3GPP TSG CN Plenary Meeting #15 **NP-020022**
6th – 8th March 2002. Cheju, Korea.

Source: TSG CN WG4

Title: LSs after CN#14

Agenda item: 6.4.1

Document for: Information

Introduction:

This document contains 11 LSs that have been agreed by TSG CN WG4 after CN#14, and are forwarded to TSG CN Plenary meeting #15 for information.

TDOC N4-00xxxx	Subject	To	Cc	Attachment	Sent
N4-020186	Liaison Statement on Lawful Interception For OoBTC	SA3			4th Feb.
N4-020187	Answer Liaison Statement on MSISDN Address resolution for MMS using MAP operations	T2	SA2		4th Feb.
N4-020197	Answer to Liaison Statement on Cx User Profile	T2			4th Feb.
N4-020215	Liaison Statement on Handover Indication solution	RAN3		N4-020054	4th Feb.
N4-020220	Liaison Statement on RANAP Indication Of Modify Support Of Link Characteristics	RAN3	SA2	N4-011416, N4-011234, N4-011076	4th Feb.
N4-020229	Liaison Statement on Handover Indication solution	RAN3			4th Feb.
N4-020267	Response on LS on External Network Assisted Cell Change	GERAN2 SA2			4th Feb.
N4-020268	Liaison Statement on AMR-WB and Lawful Interception	SA3	SA4		4th Feb.
N4-020269	Proposed Liaison Statement on Handling of AMR-WB in Core Networks	SA4	SA1		4th Feb.
N4-020295	Response to SA2 on Liaison statement on the transparent transfer via SGSN of application level information between UE and GGSN.	SA2	CN1		18th Feb.
N4-020302	Proposed Response Liaison Statement to SA5 on Trace and Availability of IMSI and IMEI	SA5, SA3, RAN2, GERAN2	RAN3, CN1		18th Feb.

3GPP TSG-CN-WG4 Meeting #12 ***N4-020186***

Sophia Antipolis, France, 28th January – 1st February 2002

Title: Liaison Statement on Lawful Interception For OoBTC

Source: CN4

To: SA3(for the attention of LI subgroup)

Cc:

Response to: S3LI01-107(N4-020113) on inclusion of LI in CN standards.

Contact Person:

Name: Elena García-Mendive

Tel. Number: +49 2407 575205

E-mail Address: Elena.Garcia-Mendive@eed.ericsson.se

Attachments:

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1. Overall Description:

CN4 thanks SA3-LI for their LS, in particular regarding the current inclusion of LI impacts in TS 23.153. In general CN4 accepts and agrees to the request for providing SA3-LI with information regarding new features and possible LI impacts.

In specific reference to the TS 23.153 v 4.1.0 (UMTS Release 4) where a very basic statement is made that for TrFO calls PCM will be provided (by two decoders – i.e. only stereo monitoring) this was included after considering the existing LI standards and the fact that only PCM is supported by monitoring functions. During the release 4 standardisation work for the OoBTC WI, CN4 did contact SA3-LI (N4-010291 at the CN4 Rel-4 Ad Hoc Meeting, Madrid, SPAIN on the 13th February – 15th February 2001 in response to S3-000742) to request their opinion on this and the reply was that this was not covered by 3GPP standards. Thus as TrFO through the network was new to Release 4 standards and TS 23.153 introduced this it was agreed that at least a statement to indicate that no impacts to existing monitoring functions was required.

If SA3-LI is now embarking on the standardisation of these aspects and can provide CN4 with a specification that covers this (and of course more detail as you group sees fit) then CN4 agrees to remove such text from later releases of this specification, replaced with a reference to the appropriate SA3-LI specification.

2. Actions:

NONE

3. Date of Next CN4 Meetings:

CN4_13	8th – 12th April 2002	Florida, US

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3GPP TSG CN WG4 Meeting #12bis ***N4-020295***
Helsinki, FINLAND, 13th Feb. – 14th Feb. 2002

Title:	Response to SA2 on Liaison statement on the transparent transfer via SGSN of application level information between UE and GGSN.
Source:	CN4
To:	SA2
Cc:	CN1
Response to:	LS on the transparent transfer via SGSN of application level information between UE and GGSN (Tdoc S2-020328)

Contact Person:
Name: Einar Oltedal, Ericsson
Tel. Number:
E-mail Address: einar.oltedal@.ericsson.se

Attachments: None

Overall Descriptions

TSG CN4 would like to thank TSG SA2 for the Liaison statement on the transparent transfer via SGSN of application level information between UE and GGSN (Tdoc S2-020328).

Based on the LS from CN1 (N1-020374), CN4 has the following answers to SA2's requests:

1.1 Need to pass application level information between UE and GGSN
CN4 will provide necessary CRs so that the PCO field can be transferred transparently via the Rel-5 SGSN both in primary and in secondary context activations. No actions are needed concerning the transport of the TFT field.

1.2 Backward compatibility to pre-R5 requirement
A pre-R5 SGSN will transparently transfer the PCO field, but only for primary PDP contexts and not for secondary PDP contexts. However, if a pre-R5 SGSN wrongly transfers the PCO field in a secondary PDP context activation, the information element will just be discarded by a pre-R5 GGSN.

1.3 Questions on TS 29.060
Regarding the following text from 29.060 Section 7.3.1: "When using the Secondary PDP Context Activation Procedure, the Selection mode, IMSI, MSISDN, End User Address, Access Point Name and Protocol Configuration Options information elements shall not be included in the message."

This will not mean that a pre-R5 GGSN will reject the PDP context activation. According to TS 29.060 11.1.11 the PCO field will be treated as an unexpected information element and just discarded.

Regarding the following text from 29.060: "For contexts created by the Secondary PDP Context Activation Procedure the SGSN shall include the linked NSAPI. Linked NSAPI indicates the NSAPI assigned to any one of the already activated PDP contexts for this PDP address and APN. "

CN4 is of the opinion that this text is clear enough.

