

**TSG-RAN Meeting #14  
Kyoto, Japan, 11 - 14, December, 2001**

**TSGRP#14(01) 0859**

**Title: Agreed CRs to TS 25.426**

**Source: TSG-RAN WG3**

**Agenda item: 8.3.3/8.3.4/9.4.3**

RP Tdoc	R3 Tdoc	Spec	CR_Num	Rev	Release	CR_Subject	Cat	Cur_Ver	New_Ver	Workitem
RP-010859	R3-013490	25.426	017	1	Rel-4	Correction to Figure 3	A	4.0.0	4.1.0	TEI
RP-010859	R3-013208	25.426	014		R99	Reference corrections	F	3.6.0	3.7.0	TEI
RP-010859	R3-013489	25.426	016	1	R99	Correction to Figure 3	F	3.6.0	3.7.0	TEI
RP-010859	R3-013209	25.426	015		Rel-4	Reference corrections	A	4.0.0	4.1.0	TEI

## CHANGE REQUEST

⌘ **25.426 CR 014** ⌘ rev **-** ⌘ Current version: **3.6.0** ⌘

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

<b>Title:</b>	⌘ Reference corrections
<b>Source:</b>	⌘ R-WG3
<b>Work item code:</b>	⌘ TEI <span style="float: right;"><b>Date:</b> ⌘ November, 2001</span>
<b>Category:</b>	⌘ F <span style="float: right;"><b>Release:</b> ⌘ R99</span>
<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (essential 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)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
<p>Use <u>one</u> of the following releases:</p> <p><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)</p>	

<b>Reason for change:</b>	<p>⌘ Reference of 1999 for Q.2630.1 is ambiguous. There are several versions of Q.2630.1 that were pre-published in 1999 including, 3/99, 6/99 and 12/99. Of these only the 12/99 version should be used. There are protocol differences amongst the versions that would create interworking problems.</p> <p>Additionally:</p> <p>Q.2150.2 is missing a ITU-T publication date and also the reference usage is incorrect in the procedural text.</p> <p>Q.2150.1 publication date should be 12/99 rather than 1999.</p>
<b>Summary of change:</b>	<p>⌘ Make explicit that 12/99 version of Q.2630.1 is to be used. Changed Q.2150.1 publication date to 12/99. Added publication date of 12/99 to Q.2150.2. Corrected usage of reference tag in the procedural text.</p> <p>Impact Analysis:</p> <p>Impact assessment towards the previous version of the specification (same release):  This CR has isolated impact with the previous version of the specification (same release) because previous implementations may have not been clear which version of specification to apply.</p> <p>This CR has an impact under protocol point of view.  The impact can be considered isolated because the change affects one system function.</p>
<b>Consequences if not approved:</b>	<p>⌘ If not approved, there would be interworking problems as there are protocol incompatibilities between the different versions of Q.2630.1. Also, the missing or incomplete references for the other specifications may lead to ambiguous or unclear version to use.</p>

<b>Clauses affected:</b>	⌘	2	
<b>Other specs affected:</b>	⌘	<input checked="" type="checkbox"/>	Other core specifications
		<input type="checkbox"/>	Test specifications
		<input type="checkbox"/>	O&M Specifications
<b>Other comments:</b>	⌘		⌘ TS 25.426 REL-4 CR015

### 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](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.
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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.

