

Source: SA1

Title: CR to 22.002 Rel-4 on Corrections to erroneous CRs SP-010039 and SP-010040 to 22.002.

Document for: Approval

Agenda Item: 7.1.3

Spec	CR	Rev	Phase	Cat	Subject	Version-Current	Version-New	Doc-2nd-Level
22.002	013		Rel-4	F	Corrections to erroneous implementation of CRs SP-010039 and SP-010040 to 22.002.	4.1.0	4.2.0	S1-010357

CR-Form-v3

CHANGE REQUEST

⌘ **TS 22.002** **CR** **013** ⌘ rev **-** ⌘ Current version: **4.1.0** ⌘

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

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

Title:	⌘ Corrections to erroneous implementation of CRs SP-010039 and SP-010040 to 22.002.		
Source:	⌘ SA1		
Work item code:	⌘ Technical Enhancements and Improvements (TEI4)	Date:	⌘ 11/05/01
Category:	⌘ F	Release:	⌘ REL-4
	<i>Use one of the following categories:</i> 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.		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) REL-4 (Release 4) REL-5 (Release 5)

Reason for change:	⌘ The big changes (partially overlapping) in SP-010039 and SP-010040 resulted in an erroneous implementation of CRs to 22.002. The CRs were approved at SA#11 in SP-010039 and SP-010040 (corresponds to S1-010253, S1-010254 and S1-010266)
Summary of change:	⌘ See SP-010039, SP-010040
Consequences if not approved:	⌘

Clauses affected:	⌘ 3 and subclauses		
Other specs affected:	<input type="checkbox"/> Other core specifications <input type="checkbox"/> Test specifications <input type="checkbox"/> O&M Specifications	⌘	
Other comments:	⌘		

3 Bearer Services

This clause provides a list of the existing Bearer Services and indicates the values for each attribute in the minimal set.

The following attributes have the same value for all Bearer Services. Their values are as follows:

Information Transfer Mode:	"Circuit";
Information Transfer Rate:	Not applicable (note 1);
Establishment of Communication:	"Demand";

Symmetry: "Bi-directional Symmetric";
Communication Configuration: "Point to point".

NOTE 1: The Information Transfer Rate attribute is not applicable because it depends on the reference point assumed in the PLMN, transit or terminating network.

All asynchronous NT Bearer Services may support data compression to enhance user data throughput.

NT Bearer Services 20 may support V.120 interworking, enabling data terminals connected to an UE to interwork with V.120 [12] terminal adapters on the ISDN as shown in the figure 2 below.

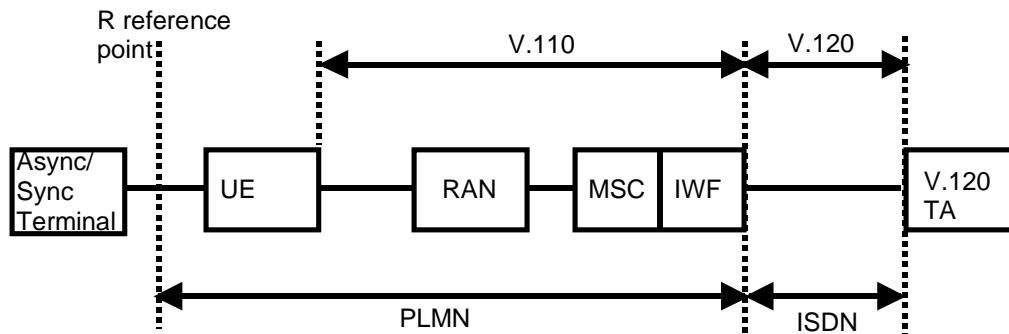


Figure 2: Model of V.120 Interworking

Table 2 contains the list of the Bearer Services and the values for the remaining attributes in the minimal set.

