

Source: MCC
Title: All LSs sent from CN1 since TSG CN#15 meeting,- pack 1
Agenda item: 6.1.1
Document for: INFORMATION

Introduction:

This document contains **11 agreed** LSs sent from **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #15 for information only.

Meeting	TDoc #	Status	Source	Tdoc Title	Type	Comments
N1-23	N1-020874	AGREED	Inmaculada	Response to the LS "Access dependent services and features for GERAN lu mode"	LS OUT	684 related. To: SA1 CC:GERAN2
N1-23	N1-020875	AGREED	Duncan	Liaison Statement on IMS Access with a R99/REL-4 USIM	LS OUT	686 related. To: SA1, SA2 CC: CN4
N1-23	N1-020876	AGREED	Mark	Proposed response to LS on SIP compression	LS OUT	689 related. To: SA2
N1-23	N1-020878	AGREED	Arnaud	Liaison Statement on Network initiated PDP context activation request for an already activated PDP context (on the mobile station side) from T1.	LS OUT	699 related. To: T1
N1-23	N1-020884	AGREED	Hannu	Correction to CS domain specific system information	LS OUT	Related to 881,882,883. To: RAN2
N1-23	N1-020930	AGREED	Hannu	Liaison Statement on UMTS to GSM change during signalling phase of CS call setup	LS OUT	682 related. To: RAN2 Revised from 872 and 929.
N1-23	N1-020931	AGREED	Rouzbeh	Reply LS on Size of Attach Request message	LS OUT	679 related. To: RAN3. Revised from 871
N1-23	N1-020947	AGREED	Atle	Liaison Statement 'Clarification of IMS signalling flag'	LS OUT	Related to 946. To: SA2 CC: CN3
N1-23	N1-020948	AGREED	Georg	Liaison statement on Charging at I-CSCF	LS OUT	Related to charging. To: SA2, SA5
N1-23	N1-020961	AGREED	Kevan	Reply Liaison Statement 'Issues with SA handling at P-CSCF'	LS OUT	Related to 742 and 900. To: SA3 Revised from 902
N1-23	N1-020962	AGREED	Duncan	Liaison Statement on SPLIT_PG_CYCLE value	LS OUT	Related to 822.

						To:TSG GERAN Revised from 913
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3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020874

Title: Response to the LS "Access dependent services and features for GERAN lu mode"
Source: CN1
To: SA1
Cc: GERAN2

Contact Person:

Name: Inmaculada Carrión
Tel. Number: +358503806481
E-mail Address: inmaculada.carrion-rodrigo@nokia.com

Attachments: None.

1. Overall Description:

TSG CN WG 1 would like to thank SA1 for their Liaison Statement (S1-020472) regarding "Access dependent services and features for GERAN lu mode". CN WG1 have discussed the issues raised in that LS and agreed that HSCSD should be included in GERAN lu mode services.

CN WG1 will study HSCSD stage 2 in TS 23.034 and make the appropriate corrections, if applicable.

Regarding the feasibility of Multicall service to GERAN lu mode in Rel-6 timeframe, this was seen as mainly GERAN issue and the meeting had no opinion on it.

2. Actions:

None.

3. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020875

Title: Liaison Statement on IMS Access with a R99/REL-4 USIM
Source: CN1
To: SA1, SA2
Cc: CN4
Response to: LS (S1-020577) on Access to IMS Services using 3GPP release 99 and release 4 UICCs from SA1; and

LS (S2-020912) on Stage 2 for use of USIMs and ISIMs for IMS from SA2.

Contact Person:

Name: Duncan Mills
Tel. Number: +44 1635 676074
E-mail Address: duncan.mills@vf.vodafone.co.uk

Attachments: None

1. Overall Description:

CN1 thanks SA1 and SA2 on their LS concerning the requirement to access IMS with a R99/Rel-4 UICC.

CN1 would like to inform SA1 and SA2 that a proposal to derive IMS identities from a R99/Rel-4 UICC has been discussed in CN1.

The proposal showed that the IMS identities could be derived as follows:

- Home Network Domain Name – Derived from the first six digits of the IMSI
- Private User ID – Derived from the IMSI
- ‘Temporary’ User ID for use in initial registration and subscription procedures – derived from IMSI

The NOTIFY response from the S-CSCF to the UE will then provide the UE with the list of Public User IDs that have been registered.

CN1 is aware that SA2 are working on this kind of solution and can confirm that they foresee no problem in completing any stage three work as a result of the detailed stage two procedures being specified by SA2.

CN1 agrees that 23.003 is a suitable place to specify how IMS identities are derived from UMTS identities. This specification is under joint responsibility of CN1 and CN4. It should be noted that CN4 have the ultimate decision in agreeing a CR to 23.003. However, CN1 believes they have the necessary expertise to review any CR written in SA2, and as such should lead CN4 in this area.