2. Date of Next CN4 Meetings:

CN4_13	8th – 12th April 2002	Fort Lauderdale, USA
CN4_14	13th – 17th May 2002	Amsterdam, NETHERLANDS

3GPP TSG CN WG4 Meeting #12 ***N4-020269***

Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Title: **Proposed Liaison Statement on Handling of AMR-WB in Core Networks**
Source: **CN4**
To: **SA4**
Cc: **SA1**
Contact Person:

Name: **John Watson**
Tel. Number: +44 1635 682178
E-mail Address: John.Watson@vf.vodafone.co.uk

Attachments: None

3GPP CN4 would like to thank SA4 for their liaison statement S4 (01) 0681 (N4-020117) on the standardisation required in Release 5 to support AMR-WB speech service.

In response to the specific points raised in your Liaison Statement:

1. CN4 are pleased to inform SA4 that the specification of TrFO, for Release 5 wideband speech services, is progressing well. At this meeting we agreed a further TrFO CR N4-020271.

2. We agree that responsibility for the specification of signal processing functions, to enable interworking between AMR-WB and narrowband speech codecs, including PCM G.711, should remain with SA4. Whilst performing this work, it would be appreciated if SA4 could keep CN4 informed of any changes that might impact the TrFO specifications.

3. CN4 recognises the considerable benefit of the 3GPP AMR-WB codec interworking with the new wideband codec defined in ITU-T Recommendation G.722.2, without the need for transcoding. Since G.722.2 also enables good quality 7kHz speech to be encoded at 16kbit/s, we envisage its adoption by manufacturers of video conferencing equipment as an eventual replacement for both G.722 (64kbit/s) and G.722.1 (24 & 32kbit/s) audio coding based systems. Thus, we don't see an immediate requirement for the specification of transcoding between AMR-WB and G.722.1.

2. Actions:

ACTION to SA4: CN4 kindly asks SA4 to keep CN4 informed of any new codec interworking functions that might impact existing TrFO specifications.

3. Date of Next CN4 Meetings:

CN4#13: 6 – 8 April, 2002

3GPP TSG CN WG4 Meeting #12 ***N4-020268***
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Title: Liaison Statement on AMR-WB and Lawful Interception
Source: CN4
To: SA3 (for the attention of LI subgroup)
Cc: SA4

Contact Person:
Name: Seppo Kauntola
Tel. Number: +358 40 556 9959
E-mail Address: seppo.kauntola@nokia.com

Attachments: None

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1. Overall Description:

CN4 and CN plenary have approved a work item on Introduction of AMR-WB speech service in 3GPP Standards Release 5. CN4 is now completing this work item. To clarify the effects of AMR-WB to Lawful Interception the following information is brought to SA3 LI group:

In Circuit Switched voice calls for the Lawful interception user plane connection the MGW decodes the encoded speech in both TFO and TrFO case to G.711 PCM speech, and this is also done for WB speech by the MGW. The MGW just needs one new decoder.

In 3GPP TS 23.153 it is stated:

"4.3 Lawful interception

The TrFO shall be maintained if the interception is made due to the lawful interception. Two decoders are needed to monitor the TrFO call.
Lawful interception shall not have any influence on the establishment or maintenance of the TrFO connection in order to avoid any audible effect in speech quality or noticeable effect in speech delay to the end users."

The addition of one new codec does not affect the functionality of Lawful Interception.

In case SA3 LI group sees a demand to intercept wideband speech not decoded to narrowband G.711, but with full frequency (7kHz) wideband speech, CN4 would need to study possible solutions. One possible solution would be to use the TFO mechanisms defined in 3GPP TS 28.062 from MGW to Lawful Interception user plane connection. This would then require LEA side to have equipment to handle TFO synchronisation and signalling and then the decoder to decode TFO stream.

2. Actions:

None.

3. Date of Next CN4 Meetings:

CN4#13	8th – 12th April 2002	Florida, USA

3GPP TSG CN WG4 Meeting #12 ***N4-020267***
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Title: **Response on LS on External Network Assisted Cell Change**
Source: TSG CN WG4
To: TSG GERAN WG2, TSG SA WG2

Date: 1 February 2002

Contact person: Einar Oltedal
E-mail: mailto:einar.oltedal@eto.ericsson.se

TSG CN WG4 thanks SA2 and GERAN 2 for their liaison statements (S2-013597 & G2-020131) on External Network Assisted Cell Change. CN4 has started the required work and hopes to have it ready for the CN plenary meeting number 15.

3GPP TSG CN WG4 Meeting #12 ***N4-020229***
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Title: **[DRAFT]** Liaison Statement Response on the introduction of GERAN Iu mode
Source: CN4
To: GERAN2
Cc: SA4
Response to: LS (G2-020129) on the introduction of GERAN Iu mode from GERAN2.

Contact Person:
Name: Elena García-Mendive
Tel. Number: +49 2407 575205
E-mail Address: Elena.Garcia-Mendive@ericsson.com

Attachments: none

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1. Overall Description:

CN4 thanks GERAN2 for their LS (G2-020129), but regrets to inform GERAN2 that CN4 hadn't time to review the corresponding CR against 23.153 during CN4 #12 meeting but will be glad to consider it during the next CN4 meeting in April (please refer below for the exact date).

2. Actions:

To GERAN2 group.

ACTION:

TSG CN4 kindly asks TSG GERAN2 to put on hold any decision on this issue till CN4 decides if the proposed mechanism can be accepted by the meeting.