Table 2

Bearer Service Number	Bearer Service Name	Access Structure	Access Rate	Information Transfer Capability	QOS Attribute	Notes
20	Asynchronous General Bearer Service	Asynch	note 1	3.1 kHz , UDI, RDI	NT / T	
30	Synchronous General Bearer Service	Synch	note 1	3.1 kHz , UDI, RDI	T	

Note 1: This General Bearer is independent of any nominal rate. It is elaborated in more detail in subclause 3.1

3.1 General bearer service user data characteristics

The tables below describe the characteristics of the General Bearer Services. The indicated fixed network user rates are possible, but support of General Bearer Service does not imply support of all rates.

3.1.1 BS 20 (asynchronous services)

3.1.1.1 BS 20 T (transparent asynchronous services)

3.1.1.1.1 BS 20 transparent in regular mode for analogue interworking

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS attributes	Note
0.3 kbit/s	Asynch	3,1 kHz	-	T	Note 1
1.2 kbit/s	Asynch	3,1 kHz	-	T	Note 1
2.4 kbit/s	Asynch	3,1 kHz	-	T	Note 1
4.8 kbit/s	Asynch	3,1 kHz	-	T	Note 1
9.6 kbit/s	Asynch	3,1 kHz	-	T	Note 1
14.4 kbit/s	Asynch	3,1 kHz	-	T	Note 1
19.2 kbit/s	Asynch	3,1 kHz	-	T	Note 1
28.8 kbit/s	Asynch	3,1 kHz	-	T	
			-		

NOTE 1: Only applicable in GSM

3.1.1.1.2 BS 20 transparent in regular mode for digital interworking

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS Attribute	Notes
0.3 kbit/s	Asynch	UDI	V.110	T	Note 1
1.2 kbit/s	Asynch	UDI	V.110	T	Note 1
2.4 kbit/s	Asynch	UDI	V.110	T	Note 1
4.8 kbit/s	Asynch	UDI	V.110	T	Note 1
9.6 kbit/s	Asynch	UDI	V.110	T	Note 1
14.4 kbit/s	Asynch	UDI	V.110	T	Note 1
19.2 kbit/s	Asynch	UDI	V.110	T	Note 1
28.8 kbit/s	Asynch	UDI	V.110	T	Note 1
38.4 kbit/s	Asynch	UDI	V.110	T	Note 1
		UDI			
		UDI			
56 kbit/s	Synch	RDI	-	T	
64 kbit/s	Synch	UDI	-	T	

NOTE 1: Only applicable in GSM

3.1.1.2 BS 20 NT (non-transparent asynchronous services)

3.1.1.2.1 BS 20 non-transparent in regular mode for analogue interworking

Fixed Network User Rate	Access Structure	Information Transfer Capability	<u>Rate Adaptation</u>	QoS attributes	Note
0.3 kbit/s	Asynch	3,1 kHz	-	NT	Note 4 and 32
1.2 kbit/s	Asynch	3,1 kHz	-	NT	Note 4 and 32
2.4 kbit/s	Asynch	3,1 kHz	-	NT	Note 4 and 32
4.8 kbit/s	Asynch	3,1 kHz	-	NT	Note 4 and 32
9.6 kbit/s	Asynch	3,1 kHz	-	NT	
14.4 kbit/s	Asynch	3,1 kHz	-	NT	
19.2 kbit/s	Asynch	3,1 kHz	-	NT	
28.8 kbit/s	Asynch	3,1 kHz	-	NT	
	Asynch	3,1 kHz	-	NT	Note 21

NOTE 1: These services are also supported by the GSM Phase 2 Specifications.

NOTE 21: This is used with high speed modems such as V.90 (56kbit/s). Modem type = 'Autobauding Type 1' is selected. FNUR has no meaning in this case.

NOTE 32: In case of UTRAN the FNURs 300, 1200, 2400 and 4800 bit/s towards the fixed network can be provided only with modem type = 'Autobauding Type 1' is selected.

