

**3GPP TSG CN Plenary Meeting #17**  
**4<sup>th</sup> – 6<sup>th</sup> September 2002 Biarritz, FRANCE.**

**NP-020463**

**Source:** TSG CN WG4  
**Title:** Bearer Independent Architecture Rel-4  
**Agenda item:** 7.11  
**Document for:** APPROVAL

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<b>Spec</b>	<b>CR</b>	<b>Rev</b>	<b>Doc-2nd-Level</b>	<b>Phase</b>	<b>Subject</b>	<b>Cat</b>	<b>Ver_C</b>
23.205	032	1	N4-021057	Rel4	Correction on wrong message handling for subsequent Handover	F	4.5.0
23.205	033	1	N4-021058	Rel5	Correction on wrong message handling for subsequent Handover	A	5.2.0
29.232	043	1	N4-021059	Rel4	Missing Properties For Circuit Switched Data Calls	F	4.5.0
29.232	044	1	N4-021060	Rel5	Missing Properties For Circuit Switched Data Calls	A	5.2.0

## CHANGE REQUEST

⌘ **23.205 CR 032** ⌘ rev **1** ⌘ Current version: **4.5.0** ⌘

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

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

<b>Title:</b>	⌘ Correction on wrong message handling for subsequent Handover		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ CSSPLIT	<b>Date:</b>	⌘ 02.08.2002
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ Rel-4
	<i>Use <u>one</u> of the following categories:</i> <b>F</b> (correction) <b>A</b> (corresponds to a correction in an earlier release) <b>B</b> (addition of feature), <b>C</b> (functional modification of feature) <b>D</b> (editorial modification) Detailed explanations of the above categories can be found in 3GPP <a href="http://www.3gpp.org/Specs/tr21/900">TR 21.900</a> .		<i>Use <u>one</u> of the following releases:</i> <b>2</b> (GSM Phase 2) <b>R96</b> (Release 1996) <b>R97</b> (Release 1997) <b>R98</b> (Release 1998) <b>R99</b> (Release 1999) <b>Rel-4</b> (Release 4) <b>Rel-5</b> (Release 5) <b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Essential correction
	Wrong message types are used for HO messages. Wrong message sequence for Handover trigger..
<b>Summary of change:</b>	⌘ The correct message types are inserted to align 23.205 with other specification (e.g. Relocation required is replaced by relocation request)
<b>Consequences if not approved:</b>	⌘ Wrong message types are used which could lead to misinterpretations

<b>Clauses affected:</b>	⌘						
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<input checked="" type="checkbox"/>	Test specifications					
	<input checked="" type="checkbox"/>	O&M Specifications					
<b>Other comments:</b>	⌘ Not implementing the CR in Rel 4 would lead to the interpretations by comparing Rel4 and Rel 5 specifications that functionality has changed. Which could lead to further incompatibilities in implementations.						

**How to create CRs using this form:**

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

\*\*\*\*\* FIRST MODIFIED SECTION \*\*\*\*\*

### 8.1.3 Subsequent Inter-MSC SRNS/SBSS Relocation back to the Anchor MSC

The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent Relocation from 3G\_MSC-B to 3G\_MSC-A requiring a Circuit Connection between 3G\_MSC-A and 3G\_MSC-B' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

#### 8.1.3.1 MSC-A/MGW-A

##### Relocation ~~Required~~Request

When the MSC-A server receives the [MAP Prepare Subsequent Handover request containing a Relocation Request](#)~~Required~~ message, it requests MGW-A to provide a binding reference and a bearer address using the Prepare Bearer procedure. For speech calls, the MSC-A server shall provide the MGW-A with the speech coding information for the bearer. For non-speech calls the MSC-A server shall provide MGW-A with the same PLMN Bearer Capability [4] as was provided at the last access bearer assignment. The MSC-A server uses the Change Flow Direction procedure to request the MGW-A to set the Handover Device to initial state. The MSC-A server sends the Relocation Request message, containing the bearer address and the binding reference, to RNC-B (bullet 1 in figure 8.6/1).