3. Date of Next CN4 Meetings:

CN4_13	8th – 12th April 2002	Florida, US

3GPP TSG-CN-WG4 Meeting #09 ***N4-011076***
Brighton, UK, 15th - 19th October 2001

Source:	LM Ericsson
Title:	Problems With RAB Assignment Modification
Agenda item:	7.3
Document for:	Approval

Introduction

The current handling of RAB Assignment Modification is faulty when AAL2 CS1 is used or CS2 used but does not support MSLC (Modify Support For Link Characteristics). If MSLC is not supported between the RNC and the MGW and a RAB Modification is requested then the Transport would be released and then re-seized. This does not allow coordination between the change of the transport connection and the Bearer Properties of the MGW termination.

It is desired to be able in such case to reserve a new termination prior to attempting RAB modification and request that the transport is moved to this new termination.

The current RANAP specification is unclear in its handling of the Transport Association & Transport Address during RAB modification. The specification states:

At a RAB modification, it is up to the RNC to decide if any transport network control plane signalling shall be performed or if the already existing transport bearer shall be used. If the RNC decides to establish a new transport bearer, the transport network control plane signalling shall use the possibly included Transport Layer Address IE and Iu Transport Association IE. Then the switch over to this new transport bearer shall be done immediately after transport bearer establishment and initialisation of the user plane mode. If the RNC decides to modify the already existing transport bearer, the transport network control plane signalling shall not use the possibly included Transport Layer Address IE and Iu Transport Association IE. That is, re-binding with Iu Transport Association IE shall not be done.

It is not clear in this procedure when the MSC server shall provide a new Transport Address or Transport Association and when this is not needed. It is believed that this text is written in this manner in order to allow for the introduction of MSLC in future RNC implementations. It is however clear that this provides the CN with a problem.

Analysis Of Problem

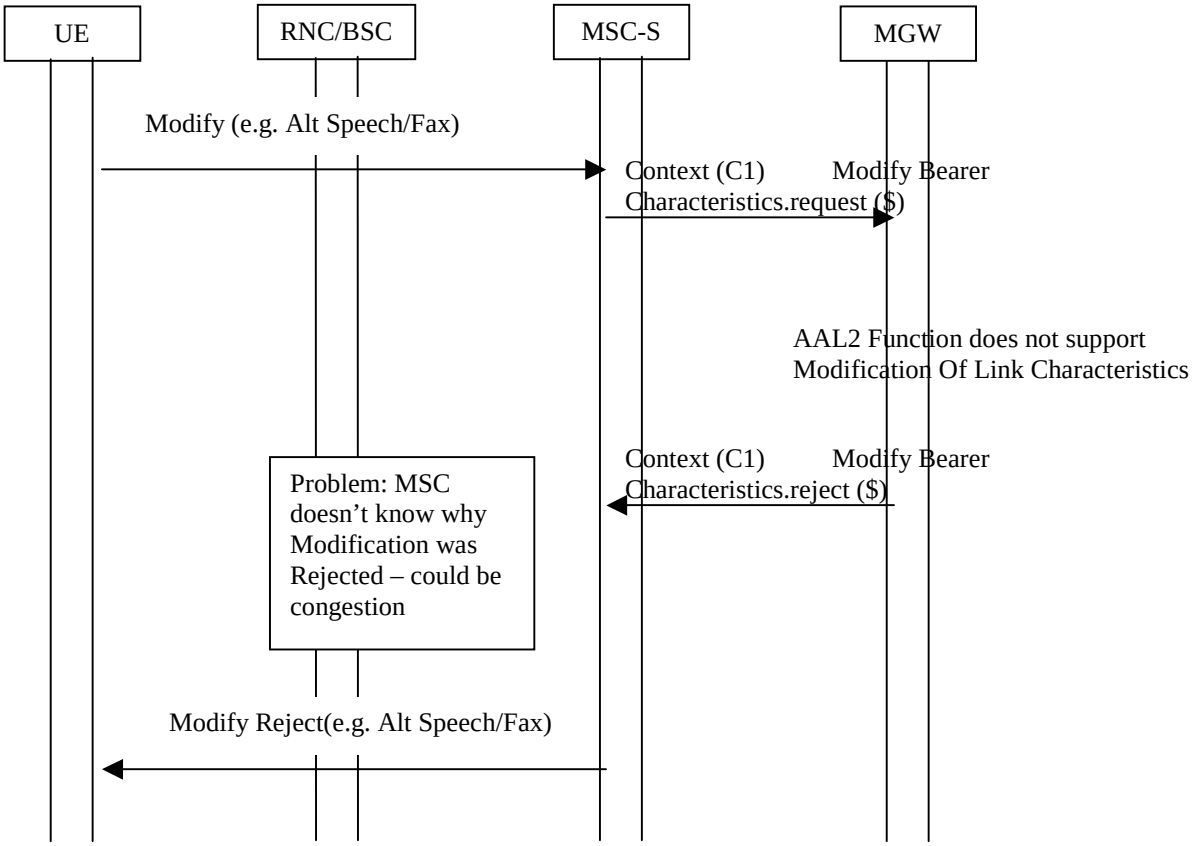

Figure 1: Bearer modification failure

Proposed Solution

Introduce a new parameter in the first RANAP RAB Assignment Response to indicate that Modification of RAB including Link Characteristics is supported. This would be a change to Release 4. The parameter would only be included if Modification of Link Characteristics was supported. This solution would be backward compatible with R'99 where Modification of Link Characteristics is not supported, i.e. new parameter would not be present.

The RAB Assignment modification procedures in RANAP should be clarified. When modification of the link characteristics is required and modification of link characteristics is not supported then new Iu Transport Association and Address shall be provided. Thereby a new access termination for the existing RAB id would have been given by the MGW to the MSC server.

If modification of link characteristics is supported then exhibiting Transport Association and Address shall be used. The resulting sequences are shown in Figures 2 and 3, where once the call is established the UE shall send a Modify message to the MSC server.