2. Actions:

None

3. Date of Next CN1 Meetings:

CN1 SIP ad hoc	23 rd – 25 th April	Madrid, Spain
CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

Title: Proposed response to LS on SIP compression
Source: N1
To: SA2
Cc:
Response to: S2-020859 (N1-020689)

Contact Person:

Name: Mark Beckmann
E-mail Address: Mark.Beckmann@siemens.com
Tel. Number: +49 5341 906 1814

Attachments: None

Description:

CN WG1 thanks SA2 for the LS on SIP compression. While CN1 agrees with SA2 position that support of SIP compression shall be mandatory but to keep its usage optional, CN1 does not see a need for negotiation and the standardization of a default compression algorithm. This issue has been discussed a number of times with the IETF experts on signalling compression, and the conclusion is that neither algorithm negotiation nor the standardization of a default algorithm is needed.

The basic principle of the signalling compression scheme SigComp (draft-ietf-rohc-sigcomp-06 will come out soon) is based on a decompressor virtual machine . The compressor implements one or more compression algorithms. The decompressor announces its capabilities (e.g., available memory, cpu cycles, etc.). Afterwards the compressor, based on the decompressor announcement, may upload a suitable algorithm to the decompressor virtual machine (UDVM). Additionally the compressor is free to send the packets either compressed or uncompressed. Compressed packets are therefore marked by setting the first 5 bits to "1". By their nature uncompressed packets will never start with the first 5 bits set to "1" so that the receiving entity is able to determine whether the packet is compressed or uncompressed by just analysing the first 5 bits of the packet.

Since all the required announcement is performed in-band by the signalling compression scheme (SigComp) itself and because of the concept of uploading the algorithms, CN1 does not see a need to specify an additional negotiation mechanism or a default algorithm.

Actions:

CN1 would like to ask SA2 to take the above into account when describing the compression issue in their specifications.

Date of Next N1 Meetings:

N1 SIP adhoc	23 rd – 25 th April 2002	Madrid, Spain
N1#24	13 th – 17 th May 2002	Budapest, Hungary

3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020878

Title: Liaison Statement on Network initiated PDP context activation request for an already activated PDP context (on the mobile station side) from T1.
Source: CN1
To: T1
Cc:
Response to: LS (N1-020699) on Network initiated PDP context activation request for an already activated PDP context (on the mobile station side) from T1.

Contact Person:

Name: Arnaud THIERRY
Tel. Number: +33 6 76 04 98 35
E-mail Address: arnaud.thierry@mdc.nec.fr

Attachments: N1-020699 (T1-020174, T1S-020002r2)

1. Overall Description:

CN1 has received the N1-020699 T1 LS on Network initiated PDP context activation request for an already activated PDP context (on the mobile station side).

In [1] TS 24.008 section 6.1.3.1.5 states:

d) Network initiated PDP context activation request for an already activated PDP context (on the mobile station side)

If the MS receives a REQUEST PDP CONTEXT ACTIVATION message with the same combination of APN, PDP type and PDP address as an already activated PDP context, the MS shall deactivate the existing PDP context and, if any, all the linked PDP contexts (matching the combination of APN, PDP type and PDP address) locally without notification to the network and proceed with the requested PDP context activation.

CN1 action is to clarify the intended UE behaviour for the above case, especially to clarify the meaning of “the MS shall deactivate the existing PDP context ... locally”. Does this mean deleting the existing PDP context along with all the radio resources associated with it including the required RABs and associated resources like DCH, Physical Channels etc for the same PDP context?

The meaning is, for each linked PDP context :

- The UE deactivates the PDP context locally . Locally only means “without any SM protocol procedure to the network”.
- The UE does not try to act on this PDP associated radio resources
- This PDP associated radio resource is expected to be aligned by the Access Stratum Network

2. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020884

Title: Correction to CS domain specific system information
Source: CN1
To: RAN2
Cc:
Response to

Contact Person:

Name: Hannu Hietalahti / Nokia
Tel. Number: +358 40 5021724
E-mail Address: Hannu.Hietalahti@nokia.com

Attachments: CN1 change requests in N1-020881-883

1. Overall Description:

CN1 has agreed the attached CRs to correct the encoding of CS domain specific system information IE.

This change is believed to be in line with the RAN2 understanding of the usage of this IE. However, if this view is not shared by RAN2, CN1 would like to hear about it as it implies that changes to other container IEs CN Common GSM-MAP NAS system information and PS domain specific system information might be needed.

2. Actions:

To RAN2 group.

ACTION: RAN2 is asked to confirm the CN1 assumption and to check if the attached CRs need to be reflected in any specifications under RAN2 control.

3. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Amsterdam, Holland
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020930

Title: Liaison Statement on UMTS to GSM change during signalling phase of CS call setup
Source: CN1
To: RAN2
Cc:
Response to: LS (N1-020682) on UMTS->GSM handover during signalling phase of CS call setup from WG RAN2.
Release: R99

Contact Person:

Name: Hannu Hietalahti
Tel. Number: +358 40 5021724
E-mail Address: hannu.hietalahti@nokia.com

Attachments:

N1-020682_LS IN.doc [LS on UMTS->GSM handover during signalling phase of CS call setup]

1. Overall Description:

CN1 has received the RAN2 LS on UMTS to GSM handover during signalling phase of CS call setup. CN1 action was to analyse and confirm RAN2's analysis and if so to make changes to the mobile NAS specifications.

CN1 confirms RAN2's analysis, and considers the problem as difficult.

The issue was studied in order to solve the problem on NAS protocol level.

An attempt was made to overcome the inter-RAT change problem by drafting a NAS related CR. But neither LU procedure nor call re-establishment is possible during call establishment and thus no workable solution could be identified without causing significant impact on the UE protocol architecture.

2. Actions:

To RAN2 group.

ACTION: CN1 asks RAN2 group to consider RAN specific corrections to the problem, such as not using the Cell-FACH state for the CS-domain signalling

3. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

Title: Reply LS on Size of Attach Request message
Source: CN1
To: RAN3
Cc:
Response to: N1-020679 (R3-020702) LS on Size of Attach Request message.

Contact Person:

Name: Rouzbeh Farhoumand
Tel. Number: +1 972 583 8061
E-mail Address: rouzbeh.farhoumand@ericsson.com

Attachments:

1. Overall Description:

CN1 would like to thank RAN3 for their LS highlighting the possibility that the user data field of the SCCP CONNECTION_REQUEST may be insufficient to carry the ATTACH_REQUEST provided by the mobile in case the ATTACH_REQUEST included a full size MS Radio Access Capability IE of 52 octets.

CN1 has investigated this problem and the solutions proposed by RAN3. CN1, however, cannot agree with the two proposed solutions that involve changing 24.008. To make a change to 24.008 in accordance with RAN3's preferred solution (i.e. UE shall not include MS Radio Access Capability when attaching to UMTS) would cause the present release of 24.008 to be not backwards compatible. To make a change to 24.008 in line with the second proposed solution (i.e. to limit the size of the MS Radio Access Capability to 20 octets when accessing UMTS) would be unreliable, because between the message encoding and the actual sending of the message the UE could perform a cell re-selection from UMTS to GSM. On top of these, CN1 feels that changes of this nature on a frozen release that is far into implementation, for a problem that is not in 24.008, are not justified.

Furthermore, in the course of our investigation, CN1 found that this problem also extends to ROUTING_AREA_UPDATE_REQUEST. Thus changes of the nature that is proposed in N1-020679 (R3-020702) cannot be seen as a fool-proof solution confined to only just one message and one aspect of the signalling protocol of the radio interface. Additionally, such changes would rule out future (full or partial) use of the MS Radio Access Capabilities in the system at some later date.

In conclusion, CN1 considers it more appropriate that RAN3 investigate lu-interface based solution.

2. Actions:

To RAN3.

ACTION: RAN3 to consider a solution to the problem highlighted in N1-020679 (R3-020702) that is more within the area of RAN3.

3. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020947

Title: Liaison Statement 'Clarification of IMS signalling flag'
Source: CN1
To: SA2
Cc: CN3
Response to:

Contact Person:
Name: Atle Monrad
Tel. Number: + 47 372 93 665
E-mail Address: atle.monrad@ericsson.com

Attachments: None

1. Overall description:

CN1 is currently working on the GPRS aspects when connected to IMS, and during this work, CN1 would like to confirm their current understanding with SA2 and CN3.

1. Current text in 23.228 version 5.4.0, clause 4.2.6, states:

The minimum set of capabilities to be applied is defined as: All messages from the UE on the Signalling PDP Context shall have their destination restricted to the P-CSCF assigned for this UE, or to any one of the set of possible P-CSCFs that may be assigned to this UE.

CN1 has introduced a signalling flag that will be set by the UE to indicate that the PDP context is used for SIP-signalling. In case of SIP signalling, the GGSN may apply restrictions to the PDP context used for the SIP-signalling in order to prevent the PDP context to be used also for ordinary IP-traffic.

Question to SA2:

Will these restriction performed in the GGSN restrict the signalling to be destined to the P-CSCF exclusively or will the PDP context also be allowed used to other destinations, e.g. by additional protocols as DNS and DHCP? In case a dedicated PDP context is intended for signalling towards the P-CSCF, is another PDP context intended to be set up for e.g. DNS and DHCP, or will the restrictions to destination P-CSCF only apply after the GGSN has obtained the P-CSCF address?

