3GPP TSG CN Plenary **Tdoc NP-010047**
Meeting #11, Palm Springs, U.S.A
14th - 16th March 2001

Source: **TSG_CN WG 3**

Title: **CRs to REL-4 Work Item "T.E.I_4"**

Agenda item: **8.16**

Document for: **APPROVAL**

Introduction:

This document contains **5** CRs on **REL-4** Work Item **"T.E.I_4"**, that have been agreed by **TSG_CN WG3**, and are forwarded to TSG CN Plenary meeting **#11** for approval.

Doc-2nd-Level	Spec	CR	Rev	Cat	Subject	Phase	Version-Current	Workitem
N3-010080	43.010	002		C	Additional changes for the removal of BS30NT and packet access	REL-4	4.0.0	TEI_4
N3-010155	27.001	058		D	Clarification of allowed combinations of FNUR and ACC values for the V.34 modem based 3G-H.324/M service.	REL-4	4.2.0	TEI_4
N3-010156	27.001	053		D	Editorial modifications of flow diagrams	REL-4	4.2.0	TEI_4
N3-010081	43.010	001		C	Removal of S Reference Point in MS	REL-4	4.0.0	TEI_4
N3-010154	43.010	004		D	Removal of speech model	REL-4	4.0.0	TEI_4

3GPP TSG CN WG3 Meeting #15
Beijing, China. 15th – 19th January 2001

Tdoc N3-010080

CR-Form-v3

CHANGE REQUEST

⌘ **43.010** **CR** **002** ⌘ **rev** **-** ⌘ **Current vers** **4.0.0** ⌘

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

Title:	⌘	Additional changes for the removal of BS30NT and packet access
Source:	⌘	TSG_CN WG3
Work item code:	⌘	TEI4
Date:	⌘	17.01.01
Category:	⌘	**C**
Release:	⌘	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:	⌘	Due to the removal of the services BS 30 NT and packet access also this specification was updated. However, some additional changes are still necessary.
Summary of change:	⌘	Removal of text for those services in table 5
Consequences if not approved:	⌘	Specification is inconsistent and contains misleading information.

Clauses affected:	⌘	Clause 1 and Table 5 in clause 7.5
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
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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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

1 Scope

A GSM PLMN may be described by a limited set of access interfaces (refer to 3GPP TS 04.02 and 22.001) and a limited set of GSM PLMN connection types to support the telecommunication services described in the 3GPP 22-series of specifications. This Global System for Mobile communications Technical Specification (TS) identifies and defines these connection types in so far as they relate to the particular network capabilities for a GSM PLMN.

The basic lower layer capabilities of a GSM PLMN are represented by a set of GSM PLMN connection types. The definition of a set of GSM PLMN connection types provides the necessary input to identify network capabilities of a GSM PLMN. In addition to describing network capabilities of a GSM PLMN, the identification of connection types facilitates the specification of network-to-network interfaces. It may also assist in the allocation of network performance parameters.

This specification should be considered in conjunction with other 3GPP specifications with particular reference to 3GPP TS 01.02, 22.001, 22.002, 22.003, 03.01, 23.002, 04.02 and 04.03.

This specification provides a bridge between the service specification in the 3GPP TS 22-series of specifications and the more detailed specifications such as the 3GPP TS 03, 04, 23, 24, 27 and 29 series. As such, it establishes a framework for the specification and understanding of the more detailed specifications. It is therefore not a specification against which detailed conformance testing can be performed. However, it shall be considered mandatory for the understanding of the more detailed specifications and used to resolve issues of conflict in these specifications.

From R99 onwards the following services are no longer required by a PLMN:

- the dual Bearer Services “alternate speech/data” and “speech followed by data”
- the dedicated services for PAD and Packet access
- the single asynchronous and synchronous Bearer Services (BS 21..26, BS 31..34)

From R00 onwards the following service~~s~~ ~~is~~ are no longer required by a PLMN:

- the synchronous Bearer Service non-transparent (BS 30 NT)
- the Basic Packet access

If a PLMN network still provides these services it has to fulfil the specification of ~~GSM R99~~former releases.

Next section modified

6.4 Limited set of GSM PLMN connection types (all channel codings excluding TCH/F14.4 and EDGE)

From the two connection elements defined in subclause 6.2, the list of attributes and their possible values given in subclause 6.3, and from the service requirements defined in 3GPP TS 22.002 and 02.03, a limited set of GSM PLMN connection types have been identified (see also table 5 and table 6 for the relationship between connection elements and telecommunication services).

Figure 6 gives the information transfer protocol models for the identified set of GSM PLMN connection types. The S bits correspond to status bits and the D bits to data bits (3GPP TS 44.021); S* indicates that S bits are used only when 3.1 kHz audio ex PLMN. D' bits corresponds to user bits passed in the place of status bits in the non transparent case Moreover, it should be noted that the RLP rate of 6 and 12 kbit/s correspond to the 8 and 16 Kbit/s intermediate rate in the transparent case.

Protocol Models 1 a and b are the models for asynchronous data transmission in the transparent mode. Models 1d and 1e are for multislot transparent asynchronous data configurations.

Protocol Models 2 a and b are the models for synchronous data transmission in the transparent mode. Models 2d and 2e are for multislot transparent synchronous data.

Protocol Models 3 a and b are the models for character "asynchronous" mode data transmission in the non-transparent mode. In this case, L2RCOP represents the protocol used between the Layer 2 Relay functions (L2R) to convey characters between the MS and the IWF (see 3GPP TS 27.002). The data compression function is located in the L2R COP function. Models 3d and 3e are for multislot character "asynchronous" data transmission in the non-transparent mode.

In all the above models, the a, d and b, e variants indicate alternative access arrangements at the MS, i.e. access at the S interface or at the R interface. ~~The c and f variants indicate a further alternative access arrangement where rate adaptation at the S interface is performed by flag stuffing as defined in ITU-T Recommendation X.31.~~

Protocol Model 5a is the model for the transparent support of group 3 facsimile transmission. Model 5b is for transparent support of group 3 facsimile transmission in multislot data configurations.

Protocol Models 6 a and b are the models for speech transmission. As in models 1-~~4~~3, the a and b variants indicate alternative access arrangements at the MS, i.e. access at the S interface or direct access of the telephony teleservice.

Protocol model 7 a is the model for the non-transparent support of group 3 facsimile transmission. Model 7b is for non-transparent support of group 3 facsimile transmission in multislot data configurations.

In the multislot-data models the data is split into parallel substreams between the Split/Combine-functions (S/C). These substreams are transmitted through parallel TCH/Fs which are treated as independent channels. Between the S/C-functions parallel RA- and FEC-functions are used.

For all the models, only the minimum functionality of the IWF is shown. Additional functions will be required for various interworking situations. These additional functions are described in specification 3GPP TS 29.007.

It should be noted that, in Figure 6, the representation of the transcoding and rate adaptation from the intermediate rate on the radio interface to the 64 kbit/s rate required by the MSC is not intended to indicate a particular implementation. The annex B to 3GPP TS 43.010 identifies alternative arrangements.

Next section modified

7.5 Network capability to support channel mode modification

Specification 3GPP TS 03.45 (Technical Realization of the Group 3 Facsimile Teleservice) identifies a need for a GSM PLMN to support channel mode modification within the facsimile phase of the alternate speech and facsimile group 3 service. The network capability to support channel modification is described in 3GPP TS 24.008. Channel mode modification is not possible for other services. A channel mode modification results in a change of connection element over the radio interface with resultant change in access at the mobile station.

Table 5: Relationship between Bearer services and GSM PLMN Connection elements

Connection description	**Bearer service user data rate**	**Radio interface connection element**	**Intermediate rate at the BSS-MSC interface**	**BSS-MSC connection element**	**Protocol model in figure 6, 7 or 8**
Circuit mode unstructured with unrestricted digital capability transparent.	Data circuit duplex async n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 4). Data circuit duplex sync n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 5) or n × 1 1200 bit/s (n = 5 or 6).	cct mode unstructured unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 6) on n full rate channels.	8 or 16 kbit/s per TCH/F. For data connections using 5 or 6 TCH/Fs no intermediate rate(s) .	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 :1 d, 1 e, 2 d, 2 e
	Data circuit duplex async n × 14 400 bit/s (n ≤ 3). Data circuit duplex sync n × 14 400 bit/s (n ≤ 5)	cct mode unstructured unrestricted n x 14.5 kbit/s (n ≤ 5) on n full rate channels	16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 1 d, 1 e, 2 d, 2 e
	Data circuit duplex async 28 800 bit/s. Data circuit duplex sync 28 800 bit/s Data circuit duplex Sync 32 000 bit/s Data circuit duplex sync 64 000 bit/s	cct mode unstructured unrestricted 29.0 kbit/s on full rate channel cct mode unstructured unrestricted 32 kbit/s on full rate channel cct mode unstructured unrestricted 2 x 32.0 kbit/s on full rate channels	16 kbit/s per TCH/F. 32 kbit/s No intermediate rate for the 64 000 bit/s rate	cct mode unstructured unrestricted 64 kbit/s.	Fig 8 : 1 a, 1 b, 2 a, 2 b None
	Data circuit duplex async 14 400 bit/s Data circuit duplex sync 14 400 bit/s	cct mode unstructured unrestricted 14.5 kbit/s on full rate Channel	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 1 a, 1 b 2 a, 2 b
	Data circuit duplex async 9 600 bit/s. Data circuit duplex sync 9 600 bit/s.	cct mode unstructured unrestricted 12 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 :1 a, 1 b Fig 6 2 a, 2 b
	Data circuit duplex async 4 800 bit/s. Data circuit duplex sync 4 800 bit/s.	cct mode unstructured unrestricted 6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 1 a, 1 b Fig 6 2 a, 2 b
	Data circuit duplex async 300. Data circuit duplex async 1 200. Data circuit duplex async 2 400. Data circuit duplex sync 1 200. Data circuit duplex sync 2 400.	cct mode unstructured unrestricted 3.6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : 1 a, 1 b Fig 6 1 a, 1 b Fig 6 1 a, 1 b Fig 6 2 a, 2 b Fig 6

					2 a, 2 b

Connection description	**Bearer service user data rate**	**Radio interface connection element**	**Intermediate rate at the BSS-MSC interface**	**BSS-MSC connection element**	**Protocol model in figure 6, 7 or 8**
Circuit mode unstructured with unrestricted digital capability non transparent.	Data circuit duplex async n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 4).	cct mode SDU unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 4) on full rate channels.	8 or 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 3 d, 3 e
	Data circuit duplex async n × 14 400 bit/s (n ≤ 4).	cct mode SDU unrestricted n × 14.5 kbit/s (n ≤ 4) on full rate channels.	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 3 d, 3e
	Data circuit duplex async n x 28 800 bit/s (n ≤ 2). Data circuit duplex async 43 200 bit/s	cct mode SDU unrestricted n × 29.0 kbit/s (n ≤ 2) on full rate channels. cct mode SDU unrestricted 43.5 kbit/s on a full rate channel.	16 kbit/s per TCH/F. 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 8 : 3a, 3 b
	Data circuit duplex async 14 400 bit/s	cct mode SDUunrestricted 14.5 kbit/s on full rate channel	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 3 a, 3 b
	Data circuit duplex async 9 600 bit/s.	cct mode SDU unrestricted 12 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : 3 a, 3 b
	Data circuit duplex async 4 800 bit/s.	cct mode SDU unrestricted full rate channel, 12 kbit/s or half rate channel, 6 kbit/s.	16 kbit/s FR 8 kbit/s HR.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : 3 a, 3 b
	Data circuit duplex async 300. Data circuit duplex async 1 200. Data circuit duplex async 2 400.	cct mode SDU unrestricted full rate channel, 12 kbit/s or half rate channel, 6 kbit/s.	16 kbit/s FR 8 kbit/s HR.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6: 3 a, 3 b Fig 6 : 3 a, 3 b Fig 6 3 a, 3 b

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Circuit mode unstructured with 3.1 kHz audio ex PLMN transparent.	Data circuit duplex async n × 4 800 bit/s (n ≤ 4) or n × 9 600 bit/s (n ≤ 3). Data circuit duplex sync n × 4 800 bit/s (n ≤ 4) or n × 9 600 bit/s (n ≤ 3).	cct mode unstructured unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 3) on n full rate channels.	8 or 16 kbit/s TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 1 d, 1 e, 2 d, 2 e
	Data circuit duplex async n × 14 400 bit/s (n ≤ 2). Data circuit duplex sync n × 14 400 bit/s (n ≤ 2)	cct mode unstructured unrestricted x 14.5 kbit/s (n ≤ 2) on n full rate channels	16 kbit/s per TCH/F	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 1 d, 1 e, 2 d, 2e
	Data circuit duplex async 28 800 bit/s. Data circuit duplex sync 28 800 bit/s	cct mode unstructured unrestricted 29.0 kbit/s on a full rate channel	16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 8 : 1 a, 1 b, 2 a, 2 b
	Data circuit duplex asynch 14 400 bit/s synch 14 400 bit/s	cct mode unstructured unrestricted 14.5 kbit/s on full rate channels	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 1 a, 1 b for async Fig 7 2 a 2 b for synch
	Data circuit duplex async 9.6 kbit/s sync 9.6 kbit/s.	cct mode unstructured unrestricted 12 kbit/s full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 1 a, 1 b for asynch. Fig 6 : 2 a, 2 b for synch.
	Data circuit duplex async 4.8 kbit/s sync 4.8 kbit/s.	cct mode unstructured unrestricted 6 kbit/s full and half rate channel.	8 kbit/s.		
	Data circuit duplex async ≤ 2 400 sync ≤ 2 400.	cct mode unstructured unrestricted 3.6 kbit/s full and half rate channel.	8 kbit/s.		

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Circuit mode unstructured with 3.1 kHz audio ex PLMN non transparent.	Data circuit duplex async n × 4 800 (n ≤ 4) or n × 9 600 (n ≤ 4) bit/s.	cct mode SDU unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 4) on full rate channels.	8 or 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : 3 d, 3 e for async.
	Data circuit duplex async n × 14 400 bit/s (n ≤ 4).	cct mode SDU unrestricted n x 14.5 kbit/s (n ≤ 4) on n full rate channels	16 kbit/s per TCH/F	cct mode unstructured unrestricted 64 kbits/s.	Fig 7 : 3 d, 3 e for asynch
	Data circuit duplex async 28 800 bit/s.	cct mode SDU unrestricted 29.0 kbit/s on a full rate channel.	16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbits/s.	Fig 8 : 3a, 3 b
	Data circuit duplex async 43 200 bit/s	cct mode SDU unrestricted 43.5 kbit/s on a full rate channel.	16 kbit/s per TCH/F.		
	Data circuit duplex asynch 14 400 bit/s	cct mode SDU unrestricted 14.5 kbit/s full rate channel	16 kbit/s	cct mode unstructured unrestricted 64 kbits/s.	Fig 7 : 3a, 3b for asynch
	Data circuit duplex async 9.6 kbit/s ~~sync 9.6 kbit/s.~~	cct mode SDU unrestricted 12 kbit/s full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 3 a, 3 b for asynch.
	Data circuit duplex async 4.8 kbit/s	cct mode SDU unrestricted half rate channel, 6 kbit/s or full rate channel, 12 kbit/s.	16 kbit/s FR 8 kbit/s HR.		
	Data circuit duplex async ≤ 2 400 ~~sync ≤ 2 400.~~	cct mode SDU unrestricted half rate channel, 6 kbit/s or full rate channel, 12 kbit/s.			

Table 5 (continued): Relationship between Bearer services and GSM PLMN Connection elements

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Packet services basic access transparent.	Data circuit duplex sync n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 5) or n × 11200 bit/s (n = 5 or 6).	cct mode unstructured unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 6) on n full rate channels.	8 or 16 kbit/s per TCH/F. For data connections using 5 or 6 TCH/Fs no intermediate rate(s).	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 2 d, 2 e
	Data circuit duplex sync n × 14 400 bit/s (n ≤ 5)	cct mode unstructured unrestricted n × 14.5 kbit/s (n ≤ 5) on n full rate channels.	16 kbit/s per TCH/F	cct mode unstructured unrestricted 64 kbits/s.	Fig 7 : 2 d, 2 e
	Data circuit duplex synch 14 400 bit/s	cct mode unstructured unrestricted 14.5 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : 2 a, 2 b
	Data circuit duplex sync 9 600 bit/s.	cct mode unstructured unrestricted 12 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 2 a, 2 b
	Data circuit duplex sync 4 800 bit/s.	cct mode unstructured unrestricted 6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 2 a, 2 b
	Data circuit duplex sync 2 400 bit/s.	cct mode unstructured unrestricted 3.6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : 2 a, 2 b

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Beijing, China. 15th – 19th January 2001

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CHANGE REQUEST

⌘ **43.010** **CR** **001** ⌘ **rev** **-** ⌘ **Current vers** **4.0.0** ⌘

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

Title:	⌘	Removal of S Reference Point in MS
Source:	⌘	TSG_CN WG3
Work item code:	⌘	TEI 4
Date:	⌘	11.01.01
Category:	⌘	**C**
Release:	⌘	REL-4

Use one of the following categories:
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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:	⌘	The S Reference Point in the MS configuration was removed
Summary of change:	⌘	Removal of all references and protocol models in figures 6, 7, 8 and 9 and table 5 using the S Reference Points.
Consequences if not approved:	⌘	43.010 is not consistent with other specifications, e.g. 27.001.

Clauses affected:	⌘	6.4, 6.5, 7.5		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

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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.

6.4 Limited set of GSM PLMN connection types (all channel codings excluding TCH/F14.4)

From the two connection elements defined in subclause 6.2, the list of attributes and their possible values given in subclause 6.3, and from the service requirements defined in 3GPP TS 22.002 and 02.03, a limited set of GSM PLMN connection types have been identified (see also table 5 and table 6 for the relationship between connection elements and telecommunication services).

Figure 6 gives the information transfer protocol models for the identified set of GSM PLMN connection types. The S bits correspond to status bits and the D bits to data bits (3GPP TS 44.021); S* indicates that S bits are used only when 3.1 kHz audio ex PLMN. D' bits corresponds to user bits passed in the place of status bits in the non transparent case Moreover, it should be noted that the RLP rate of 6 and 12 kbit/s correspond to the 8 and 16 Kbit/s intermediate rate in the transparent case.

Protocol Models 1 ~~a~~ b and ~~b~~ e are the models for asynchronous data transmission in the transparent mode. ~~Models 1d and 1e are for multislot transparent asynchronous data configurations.~~

Protocol Models 2 ~~a~~ b and ~~b~~ e are the models for synchronous data transmission in the transparent mode. ~~Models 2d and 2e are for multislot transparent synchronous data.~~

Protocol Models 3 ~~a~~ b and ~~b~~ e are the models for character "asynchronous" mode data transmission in the non-transparent mode. In this case, L2RCOP represents the protocol used between the Layer 2 Relay functions (L2R) to convey characters between the MS and the IWF (see 3GPP TS 27.002). The data compression function is located in the L2R COP function. ~~Models 3d and 3e are for multislot character "asynchronous" data transmission in the non-transparent mode.~~

In all of the above models, the b variants are for singleslot, the e variants are for multislot data configurations. ~~In all the above models, the a, d and b, e variants indicate alternative access arrangements at the MS, i.e. access at the S interface or at the R interface.~~ The c and f variants indicate a further alternative access arrangement where rate adaptation at the S interface is performed by flag stuffing as defined in ITU-T Recommendation X.31.

Protocol Model 5a is the model for the transparent support of group 3 facsimile transmission. Model 5b is for transparent support of group 3 facsimile transmission in multislot data configurations.

Protocol Model~~s~~ 6 ~~a and b are~~ is the model~~s~~ for speech transmission. ~~As in models 1-4, the a and b variants indicate alternative access arrangements at the MS, i.e. access at the S interface or direct access of the telephony teleservice.~~

Protocol model 7 a is the model for the non-transparent support of group 3 facsimile transmission. Model 7b is for non-transparent support of group 3 facsimile transmission in multislot data configurations.