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## 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
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- [1] TS UMTS 25.427: "UTRAN Iur and Iub User plane Protocol for DCH Data Streams".
- [2] ITU-T Recommendation I.361 (11/4995): "B-ISDN ATM Layer Specification".
- [3] ITU-T Recommendation I.363.2 (9/4997): "B-ISDN ATM Adaptation Layer type 2".
- [4] ITU-T Recommendation I.366.1 (6/4998): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2".
- [5] ITU-T Recommendation Q.2630.1 (12/4999): "AAL type 2 Signalling Protocol (Capability Set 1)".
- [6] ITU-T Recommendation E.191 (10/4996): "B-ISDN numbering and addressing".
- [7] ITU-T Recommendation X.213 (11/4995): "Information Technology - Open Systems Interconnection - Network Service Definition".
- [8] ITU-T Recommendation Q.2110 (7/4994): "B-ISDN ATM Adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)".
- [9] ITU-T Recommendation Q.2130 (7/4994): "B-ISDN Signalling ATM Adaptation Layer - Service Specific Coordination Function for Support of Signalling at the User Network Interface (SSCF at UNI)".
- [10] ITU-T Recommendation Q.2150.2 (12/99): "AAL type 2 signalling transport converter on SSCOP".
- [11] ITU-T Recommendation Q.2210 (7/4996): Message transfer part level 3 functions and messages using the services of the ITU-T Recommendation Q.2140".
- [12] ITU-T Recommendation Q.2140 (2/4995): "B-ISDN Signalling ATM Adaptation Layer - Service Specific Coordination Function for Support of Signalling at the Network Node Interface (SSCF at NNI)".
- [13] New ITU-T Recommendation Q.2150.1 (12/4999): "AAL Type 2 Signalling Transport Converter on MTP-3B".
- [14] IETF RFC 791 (September 1981): "Internet Protocol".
- [15] IETF RFC 1483 (July 1993): "Multiprotocol Encapsulation over ATM Adaptation Layer 5".
- [16] IETF RFC 2225 (April 1998): "Classical IP and ARP over ATM".
- [17] IETF RFC 768 (August 1980): "User Datagram Protocol".
- [18] IETF RFC 2960 (~~40/~~October 2000): "Stream Control Transmission Protocol".

- [19] G. Sidebottom et al, "SS7 MTP3 - User Adaptation Layer", draft-ietf-sigtran-m3ua-04.txt (Work In Progress), IETF, September 2000.
- [20] ITU-T Recommendation I.630 (~~2/1999~~): "ATM Protection Switching".
- [21] ITU-T Implementor's guide (12/99) for recommendation Q.2210 (07/96).

## 7.2 Signalling Bearer

SAAL-UNI [8, 9] is used as a signalling bearer for the AAL Type 2 Signalling protocol on Iub interface. Signalling Transport Converter for SSCOP is applied [910]. The following figure shows the signalling bearer protocol stack for the ALCAP on Iub interface.

## CHANGE REQUEST

⌘ **25.426 CR 015** ⌘ rev **-** ⌘ Current version: **4.0.0** ⌘

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

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

<b>Title:</b>	⌘ Reference corrections		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ November, 2001
<b>Category:</b>	⌘ A	<b>Release:</b>	⌘ REL-4

Use one of the following categories:

- F (essential correction)
- A (corresponds to a correction in an earlier release)
- B (Addition of feature),
- C (Functional modification of feature)
- D (Editorial modification)

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

- 2 (GSM Phase 2)
- R96 (Release 1996)
- R97 (Release 1997)
- R98 (Release 1998)
- R99 (Release 1999)
- REL-4 (Release 4)
- REL-5 (Release 5)

**Reason for change:** ⌘ Reference of 1999 for Q.2630.1 is ambiguous. There are several versions of Q.2630.1 that were pre-published in 1999 including, 3/99, 6/99 and 12/99. Of these only the 12/99 version should be used. There are protocol differences amongst the versions that would create interworking problems.

Additionally:

Q.2150.2 is missing a ITU-T publication date and also the reference usage is incorrect in the procedural text.

Q.2150.1 publication date should be 12/99 rather than 1999.

**Summary of change:** ⌘ Make explicit that 12/99 version of Q.2630.1 is to be used. Changed Q.2150.1 publication date to 12/99. Added publication date of 12/99 to Q.2150.2. Corrected usage of reference tag in the procedural text for references without month/date format, i.e. E.164, I.361, I.363.5, I.366.1, RFC768, RFC791. Q.2110, Q.2130, Q.2140, Q.2150.2 (missing), Q.2210, X.213, I.610.

