TSG RAN Meeting #19 **RP-030054**
Birmingham, UK, 11 - 14 March 2003

Title **CRs (R99 and Rel-4/Rel-5 Category A) to TS 25.414 on TCP Port Number**
Source **TSG RAN WG3**
Agenda Item **8.3.3**

RAN3 Tdoc	Spec	curr. Vers.	new Vers.	REL	CR	Rev	Cat	Title	Work item
R3-030182	25.414	3.12.0	3.13.0	R99	053	-	F	TCP Port Number	TEI
R3-030183	25.414	4.5.0	4.6.0	REL-4	054	-	A	TCP Port Number	TEI
R3-030184	25.414	5.3.0	5.4.0	REL-5	055	-	A	TCP Port Number	TEI

3GPP TSG-RAN3 Meeting #34
Sophia, France, 17th-21th February 2003

Tdoc ⌘R3-030182

CR-Form-v7

CHANGE REQUEST

⌘ **25.414** **CR** **053** ⌘ **rev** **-** ⌘ Current version: **3.12.0** ⌘

*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 **X** Core Network **X**

Title:	⌘	TCP Port number
Source:	⌘	RAN WG3
Work item code:	⌘	TEI
Date:	⌘	17/02/2003
Category:	⌘	**F**
Release:	⌘	R99

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	TCP Destination Port number is specified for the CN. RNC/CN destination port number specified when the CBC/RNC uses a TCP connection already set up by the RNC/CBC. IP/ATM mapping undefined for the O&M case.
Summary of change:	⌘	TCP port specified for missing cases. IP/ATM defined for O&M case. Impact assessment towards the previous version of the specification (same release): This CR has isolated impact towards the previous version of the specification (same release). This CR has an impact under functional and protocol point of view. The impact can be considered isolated because it only affects the Iu-BC transport function.
Consequences if not approved:	⌘	There is no way for the RNC to inform the CBC of BC-SA state (via e.g. restart indication or failure indication messages) if the CBC did not open at least one time the TCP connection towards the RNC. IOT issue for the option used with O&M for IP/ATM mapping.
Clauses affected:	⌘	7.1.2, 7.1.4

		Y	N			
Other specs	⌘	X		Other core specifications	⌘	TS 25.414 REL-4 CR054 TS 25.414 REL-5 CR055
affected:			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

How to create CRs using this form:
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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.

7.1.2 TCP/IP

The path protocol used shall be TCP, which is specified in RFC793 [18]. IPv4 [13] (RFC 791) shall be supported, IPv6 [16] (RFC 2460) support is optional.

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

The 3452 destination port number shall be used by both entities (RNC or CN) whenever it sets up a new TCP connection. When it sends SABP messages on an existing TCP connection, the sending entity (RNC or CN) shall use as TCP destination port number either 3452 if it was the initiator of this TCP connection, or the TCP source port number that was received from the peer entity that had initiated this existing TCP connection.

7.1.3 ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to ITU-T Recommendation I.363.5.

AAL5 virtual circuits shall be used to transport the IP packets across the Iu interface toward the broadcast domain. Multiple VCs may be used over the interface. An association shall be made between a VC and the IP addresses that are related to this VC in the peer node side. This association shall be made using O&M or using ATM Inverse ARP according to Classical IP over ATM when PVCs are used.

7.1.4 IP/ATM

When the association mentioned in 7.1.3 is made using O&M, the "LLC encapsulation" option of "Multiprotocol Encapsulation over AAL5" shall be used to carry the IP packets over the ATM transport network when PVCs are used.

When the association mentioned in 7.1.3 is made using "ATM Inverse ARP", "Classical IP and ARP over ATM" protocols and the "LLC encapsulation" option of "Multiprotocol Encapsulation over AAL5" shall be used to carry the IP packets over the ATM transport network when PVCs are used. "Classical IP and ARP over ATM" is specified in RFC 2225 [15]. "Multiprotocol Encapsulation over AAL5" is specified in RFC 2684 [14].

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CHANGE REQUEST

⌘ **25.414** **CR** **054** ⌘ **rev** **-** ⌘ 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 ☒

Title:	⌘	TCP Port number
Source:	⌘	RAN WG3
Work item code:	⌘	TEI
Date:	⌘	17/02/2003
Category:	⌘	**A**
Release:	⌘	Rel-4

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
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2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*

Reason for change: ⌘ TCP Destination Port number is specified for the CN. RNC/CN destination port number specified when the CBC/RNC uses a TCP connection already set up by the RNC/CBC.

IP/ATM mapping undefined for the O&M case.

Summary of change: ⌘ TCP port specified for missing cases. IP/ATM defined for O&M case.

Impact assessment towards the previous version of the specification (same release):

This CR has isolated impact towards the previous version of the specification (same release).

This CR has an impact under functional and protocol point of view.

The impact can be considered isolated because it only affects the Iu-BC transport function.

Consequences if not approved: ⌘ There is no way for the RNC to inform the CBC of BC-SA state (via e.g. restart indication or failure indication messages) if the CBC did not open at least one time the TCP connection towards the RNC. IOT issue for the option used with O&M for IP/ATM mapping.