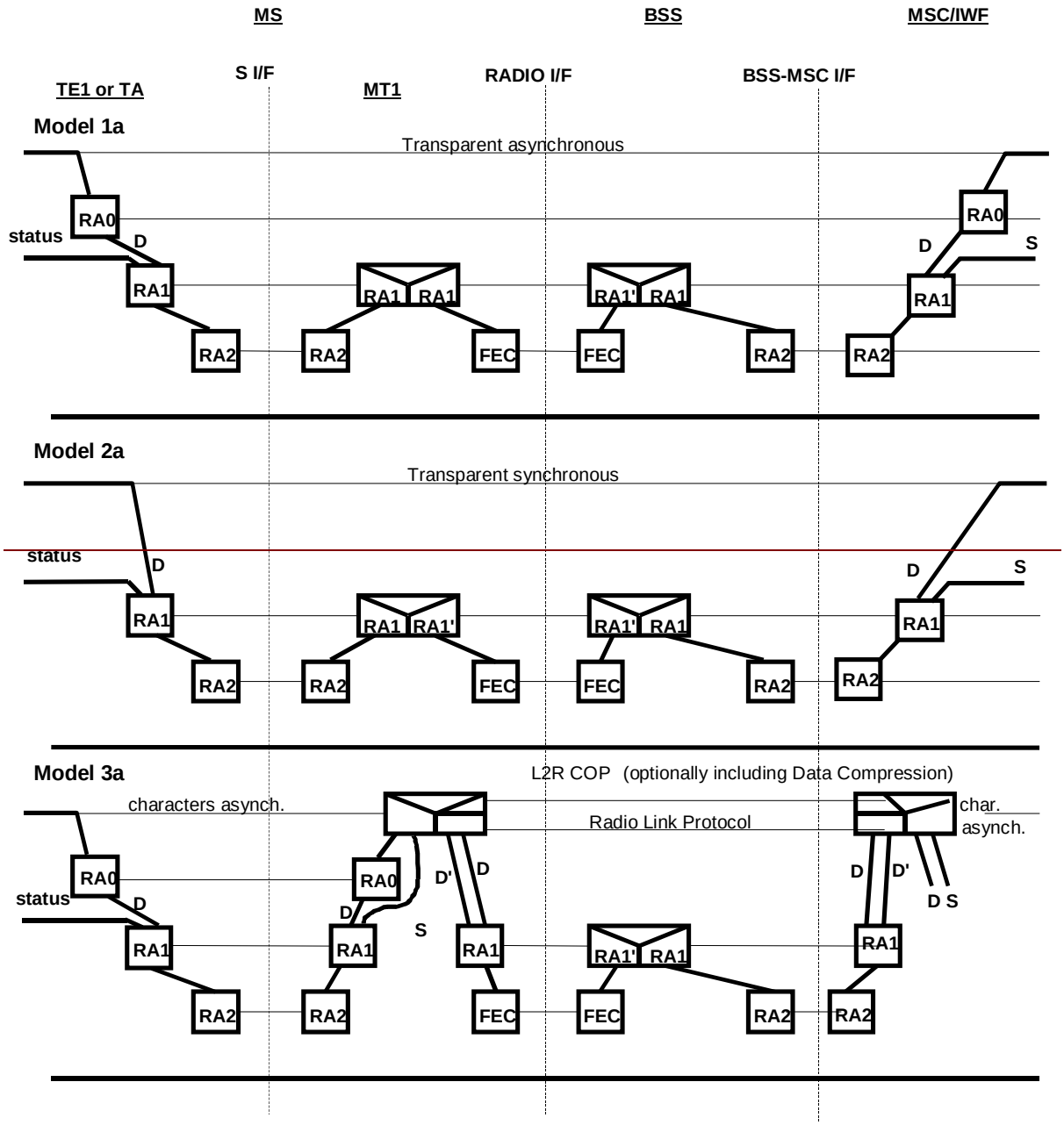
In the multislot-data models the data is split into parallel substreams between the Split/Combine-functions (S/C). These substreams are transmitted through parallel TCH/Fs which are treated as independent channels. Between the S/C-functions parallel RA- and FEC-functions are used.

For all the models, only the minimum functionality of the IWF is shown. Additional functions will be required for various interworking situations. These additional functions are described in specification 3GPP TS 29.007.

It should be noted that, in Figure 6, the representation of the transcoding and rate adaptation from the intermediate rate on the radio interface to the 64 kbit/s rate required by the MSC is not intended to indicate a particular implementation. The annex B to 3GPP TS 43.010 identifies alternative arrangements.

6.5 Limited set of GSM PLMN connection types (for TCH/F14.4 channel coding)

Figure 7 provides the information transfer protocol models for the identified set of GSM PLMN connection types for support of TCH/F14.4. The description of models given in subclause 6.4 applies also to figure 7.



~~Figure 6: Information transfer protocol models for GSM PLMN connections~~

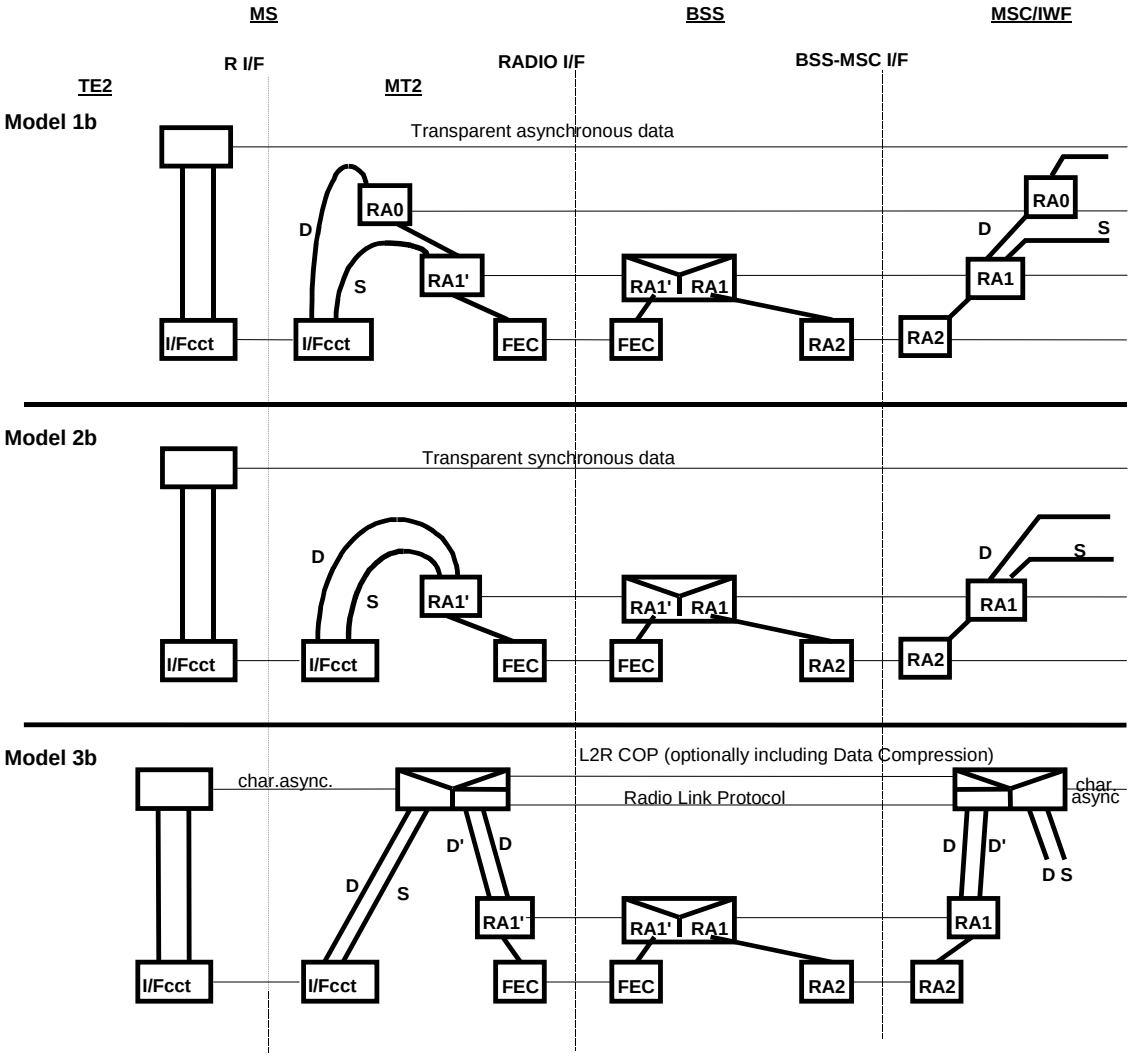
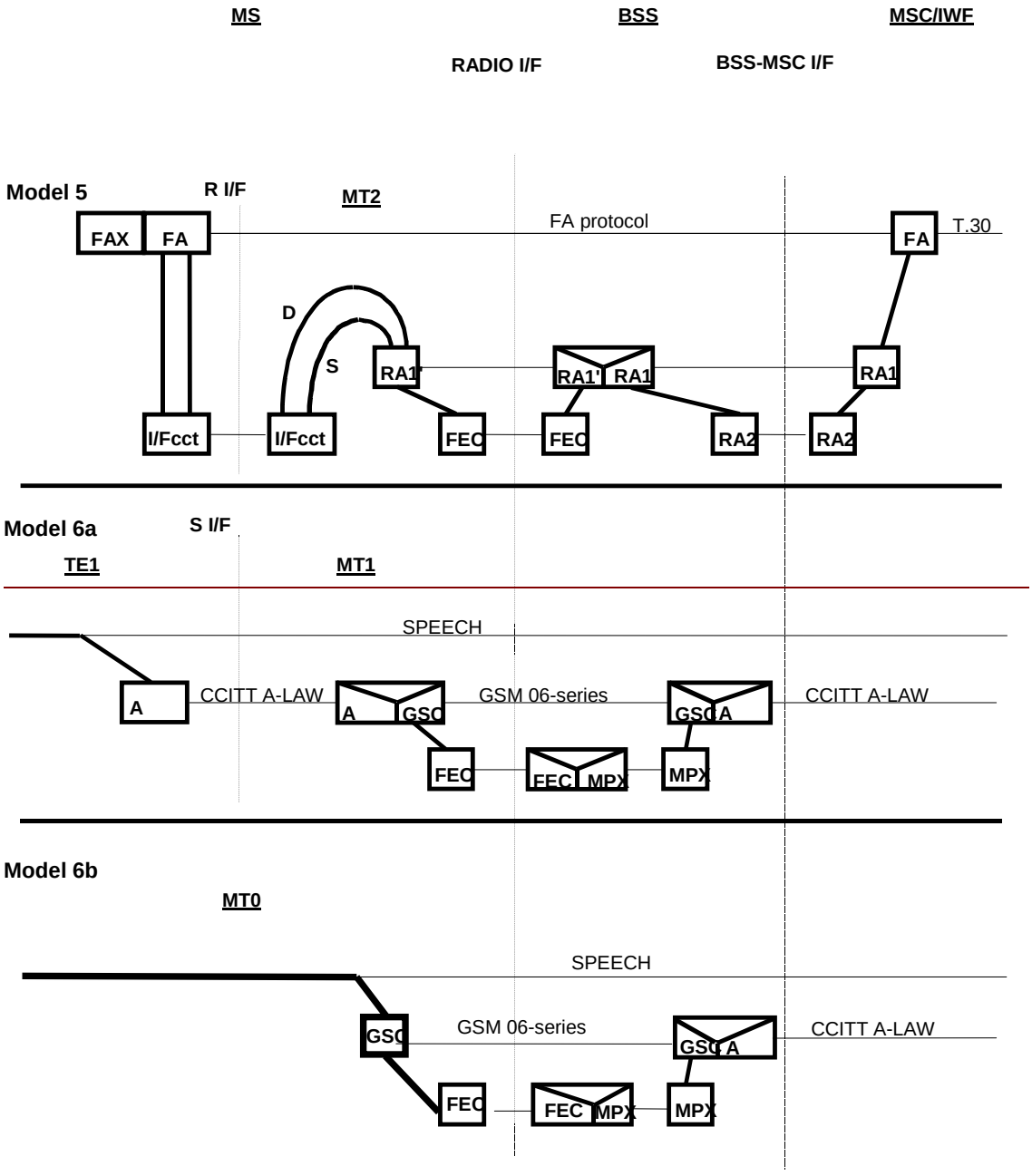


Figure 6 ~~(continued)~~: Information transfer protocol models for GSM PLMN connections


MS
BSS
MSC/IWF
RADIO I/F
BSS-MSC I/F
Model 5
R I/F
MT2
FAX
FA
FA protocol
FA
T.30
D
S
RA1'
RA1'
RA1
RA1
I/Fcct
I/Fcct
FEC
FEC
RA2
RA2
Model 6a
S I/F
TE1
MT1
SPEECH
A
CCITT A-LAW
A
GSC
GSM 06-series
GSC
A
CCITT A-LAW
FEC
FEC
MPX
MPX
Model 6b
MT0
SPEECH
GSC
GSM 06-series
GSC
A
CCITT A-LAW
FEC
FEC
MPX
MPX

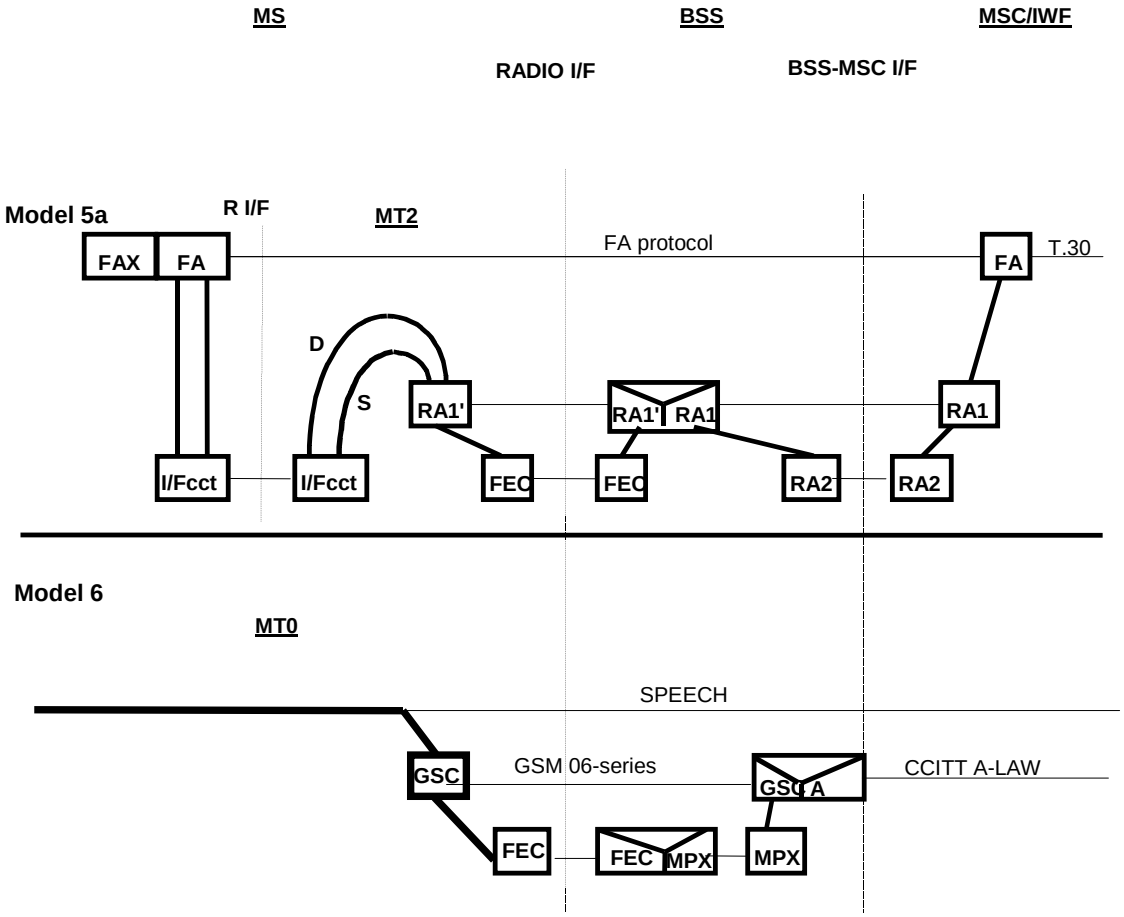


Figure 6 (continued): Information transfer protocol models for GSM PLMN connections

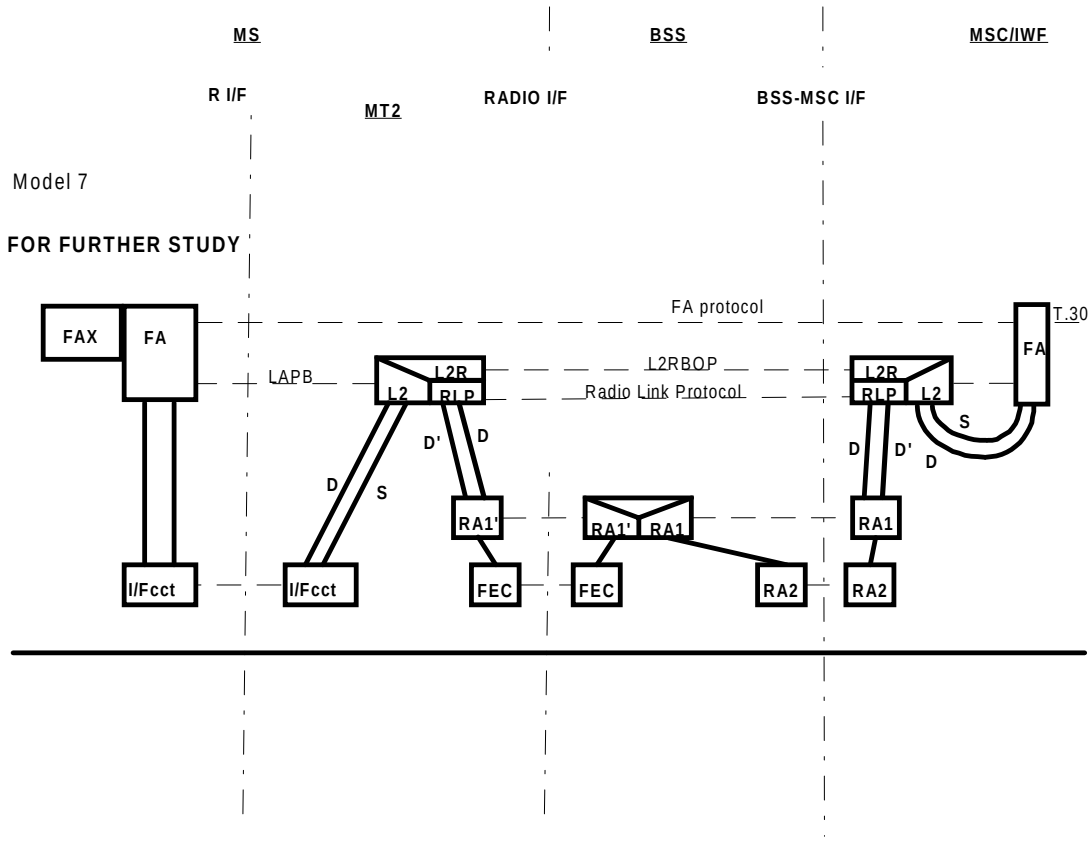
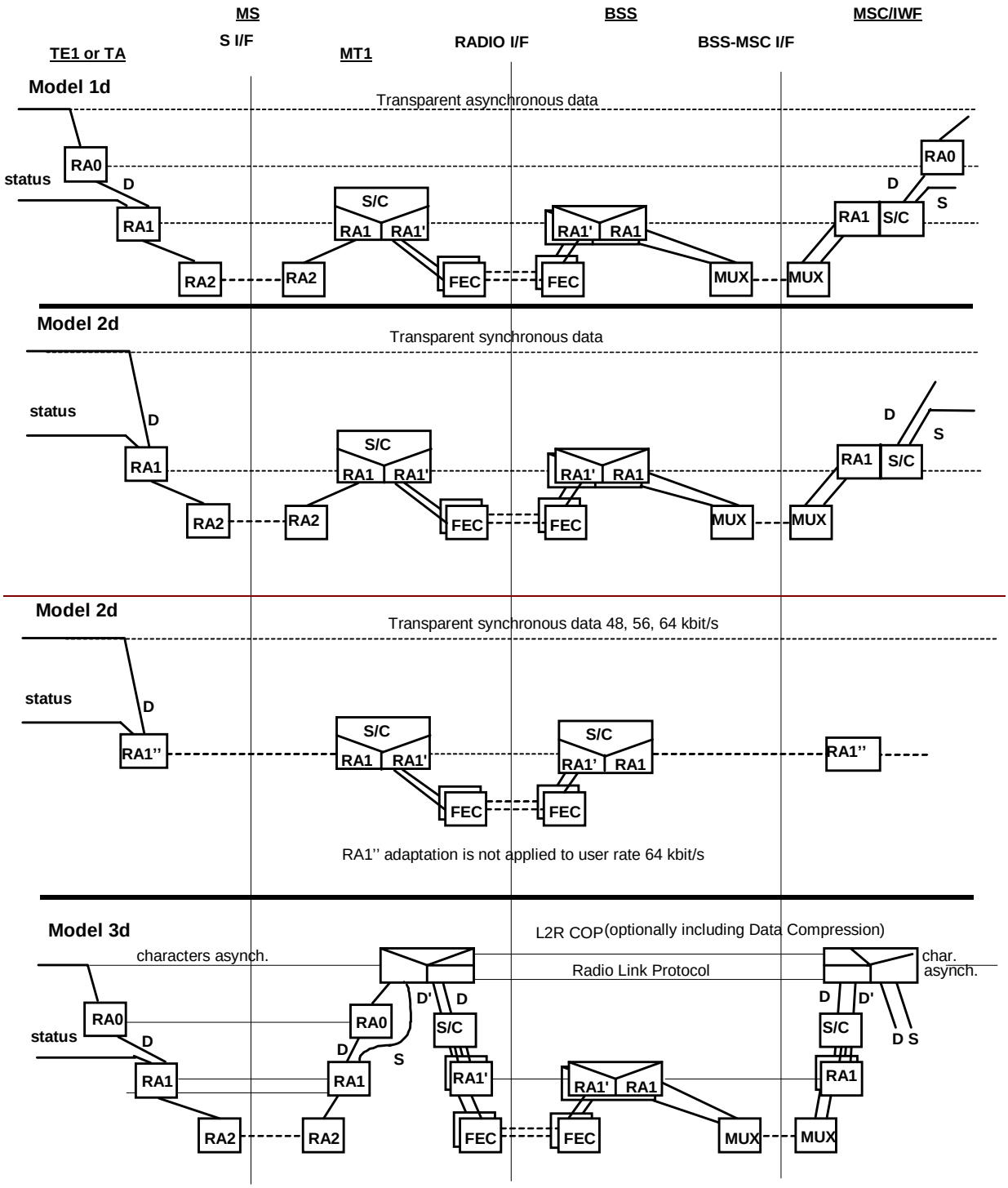


