Tdoc NP-010572

3GPP TSG CN Plenary Meeting #14 Kyoto, Japan. 12th - 14th December 2001.

Source: TSG CN WG3

Title: CRs on <R99 Work Item GPRS

Agenda item: 7.12

Document for: APPROVAL

Introduction:

This document contains **12** CRs on **<R99** Work Item **"GPRS"**, that have been agreed by TSG CN WG3, and are presented to TSG CN Plenary meeting #14 for approval.

NP Tdoc	WG Tdoc	Subject	Spec	CR	R.	Cat	Ph.	C_Ver	WI
NP-010572	N3-010450	Correction to 3GPP specific attribute: 3GPP-IMSI	09.61	A023	1	F	R97	6.5.0	GPRS
NP-010572	N3-010449	Correction to 3GPP specific attribute: 3GPP-IMSI	09.61	A024	1	Α	R98	7.4.0	GPRS
NP-010572	N3-010448	Correction to 3GPP specific attribute: 3GPP-IMSI	29.061	029	1	Α	R99	3.7.0	GPRS
NP-010572	N3-010447	Correction to 3GPP specific attribute: 3GPP-IMSI	29.061	030	1	Α	Rel-4	4.2.0	GPRS
NP-010572	N3-010437	Correction to 3GPP specific attributes containing MCC-MNC IMSI	09.61	A025		F	R97	6.5.0	GPRS
NP-010572	N3-010438	Correction to 3GPP specific attributes containing MCC-MNC IMSI	09.61	A026		Α	R98	7.4.0	GPRS
NP-010572	N3-010439	Correction to 3GPP specific attributes containing MCC-MNC IMSI	29.061	031		Α	R99	3.7.0	GPRS
NP-010572	N3-010440	Correction to 3GPP specific attributes containing MCC-MNC IMSI	29.061	032		Α	Rel-4	4.2.0	GPRS
NP-010572	N3-010465	Correction to Calling-station-id	09.61	A021	1	F	R97	6.5.0	GPRS
NP-010572	N3-010464	Correction to Calling-station-id	09.61	A022	1	Α	R98	7.4.0	GPRS
NP-010572	N3-010463	Correction to Calling-station-id	29.061	027	1	Α	R99	3.7.0	GPRS
NP-010572	N3-010462	Correction to Calling-station-id	29.061	028	1	Α	Rel-4	4.2.0	GPRS

	CHANGE REQUEST										
ж	09.61 CR A025 # ev - # Current version: 6.5.0 #										
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the # symbols.											
Proposed change affects: (U)SIM											
Title: ∺	Correction to 3GPP vendor specific attributes containing MCC-MNC										
Source: #	CN3										
Work item code: ₩	GPRS Date: 第 12-10-01										
Reason for change	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) Petailed explanations of the above categories can be found in 3GPP TR 21.900. To maintain consistency by ensuring that, where applicable, a 3GPP vendor specific attribute will be variable in length and not fixed in length. Release: R97 C (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5) REL-5 Release 5)										
Consequences if not approved:	MCC and MNC. # Inconsistency in the length description between 3GPP vendor specific attributes which have the possibility of being variable in length.										
Clauses affected:	第 16.4.7										
Other specs affected:	Cother core specifications Test specifications O&M Specifications										
Other comments:	ж										

How to create CRs using this form:

- 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 forr the clause containing the first piece of changed text. D the change request.	m (use CTRL-A to select it) into the specification just in front of delete those parts of the specification which are not relevant to

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

•••

8 - 3GPP-IMSI MCC-MNC

				Bits	3				
Octets	8	7	6	5	4	3	2	1	
1			30	3PP typ	e = 8				
2		3GPP Length= n8							
3		MCC digit1 (UTF-8 encoded)							
4		M	CC digi	t2 (UTF	-8 en	coded)			
5		M	CC digi	t3 (UTF	-8 en	coded)			
6		М	NC digi	t1 (UTF	-8 en	coded)			
7		MNC digit2 (UTF-8 encoded)							
8		MNC d	igit3 <u>if p</u>	oresent	UTF-	8 enco	ded)		

3GPP Type: 8

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

MS address value: text

This is the UTF-8 encoding of the MS MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

9 - 3GPP-GGSN MCC-MNC

				Bits	3				
Octets	8	7	6	5	4	3	2	1	
1			30	GPP typ	e = 9				
2			3GF	P Len	gth= <u>n</u>	<u>8</u>			
3		MCC digit1 (UTF-8 encoded)							
4		М	CC digi	it2 (UTF	8 end	coded)			
5		М	CC digi	it3 (UTF	-8 en	coded)			
6		М	NC digi	it1 (UTF	-8 en	coded)			
7		MNC digit2 (UTF-8 encoded)							
8		MNC d	ligit3 <u>if p</u>	oresent	_(UTF-	8 enco	ded)		

3GPP Type: 9

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

GGSN address value: text

This is the UTF-8 encoding of the GGSN MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

CHANGE REQUEST									
*	09.61 CR A026								
For HELP on using this form, see bottom of this page or look at the pop-up text over the x symbols.									
Proposed change affects: # (U)SIM ME/UE Radio Access Network Core Network X									
Title:	Correction to 3GPP vendor specific attributes containing MCC-MNC								
Source:	CN3								
Work item code: ₩	GPRS Date: 第 12-10-01								
Reason for chang	Release: \$\mathbb{R}\$ R98 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) P (Release 1997) C (functional modification) P (Release 1998) D (editorial modification) P (Release 1999) Detailed explanations of the above categories can be found in 3GPP TR 21.900. REL-5 (Release 5) REL-5 (Release 5) REL-5 (Release 5) REC-MNC by including n, where n will be either 7 or 8 octets in length depending on the length of MNC. Included an indication that MNC digit 3 may not be present. Added text to indicate that there will be no padding of characters between the MCC and MNC.								
Consequences if not approved:	Inconsistency in the length description between 3GPP vendor specific attributes which have the possibility of being variable in length.								
Clauses affected:	¥ 16.4.7								
Other specs affected:	Other core specifications Test specifications O&M Specifications								
Other comments:	x								