##### Relocation Command/Relocation Detect

When the MSC-A server sends the ~~Relocation Command message~~[MAP Prepare Subsequent Handover response](#), or alternatively if it receives the Relocation Detect message, the MSC-A server uses the Change Flow Direction procedure to requests MGW-A to set the Handover Device to intermediate state (bullet 2 in figure 8.6/1).

##### Relocation Complete

When the MSC-A server receives the Relocation Complete message, it informs the MSC-B server about reception of this message. The MSC-A server then initiates call clearing towards the MSC-B server as described in clause 7.3.

...

\*\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*\*

### 8.2.3 Subsequent Inter-MSC UMTS to GSM Handover back to the Anchor MSC

The following handling shall be applied for a call that started as UMTS call. The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent UMTS to GSM handover requiring a Circuit Connection between 3G\_MSC-A and 3G\_MSC-B, 3G\_MSC-B to MSC-A' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

#### 8.2.3.1 MSC-A

##### ~~Relocation Required~~Handover Request

When ~~the MSC-A server receives~~ the [MAP Prepare Subsequent Handover request containing a Relocation Request](#)~~Handover Request~~ message ~~is received, it the MSC-A server~~ requests MGW-A to seize a TDM circuit, using the Reserve Circuit procedure. For non-speech calls the MSC-A server shall provide MGW-A with the GSM Channel coding properties and the same PLMN Bearer Capability [4] as was provided at the first access bearer assignment. The MSC-A server uses the Change Flow Direction procedure to request MGW-A to set the Handover Device to initial state. The MSC-A server sends the Handover Request message, containing the CIC, to BSC-B (bullet 1 in figure 8.12/1).

### Handover Request Acknowledge

For non-speech calls after receiving the Handover Request Acknowledge message if the assigned GSM Channel coding properties differ from the previously provided ones the MSC-A server shall provide MGW-A with the assigned GSM Channel coding properties using the Modify Bearer Characteristics procedure (bullet 2 in figure 8.12/1).

### Relocation Command/Handover Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#) ~~Relocation Command~~ message or alternatively if it receives the Handover Detect message, the MSC-A server uses the Change Flow Direction procedure to requests MGW-A to set the Handover Device to intermediate state (bullet 3 in figure 8.12/2).

### Handover Complete

When the MSC-A server receives the Handover Complete message, it informs the MSC-B server about reception of this message (bullet 3 in figure 8.12/2). The MSC-A server then initiates call clearing towards the MSC-B server as described at 7.3.

. . .

\*\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*\*

## 8.3.3 Subsequent Inter-MSC GSM to UMTS Handover back to the Anchor MSC

The following handling shall be applied for a call that started as UMTS call. The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent Inter-MSC GSM to UMTS Handover back to the Anchor MSC' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

### 8.3.3.1 MSC-A

#### Handover ~~Required~~[Request](#)

When the MSC-A server receives [a MAP Prepare Subsequent Handover request containing](#) a Handover ~~Required~~[Request](#) message ~~from BSC-A (via MSC-B server)~~, it requests the MGW-A to provide a binding reference and a bearer address using the Prepare Bearer procedure. For speech calls, the MSC-A server shall provide the MGW-A with the speech coding information for the bearer. For non-speech calls the MSC-A server shall provide MGW-A with the same PLMN Bearer Capability [4] as was provided at the last channel assignment. The MSC-A server uses the Change Flow Direction Procedure to request the MGW-A to set the Handover Device to initial state. The MSC-A server sends the Relocation Request message to the RNC-B containing the bearer address and binding reference (bullet 1 in figure 8.18/1).

#### Handover Command/Relocation Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#) ~~Handover Command~~ message or alternatively if it receives a Relocation Detect message, the MSC-A server uses the Change Flow Direction procedure to requests the MGW-A to set the Handover Device to intermediate state (bullet 2 in figure 8.18/2).

#### Relocation Complete

When the MSC-A server receives a Relocation Complete message, it informs the MSC-B server about reception of this message. MSC-A server then initiates call clearing towards the MSC-B server as described in clause 7.3.

. . .