Impact Analysis:

Impact assessment towards the previous version of the specification (same release):  
This CR has isolated impact with the previous version of the specification (same release) because previous implementations may have not been clear which version of specification to apply.

This CR has an impact under protocol point of view.  
The impact can be considered isolated because the change affects one system function.

**Consequences if not approved:** ⌘ If not approved, there would be interworking problems as there are protocol incompatibilities between the different versions of Q.2630.1. Also, the missing or

incomplete references for the other specifications may lead to ambiguous or unclear version to use.

<b>Clauses affected:</b>	⌘	2		
<b>Other specs affected:</b>	⌘	<input checked="" type="checkbox"/> Other core specifications	⌘	TS 25.426 R99 CR014
		<input type="checkbox"/> Test specifications		
		<input type="checkbox"/> O&M Specifications		
<b>Other comments:</b>	⌘			

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## 2 References

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- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
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- [4] ITU-T Recommendation I.366.1 (~~6/4998~~): "Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL type 2".
- [5] ITU-T Recommendation Q.2630.1 (~~12/4999~~): "AAL type 2 Signalling Protocol (Capability Set 1)".
- [6] ITU-T Recommendation E.191 (~~10/4996~~): "B-ISDN numbering and addressing".
- [7] ITU-T Recommendation X.213 (~~11/4995~~): "Information Technology - Open Systems Interconnection - Network Service Definition".
- [8] ITU-T Recommendation Q.2110 (~~7/4994~~): "B-ISDN ATM Adaptation layer - Service Specific Connection Oriented Protocol (SSCOP)".
- [9] ITU-T Recommendation Q.2130 (~~7/4994~~): "B-ISDN Signalling ATM Adaptation Layer - Service Specific Coordination Function for Support of Signalling at the User Network Interface (SSCF at UNI)".
- [10] ITU-T Recommendation Q.2150.2 (~~12/99~~): "AAL type 2 signalling transport converter on SSCOP".
- [11] ITU-T Recommendation Q.2210 (~~7/4996~~): Message transfer part level 3 functions and messages using the services of the ITU-T Recommendation Q.2140".
- [12] ITU-T Recommendation Q.2140 (~~2/4995~~): "B-ISDN Signalling ATM Adaptation Layer - Service Specific Coordination Function for Support of Signalling at the Network Node Interface (SSCF at NNI)".
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- [16] IETF RFC 2225 (~~April~~ 1998): "Classical IP and ARP over ATM".
- [17] IETF RFC 768 (~~August~~ 1980): "User Datagram Protocol".
- [18] IETF RFC 2960 (~~10/October~~ 2000): "Stream Control Transmission Protocol".
- [19] G. Sidebottom et al, "SS7 MTP3 - User Adaptation Layer", draft-ietf-sigtran-m3ua-04.txt (Work In Progress), IETF, September 2000.

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- [21] ITU-T Implementor's guide (12/99) for recommendation Q.2210 (07/96).
- [22] ITU-T Recommendation Q.2630.2 (12/2000): "AAL Type 2 signalling protocol (Capability Set 2)".

## 7.2 Signalling Bearer

SAAL-UNI [8, 9] is used as a signalling bearer for the AAL Type 2 Signalling protocol on Iub interface. Signalling Transport Converter for SSCOP is applied [910]. The following figure shows the signalling bearer protocol stack for the ALCAP on Iub interface.