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

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

•••

8 - 3GPP-IMSI MCC-MNC

				Bits	3					
Octets	8	7	6	5	4	3	2	1		
1			30	3PP typ	oe = 8					
2		3GPP Length= n8								
3		MCC digit1 (UTF-8 encoded)								
4		М	CC digi	t2 (UTF	8 end	coded)				
5		М	CC digi	t3 (UTF	-8 en	coded)				
6		М	NC digi	t1 (UTF	8 end	coded)				
7		MNC digit2 (UTF-8 encoded)								
8		MNC d	ligit3 <u>if p</u>	oresent	_(UTF-	8 enco	ded)			

3GPP Type: 8

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

MS address value: text

This is the UTF-8 encoding of the MS MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

9 - 3GPP-GGSN MCC-MNC

				Bits						
Octets	8	7	6	5	4	3	2	1		
1			30	GPP typ	e = 9					
2			3GF	P Len	gth= <u>n</u>	₿.				
3		MCC digit1 (UTF-8 encoded)								
4		М	CC digi	it2 (UTF	-8 en	coded)				
5		М	CC digi	it3 (UTF	-8 end	coded)				
6		MNC digit1 (UTF-8 encoded)								
7		MNC digit2 (UTF-8 encoded)								
8		MNC d	ligit3 <u>if p</u>	oresent	(UTF-	8 enco	ded)			

3GPP Type: 9

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

GGSN address value: text

This is the UTF-8 encoding of the GGSN MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

	CHANGE REQUEST									
ж	29.	061	CR 03	1	ж e/	-	ж	Current vers	3.7.	. 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: # (U)SIM ME/UE Radio Access Network Core Network X										
Title: 第	Cor	rection	to 3GPP	vendor sp	ecific a	tribute	s cor	taining MCC	-MNC	
Source: #	CN	3								
Work item code: ₩	GPI	RS						Date: ♯	12-10-01	
Reason for change Summary of change	Detai be for e: #	F (corrections) A (corrections) B (addo C (fund D (edited expland in a specific spec	ific attribut ed the leng MNC by in length of	a a correction of the cation) If the above 1.900. Insistency lee will be very lee will be	feature) c categor by ensu ariable attribute where uded ar	ring the notation length will be indicated	at, whath and P-IMe eith	2 R96 R97 R98 R99 REL-4 REL-5	the following (GSM Phase (Release 19) (Release 19) (Release 19) (Release 19) (Release 4) (Release 5) Die, a 3GPP length. C and 3GPP ets in length lit 3 may not	e 2) 196) 197) 198) 199) vendor P-GGSN- 1 depending 2 be present.
Consequences if not approved:	¥		nsistency in have the					een 3GPP ven length.	ndor specifi	c attributes
Clauses affected:	ж	16.4.	7							
Other specs affected:	ж	Te	ther core sest specific M Specifi	ations	ns	*				
Other comments:	ж						_			

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

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

•••

8 - 3GPP-IMSI MCC-MNC

				Bits	3					
Octets	8	7	6	5	4	3	2	1		
1			30	SPP typ	oe = 8					
2		3GPP Length= n8								
3		MCC digit1 (UTF-8 encoded)								
4		М	CC digi	t2 (UTF	8 end	coded)				
5		М	CC digi	t3 (UTF	-8 en	coded)				
6		М	NC digi	t1 (UTF	8 end	coded)				
7		MNC digit2 (UTF-8 encoded)								
8		MNC d	ligit3 <u>if p</u>	oresent	_(UTF-	8 enco	ded)			

3GPP Type: 8

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

MS address value: text

This is the UTF-8 encoding of the MS MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

9 - 3GPP-GGSN MCC-MNC

				Bits					
Octets	8	7	6	5	4	3	2	1	
1			30	GPP typ	e = 9				
2		3GPP Length= n8							
3		MCC digit1 (UTF-8 encoded)							
4		М	CC digi	it2 (UTF	-8 en	coded)			
5		М	CC digi	it3 (UTF	-8 end	coded)			
6		MNC digit1 (UTF-8 encoded)							
7		MNC digit2 (UTF-8 encoded)							
8		MNC d	ligit3 <u>if p</u>	oresent	(UTF-	8 enco	ded)		

3GPP Type: 9

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

GGSN address value: text

This is the UTF-8 encoding of the GGSN MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

			CHAN	IGE R	EQ	UES	Т				CR-Form-v4
ж	29.0	61 CR	032	ж	ev	_ #	3 Cur	rent vers	sion:	4.2.0	X
For <u>HELP</u> on u	ising this	s form, see	e bottom	of this pa	ge or i	look at	the po	p-up text	t over ti	he ₩ sy	mbols.
Proposed change	affects:	₩ (U)	SIM	ME/UE		Radio	Access	s Networ	k	Core N	etwork X
Title: ₩	Corre	ction to 30	GPP vend	lor specif	ic attri	butes c	ontain	ing MCC	-MNC		
Source: #	CN3										
Work item code: ₩	GPRS	8						Date: ₩	12-1	0-01	
Reason for change Summary of change	Pe: # M	e of the foll (correction) (correspond (addition of (functional) (editorial) in dexplanation de in 3GPP To maintal pecific attention odified the CC-MNC of the length ded text of CC and M	nds to a confective, modification on sof the ETR 21.900 on consiste cribute will be length of MNC to indicate	rrection in on of feature above cate being by each the attril ng n, whe ling long long long ling	egories ensurin ble in butes; ere n v	g that, length a 3GPP-l vill be endication	where and no IMSI-Meither 7 on that	t fixed in ICC-MN0 or 8 oct MNC dig	the folki (GSM) (Relea (Relea (Relea (Relea (Relea De, a 30 length	owing rei Phase 2, se 1996; se 1997; se 1999; se 4) se 5) GPP ve	ndor GSN- eppending e present.
Consequences if not approved:		nconsister vhich have							ndor sı	pecific a	ttributes
Clauses affected:	₩ 1	6.4.7									
Other specs affected:	#	Test spe	ore specif ecification pecificatio	S	ж						
Other comments:	æ										

