1997)
C (functional modification of feature)	R98 (Release 1998)
D (editorial modification)	R99 (Release 1999)
Detailed explanations of the above categories can	Rel-4 (Release 4)
be found in 3GPP TR 21.900.	Rel-5 (Release 5)
	Rel-6 (Release 6)

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval.

Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number:
  2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees.
the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1). |
| ***Summary of change:*** ⌘ | The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).

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

This CR has isolated impact towards the previous version of the specification (same release).

This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc.

This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting.

The impact can be considered isolated because it only affects the relation |

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		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.1.30E		
		Y	**N**	
Other specs	⌘	X		Other core specifications	⌘	CR639 25.413 Rel-4, CR640 25.413 Rel-5, CR641 25.413 Rel-6, CR924 25.423 Rel-5, CR925 25.423 Rel-6, CR067 25.453 Rel-5, CR068 25.453 Rel-6
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.

9.2.1.30E   GA Ellipsoid Arc

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
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 $2N \leq a \leq 2(N+1)$
Confidence	M		INTEGER(0..127)	

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CHANGE REQUEST

| ⌘ | **25.423** CR **924** | ⌘**rev** | **-** | ⌘ | Current version: | **5.8.0** | ⌘ |

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

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

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code: ⌘	TEI4	***Date:*** ⌘ 10/02/2004
Category: ⌘ **A**		***Release:*** ⌘ Rel-5

Use one of the following categories: ***F*** *(correction)* ***A*** *(corresponds to a correction in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)* Detailed explanations of the above categories can be found in 3GPP TR 21.900.	*Use one of the following releases:* *2 (GSM Phase 2)* *R96 (Release 1996)* *R97 (Release 1997)* *R98 (Release 1998)* *R99 (Release 1999)* *Rel-4 (Release 4)* *Rel-5 (Release 5)* *Rel-6 (Release 6)*

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval. Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number: 2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees. the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).
Summary of change: ⌘	The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1). <u>Impact assessment towards the previous version of the specification (same release):</u> This CR has isolated impact towards the previous version of the specification (same release). This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc. This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting. The impact can be considered isolated because it only affects the relation

		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.1.30E		

		Y	**N**			
Other specs	⌘	X		Other core specifications	⌘	CR639 25.413 Rel-4, CR640 25.413 Rel-5, CR641 25.413 Rel-6, CR923 25.423 Rel-4, CR925 25.423 Rel-6, CR067 25.453 Rel-5, CR068 25.453 Rel-6
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.

9.2.1.30E   GA Ellipsoid Arc

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
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 $r = 10 \times (1.1^k-1)$
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 $2N \leq a \leq 2(N+1)$
Confidence	M		INTEGER(0..127)	

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CHANGE REQUEST

| ⌘ | **25.423** CR **925** | ⌘**rev** | **-** | ⌘ | Current version: | **6.0.0** | ⌘ |

*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 **X** Core Network ☐

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code:⌘	TEI4	***Date:*** ⌘ 10/02/2004
Category: ⌘	**A**	***Release:*** ⌘ Rel-6

Use <u>one</u> 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 <u>TR 21.900</u>.

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

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval. Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number: 2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees. the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).
Summary of change:⌘	The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1). <u>Impact assessment towards the previous version of the specification (same release):</u> This CR has isolated impact towards the previous version of the specification (same release). This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc. This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting. The impact can be considered isolated because it only affects the relation

		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.1.30E			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘	CR639 25.413 Rel-4, CR640 25.413 Rel-5, CR641 25.413 Rel-6, CR923 25.423 Rel-4, CR924 25.423 Rel-5, CR067 25.453 Rel-5, CR068 25.453 Rel-6
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

How to create CRs using this form:

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

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.

9.2.1.30E   GA Ellipsoid Arc

This IE contains one of the possible descriptions of a Cell Geographical Area.