Figure 6 (continued): Information transfer protocol models for GSM PLMN connections



~~Figure 6 (continued): Information transfer protocol models for GSM PLMN connections~~

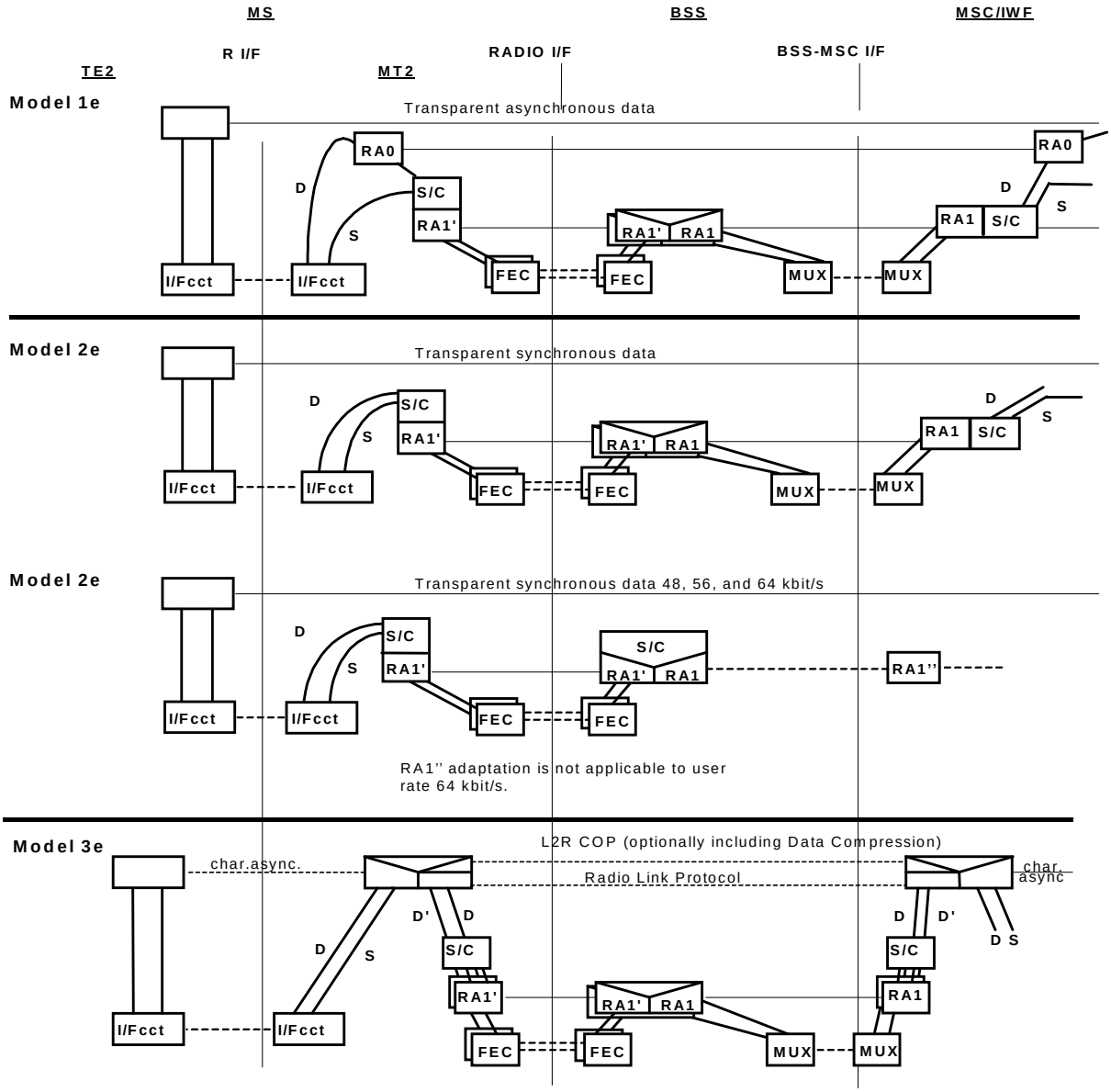


Figure 6 (continued): Information transfer protocol models for GSM PLMN connections

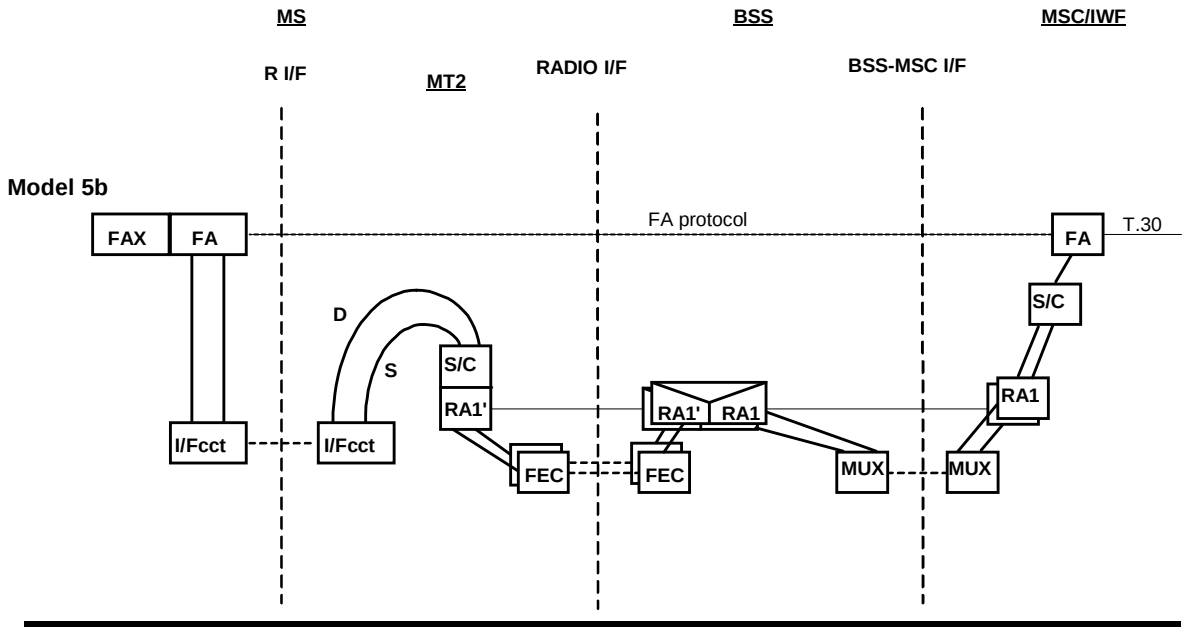


Figure 6 (continued): Information transfer protocol models for GSM PLMN connections

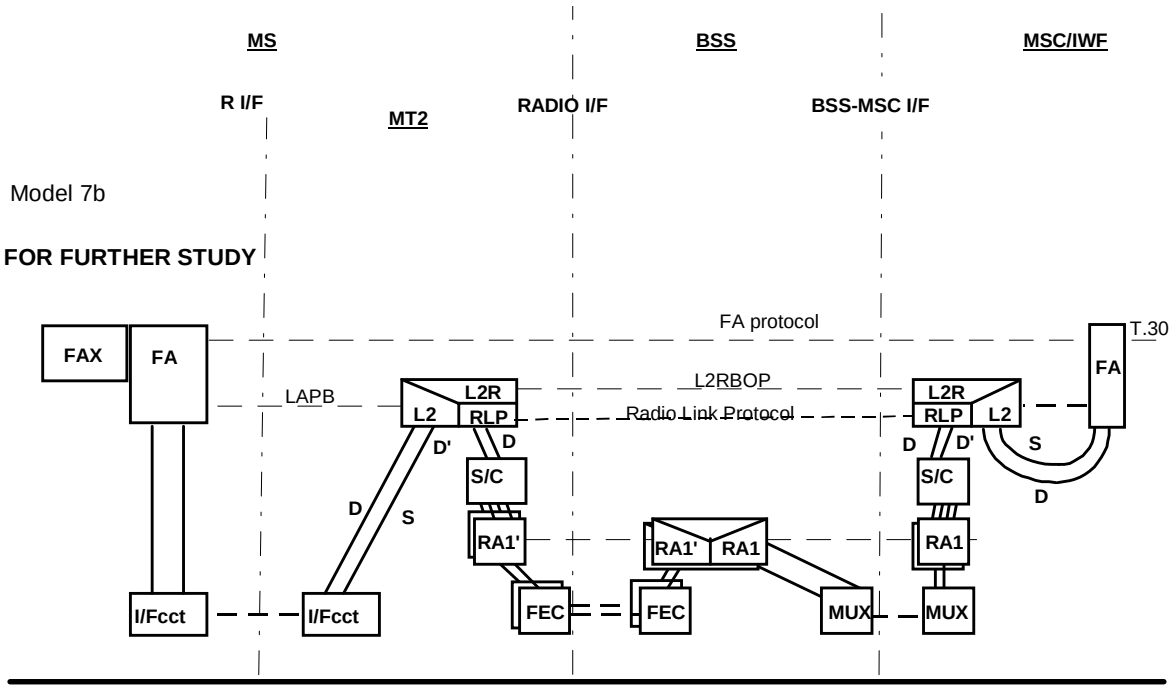
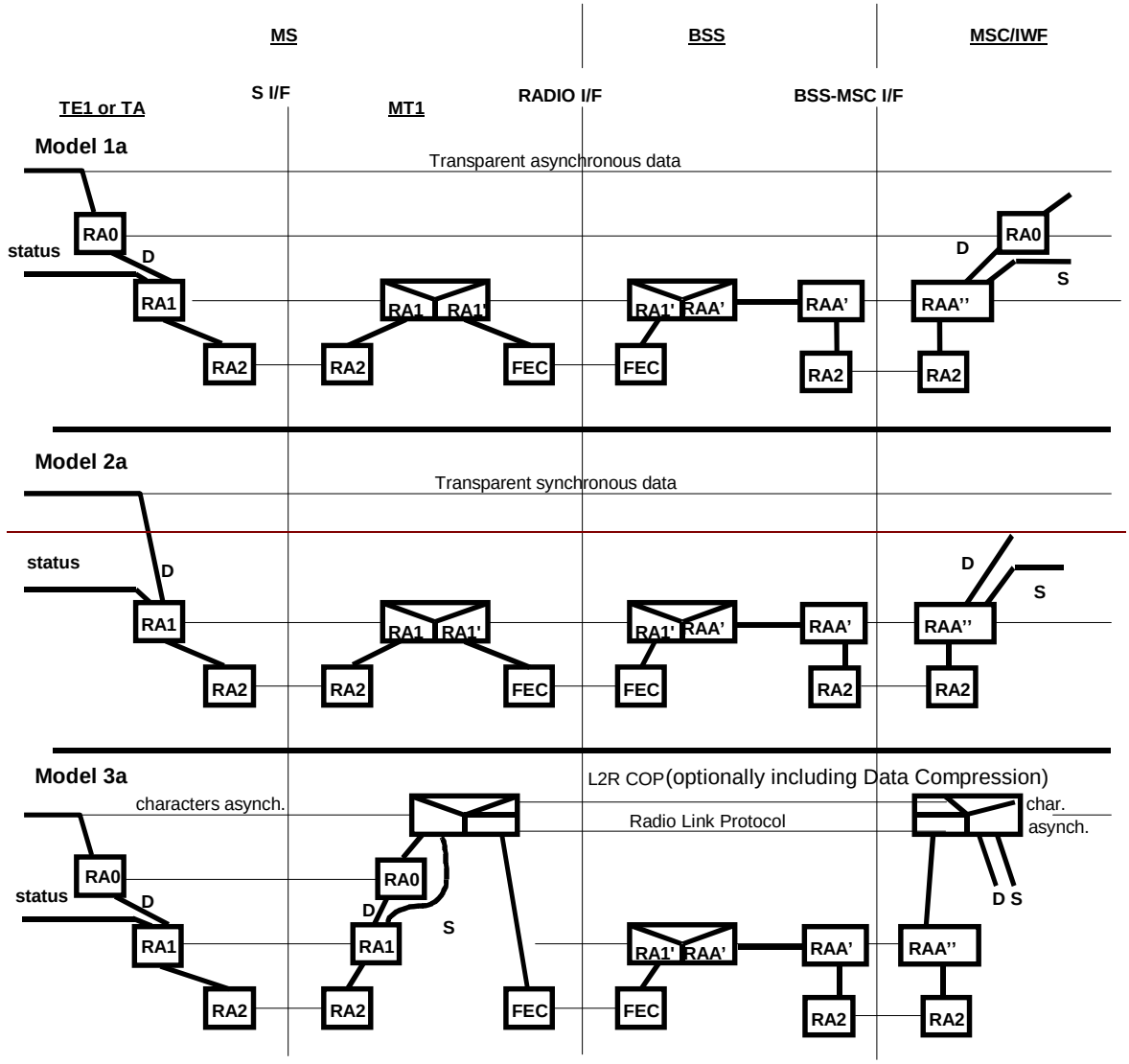


Figure 6 (concluded): Information transfer protocol models for GSM PLMN connections

Legend	**to Figure 6:**
FA	= Fax Adaptor
GSC	= GSM Speech Codec
FEC	= Forward Error Correction
MPX	= Multiplex/Demultiplex
MUX	= Multiplex/Demultiplex
S/C	= Split/ Combine



~~Figure 7: Information transfer protocol models for GSM PLMN connections using 14.4 channels~~

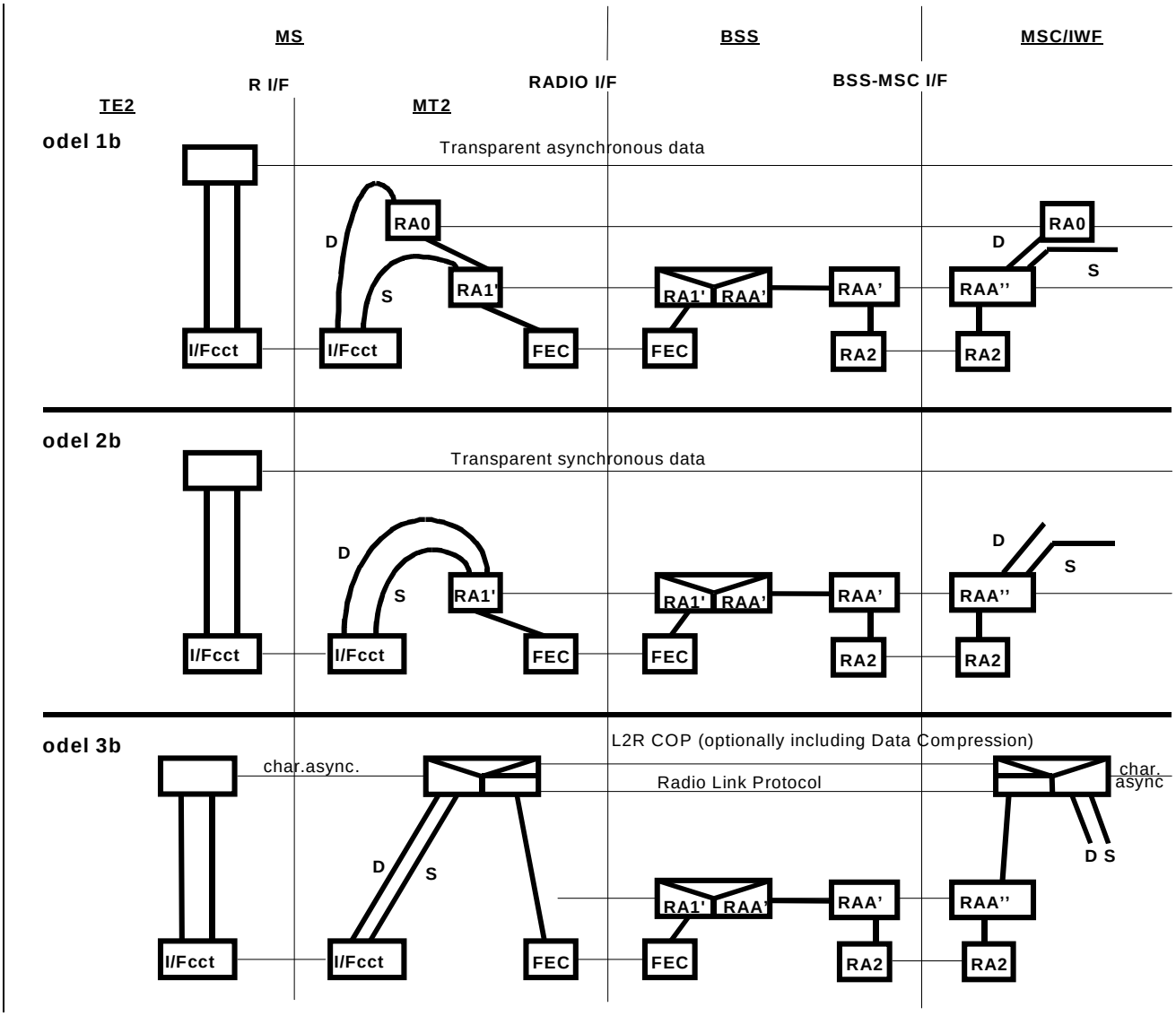
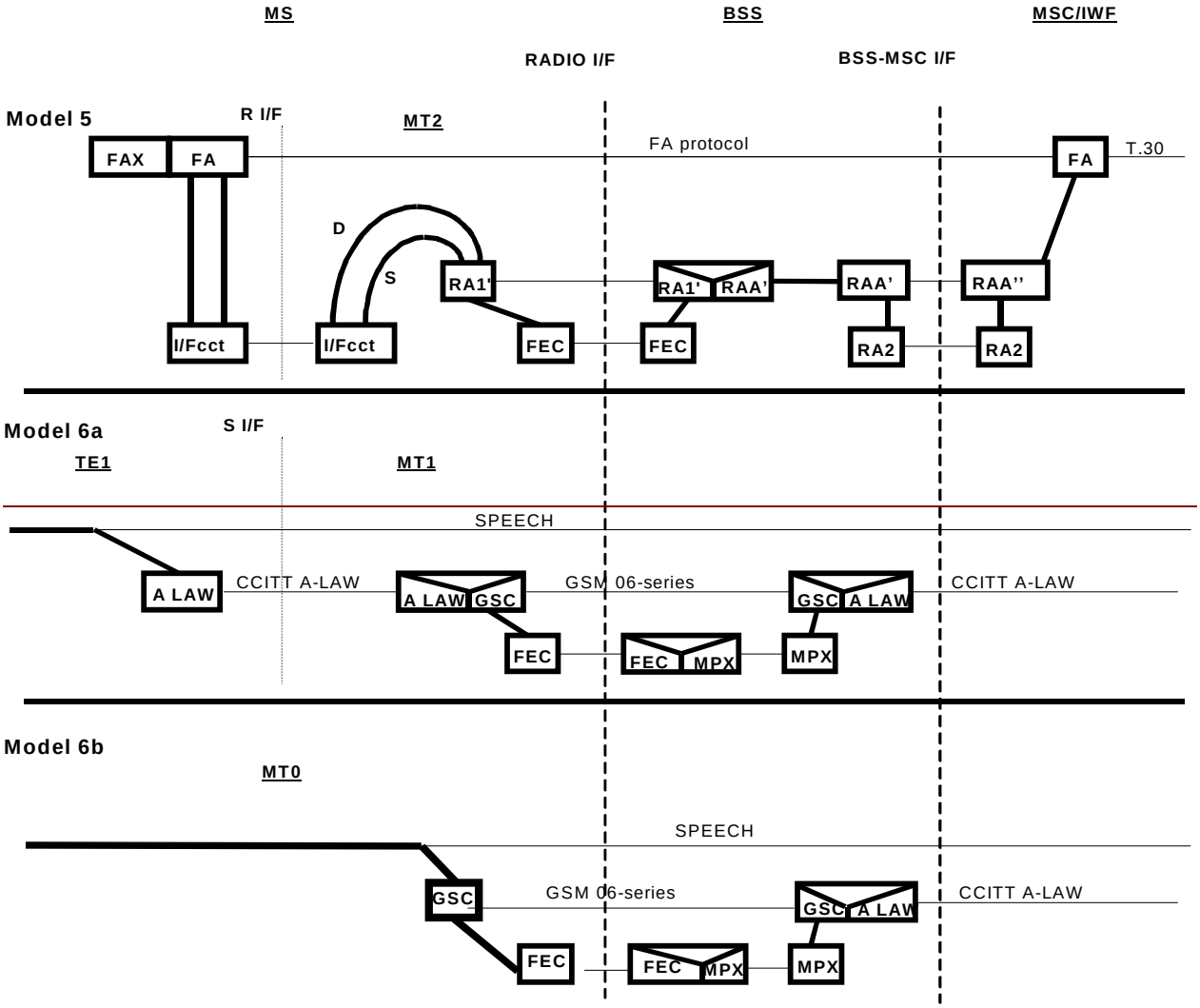