How to create CRs using this form:

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16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

•••

8 - 3GPP-IMSI MCC-MNC

				Bits	3				
Octets	8	7	6	5	4	3	2	1	
1		3GPP type = 8							
2		3GPP Length= n8							
3		MCC digit1 (UTF-8 encoded)							
4		М	CC digi	t2 (UTF	8 en	coded)			
5		М	CC digi	t3 (UTF	-8 en	coded)			
6		MNC digit1 (UTF-8 encoded)							
7		MNC digit2 (UTF-8 encoded)							
8		MNC d	ligit3 <u>if r</u>	resent	_(UTF-	8 enco	ded)		

3GPP Type: 8

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

MS address value: text

This is the UTF-8 encoding of the MS MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

9 - 3GPP-GGSN MCC-MNC

				Bits					
Octets	8	7	6	5	4	3	2	1	
1			30	3PP typ	e = 9				
2			3GF	PP Len	gth= <u>n</u>	<u>8</u>			
3		MCC digit1 (UTF-8 encoded)							
4		М	CC digi	t2 (UTF	-8 en	coded)			
5		М	CC digi	t3 (UTF	-8 en	coded)			
6		М	NC digi	t1 (UTF	-8 en	coded)			
7		MNC digit2 (UTF-8 encoded)							
8		MNC d	ligit3 <u>if p</u>	resent	UTF-	8 enco	ded)		

3GPP Type: 9

Length: n shall be 7 or 8 octets depending on the presence of MNC digit 38

GGSN address value: text

This is the UTF-8 encoding of the GGSN MCC-MNC values. If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078"). In accordance with [24] and [40] the MCC shall be 3 digits and the MNC shall be either 2 or 3 digits. There shall be no padding characters between the MCC and MNC.

	CHANGE REQUEST	R-Form-v4
ж	29.061 CR 030 # ev 1 # Current version: 4.2.0	æ
For <u>HELP</u> on u	ing this form, see bottom of this page or look at the pop-up text over the ¥ symb	ools.
Proposed change	ffects: 第 (U)SIM ME/UE Radio Access Network Core Network	vork X
Title: #	Correction to 3GPP Vendor specify attribute 3GPP-IMSI	
Source: #	CN3	
Work item code: ₩	GPRS Date: 第 17.10.2001	
	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. Release: # REL-4 Use one of the following release 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 Use one of the following release 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1999) R99 (Release 1999) REL-5 (Release 5)	
Reason for change	The octet length of the attribute is incorrect. The length of the attribute is fix (17 octets) and does not consider that the IMSI may be less than 15 digits.	
Summary of chang	Modified the attribute length to be m octets, where m represents the variable attribute length, as the IMSI may have a variable length of n to 15 digits. M the attribute encoding table to include the variable length indicator "m". Add text to indicate that padding in the GTP IE is to be removed if the IMSI is let than 15 digits.	lodified ded
Consequences if not approved:	The length of the attribute will be incorrect when an IMSI is less than 15 die	gits.
Clauses affected:	第 16	
Other specs affected:	Cother core specifications Test specifications O&M Specifications	
Other comments:	lpha	

How to create CRs using this form:

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- 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.

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

•••

The 3GPP specific attributes encoding is clarified below.

<u>1 -</u> 3GPP-<u>IMSI</u>

				Bits	}			
Octets	8	7	6	5	4	3	2	4
4			30	SPP typ	oe = 1			
2			3G l	P Len	gth= 1	5		
3		11	//SI digi	t1 (UTF	-8 en	coded)		
4		11	//SI digi	t2 (UTF	-8 en e	coded)		
5		11	//SI digi	t 3 (UTF	- 8 en e	coded)		
6		11	<mark>ASI digi</mark>	t4 (UTF	-8 en e	coded)		
7		11	//SI digi	t5 (UTF	- 8 en e	coded)		
8		11	ASI digi	t6 (UTF	-8 en	coded)		
9-15		IMS	l digits	7-15 (L	ITF-8 (encode	od)	
				Bits	<u> </u>			
Octets	<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>1</u>			30	SPP typ	oe = 1			
<u>1</u> <u>2</u>				PP Len		<u>n</u>		
<u>3-m</u>		IMS	SI digits	1-n (U	TF-8 e	ncode	<u>d)</u>	

3GPP Type: 1

<u>n <=15</u>

Length: $\underline{mL} \leq 17$

IMSI value: Text:

This is the UTF-8 encoded IMSI.; If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078") The definition of IMSI shall be in accordance with [24] and [40]. There shall be no padding characters between the MCC and MNC, and between the MNC and MSIN. If the IMSI is less than 15 digits, the padding in the GTP information element shall be removed by the GGSN and not encoded in this sub-attribute.