2. Current text in 23.207 version 5.3.0, clause 6.4, states:

To establish a PDP context for application level signalling, the UE shall be able to include a signalling flag in PDP context activation or modification procedures. This indicates to the network the intention of using the PDP context for application level signalling. The PDP Configuration Options parameter shall be used to carry this flag. The PDP Configuration Options parameter is one of the optional parameters signalled in PDP Context Activation/Modification. The signalling flag shall be a standardized static information. In the case of IMS, the signalling flag is used to reference rules and restrictions on the PDP context used for application level signalling, as described in 23.228 section 4.2.6. The signalling flag and the QoS profile parameters detailed in TS23.107 may be used independently of each other.

CN1 interprets this to be a stage-2 requirement for the UE to set the signalling flag at PDP context activation and at possible PDP context modifications. This requires the PCO-IE to be included in the PDP context modification messages sent from the UE to the GGSN.

Question to SA2:

Is this interpretation correct?

3. Some concerns were raised within CN1 on backwards compatibility, as pre-R5 SGSNs will not pass the PCO-IE to an R5 GGSN that provides the restrictions to the PDP context used for SIP signalling. One reason to introduce the PCI-IE in the PDP context modification messages now may be to prepare 24.008 for signalling flags for future application level signalling.

Question to SA2:

Can SA2 please guide CN1 on this subject?

4. CN1 assumes that the GPRS aspect for the GGSN is taken care of by CN3.

2. Actions:

To SA2 group:

ACTION: SA2 is kindly asked to analyse the topics and confirm or adjust CN1's future work on the subject by answering the above questions.

3. Date of Next CN1 Meetings:

CN1_SIP-Ad-Hoc	23rd – 25th April 2002	Madrid, Spain
CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

Title: Liaison statement on Charging at I-CSCF
Source: CN1
To: SA2, SA5

Contact Person:

Name: Georg Mayer
Tel. Number: +49 172 537 1233
E-mail Address: georg.mayer@icn.siemens.de

1. Overall Description:

CN1 has discussed the incorporation of charging issues into TS 24.228 and 24.229. During this discussion some discussions on the charging requirements at the I-CSCF arose. There are two basic questions that arose:

- Is there a scenario which would require the I-CSCF to generate any charging information?
- Is there a scenario that requires the I-CSCF to generate charging records, which would mandate it to retrieve the charging information in the SIP signalling flows?

A) Is there a Scenario which would require the I-CSCF to generate any charging information?

CN1 undertook the following investigation:

a) Pure IMS to IMS calls – no hiding

The task of the I-CSCF within a pure IMS environment (which involves no hiding) is basically to forward incoming initial SIP requests to the correct S-CSCF in the home network. After fulfilling this task for the initial request, all subsequent requests and responses will not be routed via the I-CSCF anymore. CN1 therefore assumes that for this case no charging requirements exist at the I-CSCF.

b) Pure IMS to IMS calls – topology hiding

CN1 also assumes that no charging issues arise for a I-CSCF(THIG), i.e. an I-CSCF hiding the topology of the home network in all SIP messages, as charging a user for the purpose of operator required topology hiding seems out of scope.

c) Incoming call from PSTN / CS domain to IMS

If a call is incoming from a PSTN / the CS domain, the first IMS entity involved in this call will be a MGCF. CN1 assumes that it is the task of the MGCF to generate the relevant charging information. Therefore this scenario does not put any charging requirement to the I-CSCF.

d) Incoming call from other SIP network to IMS

If a call is incoming from another SIP network, the first IMS entity involved in this call will be the I-CSCF. Nevertheless the I-CSCF will always forward the incoming request to another IMS entity of the home network (S-CSCF or MGCF). As the I-CSCF in this case again only forwards the request and afterwards will not be on the signalling path, CN1 assumes that charging information is generated by the S-CSCF/MGCF. Therefore this scenario does not put any charging requirement to the I-CSCF. This would put a new requirement on the S-CSCF to generate the IMS Charging ID (ICID) in this case, which is acceptable to CN1.

e) Call being redirected from IMS to PSTN / CS domain or to other SIP network

Redirection to a location outside the IMS is a service offered by the home network to the served user. Therefore any charging issues arising for redirection shall be handled by the redirecting entity (e.g. S-CSCF, MGCF or AS). A redirection of this form cannot be handled by the I-CSCF. Therefore this scenario does not put any charging requirement to the I-CSCF. This is also true if the call, which is redirected, is originating from another network (i.e. PSTN / CS domain or other SIP network) – see items c) and d).

Therefore there seems to be no case in which the I-CSCF will need to generate charging information.

B) Is there a scenario that requires the I-CSCF to generate charging records?

From the pure nature of the I-CSCF CN1 sees no basis for charging record generation at the I-CSCF. Therefore the I-CSCF does not need to retrieve, modify or store the charging information in the SIP signalling flow, i.e. it can transparently pass it through.

2. Actions:

To SA2 and SA5 group.