3.1.1.2.2 BS 20 non-transparent in regular mode for digital interworking

Fixed Network User Rate	Access Structure	Information Transfer Capability	User Information Layer 4 protocol Rate Adaptation	QoS Attribute	Notes
0.3 kbit/s	Asynch	UDI	V.110	NT	Note 1 and 2
1.2 kbit/s	Asynch	UDI	V.110	NT	Note 1 and 2
2.4 kbit/s	Asynch	UDI	V.110	NT	Note 1 and 2
4.8 kbit/s	Asynch	UDI	V.110	NT	Note 1 and 2
9.6 kbit/s	Asynch	UDI	V.110	NT	Note 1
14.4 kbit/s	Asynch,	UDI	V.110	NT	
19.2 kbit/s	Asynch	UDI	V.110	NT	
28.8 kbit/s	Asynch	UDI	V.110	NT	
38.4 kbit/s	Asynch	UDI	V.110	NT	

NOTE 1: These services are also supported by the GSM Phase 2 Specifications.

NOTE 21: In case of UTRAN the user rates 300, 1200, 2400 and 4800 bit/s towards the fixed network can be provided only for mobile terminated calls.

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS Attribute	Notes
1.2 kbit/s	Asynch	UDI / RDI	V.120	NT	Note 2
2.4 kbit/s	Asynch	UDI / RDI	V.120	NT	Note 2
4.8 kbit/s	Asynch	UDI / RDI	V.120	NT	Note 2
9.6 kbit/s	Asynch	UDI / RDI	V.120	NT	
14.4 kbit/s	Asynch	UDI / RDI	V.120	NT	
19.2 kbit/s	Asynch	UDI / RDI	V.120	NT	
28.8 kbit/s	Asynch	UDI / RDI	V.120	NT	Note 1
38.4 kbit/s	Asynch	UDI / RDI	V.120	NT	
48 kbit/s	Asynch	UDI / RDI	V.120	NT	
56 kbit/s	Asynch	UDI	V.120	NT	

NOTE 1: Requires a new code point in V.120 specification to be defined.

NOTE 2: In case of UTRAN the user rates 1200, 2400 and 4800 bit/s toward the fixed network can be provided only for asynchronous non-transparent (NT)-mobile terminated calls.

3.1.1.2.3 BS 20 non-transparent for PIAFS

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS Attribute	Notes
32 kbit/s	Asynch	UDI	PIAFS	NT	
64 kbit/s	Asynch	UDI	PIAFS	NT	

3.1.1.2.4 BS 20 non-transparent for Frame Tunnelling Mode

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS Attribute	Notes
56kbit/s	Asynch	RDI	X.31 flag stuffing	NT	
64 kbit/s	Asynch	UDI	X.31 flag stuffing	NT	

3.1.1 BS 30 (synchronous services)

3.1.2.1 BS 30 T (transparent synchronous services)

3.1.2.1.1 BS 30 transparent in regular mode for analogue interworking

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS attributes	Note
			-		
1.2 kbit/s	Synch	3,1 kHz	-	T	Notes 1 and 2
2.4 kbit/s	Synch	3,1 kHz	-	T	Notes 1 and 2
4.8 kbit/s	Synch	3,1 kHz	-	T	Notes 1 and 2
9.6 kbit/s	Synch	3,1 kHz	-	T	Note 2 ₁
14.4 kbit/s	Synch	3,1 kHz	-	T	Note 2 ₁
19.2 kbit/s	Synch	3,1 kHz	-	T	Note 2 ₁
28.8 kbit/s	Synch	3,1 kHz	-	T	

NOTE 1: ~~These services are also supported by the GSM Phase 2 Specifications.~~

NOTE 2₁: Only applicable in GSM.