	CHANGE REQUEST	-Form-v4
ж	29.061 CR 029 # ev 1 # Current version: 3.7.0 #	
For <u>HELP</u> on u	ring this form, see bottom of this page or look at the pop-up text over the ¥ symbo	ols.
Proposed change	ffects: 第 (U)SIM ME/UE Radio Access Network Core Network	ork X
Title:	Correction to 3GPP Vendor specify attribute 3GPP-IMSI	
Source: #	CN3	
Work item code: ₩	GPRS Date: 第 17.10.2001	
Category:	Release: # R99 Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. Release: # R99 Use one of the following release 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)	
Reason for change	The octet length of the attribute is incorrect. The length of the attribute is fixed (17 octets) and does not consider that the IMSI may be less than 15 digits.	ed
Summary of chang	Modified the attribute length to be m octets, where m represents the variable attribute length, as the IMSI may have a variable length of n to 15 digits. Mother attribute encoding table to include the variable length indicator "m". Additext to indicate that padding in the GTP IE is to be removed if the IMSI is less than 15 digits.	odified led
Consequences if not approved:	The length of the attribute will be incorrect when an IMSI is less than 15 dig	its.
Clauses affected:	策 <mark>16</mark>	
Other specs affected:	# Other core specifications # Test specifications O&M Specifications	
Other comments:	lpha	

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \$\mathbb{H}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under 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.

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

...

The 3GPP specific attributes encoding is clarified below.

<u>1 -</u> 3GPP-<u>IMSI</u>

			BIUS	,			
8	7	6	5	4	3	2	4
		30	SPP typ	e = 1			
		3GI	P Len	gth= 1	5		
	44	ASI digi	t1 (UTF	-8 end	coded)		
	11	√SI digi	t2 (UTF	-8 end	coded)		
	44	ASI digi	t3 (UTF	-8 end	coded)		
	41	ASI digi	t4 (UTF	-8 end	coded)		
	H	//SI digi	t 5 (UTF	-8 end	oded)		
	41	ASI digi	t 6 (UTF	-8 end	coded)		
	IMS	I digits	7-15 (U	TF-8 6	ncode	id)	
			Bits	<u>.</u>			
8	7	<u>6</u>	<u>5</u>	4	3	2	<u>1</u>
		30	3PP typ	e = 1			
					1		
	<u>IMS</u>	SI digits	1-n (U	TF-8 e	ncode	<u>d)</u>	
		# # # # # # # # # # # # # # # # # # #	3GI 3GI IMSI digi IMSI digi IMSI digi IMSI digi IMSI digi IMSI digi IMSI digits IMSI digits	8 7 6 5 3GPP typ 3GPP Len IMSI digit1 (UTF IMSI digit3 (UTF IMSI digit4 (UTF IMSI digit4 (UTF IMSI digit5 (UTF IMSI digit5 (UTF IMSI digit6 (UTF IMSI digit6 T-15 (U	3GPP type = 1 3GPP Length= 1: IMSI digit1 (UTF-8 end IMSI digit2 (UTF-8 end IMSI digit3 (UTF-8 end IMSI digit4 (UTF-8 end IMSI digit5 (UTF-8 end IMSI digit6 (U	3GPP type = 1 3GPP Length = 15 1MSI digit1 (UTF-8 encoded) 1MSI digit2 (UTF-8 encoded) 1MSI digit3 (UTF-8 encoded) 1MSI digit4 (UTF-8 encoded) 1MSI digit5 (UTF-8 encoded) 1MSI digit6 (UTF-8 encoded) 1MSI digit6 (UTF-8 encoded) 1MSI digit5 7-15 (UTF-8 encoded) 1MSI digit5 7-15 (UTF-8 encoded) 1MSI digit6 (UTF-8	3GPP type = 1 3GPP Length= 15 IMSI digit1 (UTF-8 encoded) IMSI digit2 (UTF-8 encoded) IMSI digit3 (UTF-8 encoded) IMSI digit4 (UTF-8 encoded) IMSI digit5 (UTF-8 encoded) IMSI digit6 (UTF-8 encoded) IMSI digit6 (UTF-8 encoded) IMSI digit6 (UTF-8 encoded) IMSI digit5 7-15 (UTF-8 encoded) Bits 8 7 6 5 4 3 2 3GPP type = 1

Dita

3GPP Type: 1

<u>n <=15</u>

Length: $\underline{mL} \leq 17$

IMSI value: Text:

This is the UTF-8 encoded IMSI.; If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078") The definition of IMSI shall be in accordance with [24] and [40]. There shall be no padding characters between the MCC and MNC, and between the MNC and MSIN. If the IMSI is less than 15 digits, the padding in the GTP information element shall be removed by the GGSN and not encoded in this sub-attribute.

	CR-Form-v-
*	09.61 CR A024 ** ev 1 ** Current version: 7.4.0 **
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the X symbols.
Proposed change	affects: 第 (U)SIM ME/UE Radio Access Network Core Network X
Title:	Correction to 3GPP Vendor specify attribute 3GPP-IMSI
Source: #	CN3
Work item code: ₩	GPRS Date: # 17.10.2001
Category: 第	ARelease: \$\mathbb{R}\$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 be found in 3GPP TR 21.900.REL-4 (Release 4)
Reason for change	The octet length of the attribute is incorrect. The length of the attribute is fixed (17 octets) and does not consider that the IMSI may be less than 15 digits.
Summary of chang	Modified the attribute length to be m octets, where m represents the variable attribute length, as the IMSI may have a variable length of n to 15 digits. Modified the attribute encoding table to include the variable length indicator "m". Added text to indicate that padding in the GTP IE is to be removed if the IMSI is less than 15 digits.
Consequences if not approved:	The length of the attribute will be incorrect when an IMSI is less than 15 digits.
Clauses affected:	光 16
Other specs affected:	# Other core specifications Test specifications O&M Specifications
Other comments:	lpha

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \$\mathbb{H}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under 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.

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

...

The 3GPP specific attributes encoding is clarified below.