## CHANGE REQUEST

⌘ **25.426 CR 016** ⌘ rev **1** ⌘ Current version: **3.6.0** ⌘

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

<b>Title:</b>	⌘ Correction to Figure 3		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ November 2001
<b>Category:</b>	⌘ F	<b>Release:</b>	⌘ R99
	<p>Use <u>one</u> of the following categories:</p> <p><b>F</b> (essential 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)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>		<p>Use <u>one</u> of the following releases:</p> <p><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)</p>

<b>Reason for change:</b>	⌘ The presence of an AAL5 SSCS sublayer in Figure 3 depicting the IP-based protocol stack for the ALCAP signalling bearer is ambiguous for the following reasons: <ul style="list-style-type: none"> <li>➤ RFC 2225 (Classical IP over ATM) makes no use of the “AAL5 SSCS” and “AAL5 CPCS” terms, whereas the “AAL5” term is obviously used to designate the latter;</li> <li>➤ RFC 1483 and RFC 2684 (Multiprotocol Encapsulation over AAL5) are specific about “routed and bridged PDUs [being] carried directly over the CPCS of AAL5, i.e., when the Service Specific Convergence Sublayer (SSCS) of AAL5 is absent”;</li> <li>➤ there is no mention of Classical IP over ATM in the text, although the relevant IETF RFCs are listed in the references.</li> </ul>
<b>Summary of change:</b>	⌘ Delete the AAL5 SSCS sublayer from the IP based protocol stack in Figure 3. Rename the AAL5 Common Part sublayer as AAL5 in Figure 3. Add references to Classical IP over ATM implementation in the text.
<b>Consequences if not approved:</b>	⌘ The IP-over-ATM scheme for the IP-based ALCAP signalling bearer will remain ambiguous. <p><u>Impact Analysis:</u></p> <p>This CR has isolated impact on the previous version of the specification (same release) because it affects the IP-based ALCAP signalling bearer only.</p>

**Clauses affected:** ⌘ 8.2

<b>Other specs</b>	⌘ <input checked="" type="checkbox"/>	Other core specifications	⌘ TS 25.426 v4.0.0 CR017
<b>affected:</b>	<input type="checkbox"/>	Test specifications	
	<input type="checkbox"/>	O&M Specifications	
<b>Other comments:</b>	⌘		

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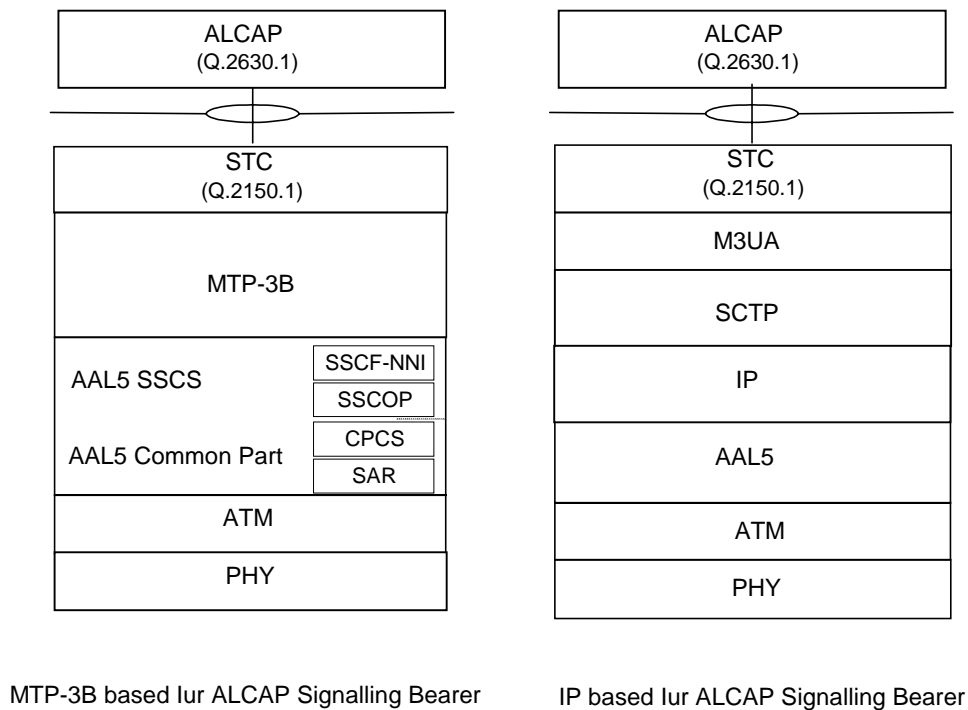
## 8 Signalling Bearer for ALCAP on I<sub>ur</sub> Interface