\*\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*\*

### 8.4.3 Subsequent Inter-MSC GSM to GSM Handover back to the Anchor MSC

The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent Handover from MSC-B to MSC-A requiring a Circuit Connection between 3G\_MSC-A and 3G\_MSC-B' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

#### 8.4.3.1 MSC-A / MGW-A

##### Handover ~~Required~~Request

When the MSC-A server receives a [MAP Prepare Subsequent Handover request containing a](#)the Handover ~~Required~~Request message, it requests MGW-A to seize a TDM circuit, using the Reserve Circuit procedure. For non-speech calls the MSC-A server shall provide MGW-A with the GSM Channel coding properties and the same PLMN Bearer Capability [4] as was provided at the first access bearer assignment The MSC-A server uses the Change Flow Direction Procedure to request MGW-A to set the Handover Device to initial state. The MSC-A server sends the Handover Request message to the BSC-B containing the CIC (bullet 1 in figure 8.24/1).

##### Handover Request Acknowledge

For non-speech calls after receiving Handover Request Acknowledge message if the assigned GSM Channel coding properties differ from the previously provided ones the MSC-A server provides the MGW-A with the assigned GSM Channel coding properties using the Modify Bearer Characteristics procedure (bullet 2 in figure 8.24/2).

##### Handover Command/Handover Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#)~~Handover Command~~ message or alternatively if it receives the Handover Detect message, the MSC-A server uses the Change Flow Direction procedure to request MGW-A to set the Handover Device to intermediate state (bullet 3 in figure 8.24/2).

##### Handover Complete

When the MSC-A server receives the Handover Complete message, it informs the MSC-B server about reception of this message. The MSC-A server then initiates call clearing towards the MSC-B server as described in clause 7.3.

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CR-Form-v7

## CHANGE REQUEST

⌘ **23.205 CR 033** ⌘ rev **1** ⌘ Current version: **5.2.0** ⌘

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

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

<b>Title:</b>	⌘ Correction on wrong message handling for subsequent Handover		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ CSSPLIT	<b>Date:</b>	⌘ 01.08.2002
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		<b>2</b> (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		<b>R96</b> (Release 1996)
	<b>B</b> (addition of feature),		<b>R97</b> (Release 1997)
	<b>C</b> (functional modification of feature)		<b>R98</b> (Release 1998)
	<b>D</b> (editorial modification)		<b>R99</b> (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP <a href="#">TR 21.900</a> .		<b>Rel-4</b> (Release 4)
			<b>Rel-5</b> (Release 5)
			<b>Rel-6</b> (Release 6)

<b>Reason for change:</b>	⌘ Correction on wrong message handling for subsequent Handover		
<b>Summary of change:</b>	⌘ The correct message types are inserted to align 23.205 with other specification (e.g. Relocation required is replaced by relocation request)		
<b>Consequences if not approved:</b>	⌘ Wrong message types are used which could lead to misinterpretations.		

<b>Clauses affected:</b>	⌘						
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
		Test specifications					
		O&M Specifications					
<b>Other comments:</b>	⌘						

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



\*\*\*\*\* FIRST MODIFIED SECTION \*\*\*\*\*

### 8.1.3 Subsequent Inter-MSC SRNS/SBSS Relocation back to the Anchor MSC

The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent Relocation from 3G\_MSC-B to 3G\_MSC-A requiring a Circuit Connection between 3G\_MSC-A and 3G\_MSC-B' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

#### 8.1.3.1 MSC-A/MGW-A

##### Relocation ~~Required~~Request

When the MSC-A server receives the [MAP Prepare Subsequent Handover request containing a Relocation Request](#)~~Required~~ message, it requests MGW-A to provide a binding reference and a bearer address using the Prepare Bearer procedure. For speech calls, the MSC-A server shall provide the MGW-A with the speech coding information for the bearer. For non-speech calls the MSC-A server shall provide MGW-A with the same PLMN Bearer Capability [4] as was provided at the last access bearer assignment. The MSC-A server uses the Change Flow Direction procedure to request the MGW-A to set the Handover Device to initial state. The MSC-A server sends the Relocation Request message, containing the bearer address and the binding reference, to RNC-B (bullet 1 in figure 8.6/1).