<u>1 -</u> 3GPP-<u>IMSI</u>

				Bits)			
Octets	8	7	6	5	4	3	2	4
4			30	SPP typ	oe = 1			
2			3GI	P Len	gth= 1	5		
3		II	ASI digi	t1 (UTF	-8 end	coded)		
4		H	ASI digi	t2 (UTF	-8 end	coded)		
5		H	ASI digi	t 3 (UTF	-8 end	coded)		
6		IMSI digit4 (UTF-8 encoded)						
7		H	ASI digi	t 5 (UTF	-8 end	oded)		
8		44	ASI digi	t6 (UTF	-8 end	oded)		
9-15		IMS	l digits	7-15 (L	TF-8 6	ncode	od)	
				Bits	<u> </u>			
Octets	<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>1</u>			30	SPP typ	e = 1			
<u>1</u> <u>2</u>				PP Len		1		
3-m		IMS	I digits				<u>d)</u>	

3GPP Type: 1

<u>n <=15</u>

Length: $\underline{mL} \leq 17$

IMSI value: Text:

This is the UTF-8 encoded IMSI.; If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078") The definition of IMSI shall be in accordance with [24] and [40]. There shall be no padding characters between the MCC and MNC, and between the MNC and MSIN. If the IMSI is less than 15 digits, the padding in the GTP information element shall be removed by the GGSN and not encoded in this sub-attribute.

	CR-Form-v4 CHANGE REQUEST
*	09.61 CR A023 # ev 1 # Current version: 6.5.0 #
For <u>HELP</u> on u	sing this form, see bottom of this page or look at the pop-up text over the % symbols.
Proposed change	affects: 第 (U)SIM ME/UE Radio Access Network Core Network X
Title:	Correction to 3GPP Vendor specify attribute 3GPP-IMSI
Source: #	CN3
Work item code: 第	GPRS Date: 17.10.2001
Category: 米	F 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. Release: R97 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)
Reason for change	The octet length of the attribute is incorrect. The length of the attribute is fixed (17 octets) and does not consider that the IMSI may be less than 15 digits.
Summary of chang	Modified the attribute length to be m octets, where m represents the variable attribute length, as the IMSI may have a variable length of n to 15 digits. Modified the attribute encoding table to include the variable length indicator "m". Added text to indicate that padding in the GTP IE is to be removed if the IMSI is less than 15 digits.
Consequences if not approved:	The length of the attribute will be incorrect when an IMSI is less than 15 digits.
Clauses affected:	光 16
Other specs affected:	Other core specifications Test specifications O&M Specifications
Other comments:	x

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked \$\mathbb{H}\$ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under 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.

16.4.7 Sub-attributes of the 3GPP Vendor-Specific attribute

...

The 3GPP specific attributes encoding is clarified below.

<u>1 -</u> 3GPP-<u>IMSI</u>

				BIUS)			
Octets	8	7	6	5	4	3	2	4
4			30	SPP tyr)e = 1			
2		3GPP Length= 15						
3		IMSI digit1 (UTF-8 encoded)						
4		IMSI digit2 (UTF-8 encoded)						
5		IMSI digit3 (UTF-8 encoded)						
6		IMSI digit4 (UTF-8 encoded)						
7		IMSI digit5 (UTF-8 encoded)						
8		IMSI digit6 (UTF-8 encoded)						
9-15		IMSI digits 7-15 (UTF-8 encoded)						
				Bits	<u> </u>			
<u>Octets</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
<u>1</u>			30	SPP typ	oe = 1			
<u>1</u> <u>2</u>				PP Len		1		
<u>3-m</u>		IMS	I digits	1-n (U	TF-8 e	ncode	<u>d)</u>	

Rite

3GPP Type: 1

<u>n <=15</u>

Length: $\underline{mL} \leq 17$

IMSI value: Text:

This is the UTF-8 encoded IMSI.; If the MNC is only 2 digits (e.g. MNC = 78), its encoding shall be with a leading '0', (e.g. "078") The definition of IMSI shall be in accordance with [24] and [40]. There shall be no padding characters between the MCC and MNC, and between the MNC and MSIN. If the IMSI is less than 15 digits, the padding in the GTP information element shall be removed by the GGSN and not encoded in this sub-attribute.

			C	CHAN	IGE	RE	ΞQ	UE	ST	•			CR-Form-v4
*	29	.061	CR	028		¥	ev	1	¥	Current ver	rsion:	4.2.0) #
For HELP on using this form, see bottom of this page or look at the pop-up text over the # symbols.													
Proposed change	affec	ts: #	(U)S	SIM	ME	/UE		Radi	io Ac	cess Netwo	rk	Core I	Network X
Title: #	Corr	ection	to the	Calling-S	Station	ı-ld a	ttribu	ute					
Source: #	CN	3											
Work item code: ₩	GP	RS								Date:	€ 17	.10.2001	
Reason for change	Use Deta be fo	F (con A (cor B (add C (fun D (edi iled exp bund in	rection) respond fition of ctional r torial mo blanation 3GPP I	/ (CLI), t	on of feather of the second of the mstand	categ	e) gories e.g. v	where	e a s	Release: 8 Use one of 2 e) R96 R97 R98 R99 REL-4 REL-5 ubscriber hading on privithe PLMN. 0	of the for (GSI) (Relo (Relo (Relo (Relo (Relo as with	ollowing r M Phase 2 ease 1990 ease 1990 ease 1990 ease 4) ease 5)	2) 5) 7) 8) 9) ir Calling
Summary of chang	70.9P	requi be s	irement pecified	t associa I as optic	ated wonal in	ith th orde	e atter	ribute cate	e is r r for	mandatory. the circumst	This is ances	incorrect as expla	ct, it should ained.
Summary or chang	ye. m	optio	nal. Te		een a	dded	to th	ne att		e descriptio			
Consequences if not approved:	#	The	MSISD	N will be	sent	outsi	de o	f the	PLM	1N when not	allow	ed to do	SO.
Clauses affected:	ж	16											
Other specs affected:	ж	Te	est spec	re specif cification ecificatio	ıS	าร	¥						
Other comments:	¥												

How to create CRs using this form:

- 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.

16.4.1 Access-Request message (sent from the GGSN to AAA server)

The table below describes the attributes of the Access-Request message.