3.1.2.1.2 BS 30 transparent in regular mode for digital interworking

Fixed Network User Rate	Access Structure	Information Transfer Capability	User Information Layer 1 protocol Rate Adaptation	QoS Attribute	Notes
1.2 kbit/s	Synch	UDI	V.110	T	Note 1 and 2
2.4 kbit/s	Synch	UDI	V.110	T	Note 1 and 2
4.8 kbit/s	Synch	UDI	V.110	T	Note 1 and 2
9.6 kbit/s	Synch	UDI	V.110	T	Note 1 and 2
14.4 kbit/s	Synch	UDI	V.110	T	Note 2 ₁
19.2 kbit/s	Synch	UDI	V.110	T	Note 2 ₁
28.8 kbit/s	Synch	UDI	V.110	T	Note 2 ₁
38.4 kbit/s	Synch	UDI	V.110	T	Note 2 ₁
48 kbit/s	Synch	UDI	V.110	T	Note 2 ₁
56 kbit/s	Synch	UDI	V.110	T (in a 64 kbit/s environment)	
56 kbit/s	Synch	RDI	-	T	
64 kbit/s	Synch	UDI	-	T	

NOTE 1: ~~These services are also supported by the GSM Phase 2 Specifications.~~

NOTE 2₁: Only applicable in GSM

Fixed Network User Rate	Access Structure	User Information Layer 1 protocol	QoS Attribute	Notes
56 kbit/s	Synch	Bit transparent	T (RDI) (in a 56 kbit/s environment)	
64 kbit/s	Synch	Bit transparent	T (UDI) (in a 64 kbit/s environment)	

3.1.2.1.3 BS 30 transparent for Multimedia

Fixed Network User Rate	Access Structure	Information Transfer Capability	Rate Adaptation	QoS Attribute	Notes
28.8 kbit/s	Synch	3.1kHz Audio	H.223 & H.245	T	
32.0 kbit/s	Synch	UDI	H.223 & H.245	T	
33.6 kbit/s	Synch	3.1kHz Audio	H.223 & H.245	T	Note
56 kbit/s	Synch	RDI	H.223 & H.245	T	
64 kbit/s	Synch	UDI	H.223 & H.245	T	

NOTE: 33.6kbit/s FNURs is applicable only for UTRAN.

Annex A (informative):
Change history

Change history											
TSG SA#	SA Doc.	SA1 Doc	Spec	CR	Rev	Rel	Cat	Subject/Comment	Old	New	WI
Jun 1999			02.02					Transferred to 3GPP SA1	8.0.0	3.0.0	
SP-05	SP-99479	S1-99608	22.002	001		R99	D	Editorial changes for alignment	3.0.0	3.1.0	
SP-05	SP-99446	S1-99659	22.002	002		R99	B	Bearer Services	3.0.0	3.1.0	
SP-06	SP-99520	S1-991008	22.002	003		R99	B	Addition of new general bearer service user data characteristics for 33.6kbit/s modem, FTM and multimedia calls	3.1.0	3.2.0	
SP-06	SP-99520	S1-991075	22.002	004		R99	C	22.002 made only applicable to CS Domain.	3.1.0	3.2.0	
SP-07	SP-000054	S1-000132	22.002	005		R99	F	Corrections on 3,1 kHz Audio support	3.2.0	3.3.0	
SP-08	SP-000192	S1-000274	22.002	006		R99	F	Lower User Rates in UMTS for Circuit Switched Data Services	3.3.0	3.4.0	
SP-09	SP-000371	S1-000561	22.002	007		R99	F	32 kbit/s UDI/RDI multimedia in GSM	3.4.0	3.5.0	
SP-09	SP-000390	S1-000595	22.002	008		R4	C	Deletion of bearer service BS 30 NT	3.4.0	4.0.0	
SP-11	SP-010039	S1-010253	22.002	010		Rel-4	C	CR to 22.002 clarification on Circuit Switched Bearer Services in UMTS	4.0.0	4.1.0	CS Bearers in UMTs
SP-11	SP-010040	S1-010254	22.002	011		Rel-4	D	Restructuring of 22.002	4.0.0	4.1.0	CS Bearers in UMTs
SP-11	SP-010040	S1-010266	22.002	012		Rel-4	D	Restructuring of tables in section 3.1	4.0.0	4.1.0	CS Bearers in UMTs