IE/Group Name	Presence	Range	IE Type and Reference	Semantics Description
Geographical Coordinates	M		9.2.1.30F	
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 $2N \leq a \leq 2(N+1)$
Confidence	M		INTEGER($0..127$)	

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CHANGE REQUEST

| ⌘ | **25.453** CR **067** | ⌘**rev** | **-** | ⌘ | Current version: | **5.8.0** | ⌘ |

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

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

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code:⌘	TEI4	***Date:*** ⌘ 10/02/2004

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 <u>TR 21.900</u>.	*Use one of the following releases:* *2 (GSM Phase 2)* *R96 (Release 1996)* *R97 (Release 1997)* *R98 (Release 1998)* *R99 (Release 1999)* *Rel-4 (Release 4)* *Rel-5 (Release 5)* *Rel-6 (Release 6)*

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval. Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number: 2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees. the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).
Summary of change:⌘	The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1). <u>Impact assessment towards the previous version of the specification (same release):</u> This CR has isolated impact towards the previous version of the specification (same release). This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc. This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting. The impact can be considered isolated because it only affects the relation

		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.2.6		

		Y	**N**			
Other specs	⌘	**X**		Other core specifications	⌘	CR639 25.413 Rel-4, CR640 25.413 Rel-5, CR641 25.413 Rel-6, CR923 25.423 Rel-4, CR924 25.423 Rel-5, CR925 25.423 Rel-6, CR068 25.453 Rel-6
affected:			**X**	Test specifications		
			X	O&M Specifications		

Other comments:	⌘	

How to create CRs using this form:

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

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.

9.2.2.6 Geographical Area

Geographical Area IE is used to identify an area using geographical coordinates. The reference system is the same as the one used in [11].

Table 30

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Geographical Area*				
>*Point*				Ellipsoid point
>>Geographical Coordinates	M		9.2.2.7	
>*Point With Uncertainty*				Ellipsoid point with uncertainty circle
>>Geographical Coordinates	M		9.2.2.7	
>>Uncertainty Code	M		INTEGER(0...127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10 \times (1.1^k - 1)$
>*Polygon*				List of Ellipsoid points
>>Polygon		*1..<maxnoofPoints>*		
>>>Geographical Coordinates	M		9.2.2.7	
>*Ellipsoid point with uncertainty Ellipse*				
>>Geographical Coordinates	M		9.2.2.7	
>>Uncertainty Ellipse	M		9.2.2.30	
>>Confidence	M		INTEGER(0...127)	
>*Ellipsoid point with altitude*				
>>Geographical Coordinates	M		9.2.2.7	
>>Altitude and direction	M		9.2.2.2	
>*Ellipsoid point with altitude and uncertainty Ellipsoid*				
>>Geographical Coordinates	M		9.2.2.7	
>>Altitude and direction	M		9.2.2.2	
>>Uncertainty Ellipse	M		9.2.2.30	
>>Uncertainty Altitude	M		INTEGER(0...127)	
>>Confidence	M		INTEGER(0...127)	
>*Ellipsoid Arc*				
>>Geographical Coordinates	M		9.2.2.7	
>>Inner radius	M		INTEGER (0...2^{16}-1)	The relation between the value (N) and the radius (r) in meters it describes is $5N \le r < 5(N+1)$, 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 $r = 10 \times (1.1^k - 1)$
>>Offset angle	M		INTEGER(0...179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \le a < 2(N+1)$

IE/Group Name	Presence	Range	IE type and reference	Semantics description
>>Included angle	M		INTEGER(0...179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a \leq 2(N+1)$
>>Confidence	M		INTEGER(0...127)	

Table 31

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

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CHANGE REQUEST

| ⌘ | **25.453** CR **068** | ⌘**rev** | **-** | ⌘ | Current version: | **6.3.0** | ⌘ |

*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 **X** Core Network ☐

Title: ⌘	Alignment with 23.032 correction of Included Angle for Ellipsoid Arc	
Source: ⌘	RAN3	
Work item code:⌘	TEI4	**Date:** ⌘ 10/02/2004
Category: ⌘	**A**	**Release:** ⌘ Rel-6

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

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

Reason for change: ⌘	The semantic description for the Included Angle (in the Ellipsoid Arc) was changed in December 2002 by CR03r2 to 23.032 in S2-023345. TSG RAN was consulted before the approval.