##### Relocation Command/Relocation Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#) ~~Relocation Command~~ message or alternatively if it receives the Relocation Detect message, the MSC-A server uses the Change Flow Direction procedure to requests MGW-A to set the Handover Device to intermediate state (bullet 2 in figure 8.6/1).

##### Relocation Complete

When the MSC-A server receives the Relocation Complete message, it informs the MSC-B server about reception of this message. The MSC-A server then initiates call clearing towards the MSC-B server as described in clause 7.3.

\*\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*\*

### 8.2.3 Subsequent Inter-MSC UMTS to GSM Handover back to the Anchor MSC

The following handling shall be applied for a call that started as UMTS call. The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent UMTS to GSM handover requiring a Circuit Connection between 3G\_MSC-A and 3G\_MSC-B, 3G\_MSC-B to MSC-A' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

#### 8.2.3.1 MSC-A

##### ~~Relocation Required~~Handover Request

When ~~the MSC-A server receives the~~ [MAP Prepare Subsequent Handover request containing a Relocation Required](#)~~Handover Request~~ message ~~is received, it the MSC-A server~~ requests MGW-A to seize a TDM circuit, using the Reserve Circuit procedure. For non-speech calls the MSC-A server shall provide MGW-A with the GSM Channel coding properties and the same PLMN Bearer Capability [4] as was provided at the first access bearer assignment. The MSC-A server uses the Change Flow Direction procedure to request MGW-A to set the Handover Device to initial state. The MSC-A server sends the Handover Request message, containing the CIC, to BSC-B (bullet 1 in figure 8.12/1).

### Handover Request Acknowledge

For non-speech calls after receiving the Handover Request Acknowledge message if the assigned GSM Channel coding properties differ from the previously provided ones the MSC-A server shall provide MGW-A with the assigned GSM Channel coding properties using the Modify Bearer Characteristics procedure (bullet 2 in figure 8.12/1).

### Relocation Command/Handover Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#) ~~Relocation Command~~ message or alternatively if it receives the Handover Detect message, the MSC-A server uses the Change Flow Direction procedure to requests MGW-A to set the Handover Device to intermediate state (bullet 3 in figure 8.12/2).

### Handover Complete

When the MSC-A server receives the Handover Complete message, it informs the MSC-B server about reception of this message (bullet 3 in figure 8.12/2). The MSC-A server then initiates call clearing towards the MSC-B server as described at 7.3.

\*\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*\*

## 8.3.3 Subsequent Inter-MSC GSM to UMTS Handover back to the Anchor MSC

The following handling shall be applied for a call that started as UMTS call. The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent Inter-MSC GSM to UMTS Handover back to the Anchor MSC' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

### 8.3.3.1 MSC-A

#### Handover ~~Required~~[Request](#)

When the MSC-A server receives [a MAP Prepare Subsequent Handover request containing](#) a Handover ~~Required~~[Request](#) message ~~from BSC-A (via MSC-B server)~~, it requests the MGW-A to provide a binding reference and a bearer address using the Prepare Bearer procedure. For speech calls, the MSC-A server shall provide the MGW-A with the speech coding information for the bearer. For non-speech calls the MSC-A server shall provide MGW-A with the same PLMN Bearer Capability [4] as was provided at the last channel assignment. The MSC-A server uses the Change Flow Direction Procedure to request the MGW-A to set the Handover Device to initial state. The MSC-A server sends the Relocation Request message to the RNC-B containing the bearer address and binding reference (bullet 1 in figure 8.18/1).

#### Handover Command/Relocation Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#)~~Handover Command~~ message or alternatively if it receives a Relocation Detect message, the MSC-A server uses the Change Flow Direction procedure to requests the MGW-A to set the Handover Device to intermediate state (bullet 2 in figure 8.18/2).

#### Relocation Complete

When the MSC-A server receives a Relocation Complete message, it informs the MSC-B server about reception of this message. MSC-A server then initiates call clearing towards the MSC-B server as described in clause 7.3.