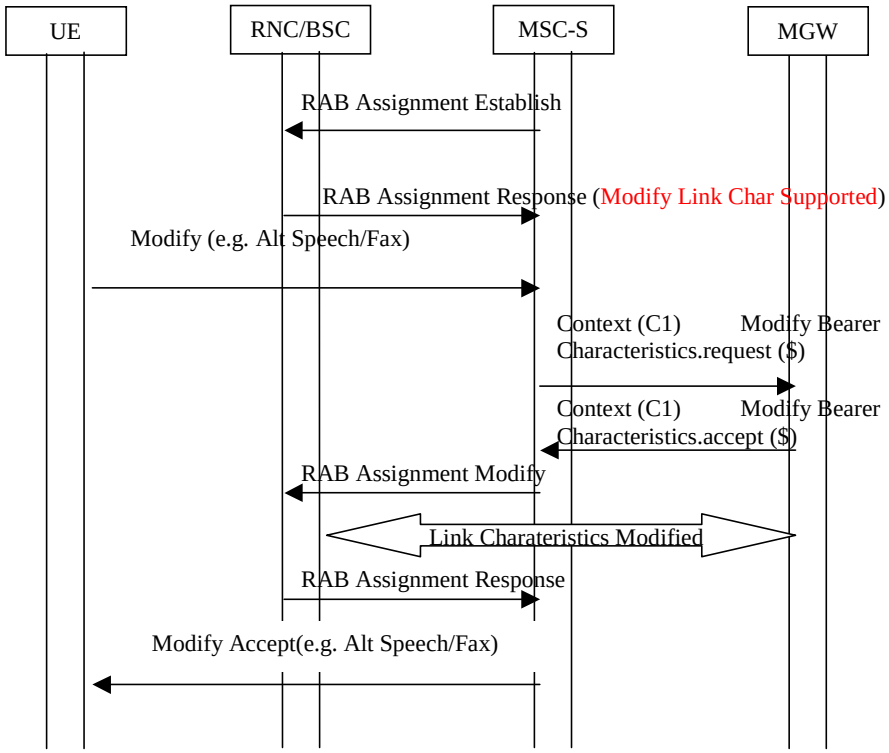

Figure 2: RAB Assignment Modification with support of modification of link characteristic

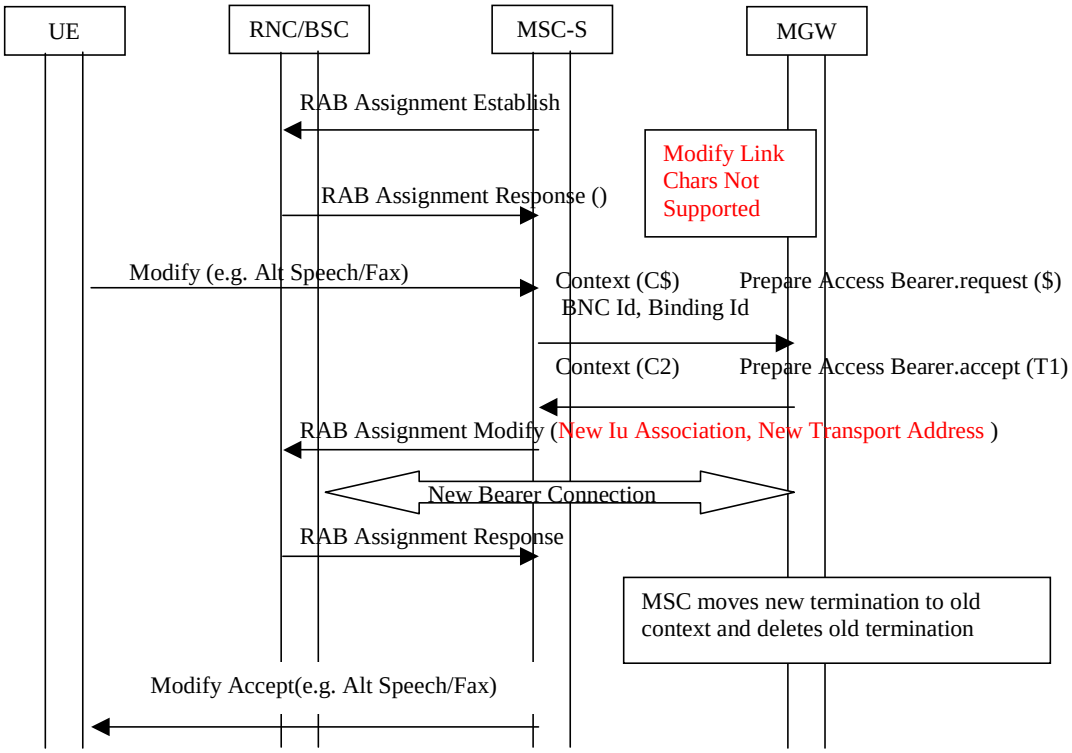

Figure 3: RAB Assignment Modification without support of modification of link characteristic

Considered Solutions

It was considered if this problem could be resolved within the Core Network as the MGW can also determine the support of MSLC after the Access bearer has been established to its Access Bearer termination. The following options were considered but deemed unsuitable for efficient call control. These would also require further standardisation external to 3GPP (ITU-T) would need to be done. Thus there would be a problem to ensure a solution within a suitable time frame for Release 4.

Option 1: Introduce a new error code to H.248 to indicate that Bearer Modification was not permitted. When the new error code is received, the MSC server would selects a new termination from the existing MGW and requests the RAB Assignment Modification for the new termination. There are a number of problems with such an approach. Firstly this error code needs to be defined for the Modify Bearer Characteristics procedure as used in TS23.205/29.232. It is not really seen as a general error case, i.e. the intention is not to fail the call but perform additional H.248 procedures in order to support the modification. Thus defining a general error case is not enough, a specific error code and when it should be sent must also be specified in Q.1950 (ITU-T). Secondly in networks where AAL2 CS1 is predominant this trial and error procedure will slow down all services that require RAB Modification. As the transport network at initial bearer establishment determines the capability it makes little sense not to have the knowledge of this on call control prior to attempting a modification.