Since no correction has been made in RAN3 documents the semantic description in RAN3 documents is not in line with the revised definition in 23.032. To align with the implemented corrections to 23.032 (Rel4) which now defines the following relation between the angle and the number:
    2 N < ai <= 2 (N+1), Accepted values for ai are within the range from 0,0...1 to 360 degrees.
the included angle relation in the RANAP, RNSAP and PCAP semantics description needs to be modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1). |
| **Summary of change:**⌘ | The formula defining the relation between the value (N) and the described angle (a) in degrees it describes is modified from 2N≤ a <2(N+1) to 2N< a ≤2(N+1).

<u>Impact assessment towards the previous version of the specification (same release):</u>

This CR has isolated impact towards the previous version of the specification (same release).

This CR has no impact on implementations behaving according to TS 23.032 v410 (December 2002) for the Ellipsoid Arc.

This CR has an impact on implementations behaving according to TS 25.413, 25.423 or 25.453 for the shape definition Ellipsoid Arc that can be used for positioning reporting.

The impact can be considered isolated because it only affects the relation |

		between the signalled value and the represented Included Angle.
Consequences if not approved:	⌘	The sematics description in RANAP, RNSAP and PCAP will not be in line with the description in 23.032 and thus not allow the representation of a full circle for the ellipsoid arc geographical shape.

Clauses affected:	⌘	9.2.2.6	

		Y	**N**			
Other specs	⌘	**X**		Other core specifications	⌘	CR639 25.413 Rel-4, CR640 25.413 Rel-5, CR641 25.413 Rel-6, CR923 25.423 Rel-4, CR924 25.423 Rel-5, CR925 25.423 Rel-6, CR067 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.

9.2.2.6 Geographical Area

Geographical Area IE is used to identify an area using geographical coordinates. The reference system is the same as the one used in [11].

Table 30

IE/Group Name	Presence	Range	IE type and reference	Semantics description
CHOICE *Geographical Area*				
>*Point*				Ellipsoid point
>>Geographical Coordinates	M		9.2.2.7	
>*Point With Uncertainty*				Ellipsoid point with uncertainty circle
>>Geographical Coordinates	M		9.2.2.7	
>>Uncertainty Code	M		INTEGER(0...127)	The uncertainty "r" is derived from the "uncertainty code" k by $r = 10 \times (1.1^k - 1)$
>*Polygon*				List of Ellipsoid points
>>Polygon		*1..<maxnoofPoints>*		
>>>Geographical Coordinates	M		9.2.2.7	
>*Ellipsoid point with uncertainty Ellipse*				
>>Geographical Coordinates	M		9.2.2.7	
>>Uncertainty Ellipse	M		9.2.2.30	
>>Confidence	M		INTEGER(0...127)	
>*Ellipsoid point with altitude*				
>>Geographical Coordinates	M		9.2.2.7	
>>Altitude and direction	M		9.2.2.2	
>*Ellipsoid point with altitude and uncertainty Ellipsoid*				
>>Geographical Coordinates	M		9.2.2.7	
>>Altitude and direction	M		9.2.2.2	
>>Uncertainty Ellipse	M		9.2.2.30	
>>Uncertainty Altitude	M		INTEGER(0...127)	
>>Confidence	M		INTEGER(0...127)	
>*Ellipsoid Arc*				
>>Geographical Coordinates	M		9.2.2.7	
>>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 $r = 10 \times (1.1^k - 1)$
>>Offset angle	M		INTEGER(0...179)	The relation between the value (N) and the angle (a) in degrees it describes is $2N \leq a < 2(N+1)$

IE/Group Name	Presence	Range	IE type and reference	Semantics description
>>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)	

Table 31

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