\*\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*\*

### 8.4.3 Subsequent Inter-MSC GSM to GSM Handover back to the Anchor MSC

The procedures specified in 3GPP TS 23.009 [8] for 'Subsequent Handover from MSC-B to MSC-A requiring a Circuit Connection between 3G\_MSC-A and 3G\_MSC-B' shall be followed. The following paragraphs describe the additional requirements for the bearer independent CS core network.

#### 8.4.3.1 MSC-A / MGW-A

##### Handover ~~Required~~Request

When the MSC-A server receives a [MAP Prepare Subsequent Handover request containing a](#) ~~the~~ Handover ~~Required~~Request message, it requests MGW-A to seize a TDM circuit, using the Reserve Circuit procedure. For non-speech calls the MSC-A server shall provide MGW-A with the GSM Channel coding properties and the same PLMN Bearer Capability [4] as was provided at the first access bearer assignment. The MSC-A server uses the Change Flow Direction Procedure to request MGW-A to set the Handover Device to initial state. The MSC-A server sends the Handover Request message to the BSC-B containing the CIC (bullet 1 in figure 8.24/1).

##### Handover Request Acknowledge

For non-speech calls after receiving Handover Request Acknowledge message if the assigned GSM Channel coding properties differ from the previously provided ones the MSC-A server provides the MGW-A with the assigned GSM Channel coding properties using the Modify Bearer Characteristics procedure (bullet 2 in figure 8.24/2).

##### Handover Command/Handover Detect

When the MSC-A server sends the [MAP Prepare Subsequent Handover response](#) ~~Handover Command~~ message or alternatively if it receives the Handover Detect message, the MSC-A server uses the Change Flow Direction procedure to request MGW-A to set the Handover Device to intermediate state (bullet 3 in figure 8.24/2).

##### Handover Complete

When the MSC-A server receives the Handover Complete message, it informs the MSC-B server about reception of this message. The MSC-A server then initiates call clearing towards the MSC-B server as described in clause 7.3.

## CHANGE REQUEST

⌘ **29.232 CR 043** ⌘ rev **1** ⌘ Current version: **4.5.0** ⌘

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

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

<b>Title:</b>	⌘ Missing Properties For Circuit Switched Data Calls		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ CSSPLIT	<b>Date:</b>	⌘ 03/07/02
<b>Category:</b>	⌘ <b>F</b>	<b>Release:</b>	⌘ REL-4
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (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)
			Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Inter-MSC Relocation with CSD calls and split architecture, MGW needs additional data for SRNS Relocation – Non Anchor MGW has to encode Non-transparent data in ATRAU' frames and needs to indicate the required bitrate at the lu interface Access Termination.
	<b>This CR is category F – essential correction – due to incomplete specification work during Bearer Independent CS Network design – mapped from REL-4.</b>
<b>Summary of change:</b>	⌘ In order not to impact existing CSD package (which is unaffected for basic calls, impacts only relevant for inter-MSC relocation and released) the solution adds an enhancement to the existing CSD package with a new property.
<b>Consequences if not approved:</b>	⌘ Inter-MSC Relocation for CSD calls not possible with split architecture.

<b>Clauses affected:</b>	⌘ 10, 14.2.4, 14.2.5, 14.2.36, new 15.1.7										
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ 29.007 cr 055 (N3-020693), 23.910 cr 041 (N3-020694)
Y	N										
X											
	X										
	X										
<b>Other comments:</b>	⌘										

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

\*\*\*\* FIRST MODIFIED SECTION \*\*\*\*

## 10 Formats and codes

Table 1 shows the parameters which are required, in addition to those defined in the subclause "Formats and Codes" of ITU—T Recommendation Q.1950 (see 3GPP TS 29.205 [7]).

The coding rules applied in ITU-T Recommendation H.248 [10] for the applicable coding technique shall be followed for the UMTS capability set.