Attr#	Attribute Name	Description	Content	Presence Requirement
1	User-Name	Username is provided by the user (extracted from the Protocol Configuration Options (PCO) field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present.	String	Mandatory
2	User-Password	User password provided by the user if PAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no password is available a generic password, configurable on a per APN basis, shall be present.	String	Conditional Note 1
3	CHAP-Password	User password provided by the user if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed-Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	IP address allocated for this user	IPv4	Conditional
9	Framed-IP-Netmask	Netmask for the user IP address	IPv4	Conditional
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MSThis attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	Optional Mand atory
60	CHAP-Challenge	Challenge if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

Next modified section

16.4.3 Accounting-Request START (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request START message.

Attr #	Attribute Name	Description	Content	Presence Requirement
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional
4	NAS-IP-Address	GGSN IP address for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	User IP address	IPv4	Mandatory
25	Class	Received in the access accept	String	Conditional (NOTE 4)
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	OptionalMand atory
40	Acct-Status-Type	Type of accounting message	START	Mandatory
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time (in seconds) of the event generating this Accounting-Request.	32 unsigned integer	Optional
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

Next modified section

16.4.4 Accounting Request STOP (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request STOP message.

Attr#	Attribute Name	Description	Content	Presence Requirement
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	User IP address	IPv4	Mandatory
25	Class	Received in the access accept	String	Optional (NOTE 4)
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded. Note that there are no leading characters in front of the country code.	Optional Manda tory
40	Acct-Status-Type	Indicates the type of accounting request	STOP	Mandatory
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time of the event generating this Accounting-Request	Second	Optional
42	Acct-Input-Octets	GGSN counted number of octets sent by the user for the PDP context	32 bit unsigned integer	Optional
43	Acct-Output-Octets	GGSN counted number of octets received by the user for the PDP context	32 bit unsigned integer	Optional
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional
46	Acct-Session-Time	Duration of the session	Second	Optional
47	Acct-Input-Packets	GGSN counted number of packets sent by the user	Packet	Optional
48	Acct-Output-Packets	GGSN counted number of packets received by the user	Packet	Optional
49	Acct-Terminate- Cause	Indicate how the session was terminated	See RFC 2866	Optional

61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according to sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

End of modified sections	
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			C	CHAN	IGE	RI	EQ	UE	ST				CR-Form-v4
*	29	.061	CR	027		¥	ev	1	¥	Current ve	rsion:	3.7.0	æ
For HELP on using this form, see bottom of this page or look at the pop-up text over the % symbols.													
Proposed change	affec	ts: #	(U)S	SIM	ME	/UE		Rad	io Ac	cess Netwo	rk	Core N	letwork X
Title: #	Corr	ection	to the	Calling-S	Station	n-ld a	attrib	ute					
Source: #	CN	3											
Work item code: ₩	GP	RS								Date:	€ 17	.10.2001	
Reason for change	Deta be fo	F (con. A (cor. B (add C (fun. D (edi iled expound in Under Line coun. requ be sp	rection) respond dition of ctional r torial mo blanation 3GPP I ler certa Identity tries, n irement pecified	/ (CLI), t ot be all t associa d as optic	on of formal in the manner of	cated	gories e.g. v N ma ass o ne att er to	where ay, de utsid tribut cate	e a s epen e of e is r	2 R96 R97 R98 R99 REL-4 REL-5 ubscriber hading on privithe PLMN. Commandatory. The circumsters of the circu	of the for (GSI) (Relicing	billowing re M Phase 2 ease 1996 ease 1997 ease 1998 ease 5) held thei ws within htty, the properties as expla	r Calling specific resence t, it should ined.
Summary of chang	ge: ೫	optio	nal. Te		een a	dded	to th	ne att		as been cha e descriptio			
Consequences if not approved:	*	The	MSISD	N will be	sent	outs	ide o	f the	PLN	IN when not	allow	ed to do	so.
Clauses affected:	ж	16											
Other specs affected:	¥	Te	est spe	re specif cificatior ecificatio	ıs	ns	ж						
Other comments:	¥												

How to create CRs using this form:

- 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.

16.4.1 Access-Request message (sent from the GGSN to AAA server)

The table below describes the attributes of the Access-Request message.

Attr #	Attribute Name	Description	Content	Presence Requirement
1	User-Name	Username is provided by the user (extracted from the Protocol Configuration Options (PCO) field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present.	String	Mandatory
2	User-Password	User password provided by the user if PAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no password is available a generic password, configurable on a per APN basis, shall be present.	String	Conditional Note 1
3	CHAP-Password	User password provided by the user if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed-Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	IP address allocated for this user	IPv4	Conditional
9	Framed-IP-Netmask	Netmask for the user IP address	IPv4	Conditional
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MSThis attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	Optional Mand atory
60	CHAP-Challenge	Challenge if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

Next modified section

16.4.3 Accounting-Request START (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request START message.

Attr # Attribute Name		Description	Content	Presence Requirement	
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional	
4	NAS-IP-Address	GGSN IP address for communication with the AAA server.	IPv4	Conditional Note 3	
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3	
6	Service-Type	Indicates the type of service for this user	Framed	Optional	
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional	
8	Framed-IP-Address	User IP address	IPv4	Mandatory	
25	Class	Received in the access accept	String	Conditional (NOTE 4)	
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory	
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	OptionalMand atory	
40	Acct-Status-Type	Type of accounting message	START	Mandatory	
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time (in seconds) of the event generating this Accounting-Request.	32 unsigned integer	Optional	
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory	
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional	
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional	
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional	