ACTIONS: CN1 kindly asks SA2 and SA5 to review the above statements and scenarios and to respond to CN1 if they are correct and complete. If the above stated consequences are correct, the CN1 asks SA2 and SA5 to align their documentation in a way that no charging requirements are mandated for the I-CSCF.

3. Date of Next CN1 Meetings:

CN1 SIP/IMS ad hoc	23 rd – 25 th April 2002	Madrid, Spain
CN1#24	13 th – 17 th May 2002	Budapest, Hungary

3GPP TSG-CN1 Meeting #23
Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020961

Title: Reply Liaison Statement 'Issues with SA handling at P-CSCF'
Source: CN1
To: SA3
Cc:
Response to: LS (S3-020161) on Issues with SA handling at P-CSCF'.

Contact Person:

Name: Kevan Hobbis
Tel. Number: +44 1628 765252
E-mail Address: kevan.hobbis@hutchison3g.com

Attachments: None

CN1 thanks SA3 for their liaison titled 'Issues with SA handling at P-CSCF' in which four questions were asked of CN1.

The answers from CN1 are given below.

- *Do CN1 see anyway of ensuring the P-CSCF knows that the UE successfully received the last message in a registration procedure?*

Answer : There is no solution at the SIP layer to detect if the message was received, except that the UE may restart the REGISTER procedure. At the transport layer, if TCP transport is used then it would be possible to determine if the message had been received by the terminal. There is no way for the network to tell if the message was delivered when UDP transport is used. UDP is the preferred option for transport to the terminal, consequently no guarantee of delivery is available.

- *Do CN1 see any reason why a UE should be allowed to initiate multiple simultaneous registrations for a particular IMPI?*

Answer : The SIP specification states that "UAs MUST NOT send a new registration (that is, containing new Contact header field values, as opposed to a retransmission) until they have received a final response from the registrar for the previous one or the previous REGISTER request has timed out." However, this would apply per IMPU rather than IMPI.

There is no scenario identified where multiple parallel registrations are required to be supported. Registration of multiple IMPU can be performed sequentially.

It should be noted that the P-CSCF and S-CSCF must in principle allow such parallel registrations otherwise an attacker flooding the network could potentially block a real registration from the valid user.

A change request to 24.229 to disallow multiple parallel registrations from the UE has been agreed by CN1 in document N1-020959.

- *Can CN1 proscribe any behaviour for the P-CSCF and S-CSCF to deal with an attacker flooding the network with multiple simultaneous registrations for the same IMPI?*

Answer : If the registrations are unprotected then the default behaviour of the P-CSCF is to pass them to the S-CSCF. It is possible that the P-CSCF could detect the flooding from a malicious user and start to discard these registrations. However, it must not prevent a registration from the valid user.

A change request to 24.229 to disallow multiple parallel registrations from the UE has been agreed by CN1 in document N1-020959. No P-CSCF behaviour is proscribed i.e. it will always pass on a REGISTER message that is unprotected.

It should also be noted that the registrations from an attacker should fail authentication and will therefore be dropped by the P-CSCF.

- *Do CN1 see the need to limit the compulsory number of SAs stored at the P-CSCF to two?*

Answer : There is no identified restriction or impact within the scope of CN1 and this is therefore considered to be an SA3 decision.

2. Actions:

To SA3 group.

ACTION: CN1 asks SA3 to note the replies given to their questions above, and to reflect the decisions in their specifications where appropriate.

3. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

3GPP TSG-CN1 Meeting #23

Fort Lauderdale, Florida, USA 08. - 12. April 2002

Tdoc N1-020962

(revision of N1-020913)

Title: Liaison Statement on SPLIT_PG_CYCLE value
Source: CN1
To: TSG GERAN
Cc:
Response to:

Contact Person:

Name: Duncan Mills
Tel. Number: +44 1635 676074
E-mail Address: duncan.mills@vf.vodafone.co.uk

Attachments: None

1. Overall Description:

At TSG CN1 #23, a proposal to allow the SGSN to select the SPLIT_PG_CYCLE value that it wishes the MS to use was discussed.

Currently, the SPLIT_PG_CYCLE value is encoded in the DRX Information Element. This IE is sent from the MS to the SGSN in the ATTACH REQUEST and the ROUTING AREA UPDATE REQUEST messages. The value of the SPLIT_PG_CYCLE is hard coded in the MS, and so the SGSN always receives the same value from the MS.

The SPLIT_PG_CYCLE value can equate to a time period of between 0 and 15 seconds. Upon receipt of the value in the ATTACH REQUEST or ROUTING AREA UPDATE REQUEST message, the SGSN shall simply store the received SPLIT_PG_CYCLE value, and the BSC uses the value when paging the MS.

The network operator has very little influence on the value of the SPLIT_PG_CYCLE used by the MS, except possibly in the procurement process. For instance, there are known implementations of MS that use SPLIT_PG_CYCLE values that vary greatly.