**Table 1: Additional parameters required**

actprot	Signal descriptor	As for the signal "Activate protocol" in subclause 15.1.2.3
Mode	Local control	As for the property "UP mode of operation" in subclause 15.1.1.1
Version	Local control	As for the property "Upversion" in subclause 15.1.1.1
Value	Local control	As for the property " Delivery of erroneous SDUs" in subclause 15.1.1.1
Interface	Local control	As for the property " Interface" in subclause 15.1.1.1
Initdirection	Local control	As for the property " Initialisation Direction" in subclause 15.1.1.1
PLMN bearer capability	Local control	As for the property "PLMN BC" in subclause 15.1.2.1
Coding	Local control	As for the property " GSM channel coding" in subclause 15.1.2.1
Tfoenable	Local control	As for the property " TFO activity control" in subclause 15.1.3.1
Codeclist	Local control	As for the property " TFO Codec List" in subclause 15.1.3.1
Result	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Protocol Negotiation Result" in subclause 15.1.2.2
Cause	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Protocol Negotiation Result" in subclause 15.1.2.2
Rate	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Rate Change" in subclause 15.1.2.2
Optimalcodec	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Optimal Codec Type" in subclause 15.1.3.2
Distlist	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Distant TFO List" in subclause 15.1.3.2
Off / value	Local control	As for the property "Echo cancelling" in subclause E.13.1 in ITU-T Recommendation H.248 [10]
Error	Error descriptor	As defined in the subclause "Command error code" in ITU-T Recommendation H.248 [10]
Bearer Modification Support	EventDescriptor	As for the EventsDescriptor in "Bearer Modification Support" in subclause 15.1.4.2.
Bearer modification possible	ObservedEvent descriptor	As for the ObserverdEventDescriptor in "Bearer Modification Support" in subclause 15.1.4.2.
Bitrate	Local control	As for the property " Bitrate" in subclause 15.1.7.1

\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

### 14.2.4 Establish Bearer

This procedure is the same as that defined in the subclause "Establish BNC\_notify" in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) with additions as shown below.

Address Information	Control information	Bearer information
	UP mode = Mode UP version = version Delivery of erroneous SDUs = value Interface = interface Initdirerection = initdirection <u>Bitrate = bitrate</u>  If indication on Protocol Negotiation Result requested: NotificationRequested (Event ID = x, "Prot Negotiation Result")  If indication on Rate Change requested: NotificationRequested (Event ID = x, "RateChange")	PLMN bearer capability = PLMN capability  GSM channel coding = coding

The parameter logical port is not used.

### 14.2.5 Prepare Bearer

This procedure is the same as that defined in the subclause "Prepare\_BNC\_notify" in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) with additions as shown below:

Address Information	Control information	Bearer information
	UP mode = mode UP version = version Delivery of erroneous SDUs = value Interface = interface Initdirerection = initdirection <u>Bitrate = bitrate</u>  If indication on Protocol Negotiation Result requested: NotificationRequested (Event ID = x, "Prot Negotiation Result")  If indication on Rate Change requested: NotificationRequested (Event ID = x, "RateChange")  If indication on Bearer Modification requested: NotificationRequested (Event ID = x, "Bearer Modification Support")	PLMN bearer capability = PLMN capability  GSM channel coding = coding

The parameter logical port is not used.

\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

### 14.2.36 Modify Bearer Characteristics

This procedure is the same as that defined in the subclause "Modify Char" in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) with additions as shown below.

Address Information	Control information	Bearer information
	If framing protocol used:  UP mode = mode UPversion =version Delivery of erroneous SDUs=value Interface=interface Initdirerection=initdirection  <u>Bitrate = bitrate</u>  If indication on Protocol Negotiation Result requested: NotificationRequested (Event ID = x, "Prot Negotiation Result")  If indication on Rate Change requested: NotificationRequested (Event ID = x, "RateChange")	If data call:  PLMN bearer capbility = PLMN capability GSM channel coding=coding

\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

### 15.1.7 Enhanced Circuit Switched Data package

PackageID: threegcsden (0x00??) [Editor's note: This needs to be registered with IANA]

Version: 1

Extends: threegcsd (0x030) Version 1

This package extends "Circuit Switched Data Package", as defined in clause 15.1.2. Thisse package adds a new property to define the user bitrate at a Nb/Iu termination.

#### 15.1.7.1 Properties

##### Bitrate

PropertyID: bitrate (0x0003)

Description: user bitrate

Type: Integer.

