3GPP TSG-RAN3 meeting #8

Abiko, Japan, 25-29 Oct 1999

Document **R3-99D80**

3G CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.411	**CR**		Current Version:	3.0.0

3G specification number ↑   ↑ *CR number as allocated by 3G support team*

For submission to TSG	RAN#6	for approval	X	*(only one box should*
list TSG meeting no. here ↑		for information		*be marked with an X)*

Form: 3G CR cover sheet, version 1.0   The latest version of this form is available from: ftp://ftp.3gpp.org/Information/3GCRF-xx.rtf

Proposed change affects: USIM ☐   ME ☐   UTRAN **X**   Core Network **X**

(at least one should be marked with an X)

Source:	Ericsson	**Date:**	17 Oct 1999

Subject: Addition of references to ITU G.824 and G.825 (Agenda Item: 25)

3G Work item:

Category:

(only one category shall be marked with an X)

F	Correction	**X**
A	Corresponds to a correction in a 2G specification	
B	Addition of feature	
C	Functional modification of feature	
D	Editorial modification	

Reason for change: The current IU Layer 1 specification allows a large number of types of transmission links. The clock stability requirements only refers to G.823 which covers transmission links based on the 2Mbit/s hierarchy. It is therefore recommended to add appropriate references to ITU G. Series specifications to cover for the other types of transmission links (622 Mbits/s, 155 Mbits/s etc..).

Clauses affected: 2 References
4.2 Layer 1 description

Other specs affected:

Other 3G core specifications	☐	→ List of CRs:	
Other 2G core specifications	☐	→ List of CRs:	
MS test specifications	☐	→ List of CRs:	
BSS test specifications	☐	→ List of CRs:	
O&M specifications	☐	→ List of CRs:	

Other comments: This implicitly impacts the specifications 25.421 and 25.431 which refers to 25.411.

help.doc

<--------- double-click here for help and instructions on how to create a CR.

References

[1]   ITU-T Rec. **I.432.2** (8/96) ISDN User-Network interfaces, Layer 1 Recommendations, 155 520 kbit/s and 622 080 kbit/s operation

[2]   ITU-T Rec. **I.432.3** (8/96) ISDN User-Network interfaces, Layer 1 Recommendations, 1544 kbit/s and 2048 kbit/s operation

[3]   ITU-T Rec. **G.703** (10/98) Physical/electrical characteristics of hierarchical digital interfaces

[4]   ITU-T Rec. **G.704** (10/98) Synchronous frame structures used at 1544, 6312, 2048, 8448 and 44 736 kbit/s hierarchical levels

[5]   ITU-T Rec. **G.957** (7/95)   Optical interfaces for equipments and systems relating to the synchronous digital hierarchy

[6]   ITU-T Rec. **I.432.1** (8/96) ISDN User-Network interfaces, Layer 1 Recommendations, General characteristics

[7]   ITU-T Rec. **G.823** (3/93)   The control of jitter and wander within digital networks which are based on the 2048 kbit/s hierarchy

[8]   ITU-T Rec. **G.824** (3/93)   The control of jitter and wander within digital networks which are based on the 1544 kbit/s hierarchy

[9]   ITU-T Rec. **G.825** (3/93)   The control of jitter and wander within digital networks which are based on the synchronous digital hierarchy (SDH)

[10 8]   ITU-T Rec. **G.826** (8/96)   Error performance parameters and objectives for international, constant bit rate digital paths at or above the primary rate

[11 9]   ITU-T rec. **I.361** (11/95)   B-ISDN ATM layer specification

[12 0]   ATM Forum AF-PHY-0016.000 (9/94), "DS1 Physical Layer Specification"

[13 1]   ATM Forum AF-PHY-0064.000 (9/96), "E1 Physical Layer Interface Specification"

[14 2]   ATM Forum AF-PHY-0086.001 (2/99), "Inverse Multiplexing for ATM (IMA) Specification Version 1.1"

[15 3]   ITU-T Rec. **G.751** (11/88) Digital multiplex equipments operating at the third order bit rate of 34 368 kbit/s and the fourth order bit rate of 139 264 kbit/s and using positive justification

Layer 1 Description

Layer 1 reference configuration shall be according to ITU-T Recommendation I.432.1 [6].

The physical layer is divided into:

–   Physical Media Dependent (PMD) sublayer

–   Transmission Convergence (TC) sublayer defined according to ITU-T Recommendation I.432.1 [6].

The PMD shall comply with at least one of the following standards:

• ETSI STM-4 (622 Mb/s) interface according to I.432.2 [1] with optical S-1.1 interface according to G.957 [5].

• SONET STS-12c (622 Mb/s) interface according to ANSI, T1.105-1995 with optical multimode.

• SONET STS-3c (155 Mb/s) interface according to ANSI, T1.105-1995 with optical multimode.

• ETSI STM-1 (155 Mb/s) interface according to I.432.2 [1] with electrical interface (CMI) to G.703 [3].

• ETSI STM-1 (155 Mb/s) interface according to I.432.2 [1] with optical S-1.1 interface according to G.957 [5].

- ITU STS-1 (51 Mb/s) interface according to ANSI, T1.105-1995 with electrical interface.

- ITU STM-0 (51 Mb/s) interface according to ETSI/TTC with electrical interface.

- ITU STM-0 (51 Mb/s) interface according to ETSI/TTC with optical S-1.1 interface according G.957 [5].

- J2, 6.3 Mb/s interface according to Japanese standard JT-G.703 [3] and JT-G.704 [4] (75 Ohm).

Note: J2 requires that the ATM cells be mapped into the physical layer according to HEC based mapping in G.804.

- E2, 8Mb/s according to ETSI/ITU G.703 [3] and G.704 [4] (75 Ohm).

- E3, 34 Mb/s interface according to ETSI/ITU G.751 [13] (75 Ohm).

- T3, 45 Mb/s interface according to ANSI/ITU G.703 [3] and G.704 [4] (75 Ohm).

- E1, 2Mb/s interface balanced 120 Ohm symmetrical according to ETS 300 420, ITU-T G.704 [4] and TBR 013 (G.703) [3], and AF-PHY-0064.000 [11]

- E1, 2Mb/s according to ETSI/ITU G.703 [3] and G.704 [4] (75 Ohm), and AF-PHY-0064.000 [13+].

- J1, 1.5 Mb/s interface according to Jt-431-a (100 Ohm).

- J1, 1.5 Mb/s interface according to JT-G.703 [3] and JT-G.704 [4] (110 Ohm).

- T1, 1.5 Mb/s interface according to AF-PHY-0016.000 [10] and ANSI/ITU G.703 [3] and G.704 [4] (100 Ohm).

Services provided to the upper layer shall be independent from the used underlying technology.

The support of intervening transport networks – like PDH or SDH terrestrial links, Point-to-point or Point-to-Multipoint

Fractional use of the physical medium to terminate a multiple of n time slots shall not be prevented, in order to allow coexistence of this interface with other interfaces on the same physical medium.

It shall be possible to use inverse multiplexing, IMA [12], with a number of all the physical ports on the ET.

The clock stability required shall be according to ÷G.823 [7] or G.824 [8] or G.825 [9] whichever is applicable.

÷Tthe clock extracted from the I_u may be used as UTRAN reference clock.

Transmission quality control shall be provided according to ITU-T Recommendation G.826 [10₈].