Option 2: Introduce a new H.248 procedure to request a Notification for support of MSLC, which would be performed after preparing the Access Bearer termination. The Notification would be expected any time between the reply from Prepare Bearer procedure (if CS1 only) or after the RAB has been established (MGW supports MSLC but the RNC doesn't). This solves the issue of knowing the capability in advance. However due to the current design of the call control procedures this would result in an additional H.248 transaction for every call, regardless whether a modification would be required. Previously, it was specifically decided for the Iu side termination that no additional Notify for bearer establishment was needed, as the RAB Assignment Response provided the MSC with this information – thus keeping H.248 transactions to a minimum. Again ITU-T standardisation is required.

Conclusion

It is proposed that a Liaison Statement is written towards RAN WG3 to request this correction to their TS 25.413 v 4.2.0. The Liaison Statement should explain that the CN WG4 has considered the possibility to solve this within the CN specifications. But the solutions not only compromise the behaviour of the call either during normal call establishment or during modification but are also dependent on support from external standards organisations (ITU-T).

CN4 believes that this modification can be implemented without additional signalling load or compromising the RANAP principles and would therefore be the most efficient solution to this problem.

A CR has been prepared for the updates to TS 23.205 to incorporate the changes to call control procedures if such a modification to RANAP is implemented. The CR is Tdoc N4-011077.

3GPP TSG-CN-WG4 Meeting #12 ***N4-020220***
Sophia Antipolis, France, 28th January – 1st February 2002

Title:	Liaison Statement on RANAP Indication Of Modify Support Of Link Characteristics
Source:	CN4
To:	RAN3
Cc:	SA2
Response to:	LS *TSGR3#25(01) 3573* on RANAP Indication Of Modify Support Of Link Characteristics from RAN WG3.

Contact Person:
Name: Phil Hodges
Tel. Number:
E-mail Address: philip.hodges@ericsson.com.au

Attachments: N4-011416, N4-011234, N4-011076

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1. Overall Description:

CN4 thanks RAN3 for their reply LS and for considering the proposal made by CN4. The solution suggested by RAN3 (to always reserve new terminations) is however not acceptable; it is desired to avoid wasting signalling and resources. CN4 agrees that the RNC is in control of the Iu transport bearers, however the modification is under request from the MSC and the MSC should be aware of what changes are possible and what changes are being made. It is not possible for only one end of a connection to direct this alone.

The purpose of the original proposal meant that the decision to modify the connection or not could be still left up to the RNC – but it would inform the MSC if it would or would not. I.e. this is more of a service level function than a bearer level function (although of course it is dependent on the transport capability). Perhaps this was not conveyed clearly enough by our Liaison Statement.

In light of the reply from RAN3 it is CN4's intention to implement Option 2 as described in N4-011076. This enables the MSC to determine if the current Iu transport connection can be modified. If it can then the MSC will not send any new transport address or transport association in the RAB Assignment Modification and will not reserve new terminations. If the Iu transport cannot be modified then a new termination will be reserved and new Iu Transport Association provided.

In the RANAP specification (TS 25.413) the following text is given to describe the handling of the RAB during modification (chapter 8.2.2):

" At a RAB modification, it is up to the RNC to decide if any transport network control plane signalling shall be performed or if the already existing transport bearer shall be used. If the RNC decides to establish a new transport bearer, the transport network control plane signalling shall use the possibly included *Transport Layer Address* IE and *Iu Transport Association* IE. Then the switch over to this new transport bearer shall be done immediately after transport bearer establishment and initialisation of the user plane mode. If the RNC decides to modify the already existing transport bearer, the transport network control plane signalling shall not use the possibly included *Transport Layer Address* IE and *Iu Transport Association* IE. That is, re-binding with *Iu Transport Association* IE shall not be done."

CN4 delegates find this description very misleading as it appears that the RNC decides whether it shall establish a new transport bearer, in which case it requires Transport Layer Address and Iu Transport Association but these are optional and described here as only "possibly included". The MSC must know to include these or not. As the change CN4 is proposing will mean that the MSC knows if the transport can be modified or not then the MSC will decide whether it needs to include *Transport Layer Address* IE and *Iu Transport Association* IE.

In this case the action by the RNC should be that when these I.E.s are included in the RAB Assignment Modification the RNC shall use them.

2. Actions:

To RAN3 group.

ACTION: CN4 asks RAN3 group to update the RANAP protocol (TS 25.413) to clarify the use of the *Transport Layer Address* IE and *Iu Transport Association* IE when receiving a RAB Assignment modification as described above. The inclusion of this change is required within the Release 5 timeframe.

3. Date of Next CN4 Meetings:

CN4_13	8th – 12th April 2002	Florida, US

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3GPP TSG CN WG4 Meeting #11 ***N4-011416***
Cancun, Mexico, 26th - 30th November 2001

TSG-RAN Working Group 3 ***TSGR3#25(01) 3573***
Makuhari, Japan, 26th – 30th November 2001

Title: Liaison Statement On "Response to RANAP Indication Of Modify Support Of Link Characteristics"
Source: RAN3 Iu SWG
To: CN4
Cc:
Response to:

Contact Person:
Name: Philippe GODIN
Tel. Number: +33 1 39308940
E-mail Address: godinp@nortelnetworks.com

Attachments:

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1. Overall Description:

RAN3 thanks CN4 for their liaison on "RANAP Indication Of Modify Support Of Link Characteristics" (CN4#10-Brighton-15-19th October 2001 N4-011234 R3-012783).

RAN3 would like to inform CN4 that after lengthy discussions we could not reach consensus on the solution proposed by CN4.