Possible Values:

transmission rate in bits per second, rounded to the nearest integer value. The value must be a valid bitrate (e.g. 33 600, 28 800).

Defined in: Local Control Descriptor

Characteristics: Read/Write



15.1.7.2 EventsNone15.1.7.3 SignalsNone.15.1.7.4 StatisticsNone15.1.7.5 Procedures

This package is used in addition to the 3GCSD package for CS data calls. It is used for indicating the user data rates for Inter-MSC SRNS Relocation and handover cases. If the Bitrate is not 64kb/s at one termination in the MGW but its opposing termination has properties that define its bitrate to be 64kb/s (e.g. TMR=UDI) then A-TRAU' protocol shall be applied by the MGW. For further details see 3G TS 29.007 [6].

## CHANGE REQUEST

⌘ **29.232 CR 044** ⌘ rev **1** ⌘ Current version: **5.2.0** ⌘

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

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

<b>Title:</b>	⌘ Missing Properties For Circuit Switched Data Calls		
<b>Source:</b>	⌘ CN4		
<b>Work item code:</b>	⌘ CSSPLIT	<b>Date:</b>	⌘ 03/07/02
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ REL-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (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)
			Rel-6 (Release 6)

<b>Reason for change:</b>	⌘ Inter-MSC Relocation with CSD calls and split architecture, MGW needs additional data for SRNS Relocation – Non Anchor MGW has to encode Non-transparent data in ATRAU' frames and needs to indicate the required bitrate at the lu interface Access Termination.
	<b>This CR is category F – essential correction – due to incomplete specification work during Bearer Independent CS Network design – mapped from REL-4.</b>
<b>Summary of change:</b>	⌘ In order not to impact existing CSD package (which is unaffected for basic calls, impacts only relevant for inter-MSC relocation and released) the solution adds an enhancement to the existing CSD package with a new property.
<b>Consequences if not approved:</b>	⌘ Inter-MSC Relocation for CSD calls not possible with split architecture.

<b>Clauses affected:</b>	⌘ 10, 14.2.4, 14.2.5, 14.2.36, new 15.1.7										
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td>X</td> <td></td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ 29.007 cr 055 (N3-020693), 23.910 cr 041 (N3-020694)
Y	N										
X											
	X										
	X										
		Test specifications									
		O&M Specifications									
<b>Other comments:</b>	⌘										

How to create CRs using this form:

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

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

\*\*\*\* FIRST MODIFIED SECTION \*\*\*\*

## 10 Formats and codes

Table 1 shows the parameters which are required, in addition to those defined in the subclause "Formats and Codes" of ITU—T Recommendation Q.1950 (see 3GPP TS 29.205 [7]).

The coding rules applied in ITU-T Recommendation H.248 [10] for the applicable coding technique shall be followed for the UMTS capability set.

**Table 1: Additional parameters required**

actprot	Signal descriptor	As for the signal "Activate protocol" in subclause 15.1.2.3
Mode	Local control	As for the property "UP mode of operation" in subclause 15.1.1.1
Version	Local control	As for the property "Upversion" in subclause 15.1.1.1
Value	Local control	As for the property " Delivery of erroneous SDUs" in subclause 15.1.1.1
Interface	Local control	As for the property " Interface" in subclause 15.1.1.1
Initdirection	Local control	As for the property " Initialisation Direction" in subclause 15.1.1.1
PLMN bearer capability	Local control	As for the property "PLMN BC" in subclause 15.1.2.1
Coding	Local control	As for the property " GSM channel coding" in subclause 15.1.2.1
Tfoenable	Local control	As for the property " TFO activity control" in subclause 15.1.3.1
Codeclist	Local control	As for the property" TFO Codec List" in subclause 15.1.3.1
Result	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Protocol Negotiation Result" in subclause 15.1.2.2
Cause	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Protocol Negotiation Result" in subclause 15.1.2.2
Rate	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Rate Change" in subclause 15.1.2.2
Optimalcodec	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Optimal Codec Type" in subclause 15.1.3.2
Distlist	ObservedEvent descriptor	As for the ObservedEventDescriptor parameter "Distant TFO List" in subclause 15.1.3.2
Off / value	Local control	As for the property "Echo cancelling" in subclause E.13.1 in ITU-T Recommendation H.248 [10]
Error	Error descriptor	As defined in the subclause "Command error code" in ITU-T Recommendation H.248 [10]
Bearer Modification Support	EventDescriptor	As for the EventsDescriptor in "Bearer Modification Support" in subclause 15.1.4.2.
Bearer modification possible	ObservedEvent descriptor	As for the ObserverdEventDescriptor in "Bearer Modification Support" in subclause 15.1.4.2.
Bitrate	Local control	As for the property" Bitrate" in subclause 15.1.7.1