Figure 7 ~~(continued)~~ : Information transfer protocol models for GSM PLMN connections using 14.4 channels


MS
BSS
MSC/IWF
RADIO I/F
BSS-MSC I/F
Model 5
R I/F
MT2
FA protocol
FAX
FA
T.30
D
S
RA1'
RA1'
RAA'
RAA'
RAA''
I/Fcct
I/Fcct
FEC
FEC
RA2
RA2
Model 6a
S I/F
TE1
MT1
SPEECH
A LAW
CCITT A-LAW
A LAW
GSC
GSM 06-series
GSC
A LAW
CCITT A-LAW
FEC
FEC
MPX
MPX
Model 6b
MT0
SPEECH
GSC
GSM 06-series
GSC
A LAW
CCITT A-LAW
FEC
FEC
MPX
MPX

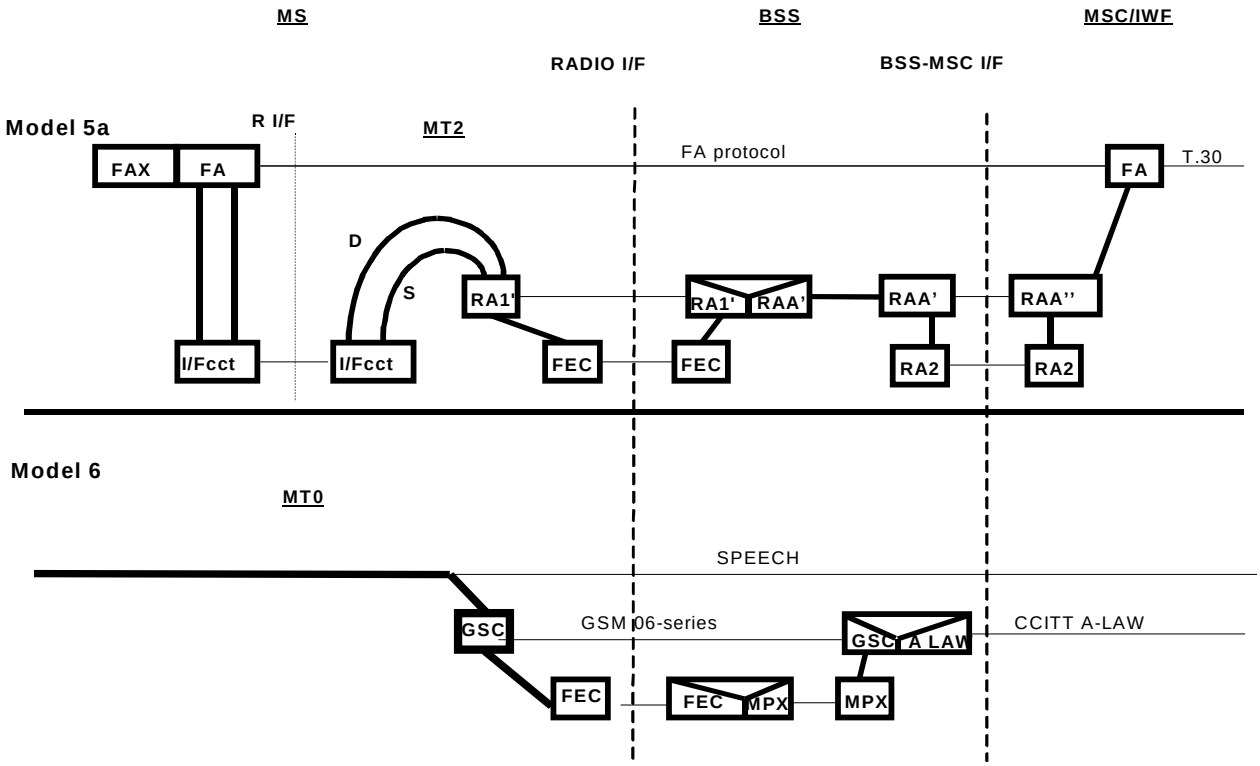


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

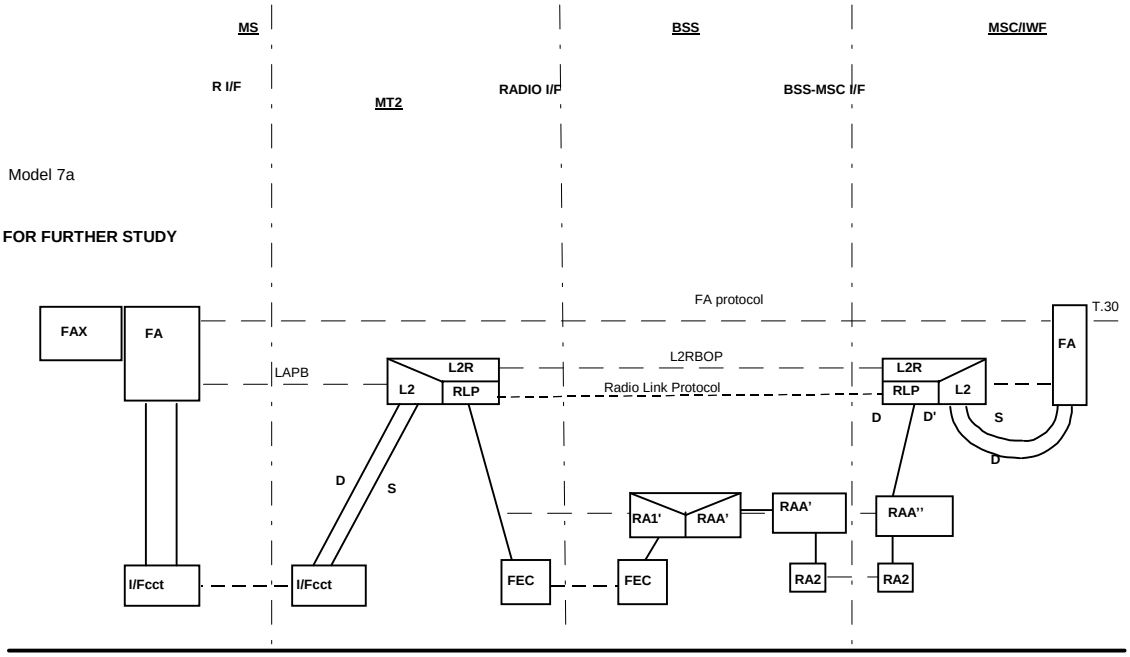
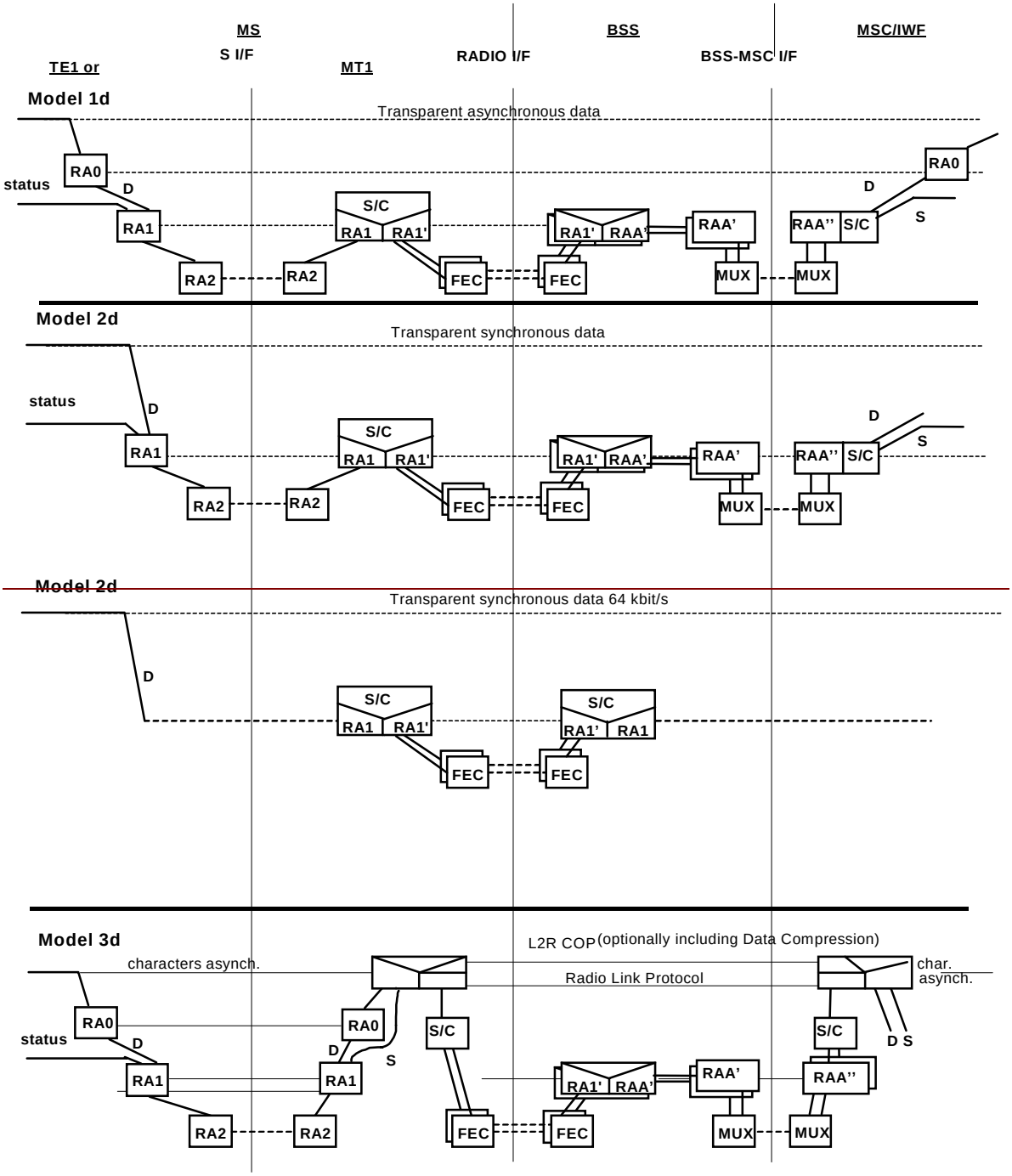


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels



~~Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels~~

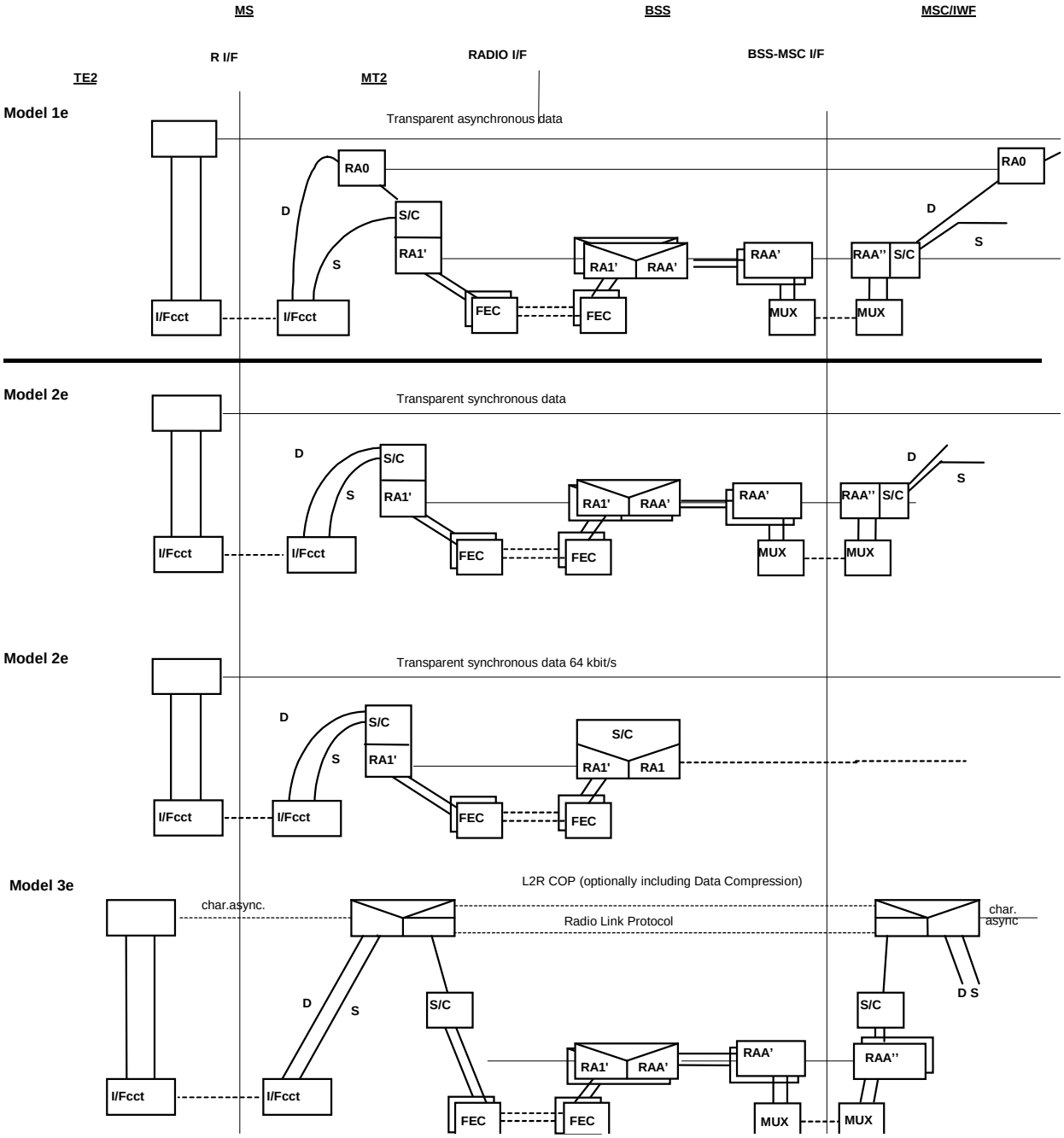


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

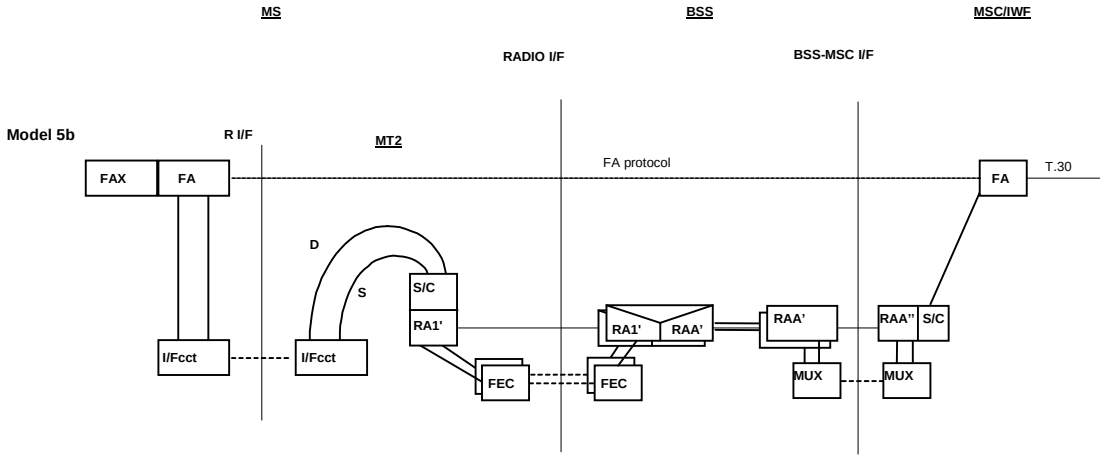


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

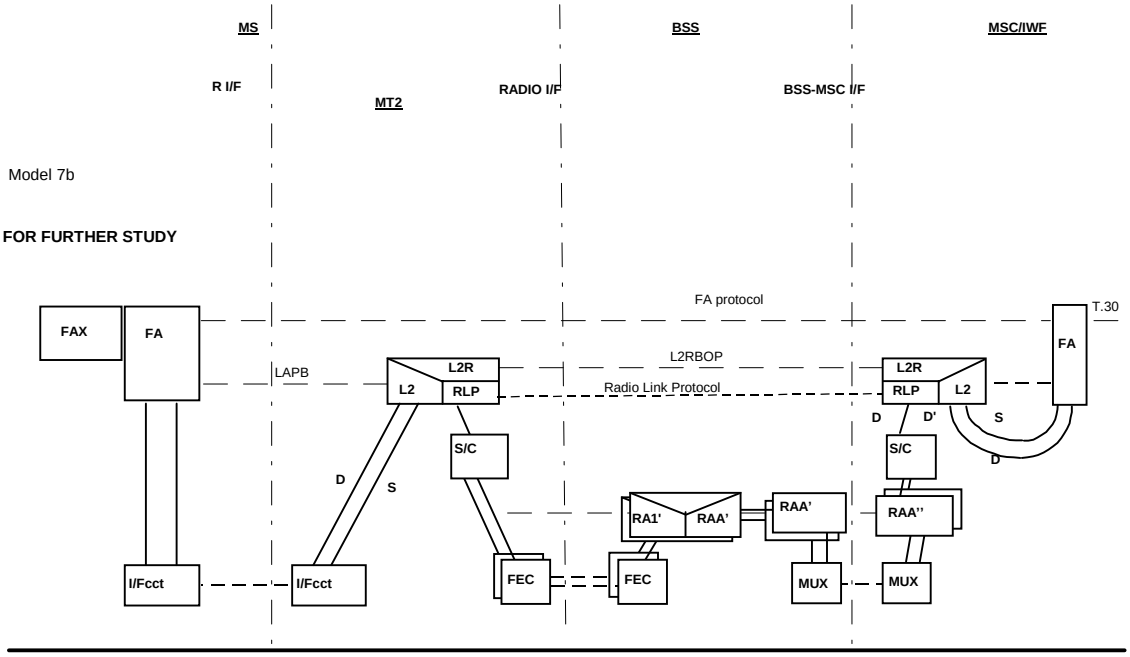


Figure 7 (concluded) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

Legend	to Figure 7:
FA	= Fax Adaptor
GSC	= GSM Speech Codec
FEC	= Forward Error Correction
MPX	= Multiplex/Demultiplex
MUX	= Multiplex/Demultiplex
S/C	= Split/ Combine

6.6 Limited set of GSM PLMN connection types (for EDGE channels)

Figure 8 provides the information transfer protocol models for the identified set of GSM PLMN connection types for support of TCH/F28.8 or TCH/F43.2 and figure 9 the models for the support of TCH/F32.0. The description of models given in subclause 6.4 applies also to figures 8 and 9.