RAN3 discussed solutions how to overcome with the problem outlined by CN4 without indicating the parameter proposed by CN4. One solution could be to always allocate a new termination at the CN side and always include the necessary corresponding new transport association and transport address whenever it sends a RAB Assignment message for modification to the RNC.

The key motivation of the solution proposed by RAN3 is to stick to the principle that the RNC continues to keep control over the Iu transport bearers.

Some companies also felt that CN4's solution would be in contradiction with the principle of the independence of RNL and TNL.

2. Actions:

No action.

3. Date of Next RAN3 Meeting:

RAN3#26	14th – 18th January 2002 Vienna, Austria
RAN3#27	18th – 22nd February 2002 Orlando, US

3GPP TSG-CN-WG4 Meeting #10 ***N4-011234***
Brighton, UK, 15th - 19th October 2001

Title: Liaison Statement On RANAP Indication Of Modify Support Of Link Characteristics
Source: CN4
To: RAN3
Cc:
Response to:

Contact Person:
Name: phil hodges
Tel. Number: +61 3 99113414
E-mail Address: philip.hodges@ericsson.com.au

Attachments: N4-011076, N4-011077

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1. Overall Description:

CN4 has discovered a problem with the RAB Assignment modification procedure when the transport bearer protocol on the Iu Access Bearer does not allow modification of the transport link characteristics without releasing the existing connection. RANAP allows the MSC to provide a new transport association and transport address in the RAB Assignment modification which it may use. However the MSC does not know when the RNC will use these parameters, i.e. it does not know when to provide new addresses or when the existing ones can be used.

CN4 has discussed some possible solutions to this (presented in discussion paper N4-01076, attached) which included Core Network solutions but agreed that the only viable solution would be to receive an indication in the initial RAB Assignment Response. In order to be backward compatible this should only be included if the transport bearer supports Link Characteristics Modification. If no indication is received the MSC will assume that it must provide a new transport association. This solution does not add additional signalling sequences during call establishment or RAB modification and does not rely on standardisation outside 3GPP (such as in ITU).

CN4 has produced a CR for its Stage 2 call procedures specification (TS 23.205) to handle this change (N4-01077, document attached) which has been approved but is dependent on a CR on TS 25.413.

2. Actions:

To RAN WG3 group.

ACTION: CN4 kindly asks RAN3 if they can provide such a solution as a CR to their Release 4 version of RANAPs In the timeframe of CN plenary #14.

3. Date of Next CN4 Meetings:

CN4#11	26th – 30th November 2001 Cancun, Mexico
CN Plenary#14	12th – 14th December 2001 Japan

3GPP TSG CN WG4 Meeting #12 ***N4-020215***
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Title: Liaison Statement on Handover Indication solution
Source: CN4
To: RAN3
Cc:
Response to: -

Contact Person:
Name: Elena García-Mendive
Tel. Number: +49 2407 575205
E-mail Address: Elena.Garcia-Mendive@ericsson.com

Attachments: N4-020054 "Proposed CRs, Handover Indication"

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1. Overall Description:

CN4 was informed by Siemens in N4-020054 (enclosed) of the approval in RAN3#21 of CR 063 against 25.415 (R3-011549) for including a mechanism for switching the user plane from source RNC to target RNC at the reception of the first 'RATE CONTROL' control frame from the target RNC at the MGW. **This mechanism violates the Core Network principle of the MSC server (Media Gateway Controller) controlling the Media Gateway and unfortunately CN4 cannot accept it.**

CN4 believes this is not a real problem, because when the Relocation Detect message is sent, the Up Link data is still going via the old RNC - so there is in fact no lost speech, the MSC controls the switch-over via the MGW and the Ue - DTAP signalling.

In the future, CN4 would like to be consulted in advance of any possible problems RAN3 may detect with the Relocation Detect message before any solution affecting the Core Network is approved by RAN3.

2. Actions:

To RAN3 group.

ACTION:

TSG CN4 kindly asks TSG RAN3 to revert the changes in CR063 against 25.415 and reconsider the problem.

3. Date of Next CN4 Meetings:

CN4_13	8th – 12th April 2002	Florida, US

3GPP TSG CN WG4 Meeting #12 ***N4-020054***
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Source:	**Siemens**
Title:	**Proposed CRs, Handover Indication**
Agenda item:	**7.4**
Document for:	**Discussion and approval**

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1. Introduction

In RAN3#21 (see CR063 in R3-011549, approved at RAN#12 in RP-010393) the fact was realised that for SRNS Relocation, when the target RNC starts to send data to the CN uplink, the CN should immediately switch the uplink data path from the serving to the target RNC to be able to receive data from the target RNC avoiding unnecessary gaps in communication. Triggering the 'change flow direction' procedure on receipt of RELOCATION DETECT will in most cases cause too much delay.

The possibility to minimise communication gaps is guaranteed at the Iu UP due to the fact that the target RNC is mandated to send a rate control frame after it has received the relocation trigger. (Section 6.5.3.1 of TS 25.415 now states that "Further, the reception of the first RATE CONTROL control frame from the target RNC, which indicates the CN the successful relocation execution on user plane level, should cause the CN to switch the user plane from the source RNC to the target RNC.")