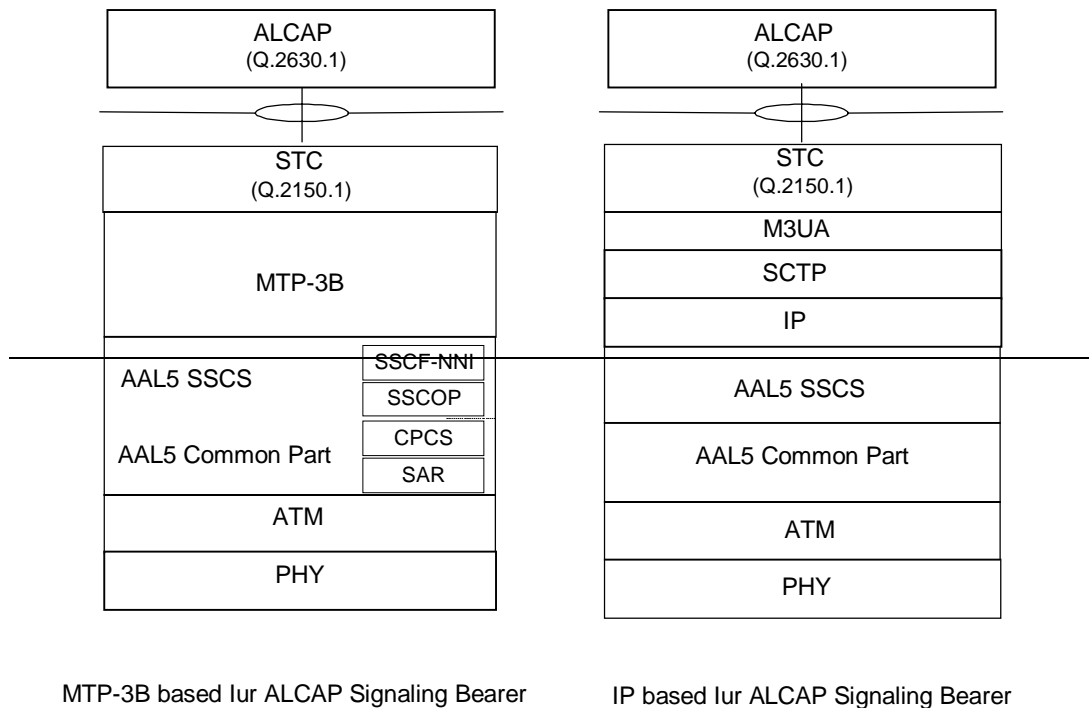
### 8.1 Introduction

This clause specifies the signalling bearer for the ALCAP on the I<sub>ur</sub> interface.

### 8.2 Signalling Bearer

There are two protocol stacks specified for I<sub>ur</sub> ALCAP Signalling Bearer - one based on MTP-3B [11, 21] and SAAL-NNI [12, 8] and the other based on SCTP [18]. Signalling Transport Converter for MTP-3B is applied [13]. MTP-3 User Adaptation Layer (M3UA) for SCTP is applied [19]. Classical IP over ATM is specified in [16]. Multiprotocol Encapsulation over AAL5 is specified in [15]. The following figure shows the signalling bearer protocol stacks for the ALCAP on I<sub>ur</sub> interface.