\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

### 14.2.4 Establish Bearer

This procedure is the same as that defined in the subclause "Establish BNC\_notify" in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) with additions as shown below.

Address Information	Control information	Bearer information
	UP mode = Mode UP version = version Delivery of erroneous SDUs = value Interface = interface Initdirerection = initdirection <u>Bitrate = bitrate</u>  If indication on Protocol Negotiation Result requested: NotificationRequested (Event ID = x, "Prot Negotiation Result")  If indication on Rate Change requested: NotificationRequested (Event ID = x, "RateChange")	PLMN bearer capability = PLMN capability  GSM channel coding = coding

The parameter logical port is not used.

### 14.2.5 Prepare Bearer

This procedure is the same as that defined in the subclause "Prepare\_BNC\_notify" in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) with additions as shown below:

Address Information	Control information	Bearer information
	UP mode = mode UP version = version Delivery of erroneous SDUs = value Interface = interface Initdirerection = initdirection <u>Bitrate = bitrate</u>  If indication on Protocol Negotiation Result requested: NotificationRequested (Event ID = x, "Prot Negotiation Result")  If indication on Rate Change requested: NotificationRequested (Event ID = x, "RateChange")  If indication on Bearer Modification requested: NotificationRequested (Event ID = x, "Bearer Modification Support")	PLMN bearer capability = PLMN capability  GSM channel coding = coding

The parameter logical port is not used.

\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

### 14.2.36 Modify Bearer Characteristics

This procedure is the same as that defined in the subclause "Modify Char" in ITU-T Recommendation Q.1950 (see 3GPP TS 29.205 [7]) with additions as shown below.

Address Information	Control information	Bearer information
	If framing protocol used:  UP mode = mode UPversion =version Delivery of erroneous SDUs=value Interface=interface Initdirerection=initdirection  <u>Bitrate = bitrate</u>  If indication on Protocol Negotiation Result requested: NotificationRequested (Event ID = x, "Prot Negotiation Result")  If indication on Rate Change requested: NotificationRequested (Event ID = x, "RateChange")	If data call:  PLMN bearer capbility = PLMN capability GSM channel coding=coding

\*\*\*\* NEXT MODIFIED SECTION \*\*\*\*

### 15.1.7 Enhanced Circuit Switched Data package

PackageID: threegcsden (0x00??) [Editor's note: This needs to be registered with IANA]

Version: 1

Extends: threegcsd (0x030) Version 1

This package extends "Circuit Switched Data Package", as defined in clause 15.1.2. Thisse package adds a new property to define the user bitrate at a Nb/Iu termination.

#### 15.1.7.1 Properties

##### Bitrate

PropertyID: bitrate (0x0003)

Description: user bitrate

Type: Integer.

Possible Values:

transmission rate in bits per second, rounded to the nearest integer value. The value must be a valid bitrate (e.g. 33 600, 28 800).

Defined in: Local Control Descriptor

Characteristics: Read/Write

15.1.7.2 EventsNone15.1.7.3 SignalsNone.15.1.7.4 StatisticsNone15.1.7.5 Procedures

This package is used in addition to the 3GCSD package for CS data calls. It is used for indicating the user data rates for Inter-MSC SRNS Relocation and handover cases. If the Bitrate is not 64kb/s at one termination in the MGW but its opposing termination has properties that define its bitrate to be 64kb/s (e.g. TMR=UDI) then A-TRAU' protocol shall be applied by the MGW. For further details see 3G TS 29.007 [6].