Next modified section

16.4.4 Accounting Request STOP (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request STOP message.

Attr #	Attribute Name	Description	Content		
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Requirement Optional	
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3	
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3	
6	Service-Type	Indicates the type of service for this user	Framed	Optional	
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional	
8	Framed-IP-Address	User IP address	IPv4	Mandatory	
25	Class	Received in the access accept	String	Optional (NOTE 4)	
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory	
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded. Note that there are no leading characters in front of the country code.	OptionalManda tory	
40	Acct-Status-Type	Indicates the type of accounting request	STOP	Mandatory	
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time of the event generating this Accounting-Request	Second	Optional	
42	Acct-Input-Octets	GGSN counted number of octets sent by the user for the PDP context	32 bit unsigned integer	Optional	
43	Acct-Output-Octets	GGSN counted number of octets received by the user for the PDP context	32 bit unsigned integer	Optional	
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory	
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional	
46	Acct-Session-Time	Duration of the session	Second	Optional	
47	Acct-Input-Packets	GGSN counted number of packets sent by the user	Packet	Optional	
48	Acct-Output-Packets	GGSN counted number of packets received by the user	Packet	Optional	
49	Acct-Terminate- Cause	Indicate how the session was terminated	See RFC 2866	Optional	

61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according to sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

End of modified sections	
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3GPP TSG-CN WG3 Meeting #19 Brighton, U.K. 15th - 19th September 2001

CHANGE REQUEST											
*	09.	61 CR	A022	ж	ev	1	ж	Current vers	sion: 7	7.4.0	Ж
For <u>HELP</u> on u	sing this	s form, se	e bottom (of this pa	age or	look a	at the	pop-up text	t over th	ne ₩ syr	mbols.
Proposed change a	Proposed change affects: (U)SIM ME/UE Radio Access Network Core Network ▼										
Title: ₩	Correc	tion to the	Calling-S	Station-I	d attrib	ute					
Source: #	CN3										
Work item code: ₩	GPRS	3						Date: ♯	17.10	0.2001	
Reason for change	Use one F A B C D Detailed be foun	(correction (correspor (addition of (functional (editorial nd dexplanati d in 3GPP	nds to a configent feature), I modification modification ons of the a TR 21.900	on of feat on of feat) above ca	ure) tegorie	s can	e a su	Release: # Use one of 2) R96 R97 R98 R99 REL-4 REL-5	the follo (GSM F (Releas (Releas (Releas (Releas (Releas	Phase 2) se 1996) se 1997) se 1998) se 1999) se 4) se 5)	Calling
Summary of chang	ge: ₩ T	countries, equireme de specifie The prese optional. T	not be allont associated as option nce required the received as options.	owed to ted with onal in o ement o een add	pass of the attraction attraction the attraction attract	tribute cater ttribute ttribute	e of the is more to the is of the is	he PLMN. C nandatory. T he circumsta s been chan e description	urrently his is in ances as ged fro	r, the precorrect, s explain	esence it should ned. latory to
Consequences if not approved:			te is config				PLM	N when not	allowed	to do s	0.
Clauses affected:	第 1	6									
Other specs affected:	*	Test sp	ore specifi ecification pecificatio	S	¥						
Other comments:	æ										

How to create CRs using this form:

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

Start of modified sections

16.4.1 Access-Request message (sent from the GGSN to AAA server)

The table below describes the attributes of the Access-Request message.

Attr # Attribute Nam		Description	Content	Presence Requirement	
1	User-Name Username is provided by the user (extracted from the Protocol Configuration Options (PCO) field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present.		String	Mandatory	
2	User-Password	User password provided by the user if PAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no password is available a generic password, configurable on a per APN basis, shall be present.	String	Conditional Note 1	
3	CHAP-Password	User password provided by the user if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2	
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3	
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3	
6	Service-Type	Indicates the type of service for this user	Framed	Optional	
7	Framed-Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional	
8	Framed-IP-Address	IP address allocated for this user	IPv4	Conditional	
9	Framed-IP-Netmask	Netmask for the user IP address	IPv4	Conditional	
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory	
31	Calling-Station-Id	Identifier for the MSThis attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	Optional Mand atory	
60	CHAP-Challenge	Challenge if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2	
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional	
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional	

Next modified section

16.4.3 Accounting-Request START (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request START message.

Attr # Attribute Name		Description	Content	Presence Requirement	
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional	
4	NAS-IP-Address	GGSN IP address for communication with the AAA server.	IPv4	Conditional Note 3	
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3	
6	Service-Type	Indicates the type of service for this user	Framed	Optional	
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional	
8	Framed-IP-Address	User IP address	IPv4	Mandatory	
25	Class	Received in the access accept	String	Conditional (NOTE 4)	
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory	
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	OptionalMand atory	
40	Acct-Status-Type	Type of accounting message	START	Mandatory	
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time (in seconds) of the event generating this Accounting-Request.	32 unsigned integer	Optional	
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory	
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional	
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional	
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional	

Next modified section

16.4.4 Accounting Request STOP (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request STOP message.

Attr #	Attribute Name	Description	Content	Presence Requirement	
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional	
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3	
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3	
6	Service-Type	Indicates the type of service for this user	Framed	Optional	
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional	
8	Framed-IP-Address	User IP address	IPv4	Mandatory	
25	Class	Received in the access accept	String	Optional (NOTE 4)	
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory	
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded. Note that there are no leading characters in front of the country code.	Optional Manda tory	
40	Acct-Status-Type	Indicates the type of accounting request	STOP	Mandatory	
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time of the event generating this Accounting-Request	Second	Optional	
42	Acct-Input-Octets	GGSN counted number of octets sent by the user for the PDP context	32 bit unsigned integer	Optional	
43	Acct-Output-Octets	GGSN counted number of octets received by the user for the PDP context	32 bit unsigned integer	Optional	
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory	
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional	
46	Acct-Session-Time	Duration of the session	Second	Optional	
47	Acct-Input-Packets	GGSN counted number of packets sent by the user	Packet	Optional	
48	Acct-Output-Packets	GGSN counted number of packets received by the user	Packet	Optional	
49	Acct-Terminate- Cause	Indicate how the session was terminated	See RFC 2866	Optional	