When a TCH/F28.8 channel is used in multislot configurations, multiple EDGE multiplexing functions are applied on both sides of the air-interface; i.e. one multiplexing function — on each side of the air interface — is associated with each air-interface channel.

When TCH/F32.0 channels are used in double slot configurations, no rate adaptation is applied as the PLMN offers a '64 kbit/s pipe' between TE and an external network. When TCH/F32.0 channels are used in single slot configurations, the ITU-T I.460 rate adaptation is applied. (For details refer to 3GPP TS 44.021).

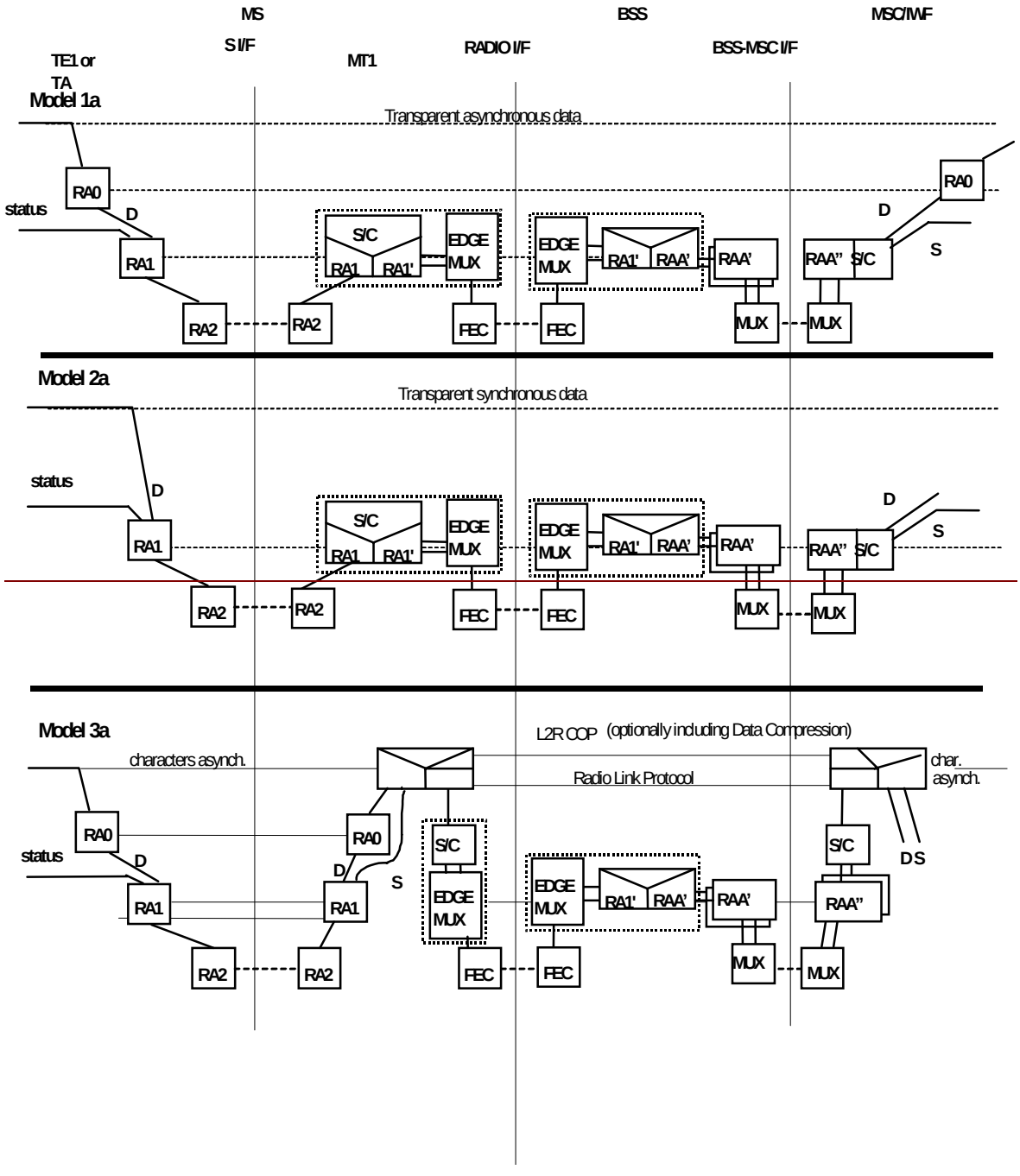


Figure 8 : Information transfer protocol models for GSM PLMN connections using EDGE channels

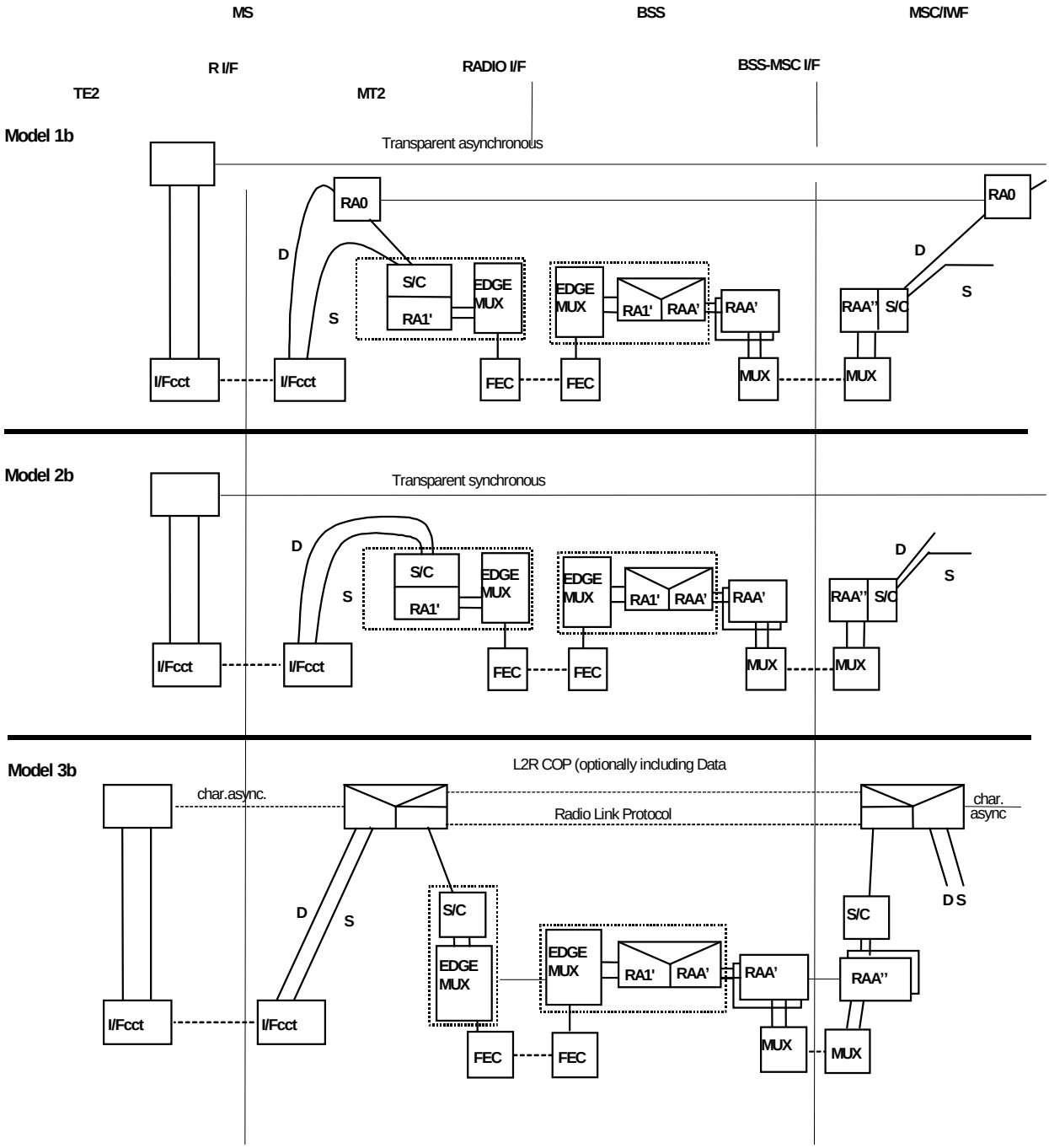


Figure 8 ~~(concluded)~~ : Information transfer protocol models for GSM PLMN connections using EDGE channels

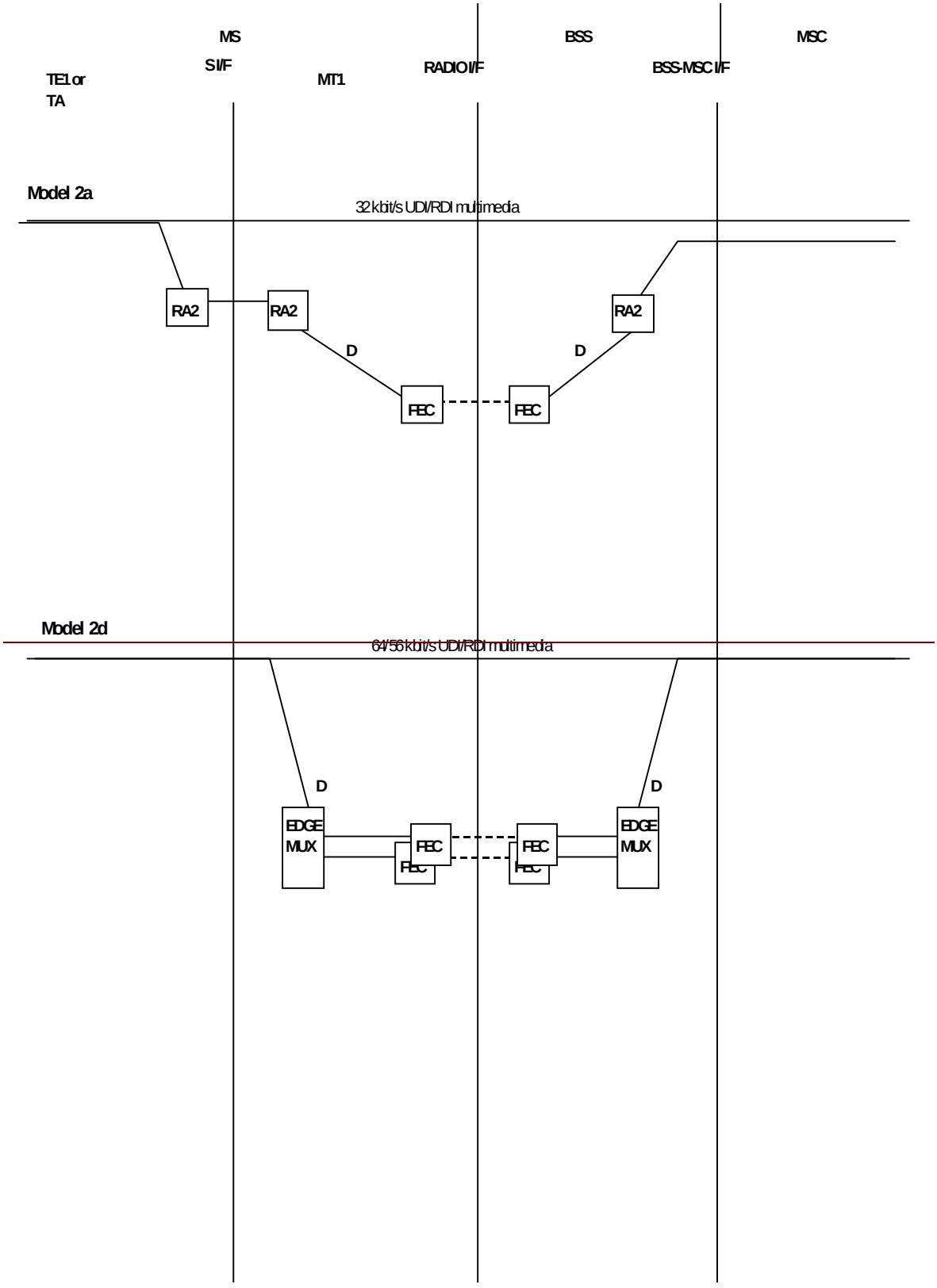
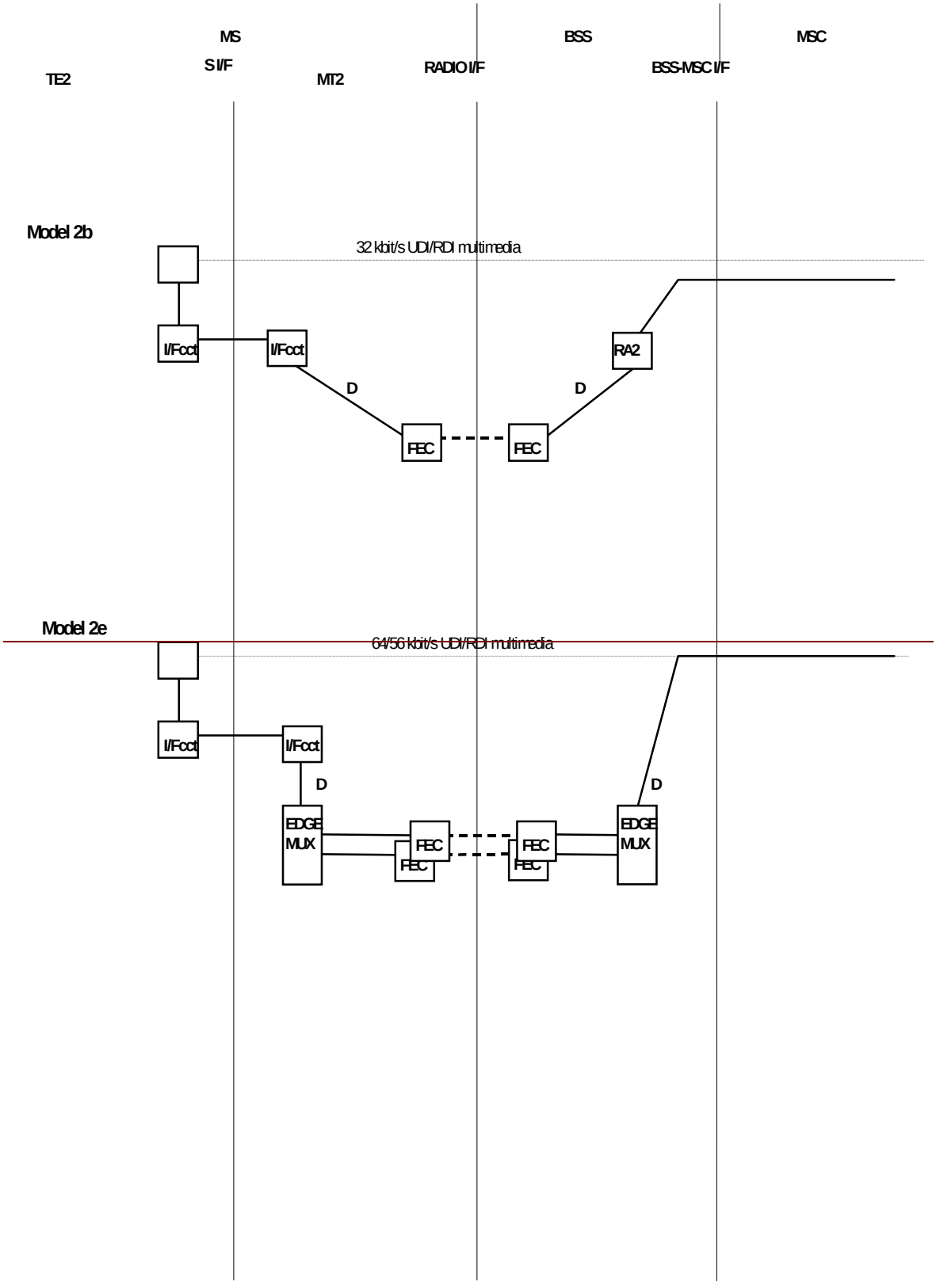


Figure 9 : Information transfer protocol models for GSM PLMN connections using TCH/F32.0 EDGE channels


MS
BSS
MSC
S I/F
RADIO I/F
BSS-MSC I/F
TE2
MT2
Model 2b
32 kbit/s UDI/RDI multimedia
I/Fcct
I/Fcct
RA2
D
D
FEC
FEC
Model 2e
64/56 kbit/s UDI/RDI multimedia
I/Fcct
I/Fcct
D
D
EDGE MUX
FEC
FEC
FEC
FEC
EDGE MUX

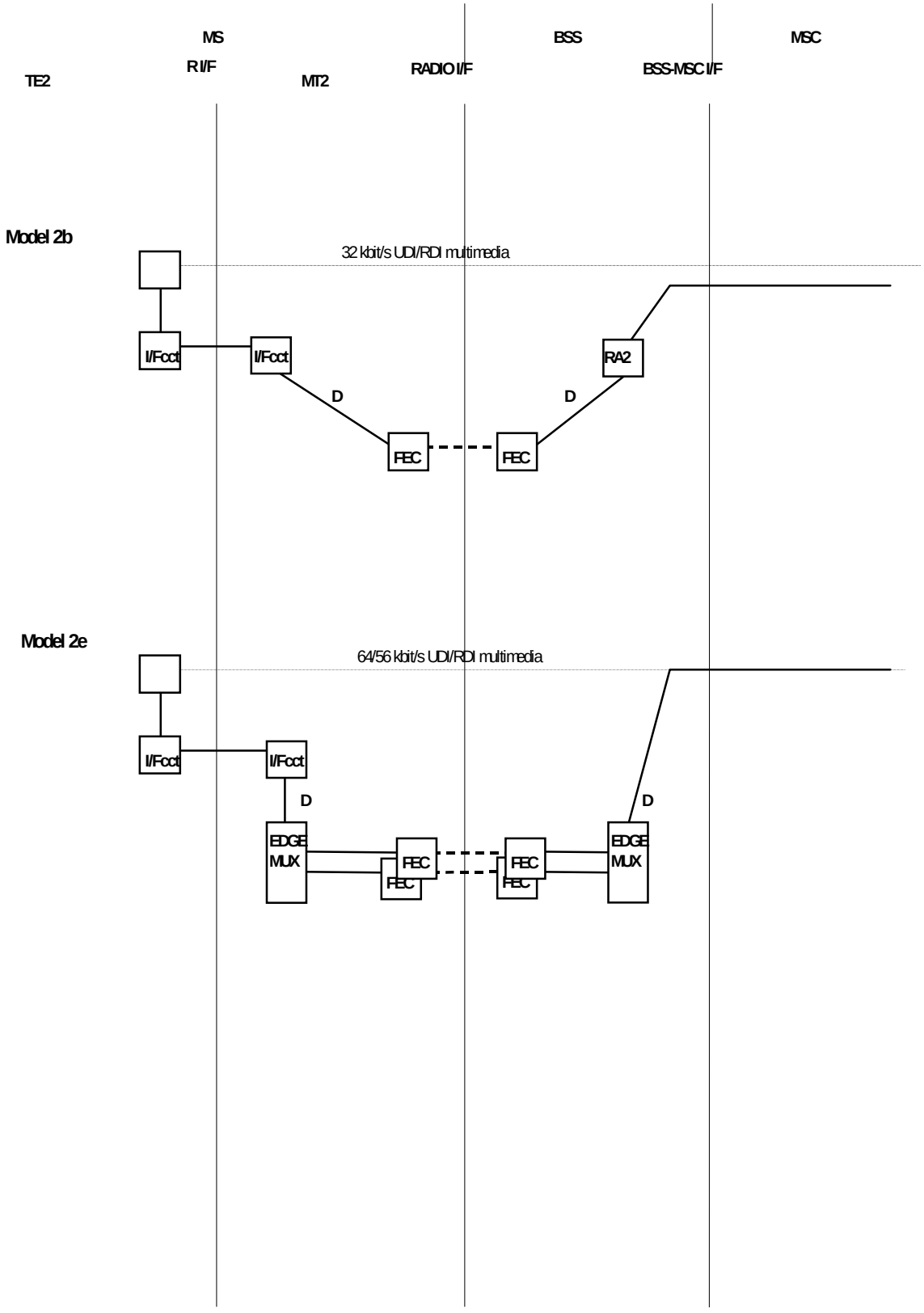


Figure 9 ~~(concluded)~~ : Information transfer protocol models for GSM PLMN connections using TCH/F32.0 EDGE channels

Next section modified

7.5 Network capability to support channel mode modification

Specification 3GPP TS 03.45 (Technical Realization of the Group 3 Facsimile Teleservice) identifies a need for a GSM PLMN to support channel mode modification within the facsimile phase of the alternate speech and facsimile group 3 service. The network capability to support channel modification is described in 3GPP TS 24.008. Channel mode modification is not possible for other services. A channel mode modification results in a change of connection element over the radio interface with resultant change in access at the mobile station.