On the circuit switched side, the network has the ability to broadcast similar parameters (BS_PA_MFRMS) in the system info.

The choice of SPLIT_PG_CYCLE has a direct impact on paging by the network and battery life in the terminal and therefore perceived quality of both networks and terminals. It is believed that there is an indirect impact on cell selection as well.

As long as network operators have little or no influence on the setting of this value, the performance of both networks and terminals is greatly reduced.

The Vodafone proposal was to allow the network to respond to the ATTACH REQUEST and ROUTING AREA UPDATE REQUEST messages with a value for SPLIT_PG_CYCLE that the operator specifies, in the ATTACH ACCEPT and ROUTING AREA UPDATE ACCEPT messages, respectively.

The UE would thus still be hard coded with a value, and would 'offer' that value in the ATTACH REQUEST and ROUTING AREA UPDATE request. The network may then choose a different value and return it to the MS. The MS would then have to start using that value commanded by the network.

Indication of support of the feature would be provided in the MS Network Capability IE.

This proposal was discussed and the principle was acceptable to CN1, and some delegates recognised the urgent need to add this functionality for Release 5.

However, there were some concerns within CN1 on the impact to layer 1 mechanisms in the MS. The MS would need to be capable of switching to any one of 98 SPLIT_PG_CYCLE values.

Thus, CN1 felt it appropriate to liaise to TSG GERAN. One proposal was that the network could be allowed to set the SPLIT_PG_CYCLE value as outlined above, but only a limited set of the 98 values would be allowed. It is believed that on the circuit switched side, the network is allowed to use any one of 8 values for 'BS_PA_MFRMS'.

CN1 is willing to compromise in such a way that perhaps 8 values could be selected for the SPLIT_PG_CYCLE, and the network would be able to command the MS to use one of 8 values rather than one of 98.

CN1 asks GERAN to consider which of its working groups may be impacted by these proposed changes, and also what level of impact such a proposal has at layer 1. Ideally the network should be able to use any of the 98 values, but as indicated above, a compromise could be reached.

2. Actions:

To GERAN:

ACTION: CN1 asks GERAN to consider the problem outlined above, and respond to CN1 if they see any reason why CN1 should not proceed with this change. If there is no reason for CN1 not to proceed, then CN1 asks for guidance on which SPLIT_PG_CYCLE values the network should be allowed to command to the mobile. These values should be limited in number and the values and their range should be chosen carefully, in order to not impact MS implementation too much, and to be useful to both network operators and terminal manufacturers.

CN1 believes that a CR to 24.008 is the only change necessary to complete this work. GERAN are asked to notify CN1 if they do not agree with this assessment.

3. Date of Next CN1 Meetings:

CN1_24	13th – 17th May 2002	Budapest, Hungary
CN1_25	29th July – 02nd August 2002	Helsinki, Finland

Agenda item: 3
Document for: LS IN

TSG-RAN Working Group 2 Meeting #27
Orlando, FL, USA, 18 - 22 February 2002

R2-020595

Title: LS on UMTS->GSM handover during signalling phase of CS call setup
Source: RAN2
To: CN1
Cc:
Response to: -
Release: R'99

Contact Person:
Name: Michael Roberts
Tel. Number: +33 1 4209 2006
E-mail Address: michael.roberts@mdc.nec.fr

Attachments: R2-020256

1. Overall Description:

The signalling phase of a CS connection can use either CELL DCH or CELL FACH RRC states. During CELL FACH the dual mode mobile controls mobility and may change from UMTS coverage to GSM coverage within the same PLMN and thus perform an inter system cell reselection.

Inspection of 24.007 shows that the NAS is required to resend unsent messages from the AS/UMTS to the AS/GSM side on inter system cell reselection. However, in this case, this behaviour of the NAS doesn't work, at least, not until the point in time the AS is in CELL DCH state.

RAN2 studied this issue and deduced that the most preferred way of handling the situation would be in the mobile NAS. RAN2's understanding is that the mobile's NAS would have to re-initiate the call on GSM (i.e. perform location update followed by CM service request).

RAN2 studied other possible solutions which touched either UTRAN or the mobiles AS (see attachment R2-020256). However it was felt that the mobile NAS solution was the most preferred and was felt to be the best and least complex solution.

2. Actions:

To CN1.

ACTION: CN1 to analyse and confirm RAN2's analysis and if so to make changes to the mobile NAS specifications.

3. Date of Next RAN2 Meetings:

RAN2_28	8 – 12 April 2002	Kobe, Japan.
RAN2_29	13 – 17 May 2002	Gyeongju, Korea.