2. Discussion

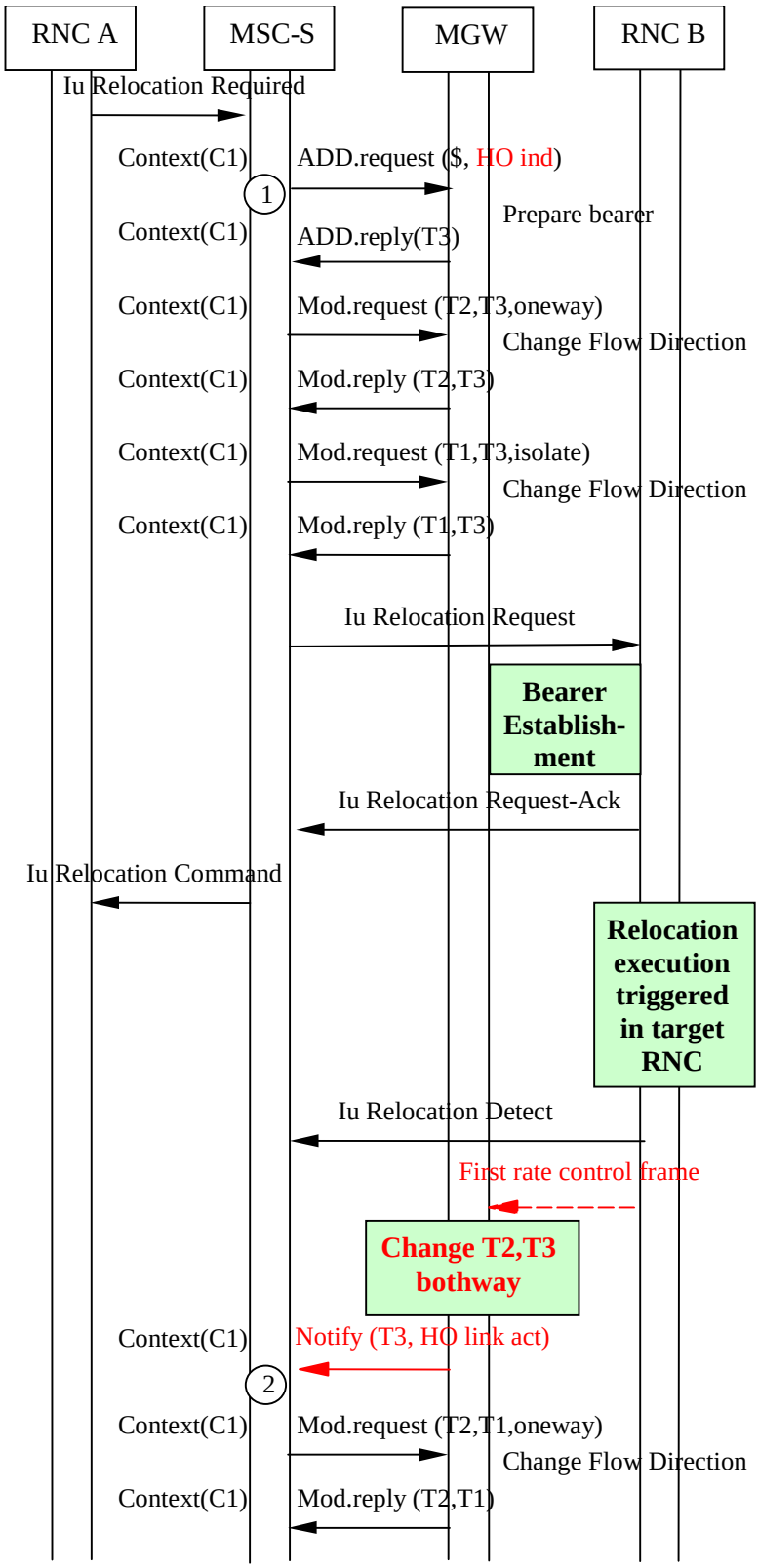
However, while introducing this mechanism, RAN3 was not aware of possible implications in the CN, i.e. it was not recognised, that this option will contradict the basic worksplit between MGW and MSC Server, where the MGW is never allowed to perform this kind of actions on its own without being explicitely requested by the MSC-Server.

On the other hand this mechanism is felt to be important to comply with mobile specific requirements on the MGW, i.e. to minimise the communication gap during relocation for cs services.

To overcome with this situation a draft CR for TS 29.232 is provided in the attached document:

N4-020054-CR-29-232.doc

The mechanism proposed is described in the following figure ('template figure' taken from figure 8.2/1 in TS 23.205).



The MSC-Server, when preparing a new termination for a communication context (T3) will inform the MGW that the new termination is used for an SRNS Relocation with an extra indication (“HO ind”). This indication needs to be introduced within the 3GPP-UP package.
Further, there should be a notification sent from the MGW to the MSC-Server to indicate that the flow direction between T3/T1 has been changed to ‘bothway’.
One problem remaining is the description of the handling of possible crossing messages (Notify vs. Mod.request). The draft CR does not explicitly specifiy that as this should be covered either implementation specific or according to already existing rules in H.248.

If it is felt that further changes in e.g. TS 23.205 and TS 23.153 is necessary as well Siemens is willing to provide the corresponding CRs. Siemens is also open for discussions which release should contain this correction first.

3. Proposal

It is proposed to discuss the proposed changes and to agree in principle on the introduction of relocation specific indications within the 3GUP package to support the mechanism described in TS 25.415 and to discuss on the changes actually required based on the attached CR.

3GPP TSG CN WG4 Meeting #12 ***N4-020197***
Sophia Antipolis, France, 28th Jan. – 1st Feb. 2002

Title:	Answer to Liaison Statement on Cx User Profile
Source:	CN4
To:	T2
Cc:	-
Response to:	LS (UP-010122 = N4-020123) on Liaison Statement on Cx User Profile from CN4.

Contact Person:
Name: Miguel-Angel Pallares, Ericsson
E-mail Address: miguel-angel.pallares-lopez@ece.ericsson.se

Attachments: CxDataTypes.xml
CxDataType.xsd

CN4 would like to thank GUP WG for their LS UP-010122.

Cx interface user profile

Following GUP WG suggestion, CN4 have decided to use an XML-Schema for the description of the user profile downloaded over the Cx interface. Such XML-Schema is based on the Data Description Framework specified in TS 23.241 v0.3.0.

CN4 assume that the target of TS 23.240 and TS 23.241 is Release 6. That is the reason why CN4 specifications for Release 5 won't reference such specifications.