Table 5: Relationship between Bearer services and GSM PLMN Connection elements

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Circuit mode unstructured with unrestricted digital capability transparent.	Data circuit duplex async n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 4). Data circuit duplex sync n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 5) or n × 1 1200 bit/s (n = 5 or 6).	cct mode unstructured unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 6) on n full rate channels.	8 or 16 kbit/s per TCH/F. For data connections using 5 or 6 TCH/Fs no intermediate rate(s) .	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 :~~1 d,~~ 1 e, ~~2 d,~~ 2 e
	Data circuit duplex async n × 14 400 bit/s (n ≤ 3). Data circuit duplex sync n × 14 400 bit/s (n ≤ 5)	cct mode unstructured unrestricted n x 14.5 kbit/s (n ≤ 5) on n full rate channels	16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~1 d,~~ 1 e, ~~2 d,~~ 2 e
	Data circuit duplex async 28 800 bit/s. Data circuit duplex sync 28 800 bit/s Data circuit duplex Sync 32 000 bit/s Data circuit duplex sync 64 000 bit/s	cct mode unstructured unrestricted 29.0 kbit/s on full rate channel cct mode unstructured unrestricted 32 kbit/s on full rate channel cct mode unstructured unrestricted 2 x 32.0 kbit/s on full rate channels	16 kbit/s per TCH/F. 32 kbit/s No intermediate rate for the 64 000 bit/s rate	cct mode unstructured unrestricted 64 kbit/s.	Fig 8 : ~~1 a,~~ 1 b, ~~2 a,~~ 2 b None
	Data circuit duplex async 14 400 bit/s Data circuit duplex sync 14 400 bit/s	cct mode unstructured unrestricted 14.5 kbit/s on full rate Channel	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~1 a,~~ 1 b ~~2 a,~~ 2 b
	Data circuit duplex async 9 600 bit/s. Data circuit duplex sync 9 600 bit/s.	cct mode unstructured unrestricted 12 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 :~~1 a,~~ 1 b Fig 6 ~~2 a,~~ 2 b
	Data circuit duplex async 4 800 bit/s. Data circuit duplex sync 4 800 bit/s.	cct mode unstructured unrestricted 6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 :~~1 a,~~ 1 b Fig 6 ~~2 a,~~ 2 b
	Data circuit duplex async 300. Data circuit duplex async 1 200. Data circuit duplex async 2 400. Data circuit duplex sync 1 200. Data circuit duplex sync 2 400.	cct mode unstructured unrestricted 3.6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : ~~1 a,~~ 1 b Fig 6 ~~1 a,~~ 1 b Fig 6 ~~1 a,~~ 1 b Fig 6 ~~2 a~~, 2 b Fig 6 ~~2 a~~, 2 b

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Circuit mode unstructured with unrestricted digital capability non transparent.	Data circuit duplex async n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 4).	cct mode SDU unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 4) on full rate channels.	8 or 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 ~~3 d,~~ 3 e
	Data circuit duplex async n × 14 400 bit/s (n ≤ 4).	cct mode SDU unrestricted n × 14.5 kbit/s (n ≤ 4) on full rate channels.	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~3 d,~~ 3e
	Data circuit duplex async n x 28 800 bit/s (n ≤ 2). Data circuit duplex async 43 200 bit/s	cct mode SDU unrestricted n × 29.0 kbit/s (n ≤ 2) on full rate channels. cct mode SDU unrestricted 43.5 kbit/s on a full rate channel.	16 kbit/s per TCH/F. 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 8 : ~~3a,~~ 3 b
	Data circuit duplex async 14 400 bit/s	cct mode SDUunrestricted 14.5 kbit/s on full rate channel	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~3 a,~~ 3 b
	Data circuit duplex async 9 600 bit/s.	cct mode SDU unrestricted 12 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : ~~3 a,~~ 3 b
	Data circuit duplex async 4 800 bit/s.	cct mode SDU unrestricted full rate channel, 12 kbit/s or half rate channel, 6 kbit/s.	16 kbit/s FR 8 kbit/s HR.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : ~~3 a,~~ 3 b
	Data circuit duplex async 300. Data circuit duplex async 1 200. Data circuit duplex async 2 400.	cct mode SDU unrestricted full rate channel, 12 kbit/s or half rate channel, 6 kbit/s.	16 kbit/s FR 8 kbit/s HR.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6: ~~3 a,~~ 3 b Fig 6 : ~~3 a,~~ 3 b Fig 6 ~~3 a,~~ 3 b

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Circuit mode unstructured with 3.1 kHz audio ex PLMN transparent.	Data circuit duplex async n × 4 800 bit/s (n ≤ 4) or n × 9 600 bit/s (n ≤ 3). Data circuit duplex sync n × 4 800 bit/s (n ≤ 4) or n × 9 600 bit/s (n ≤ 3).	cct mode unstructured unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 3) on n full rate channels.	8 or 16 kbit/s TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~1 d,~~ 1 e, ~~2 d,~~ 2 e
	Data circuit duplex async n × 14 400 bit/s (n ≤ 2). Data circuit duplex sync n × 14 400 bit/s (n ≤ 2)	cct mode unstructured unrestricted x 14.5 kbit/s (n ≤ 2) on n full rate channels	16 kbit/s per TCH/F	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~1 d,~~ 1 e, ~~2 d,~~ 2e
	Data circuit duplex async 28 800 bit/s. Data circuit duplex sync 28 800 bit/s	cct mode unstructured unrestricted 29.0 kbit/s on a full rate channel	16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbit/s.	Fig 8 : ~~1 a,~~ 1 b, ~~2 a,~~ 2 b
	Data circuit duplex asynch 14 400 bit/s synch 14 400 bit/s	cct mode unstructured unrestricted 14.5 kbit/s on full rate channels	16 kbit/s	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~1 a,~~ 1 b for async Fig 7 ~~2 a~~ 2 b for synch
	Data circuit duplex async 9.6 kbit/s sync 9.6 kbit/s.	cct mode unstructured unrestricted 12 kbit/s full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~1 a,~~ 1 b for asynch. Fig 6 : ~~2 a,~~ 2 b for synch.
	Data circuit duplex async 4.8 kbit/s sync 4.8 kbit/s.	cct mode unstructured unrestricted 6 kbit/s full and half rate channel.	8 kbit/s.		
	Data circuit duplex async ≤ 2 400 sync ≤ 2 400.	cct mode unstructured unrestricted 3.6 kbit/s full and half rate channel.	8 kbit/s.		

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Circuit mode unstructured with 3.1 kHz audio ex PLMN non transparent.	Data circuit duplex async n × 4 800 (n ≤ 4) or n × 9 600 (n ≤ 4) bit/s.	cct mode SDU unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 4) on full rate channels.	8 or 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbits/s.	Fig 6 : ~~3 d,~~ 3 e ~~for async.~~
	Data circuit duplex async n × 14 400 bit/s (n ≤ 4).	cct mode SDU unrestricted n x 14.5 kbit/s (n ≤ 4) on n full rate channels	16 kbit/s per TCH/F	cct mode unstructured unrestricted 64 kbits/s.	Fig 7 : ~~3 d,~~ 3 e ~~for asynch~~
	Data circuit duplex async 28 800 bit/s. Data circuit duplex async 43 200 bit/s	cct mode SDU unrestricted 29.0 kbit/s on a full rate channel. cct mode SDU unrestricted 43.5 kbit/s on a full rate channel.	16 kbit/s per TCH/F. 16 kbit/s per TCH/F.	cct mode unstructured unrestricted 64 kbits/s.	Fig 8 : ~~3a,~~ 3 b
	Data circuit duplex asynch 14 400 bit/s	cct mode SDU unrestricted 14.5 kbit/s full rate channel	16 kbit/s	cct mode unstructured unrestricted 64 kbits/s.	Fig 7 : ~~3a,~~ 3b ~~for asynch~~
	Data circuit duplex async 9.6 kbit/s sync 9.6 kbit/s.	cct mode SDU unrestricted 12 kbit/s full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~3 a,~~ 3 b ~~for asynch~~.
	Data circuit duplex async 4.8 kbit/s	cct mode SDU unrestricted half rate channel, 6 kbit/s or full rate channel, 12 kbit/s.	16 kbit/s FR 8 kbit/s HR.		
	Data circuit duplex async ≤ 2 400 sync ≤ 2 400.	cct mode SDU unrestricted half rate channel, 6 kbit/s or full rate channel, 12 kbit/s.			

Table 5 (continued): Relationship between Bearer services and GSM PLMN Connection elements

Connection description	Bearer service user data rate	Radio interface connection element	Intermediate rate at the BSS-MSC interface	BSS-MSC connection element	Protocol model in figure 6, 7 or 8
Packet services basic access transparent.	Data circuit duplex sync n × 4 800 (n ≤ 4) or n × 9 600 bit/s (n ≤ 5) or n × 11200 bit/s (n = 5 or 6).	cct mode unstructured unrestricted n × 6 kbit/s (n ≤ 4) or n × 12 kbit/s (n ≤ 6) on n full rate channels.	8 or 16 kbit/s per TCH/F. For data connections using 5 or 6 TCH/Fs no intermediate rate(s).	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~2 d,~~ 2 e
	Data circuit duplex sync n × 14 400 bit/s (n ≤ 5)	cct mode unstructured unrestricted n × 14.5 kbit/s (n ≤ 5) on n full rate channels.	16 kbit/s per TCH/F	cct mode unstructured unrestricted 64 kbits/s.	Fig 7 : ~~2 d,~~ 2 e
	Data circuit duplex synch 14 400 bit/s	cct mode unstructured unrestricted 14.5 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 7 : ~~2 a~~, 2 b
	Data circuit duplex sync 9 600 bit/s.	cct mode unstructured unrestricted 12 kbit/s on full rate channel.	16 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~2 a,~~ 2 b
	Data circuit duplex sync 4 800 bit/s.	cct mode unstructured unrestricted 6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~2 a,~~ 2 b
	Data circuit duplex sync 2 400 bit/s.	cct mode unstructured unrestricted 3.6 kbit/s on full rate channel and half rate channel.	8 kbit/s.	cct mode unstructured unrestricted 64 kbit/s.	Fig 6 : ~~2 a,~~ 2 b

Table 6: Relationship between Teleservices and GSM PLMN connection types

Teleservice in GSM PLMN	**Access at mobile station**	**Radio interface connection element**	**Intermediate rate at the BSS-MSC interface**	**BSS-MSC connection element**	**Protocol model in figure 6 or 7**
Telephony.		cct mode speech.	NA.	cct mode structured 64 kbit/s speech.	Fig 6 : 6 ~~a or 6 b~~
Emergency calls.		cct mode speech.	NA.	cct mode structured 64 kbit/s speech.	Fig 6 : 6 ~~a or 6 b~~
Alternate Speech/ Facsimile Group 3.	Data cct duplex synchronous access alternate speech/ group 3 fax.	cct mode speech alternating with unstructured unrestricted 3.6 or 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR transparent.	Speech NA 8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s alternate speech/unrestricted.	Fig 6 : 5a~~,~~ or 5b and 6 ~~a or 6 b~~
		cct mode speech alternating with unstructured unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR transparent	Speech NA 16 kbit/s per TCH/F.		Fig 7 : 5a ~~and~~ or 5 b and 6 ~~a or 6 b~~
Automatic Facsimile Group 3.	Data cct duplex synchronous access group 3 fax.	cct mode unstructured unrestricted 3.6 or 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR transparent.	8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s unrestricted.	Fig 6 : 5a, 5b
		cct mode unstructured unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR transparent	16 kbit/s per TCH/F.		
Alternate speech/ Facsimile Group 3.	Data cct duplex synchronous access alternate speech/ group 3 fax.	cct mode speech alternating with SDU unrestricted 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR non transparent.	Speech NA 8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s alternate speech/unrestricted.	Fig 6 : 6 ~~a or 6 b~~, 7 a and 7 b
		cct mode speech alternating with SDU unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR non transparent.	16 kbit/s per TCH/F.		Fig 7 : 6 ~~a or 6 b~~ and 7 a and 7 b
Automatic Facsimile Group 3.	Data cct duplex synchronous access group 3 fax.	cct mode SDUunrestricted 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR non transparent.	8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s unrestricted.	Fig 6 : 7 a and 7 b
		cct mode SDU unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR non transparent.	16 kbit/s per TCH/F.		Fig 7 : 7 a and 7 b

NA: Not Applicable

NOTE: The multislot data connections and the connections using TCH/F14.4 coding belong to the General Bearer Services (Classes 20 and 30 in 3GPP TS 22.002).

3GPP TSG CN WG3 Meeting #16 ***Tdoc N3-010154***
Sophia Antipolis, France 26th February – 2nd March 2001

CR-Form-v3

CHANGE REQUEST

⌘ **43.010** **CR** **004** ⌘ **rev** **-** ⌘ **Current vers** **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 ☐

Title:	⌘	Removal of speech model from Figure 7
Source:	⌘	TSG_CN WG3
Work item code:	⌘	T.E.I_4
Date:	⌘	23.02.01
Category:	⌘	**D**
Release:	⌘	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:	⌘	Model 6 of Figure 7 describes the model for speech, this model is redundant to Model 6 of Figure 6.
Summary of change:	⌘	Removal of protocol Model 6 for speech in figures 7. Consequently the references for speech in Table 6 towards Model 6 of Figure 7 have to be changed to a reference to Model 6 of Figure 6.
Consequences if not approved:	⌘	43.010 contains redundant information

Clauses affected:	⌘	6.5, 7.5
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

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. 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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

6.5 Limited set of GSM PLMN connection types (for TCH/F14.4 channel coding)

Figure 7 provides the information transfer protocol models for the identified set of GSM PLMN connection types for support of TCH/F14.4. The description of models given in subclause 6.4 applies also to figure 7.

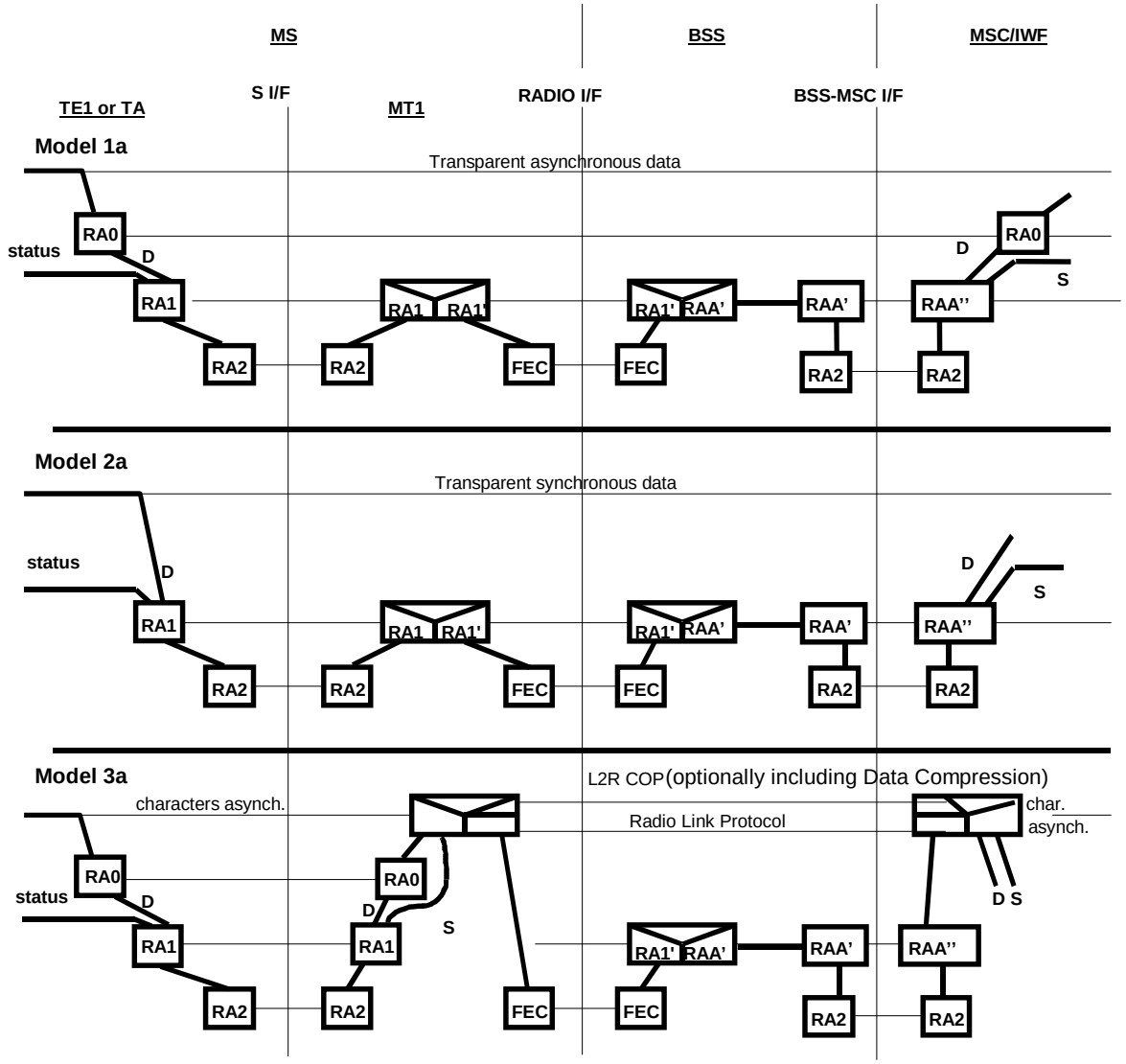


Figure 7: Information transfer protocol models for GSM PLMN connections using 14.4 channels