Agenda item: 3
Document for: LS IN

3GPP TSG T T1 Meeting #14
Sophia Antipolis, 21st – 22nd February 2001

T1-020174

3GPP TSG T T1Sig Meeting #21
Sophia Antipolis, 18th - 20th February 2001

T1S-020002r2

Title: Liaison Statement on Network initiated PDP context activation request for an already activated PDP context (on the mobile station side)
Source: T1
To: CN1
Cc:
Response to:

Contact Person:
Name: Jasmina Prosenica
E-mail Address: (<mailto:jasminap@icpdd.nec.com.au>)

Attachments:

1. Overall Description:

T1 would like to ask CN1 for clarification of the UE behaviour for the case of network initiated PDP context activation request for an already activated PDP context (on the mobile station side).

In [1] TS 24.008 section 6.1.3.1.5 states:

- d) Network initiated PDP context activation request for an already activated PDP context (on the mobile station side)

If the MS receives a REQUEST PDP CONTEXT ACTIVATION message with the same combination of APN, PDP type and PDP address as an already activated PDP context, the MS shall deactivate the existing PDP context and, if any, all the linked PDP contexts (matching the combination of APN, PDP type and PDP address) locally without notification to the network and proceed with the requested PDP context activation.

2. Actions:

To CN1 group.

ACTION: T1 asks CN1 group to clarify the intended UE behaviour for the above case, especially to clarify the meaning of "the MS shall deactivate the existing PDP context ... locally". Does this mean deleting the existing PDP context along with all the radio resources associated with it including the required RABs and associated resources like DCH, Physical Channels etc for the same PDP context?

TSG T1 asks CN1 for reply by next T1 meeting.

3. Date of Next T1 Meetings:

T1_15	23rd – 24th May 2002	Sweden.
T1_16	1st – 2nd August 2002	Japan.

References

- [1] 3GPP TS 24.008 v3.a.0: "Mobile radio interface layer 3 specification, Core Network Protocols - Stage 3".

CR-Form-v5

CHANGE REQUEST

⌘ **24.008 CR 579** ⌘ rev **1** ⌘ Current version: **3.11.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Correction to CS domain specific system information		
Source:	⌘ Nokia		
Work item code:	⌘ GSM – UMTS interworking	Date:	⌘ 8.4.2002
Category:	⌘ F	Release:	⌘ R99
	<i>Use <u>one</u> of the following categories:</i> 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.		<i>Use <u>one</u> of the following releases:</i> 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:	⌘ Incorrect octet numbers in Table 10.5.1.12.2		
Summary of change:	⌘ Correction in Table 10.5.1.12.2		
Consequences if not approved:	⌘ The specification remains incorrect		

Clauses affected:	⌘ 10.5.1.12.2		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> 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/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.

10.5.1.12.2 CS domain specific system information

The purpose of the *CN domain specific GSM-MAP NAS system information* element, when used for the CS domain, is to provide the MS with actual parameter settings of parameters relevant only for MM functionality. The coding of the information element identifier and length information is defined in the 3GPP TS 25.331. Only the coding of the content is in the scope of the present document.

For CS domain, the content of the *CN domain specific GSM-MAP NAS system information* element is coded as shown in figure 10.5.1.12.2/3GPP TS 24.008 and table 10.5.1.12.2/3GPP TS 24.008. The length of this element content is two octets. The MS shall ignore any additional octets received.

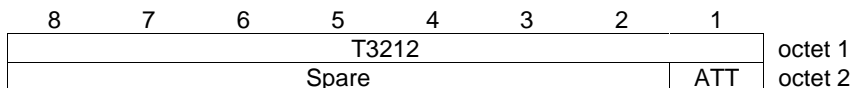


Figure 10.5.1.12.2/3GPP TS 24.008 CS domain specific system information element

Table 10.5.1.12.2/3GPP TS 24.008: CS domain specific system information element

<p>T3212 timeout value (1 octet field) The T3212 timeout field is coded as the binary representation of the timeout value for periodic updating in decihours. Bit 8 in octet <u>13</u> is the most significant bit and bit 1 in octet <u>13</u> is the least significant bit. Range: 1 to 255 The value 0 is used for infinite timeout value i.e. periodic updating shall not be used</p> <p>ATT, Attach-detach allowed (1 bit field): Bit 1 0 MSs shall not apply IMSI attach and detach procedure. 1 MSs shall apply IMSI attach and detach procedure</p> <p>The bits 2 – 8 of octet <u>24</u> are spare and shall be coded all zeros.</p>
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CR-Form-v5

CHANGE REQUEST

⌘ **24.008 CR 580** ⌘ rev **1** ⌘ Current version: **4.6.0** ⌘

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

Title:	⌘ Correction to CS domain specific system information		
Source:	⌘ Nokia		
Work item code:	⌘ GSM – UMTS interworking	Date:	⌘ 18.3.2002
Category:	⌘ A	Release:	⌘ Rel-4
	Use <u>one</u> of the following categories:		Use <u>one</u> 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)
			REL-5 (Release 5)