CN4 will attach the mentioned schema to CN4's specification TS 29.228 "IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents". In the future, and in order not to cause inter-group dependencies, CN4 would prefer to follow the approach of including the CN4 generated schemas in CN4 specifications.

"index" attribute

During the definition of the XML-Schema following DDF, CN4 have found that the generated schema contains a set of lines of the form:

<xs:attribute name="index" type="xs:int" use="required"/>

CN4 was not able to deduce a use of the attribute "index". Could T2 GUP ad-hoc provide CN4 with an explanation about the use of this parameter that CN4 may add to the definition of the XML-schema for Cx interface?

CN4 would like to know if we may experience other similar effects from the application of the DDF?

We have attached the base XML document (CxDataTypes.xml) and the generated schema (CxDataType.xsd), so that T2 can track the mentioned problem.

2. Actions:

To the T2 GUP ad-hoc group.

ACTION: CN4 kindly requests from T2 GUP ad-hoc to inform CN4 of changes in TS 23.241, which may affect the applicability of the DDF to CN4's work.

3. Date of next CN4 meetings:

CN4#13	8th – 12th April, 2002
CN4#14	13th- 17th May, 2002

3GPP TSG CN WG4 Meeting #12 ***N4-020187***
Sophia Antipolis, FRANCE, 28th Jan. – 1st Feb. 2002

Title: Answer Liaison Statement on MSISDN Address resolution for MMS using MAP operations
Source: CN4
To: T2
Cc: SA2
Response to: T2-011122

Contact Person:
Name: Pompeo Santoro
Tel. Number: +39 081 5147 721
E-mail Address: pompeo.santoro@eri.ericsson.se

Attachments: None

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1. Overall Description:

CN4 has discussed the T2 request for guidance on the selection of the most appropriate MAP operation for MSISDN Address resolution for Multimedia Messaging Service (MMS) for Release 5 (TS 23.140).

CN4 has focused on the two operations that, as indicated by T2, do indeed provide MSISDN to IMSI address resolution, MAP-SEND-IMSI and MAP-SEND-ROUTING-INFO-FOR-SM. As already pointed out by T2 neither of the two operations provide a perfect fit.

SEND-IMSI seems in its simplicity to accomplish exactly what is required, but on the other hand it:

- was originally introduced in MAP in order to allow customer care in visited networks, giving a means for Operators' personnel to derive the IMSI for visiting subscriber from their MSISDN
- cannot be assumed to be widely deployed in existing mobile networks because of the very reason it was originally developed

SEND-ROUTING-INFO-FOR-SM on the other hand is widely deployed in existing mobile networks but it:

- is a quite complex operation requiring elaborated handling in the HLR
- triggers a number of checks related to SMS user subscription and SMS network support. This can be a serious drawback if MMS subscription and network support are configured independently from SMS subscription and support, i.e. if a user would have subscription to MMS but not to SMS, or a VLR would support MMS but not SMS.
  On the other hand this could turn into an advantage if the MMS subscription and network support are indeed lined up to the SMS ones.

Given the serious drawback of SEND-IMSI in terms of availability in existing mobile networks and the need highlighted by T2 for a quickly available bridge solution until ENUM solutions will be available, CN4 understanding is that SEND-ROUTING-INFO-FOR-SM is the "least undesirable" of the two options.

CN4 would also like to highlight that it considers it undesirable to bring modifications to SEND-ROUTING-INFO-FOR-SM in order to provide for possible further support of MMS which might have implications on the existing handling of SMS. Thus if need should arise for additional functionality, then CN4 would suggest T2 to ask for a new MAP operation best based on SEND-ROUTING-INFO-FOR-SM.

3GPP TSG CN WG4 Meeting #12bis ***N4-020302***
Helsinki, Finland, 13th Feb. – 14th Feb. 2002

Title: Response Liaison Statement on Trace and Availability of IMSI and IMEI
Source: CN4
To: SA5, SA3, RAN 2, GERAN 2
Cc: RAN 3, CN1

Contact Person:
Name: Elena Garcia-Mendive
Tel. Number: +49 2407575205
E-mail Address: Elena.Garcia-Mendive @eed.ericsson.se

Attachments:
None,

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1. Overall Description:

CN4 thanks SA5 on Liaison statements S5-010748, S5-020013 and S5-020010. CN4 wants to inform SA5 that CN4 is introducing Trace functionality to Cx interface to Rel-5 3GPP TS 29.228 and 29.229.

Answer to S5-020010:

SA5 requests CN4 to provide answers to the following questions (for both IMSI and IMEI):

1. Is the IMSI/IMEI visible to the MGW?

Answer: No

2. If the IMSI/IMEI is not always known in the MGW, then in which cases is it not known?

Answer: IMSI/IMEI is never known.

3. If there are cases where the IMSI/IMEI is not known, is it possible for CN4 to provide for Release 5 an addition to their specifications, which would guarantee that the IMSI/IMEI would always be visible in the MGW?

Answer: No

4. If the answer to question #3 is positive, then which specification(s) would be affected, in which timeframe could this be done, what would the solution be, and under which WIs in CN4 would the work be done?

Not applicable.

2. Actions:

TO SA5

- CN4 kindly asks SA5 about the information they want to collect in MGW. CN 4 would like to check if the information is already available in the MSC-Server or can be retrieved from MGW and in which circumstances?
- CN4 would like to raise concerns in transmitting sensitive information like IMSI/IMEI across the Mc Interface.

TO SA3:

- CN4 would like guidance from SA3 on security implications on spreading sensitive information like IMSI/IMEI over the signalling interfaces due to support trace functionality.

To RAN2, GERAN2:

- CN4 kindly asks if IMSI/IMEI is already sent over their signalling interfaces (CN4 is receiving contradictory information).

3. Date of Next CN4 Meetings:

CN4#13	8th – 12th April 2002	Florida, USA