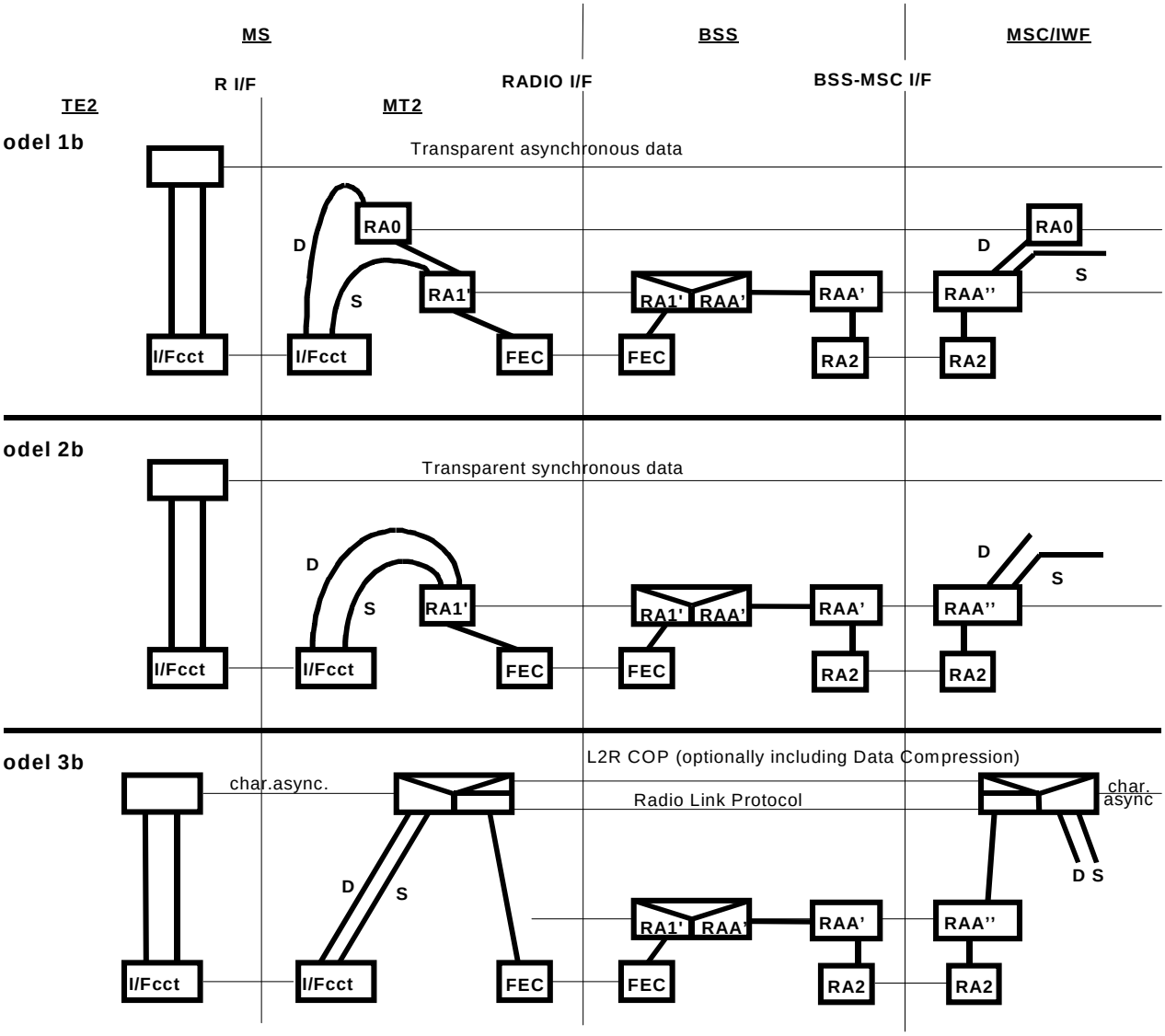


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

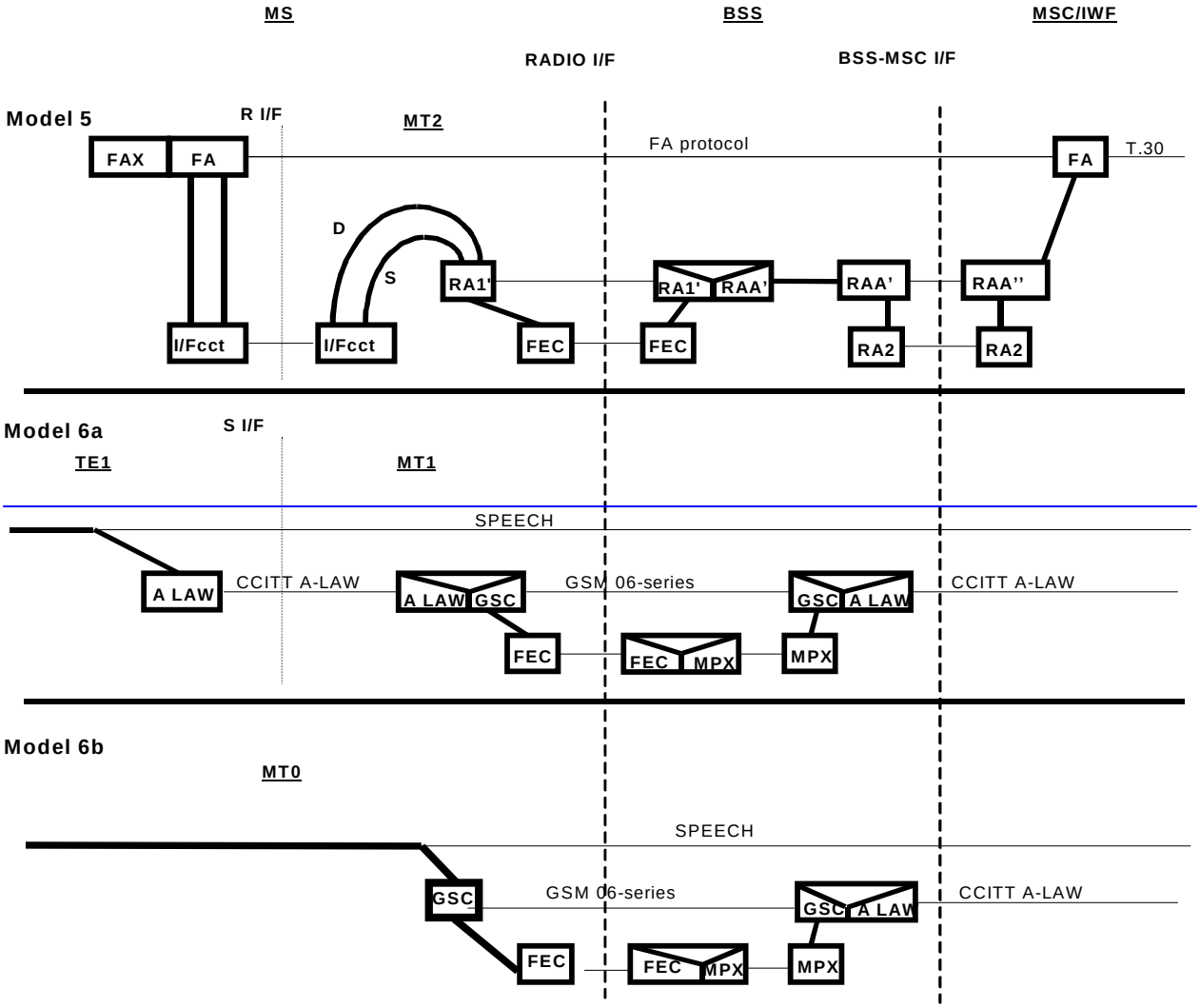
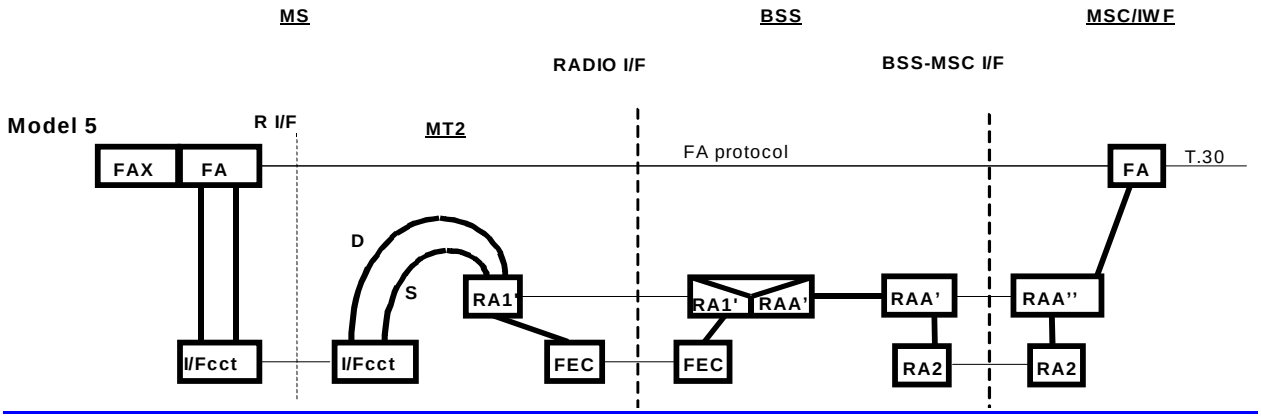


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels



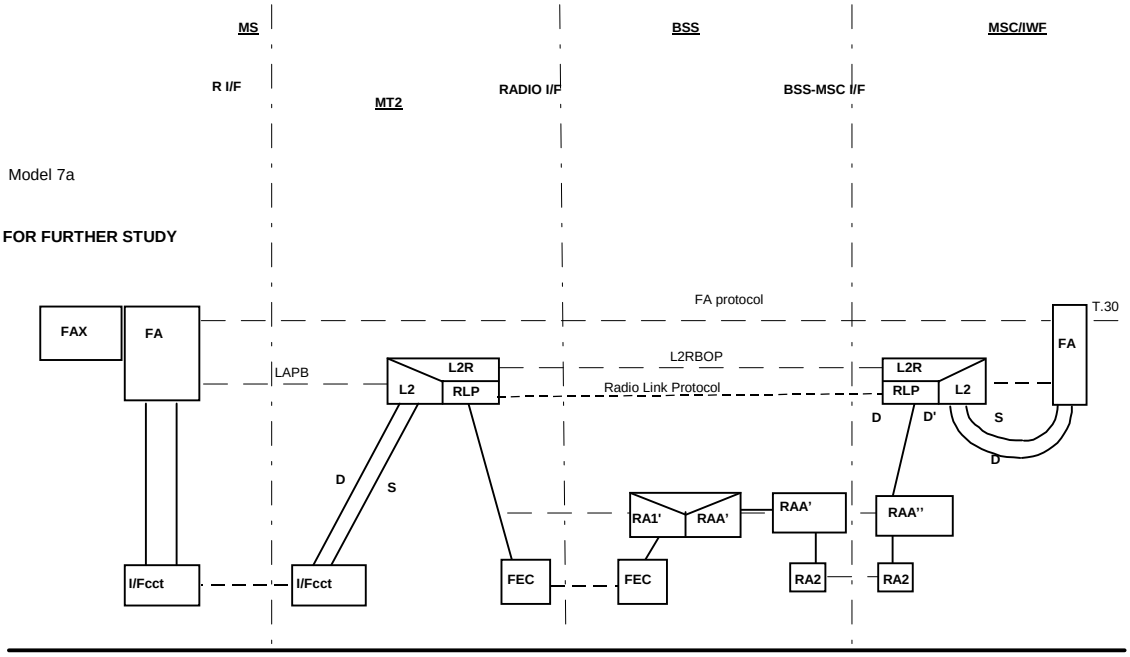


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

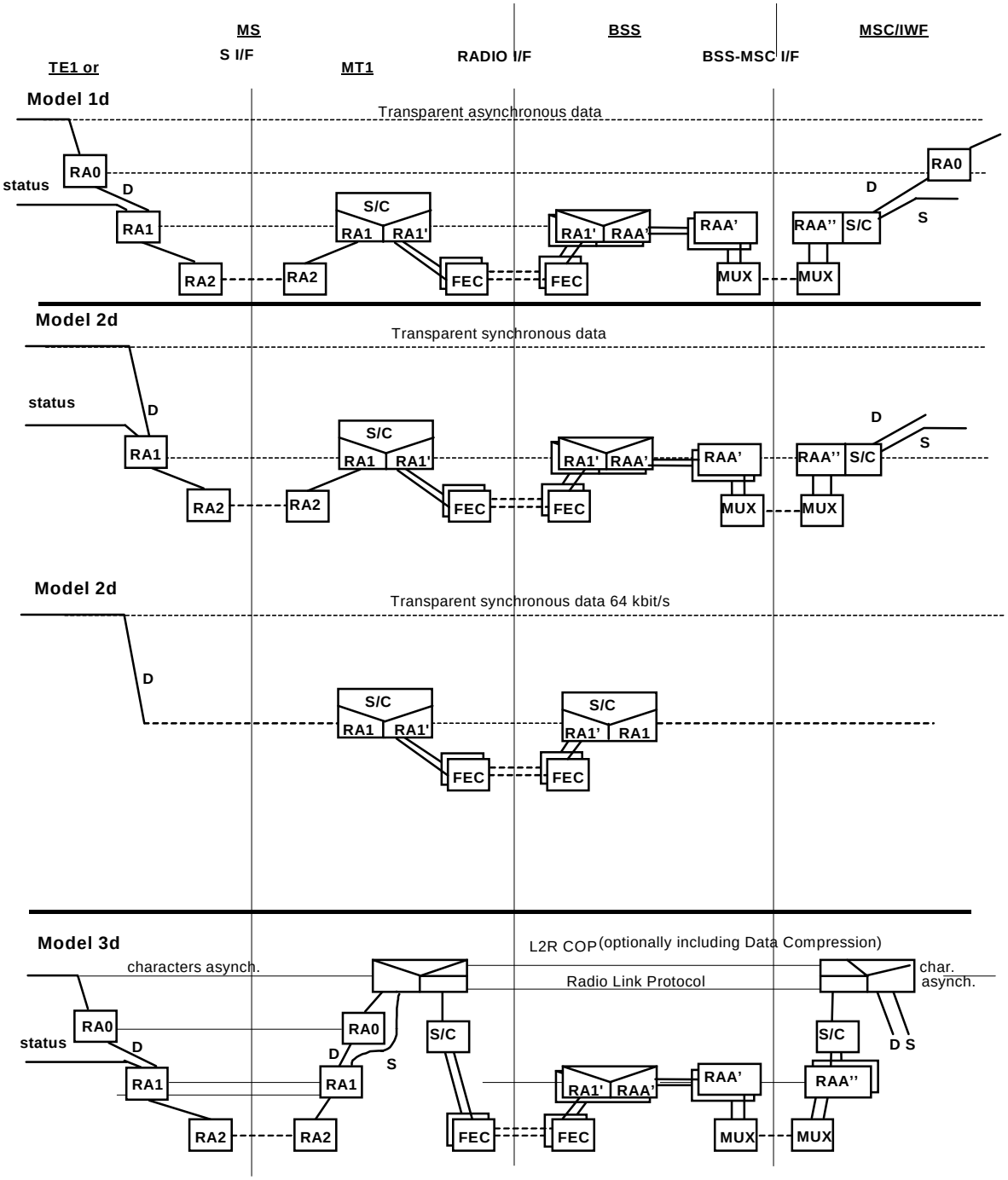


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

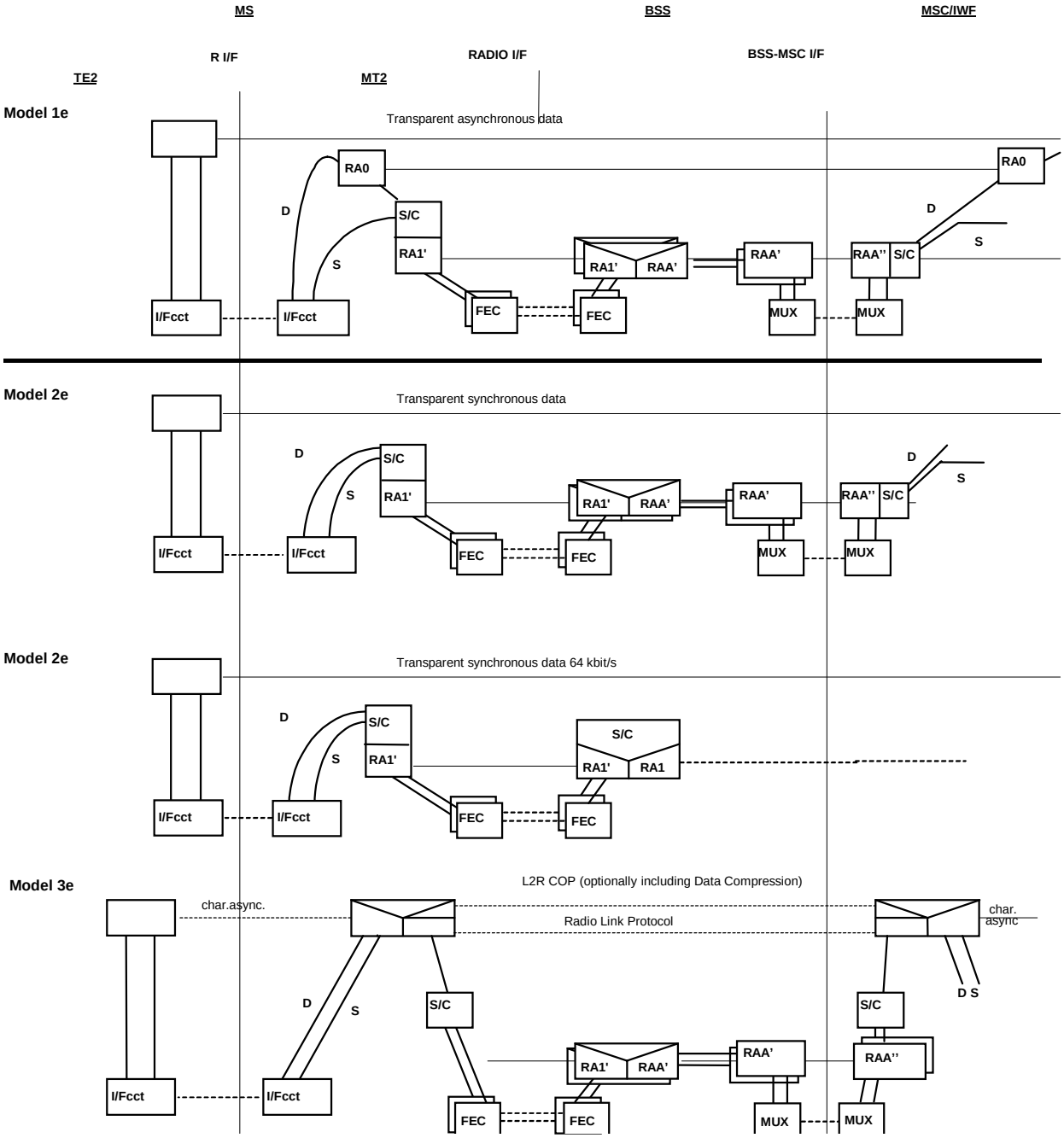


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

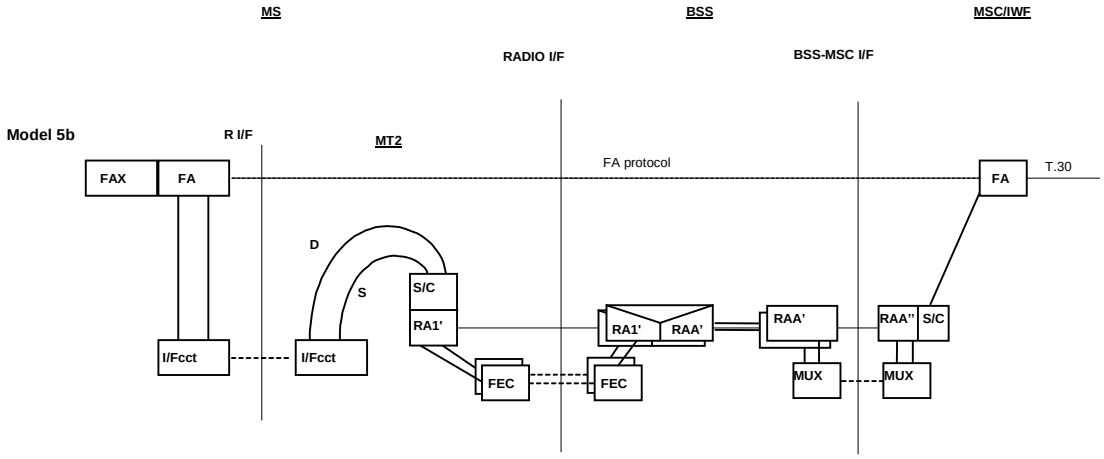


Figure 7 (continued) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

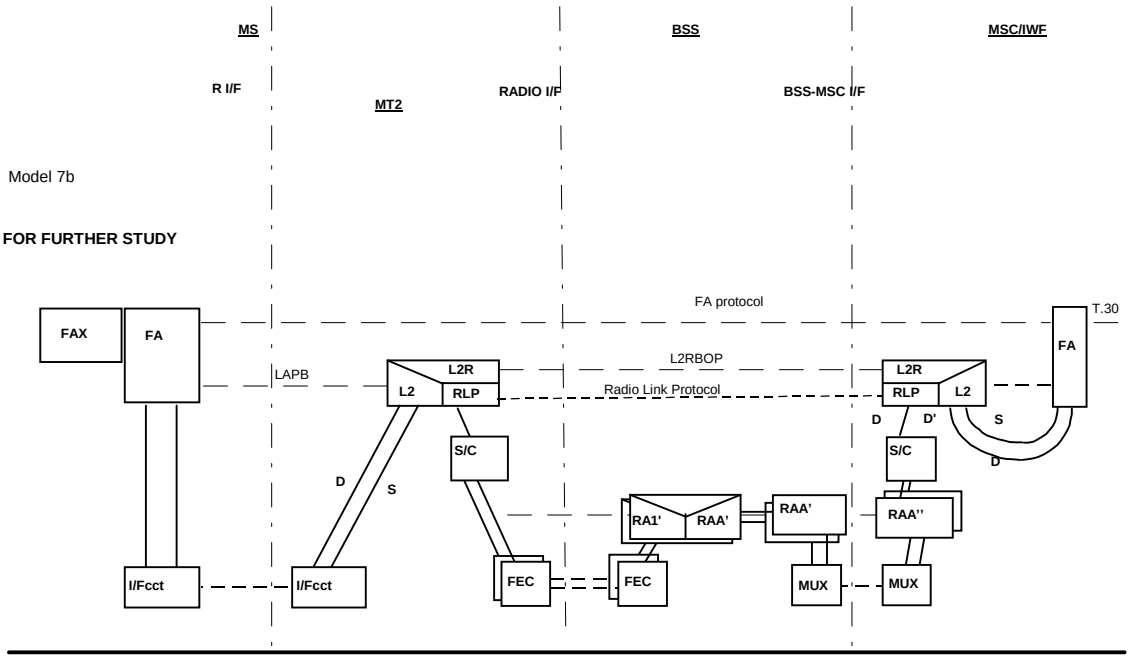


Figure 7 (concluded) : Information transfer protocol models for GSM PLMN connections using 14.4 channels

Legend	to Figure 7:
FA	= Fax Adaptor
GSC	= GSM Speech Codec
FEC	= Forward Error Correction
MPX	= Multiplex/Demultiplex
MUX	= Multiplex/Demultiplex
S/C	= Split/ Combine

7.5 Network capability to support channel mode modification

Specification 3GPP TS 03.45 (Technical Realization of the Group 3 Facsimile Teleservice) identifies a need for a GSM PLMN to support channel mode modification within the facsimile phase of the alternate speech and facsimile group 3 service. The network capability to support channel modification is described in 3GPP TS 24.008. Channel mode modification is not possible for other services. A channel mode modification results in a change of connection element over the radio interface with resultant change in access at the mobile station.