**Figure 3: Signalling bearers for ALCAP on Iur interface**

## CHANGE REQUEST

⌘ **25.426 CR 017** ⌘ rev **1** ⌘ Current version: **4.0.0** ⌘

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

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

<b>Title:</b>	⌘ Correction to Figure 3		
<b>Source:</b>	⌘ R-WG3		
<b>Work item code:</b>	⌘ TEI	<b>Date:</b>	⌘ November 2001
<b>Category:</b>	⌘ <b>A</b>	<b>Release:</b>	⌘ REL-4
	<i>Use one of the following categories:</i> <b>F</b> (essential 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)		<i>Use one 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)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		

<b>Reason for change:</b>	⌘ The presence of an AAL5 SSCS sublayer in Figure 3 depicting the IP-based protocol stack for the ALCAP signalling bearer is ambiguous for the following reasons: <ul style="list-style-type: none"> <li>➤ RFC 2225 (Classical IP over ATM) makes no use of the “AAL5 SSCS” and “AAL5 CPCS” terms, whereas the “AAL5” term is obviously used to designate the latter;</li> <li>➤ RFC 1483 and RFC 2684 (Multiprotocol Encapsulation over AAL5) are specific about “routed and bridged PDUs [being] carried directly over the CPCS of AAL5, i.e., when the Service Specific Convergence Sublayer (SSCS) of AAL5 is absent”;</li> <li>➤ there is no mention of Classical IP over ATM in the text, although the relevant IETF RFCs are listed in the references.</li> </ul>
<b>Summary of change:</b>	⌘ Delete the AAL5 SSCS sublayer from the IP based protocol stack in Figure 3. Rename the AAL5 Common Part sublayer as AAL5 in Figure 3. Add references to Classical IP over ATM implementation in the text.
<b>Consequences if not approved:</b>	⌘ The IP-over-ATM scheme for the IP-based ALCAP signalling bearer will remain ambiguous. <p><u>Impact Analysis:</u></p> <p>This CR has isolated impact on the previous version of the specification (same release) because it affects the IP-based ALCAP signalling bearer only.</p>

**Clauses affected:** ⌘ 8.2



<b>Other specs</b>	⌘	<input checked="" type="checkbox"/>	Other core specifications	⌘	TS 25.426 v3.6.0 CR016
<b>affected:</b>		<input type="checkbox"/>	Test specifications		
		<input type="checkbox"/>	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.

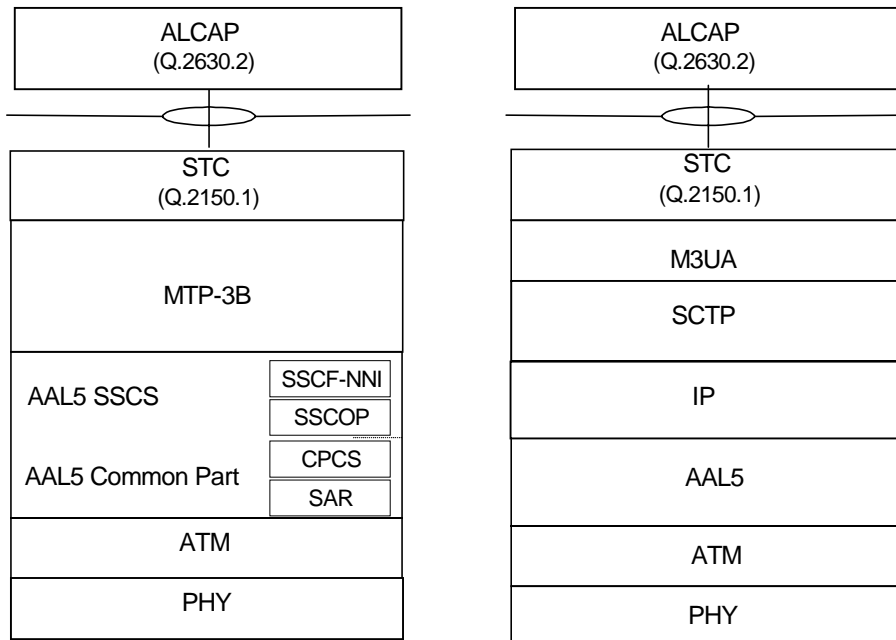
## 8 Signalling Bearer for ALCAP on I<sub>ur</sub> Interface

### 8.1 Introduction

This clause specifies the signalling bearer for the ALCAP on the I<sub>ur</sub> interface.