Reason for change:	⌘ Incorrect octet numbers in Table 10.5.1.12.2		
Summary of change:	⌘ Correction in Table 10.5.1.12.2		
Consequences if not approved:	⌘ The specification remains incorrect		

Clauses affected:	⌘ 10.5.1.12.2		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications	⌘	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
Other comments:	⌘		

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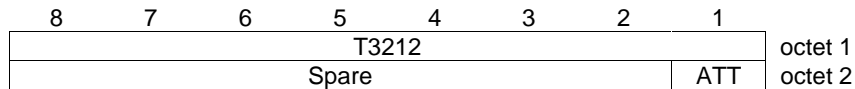


Figure 10.5.1.12.2/3GPP TS 24.008 CS domain specific system information element

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CR-Form-v5

CHANGE REQUEST

⌘ **24.008 CR 581** ⌘ rev **1** ⌘ Current version: **5.3.0** ⌘

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

Proposed change affects: ⌘ (U)SIM ME/UE Radio Access Network Core Network

Title:	⌘ Correction to CS domain specific system information		
Source:	⌘ Nokia		
Work item code:	⌘ GSM – UMTS interworking	Date:	⌘ 18.3.2002
Category:	⌘ A	Release:	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> 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)
			REL-5 (Release 5)

Reason for change:	⌘ Incorrect octet numbers in Table 10.5.1.12.2		
Summary of change:	⌘ Correction in Table 10.5.1.12.2		
Consequences if not approved:	⌘ The specification remains incorrect		

Clauses affected:	⌘ 10.5.1.12.2		
Other specs affected:	⌘ <input type="checkbox"/> Other core specifications	⌘	
	<input type="checkbox"/> Test specifications		
	<input type="checkbox"/> O&M Specifications		
Other comments:	⌘		

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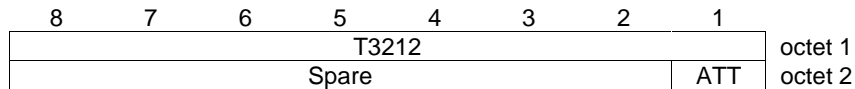


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Title: Use of CELL FACH state for signaling towards the CS domain for Dual mode mobiles and 3G->2G cell reselection

Source: NEC UK LTD

Date: 22 February 2002

Contact person: Michael Roberts
E-mail: michael.roberts@mdc.nec.fr

Discussion

The CELL FACH state can be used as a common mechanism for carrying signaling traffic between MS and the CS and PS domain. When in CELL FACH state the mobile is responsible for controlling its mobility and thus it is (in the present standard) free to choose any cell in the PLMN.

It is recognized that a PLMN is made up of one or more PLMN identities these are known collectively as equivalent PLMNs. The radio access of a PLMN can be either 2G or 3G access for R99 and thus in the CELL FACH state the mobile is free to choose either 2G or 3G access based on radio measurements made by the mobile.

For 2G access towards the MSC the BSS always allocates a dedicated channel (normally SDCCH). In this state the mobility of the mobile is controlled by the network and thus any channel changes between cells or systems are maintained under control of the network.

For 3G access the signaling can be made using dedicated channels (i.e. CELL DCH) but it is foreseen that CELL FACH is commonly used. The use of CELL FACH leads to the possibility that the mobile can change from 3G to 2G and from 3G PLMN to 3G PLMN (i.e. two equivalent PLMNs).

The 3G/3G PLMN environment requires the support of Iur interface in order to handle the mobility for signaling across different RNCs belonging to different operators. This facilitates the eventual triggering of the SRNC relocation and thus the transference on the Iu interface of the Iu connection (realized by the signaling connection between the RNC and MSC/SGSN).

However, for the 3G to 2G PLMN environment there is no Iur interface support in R99 DM mobiles. The lack of the Iur-g interface means that the possibility to manage the mobility between BSC and RNC is not possible for the CS domain and thus the maintenance of the Iu connection to an A interface connection is not possible. For the PS domain there is no problem as the handover is made possible by MAP protocols.

For CS domain the Call setup times (during signaling connection setup before allocation of the dedicated channel for the CS call) can be anywhere from 5 seconds upwards (say 10seconds) and thus when in the CELL FACH state the possibility of the Dual mode mobile selecting a 2G cell becomes a statistically possibility which in turn leads to a dropped call.

Possible solutions

If RAN2 deems that the scenario poses some problems the following solutions exist:

- UTRAN must handle Dual mode mobiles differently than single mode mobiles by allocating a DCH for signaling connections towards the CS domain. Change to Network.
- Require that the mobile restricts cell reselection when in CELL FACH state and there is a signaling connection towards the CS domain. Note : Change to AS.
- Require mobiles to abort signaling and retry on the newly selected PLMN. Change to NAS.



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