Clauses affected: ⌘ 7.1.2, 7.1.4

		Y	N			
Other specs	⌘	X		Other core specifications	⌘	TS 25.414 R99 CR053 TS 25.414 REL-5 CR055
affected:			X	Test specifications		
			X	O&M Specifications		
Other comments:	⌘					

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7.1.2 TCP/IP

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The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

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7.1.3 ATM Adaptation Layer Type 5 (I.363.5)

AAL5 shall be used according to ITU-T Recommendation I.363.5.

AAL5 virtual circuits shall be used to transport the IP packets across the Iu interface toward the broadcast domain. Multiple VCs may be used over the interface. An association shall be made between a VC and the IP addresses that are related to this VC in the peer node side. This association shall be made using O&M or using ATM Inverse ARP according to Classical IP over ATM when PVCs are used.

7.1.4 IP/ATM

When the association mentioned in 7.1.3 is made using O&M, the "LLC encapsulation" option of "Multiprotocol Encapsulation over AAL5" shall be used to carry the IP packets over the ATM transport network when PVCs are used.

When the association mentioned in 7.1.3 is made using "ATM Inverse ARP", "Classical IP and ARP over ATM" protocols and the "LLC encapsulation" option of "Multiprotocol Encapsulation over AAL5" shall be used to carry the IP packets over the ATM transport network when PVCs are used. "Classical IP and ARP over ATM" is specified in RFC 2225 [15]. "Multiprotocol Encapsulation over AAL5" is specified in RFC 2684 [14].

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7.2 Transport network control plane

ALCAP is not required over the Iu interface towards the broadcast domain.

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CHANGE REQUEST

⌘ **25.414** **CR** **055** ⌘ **rev** **-** ⌘ Current version: **5.3.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☒ Core Network ☒

Title:	⌘	TCP Port number
Source:	⌘	RAN WG3
Work item code:	⌘	TEI
Date:	⌘	17/02/2003
Category:	⌘	**A**
Release:	⌘	Rel-5

Use one of the following categories:
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Rel-6	*(Release 6)*

Reason for change: ⌘ TCP Destination Port number is specified for the CN. RNC/CN destination port number specified when the CBC/RNC uses a TCP connection already set up by the RNC/CBC.

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Clauses affected:	⌘	7.1.2, 7.1.3			
		Y	**N**		
Other specs	⌘	**X**		Other core specifications	⌘ TS25.414 CR053 TS25.414 CR054
affected:			**X**	Test specifications	
			X	O&M Specifications	
Other comments:	⌘				

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7.1.2 ATM Transport Option

7.1.2.1 General

In the ATM transport option, the protocol architecture for the Service Area Broadcast Plane of the Iu interface shall be TCP over IP over AAL5 over ATM.

7.1.2.2 TCP/IP

The path protocol used shall be TCP, which is specified in RFC793 [18]. IPv4 [13] (RFC 791) shall be supported, IPv6 [16] (RFC 2460) support is optional.

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

The 3452 destination port number shall be used by both entities (RNC or CN) whenever it sets up a new TCP connection. When it sends SABP messages on an existing TCP connection, the sending entity (RNC or CN) shall use as TCP destination port number either 3452 if it was the initiator of this TCP connection, or the TCP source port number that was received from the peer entity that had initiated this existing TCP connection.

7.1.2.3 ATM Adaptation Layer Type 5 (I.363.5)

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7.1.2.4 IP/ATM

When the association mentioned in 7.1.2.3 is made using O&M, the "LLC encapsulation" option of "Multiprotocol Encapsulation over AAL5" shall be used to carry the IP packets over the ATM transport network when PVCs are used.

When the association mentioned in 7.1.2.3 is made using "ATM Inverse ARP", "Classical IP and ARP over ATM" protocols and the "LLC encapsulation" option of "Multiprotocol Encapsulation over AAL5" shall be used to carry the IP packets over the ATM transport network when PVCs are used. "Classical IP and ARP over ATM" is specified in RFC 2225 [15]. "Multiprotocol Encapsulation over AAL5" is specified in RFC 2684 [14].

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7.1.3 IP Transport Option

7.1.3.1 General

In the IP transport option TCP over IP shall be supported as the transport for data streams on the Iu-BC interface. The data link layer is as specified in subclause 4.2.

The transport bearer is identified by the TCP port number and the IP address (source TCP port number, destination TCP port number, source IP address, destination IP address).

7.1.3.3 TCP /IP

The path protocol used shall be TCP, which is specified in RFC 793 [18].

The TCP Destination Port number for SABP messages is 3452. It is the registered port number for SABP.

The 3452 destination port number shall be used by both entities (RNC or CN) whenever it sets up a new TCP connection. When it sends SABP messages on an existing TCP connection, the sending entity (RNC or CN) shall use as TCP destination port number either 3452 if it was the initiator of this TCP connection, or the TCP source port number that was received from the peer entity that had initiated this existing TCP connection.

An IP RNC/CN-node shall support IPv6. The support of IPv4 is optional.

NOTE: This does not preclude single implementation and use of IPv4.

IP dual stack support is recommended for the potential transition period from IPv4 to IPv6 in the transport network.

7.1.3.4 Diffserv code point marking

IP Differentiated Services code point marking [x11] shall be supported. The Diffserv code point may be determined from the application parameters.