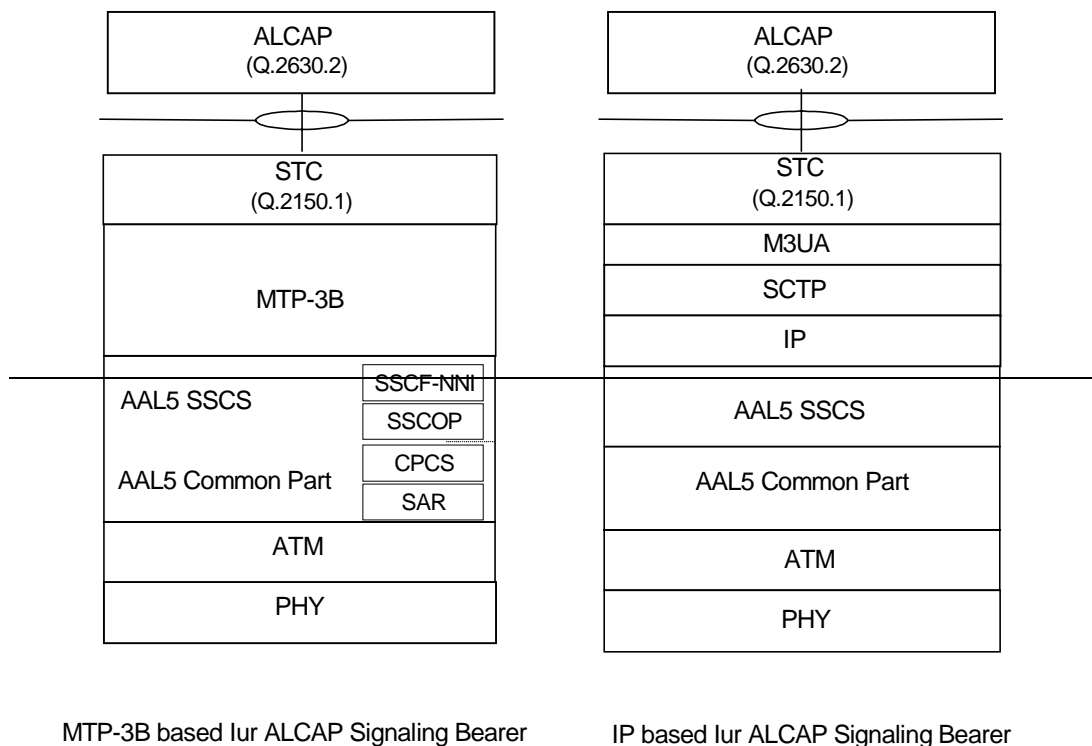
### 8.2 Signalling Bearer

There are two protocol stacks specified for I<sub>ur</sub> ALCAP Signalling Bearer - one based on MTP-3B [11, 21] and SAAL-NNI [12, 8] and the other based on SCTP [18]. Signalling Transport Converter for MTP-3B is applied [13]. MTP-3 User Adaptation Layer (M3UA) for SCTP is applied [19]. Classical IP over ATM is specified in [16]. Multiprotocol Encapsulation over AAL5 is specified in [15]. The following figure shows the signalling bearer protocol stacks for the ALCAP on I<sub>ur</sub> interface.



MTP-3B based I<sub>ur</sub> ALCAP Signalling Bearer

IP based I<sub>ur</sub> ALCAP Signalling Bearer



**Figure 3: Signalling bearers for ALCAP on Iur interface**