61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according to sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

End of modified sections	
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3GPP TSG-CN WG3 Meeting #19 Brighton, U.K. 15th - 19th September 2001

CHANGE REQUEST					
ж	09.61 CR A021				
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the # symbols.					
Proposed change af	fects: 第 (U)SIM ME/UE Radio Access Network Core Network X				
Title: # (Correction to the Calling-Station-Id attribute				
Source: #	CN3				
Work item code: 第	GPRS Date: 17.10.2001				
	Release: Release: Release: Release: Release: Release: Representation of the following categories: Release: Section of the following categories: Release: Section of the following releases: Release: Section of the following releases: Release: R				
Reason for change: Under certain circumstances, e.g. where a subscriber has withheld their Calling Line Identity (CLI), the MSISDN may, depending on privacy laws within specific countries, not be allowed to pass outside of the PLMN. Currently, the presence requirement associated with the attribute is mandatory. This is incorrect, it should be specified as optional in order to cater for the circumstances as explained. Summary of change: The presence requirement of the attribute has been changed from mandatory to					
	optional. Text has been added to the attribute description in order to clarify that the attribute is configurable per APN.				
Consequences if not approved:	The MSISDN will be sent outside of the PLMN when not allowed to do so.				
Clauses affected:					
Other specs affected:	Other core specifications Test specifications O&M Specifications				
Other comments:	ж				

How to create CRs using this form:

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

Start of modified sections

16.4.1 Access-Request message (sent from the GGSN to AAA server)

The table below describes the attributes of the Access-Request message.

Attr #	Attribute Name	Description	Content	Presence Requirement
1	User-Name	Username is provided by the user (extracted from the Protocol Configuration Options (PCO) field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present.	String	Mandatory
2	User-Password	User password provided by the user if PAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no password is available a generic password, configurable on a per APN basis, shall be present.	String	Conditional Note 1
3	CHAP-Password	User password provided by the user if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed-Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	IP address allocated for this user	IPv4	Conditional
9	Framed-IP-Netmask	Netmask for the user IP address	IPv4	Conditional
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MSThis attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	Optional Mand atory
60	CHAP-Challenge	Challenge if CHAP is used (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used).	String	Conditional Note 2
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

Next modified section

16.4.3 Accounting-Request START (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request START message.

Attr #	Attribute Name	Description	Content	Presence Requirement
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional
4	NAS-IP-Address	GGSN IP address for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	User IP address	IPv4	Mandatory
25	Class	Received in the access accept	String	Conditional (NOTE 4)
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded decimal. Note that there are no leading characters in front of the country code.	OptionalMand atory
40	Acct-Status-Type	Type of accounting message	START	Mandatory
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time (in seconds) of the event generating this Accounting-Request.	32 unsigned integer	Optional
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional
61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

Next modified section

16.4.4 Accounting Request STOP (sent from GGSN to AAA server)

The table below describes the attributes of the Accounting-Request STOP message.

4				Requirement
1	User-Name	Username provided by the user (extracted from the PCO field of the Create PDP Context Request message) or PPP authentication phase (if PPP PDP type is used). If no username is available a generic username, configurable on a per APN basis, shall be present. If the User-Name has been received in the Access-Accept message, this user-name shall be used in preference to the above	String	Optional
4	NAS-IP-Address	IP address of the GGSN for communication with the AAA server.	IPv4	Conditional Note 3
32	NAS-Identifier	Hostname of the GGSN for communication with the AAA server.	String	Conditional Note 3
6	Service-Type	Indicates the type of service for this user	Framed	Optional
7	Framed Protocol	Indicates the type of protocol for this user	7 (GPRS PDP Context)	Optional
8	Framed-IP-Address	User IP address	IPv4	Mandatory
25	Class	Received in the access accept	String	Optional (NOTE 4)
30	Called-Station-Id	Identifier for the target network	APN (UTF-8 encoded)	Mandatory
31	Calling-Station-Id	Identifier for the MS This attribute is the identifier for the MS, and it shall be configurable on a per APN basis.	MSISDN in international format according to 3GPP TS 23.003, UTF-8 encoded. Note that there are no leading characters in front of the country code.	OptionalManda tory
40	Acct-Status-Type	Indicates the type of accounting request	STOP	Mandatory
41	Acct-Delay-Time	Indicates how many seconds the GGSN has been trying to send this record for, and can be subtracted from the time of arrival on the AAA server to find the approximate time of the event generating this Accounting-Request	Second	Optional
42	Acct-Input-Octets	GGSN counted number of octets sent by the user for the PDP context	32 bit unsigned integer	Optional
43	Acct-Output-Octets	GGSN counted number of octets received by the user for the PDP context	32 bit unsigned integer	Optional
44	Acct-Session-Id	User session identifier.	GGSN IP address and Charging-ID concatenated in a UTF-8 encoded hexadecimal. NOTE: The GGSN IP address is the same as that used in the GCDRs.	Mandatory
45	Acct-Authentic	Authentication method	RADIUS or LOCAL	Optional
46	Acct-Session-Time	Duration of the session	Second	Optional
47	Acct-Input-Packets	GGSN counted number of packets sent by the user	Packet	Optional
48	Acct-Output-Packets	GGSN counted number of packets received by the	Packet	Optional
	Acct-Terminate-	Indicate how the session was terminated		

61	NAS-Port-Type	Port type for the GGSN	As per RFC 2865	Optional
26/10415	3GPP Vendor- Specific	Sub-attributes according to sub-clause 16.4.7.	See sub-clause 16.4.7	Optional except sub- attribute 3 which is conditional

End of modified sections	
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