Table 6: Relationship between Teleservices and GSM PLMN connection types

Teleservice in GSM PLMN	**Access at mobile station**	**Radio interface connection element**	**Intermediate rate at the BSS-MSC interface**	**BSS-MSC connection element**	**Protocol model in figure 6 or 7**
Telephony.		cct mode speech.	NA.	cct mode structured 64 kbit/s speech.	Fig 6 : 6 a or 6 b
Emergency calls.		cct mode speech.	NA.	cct mode structured 64 kbit/s speech.	Fig 6 : 6 a or 6 b
Alternate Speech/ Facsimile Group 3.	Data cct duplex synchronous access alternate speech/ group 3 fax.	cct mode speech alternating with unstructured unrestricted 3.6 or 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR transparent.	Speech NA 8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s alternate speech/unrestricted.	Fig 6 : 5, 5b and 6 a or 6 b
		cct mode speech alternating with unstructured unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR transparent	Speech NA 16 kbit/s per TCH/F.		Fig 7 : 5 and 5 b and Fig 6: 6 ~~a or 6 b~~
Automatic Facsimile Group 3.	Data cct duplex synchronous access group 3 fax.	cct mode unstructured unrestricted 3.6 or 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR transparent.	8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s unrestricted.	Fig 6 : 5, 5b
		cct mode unstructured unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR transparent	16 kbit/s per TCH/F.		
Alternate speech/ Facsimile Group 3.	Data cct duplex synchronous access alternate speech/ group 3 fax.	cct mode speech alternating with SDU unrestricted 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR non transparent.	Speech NA 8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s alternate speech/unrestricted.	Fig 6 : 6 a or 6 b, 7 a and 7 b
		cct mode speech alternating with SDU unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR non transparent.	16 kbit/s per TCH/F.		Fig 6~~7~~ : 6 ~~a or 6 b~~ and Fig 7: 7 a and 7 b
Automatic Facsimile Group 3.	Data cct duplex synchronous access group 3 fax.	cct mode SDUunrestricted 6 or 12 kbit/s or n × 6 kbit/s (n ≤ 3) or n × 12 kbit/s (n ≤ 2) on FR non transparent.	8 or 16 kbit/s per TCH/F.	cct mode structured 64 kbit/s unrestricted.	Fig 6 : 7 a and 7 b
		cct mode SDU unrestricted 14.5 kbit/s or n × 14.5 kbit/s (n ≤ 2) on FR non transparent.	16 kbit/s per TCH/F.		Fig 7 : 7 a and 7 b

NA: Not Applicable

NOTE: The multislot data connections and the connections using TCH/F14.4 coding belong to the General Bearer Services (Classes 20 and 30 in 3GPP TS 22.002).

3GPP TSG CN WG3 Meeting #16
Sophia, France. 26th Feb - 2nd March 2001

Tdoc N3-010155

CR-Form-v3

CHANGE REQUEST

⌘ **27.001** **CR** **058** ⌘ **rev** **-** ⌘ **Current vers** **4.2.0** ⌘

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

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

Title:	⌘	Clarification of allowed combinations of FNUR and ACC values for the V.34 modem based 3G-H.324/M service.
Source:	⌘	TSG_CN WG3
Work item code:	⌘	TEI_4
Date:	⌘	28-02-2001
Category:	⌘	**D**
Release:	⌘	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:	⌘	Clarify the correlation between FNUR and ACC values. Clearly indicate that FNUR 33.6 kbit/s is valid for UTRAN only
Summary of change:	⌘	Modified flow diagram B.1.3.2.3 by separating the flows for FNUR= 28.8 kbit/s and FNUR= 33.6 kbit/s. Inserted a note in B.1.3.2.3. Note: Modifications of the flow diagrams are indicated as follows: New diagrams are highlighted with Green colour Deleted diagrams are highlighted with Blue colour
Consequences if not approved:	⌘	The users may specify values and/or combinations of FNUR and ACC that are not allowed.

Clauses affected:	⌘	B.1.3.2.3
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

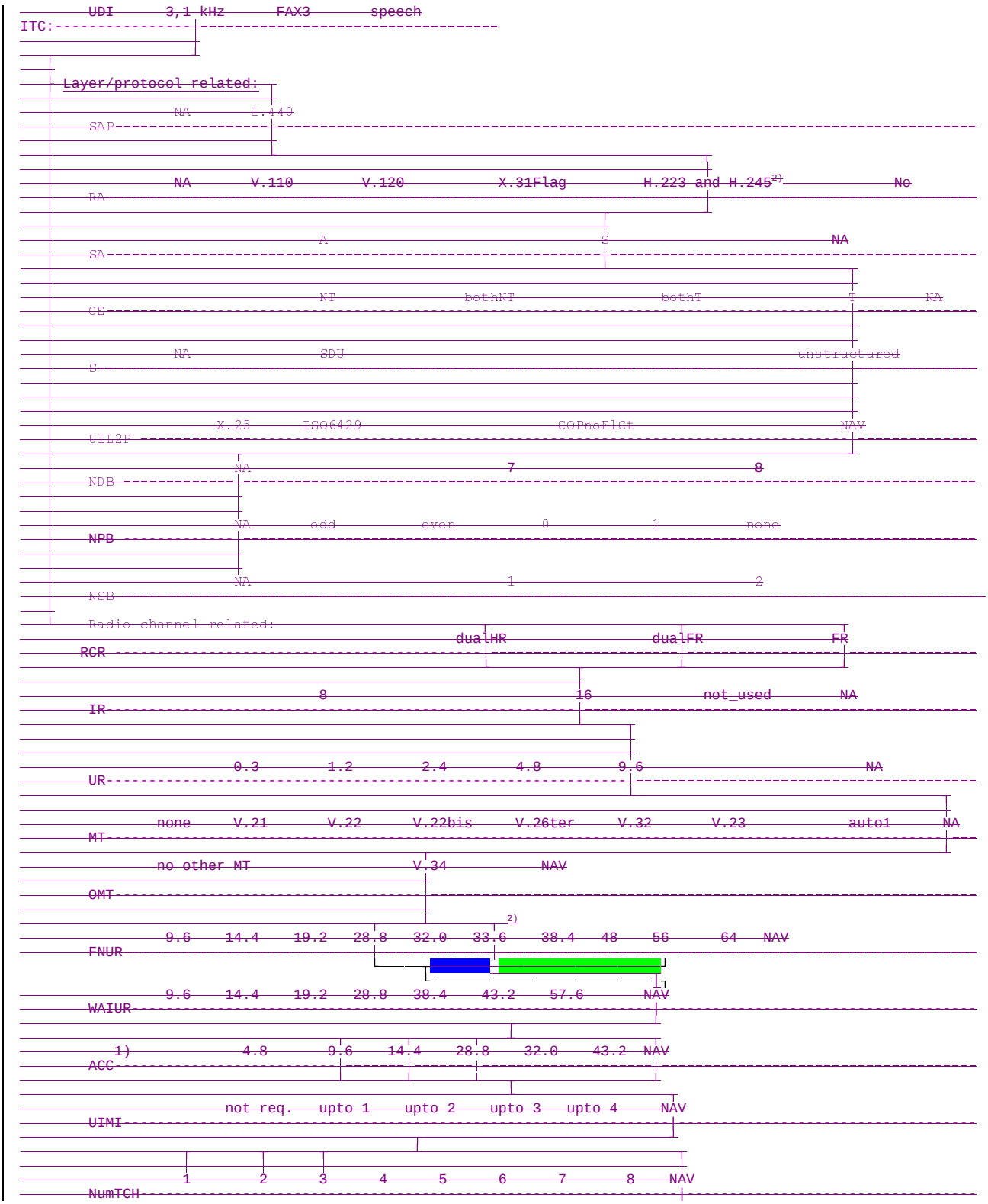
How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

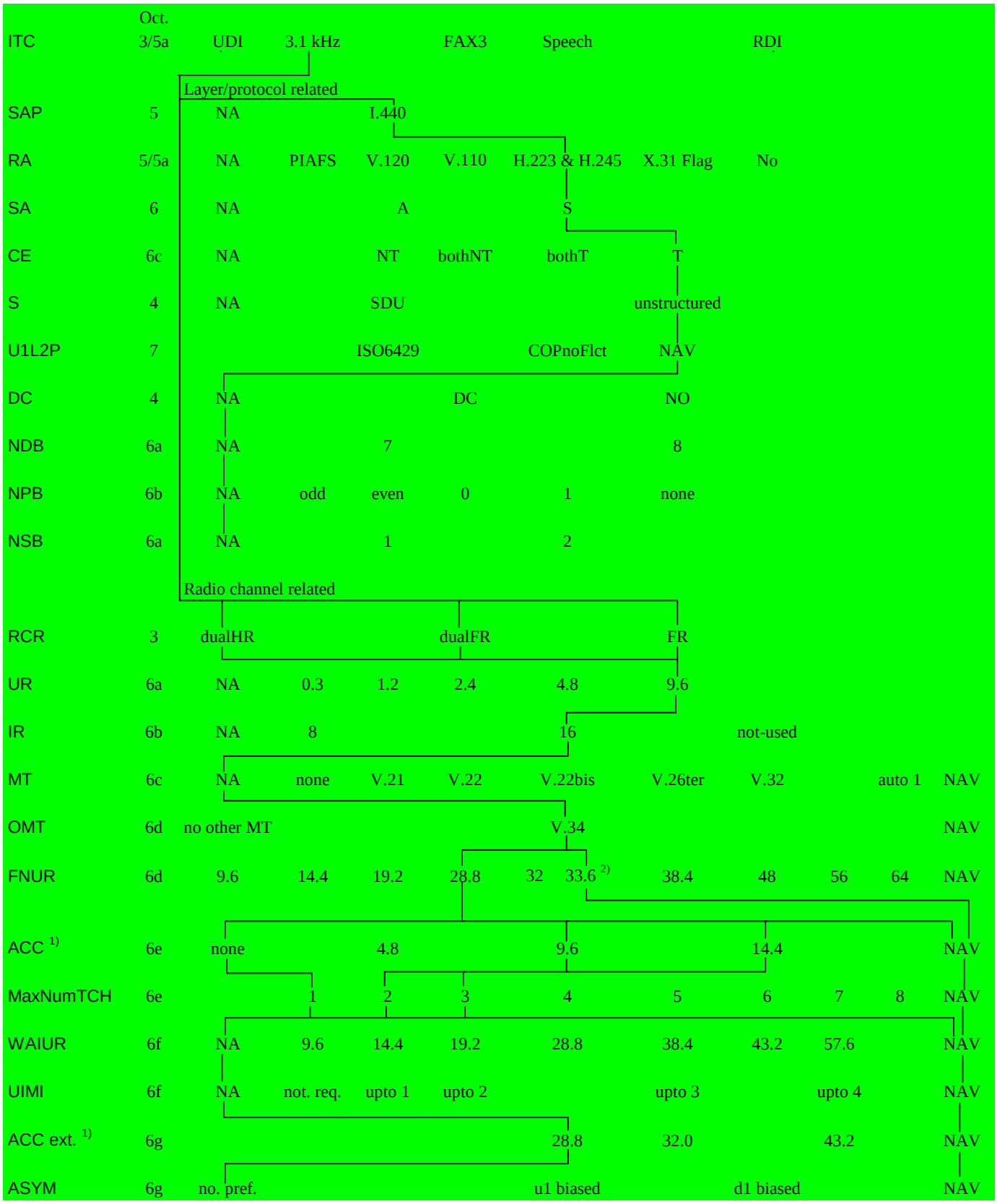
1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

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://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 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.

B.1.3.2.3 3G-H.324/M Case





1) ACC may have several values simultaneously (bit map coding).

2) FNUR 33.6 kbit/s applies to UTRAN only.

3GPP TSG CN WG3 Meeting #16 ***N3-010156***
Sophia, France 26th Feb – 2nd March 2001

CR-Form-v3

CHANGE REQUEST

⌘ **27.001** **CR** **053** ⌘ rev **-** ⌘ Current version: **4.2.0** ⌘

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

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

Title:	⌘	Editorial modifications of flow diagrams
Source:	⌘	TSG_CN WG3
Work item code:	⌘	TEI_4
Date:	⌘	28-02-2001
Category:	⌘	**D**
Release:	⌘	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: ⌘ Improve the readability of the flow diagrams by re-ordering the octets as well as ease future editing of the flow diagrams.

Summary of change: ⌘ Re-ordering of octets in sequential order (radio related values). Modified notes and inserted references to notes were missing. Minor editorial modificastions of notes below flowdiagrams.

Note:

Modifications of the flow diagrams are indicated as follows:

New [EXCEL] diagrams are highlighted with Green colour

Deleted [EXCEL] diagrams are highlighted with Blue colour

Consequences if not approved: ⌘ Inconsistency between the layout of the flow diagrams in B.1.2.1, B.1.3.1.1 – B.1.3.1.6, B.1.3.2.1, B.1.8

Clauses affected: ⌘ B.1.2.1, B.1.3.1.1 – B.1.3.1.6, B.1.3.2.1, B.1.8

Other specs affected: ⌘
☐ Other core specifications ⌘
☐ Test specifications
☐ O&M Specifications

Other comments: ⌘

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.
Below is a brief summary:

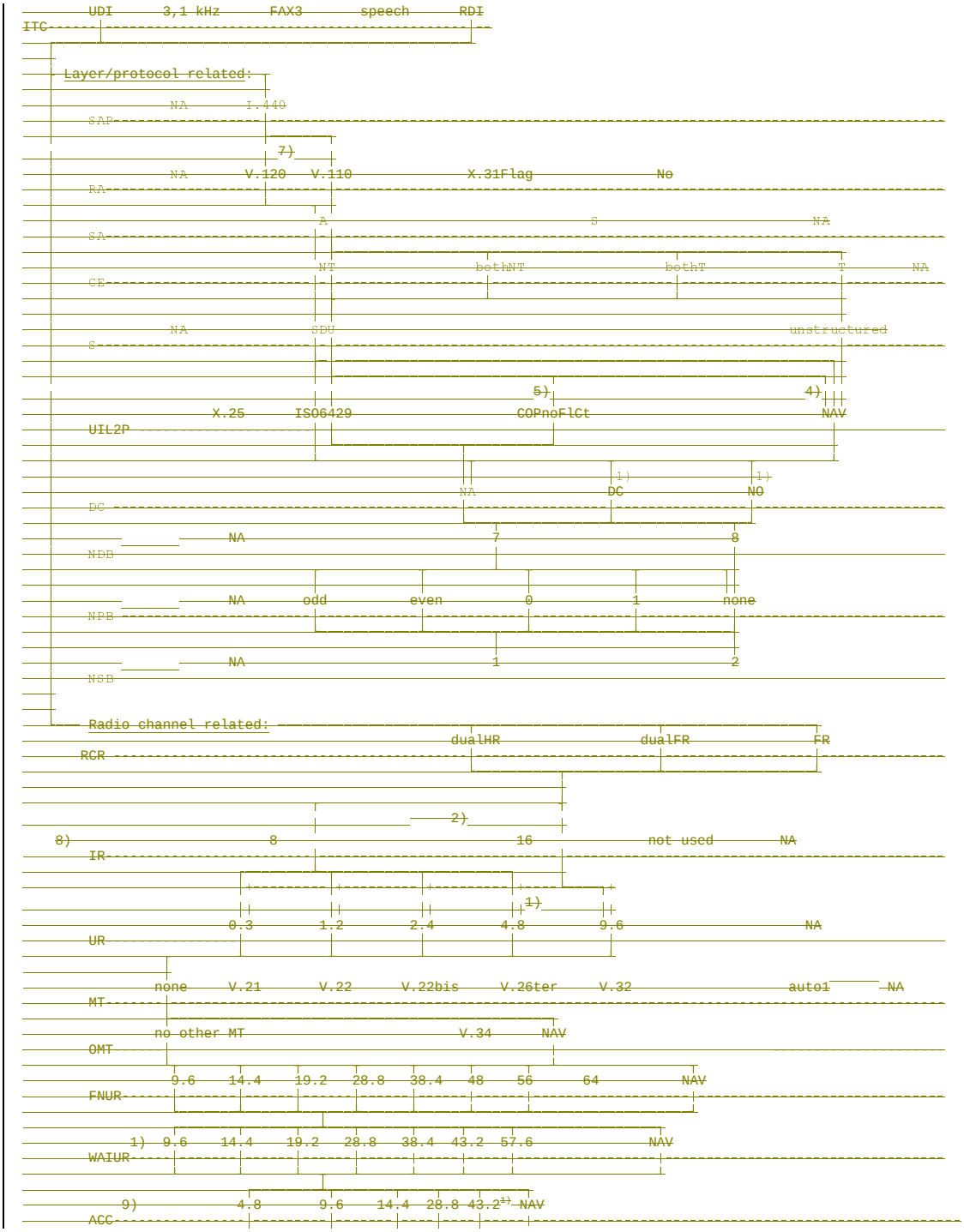
1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

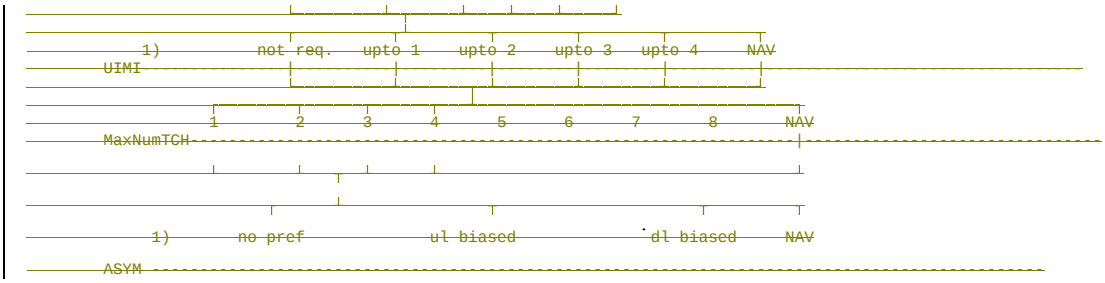
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

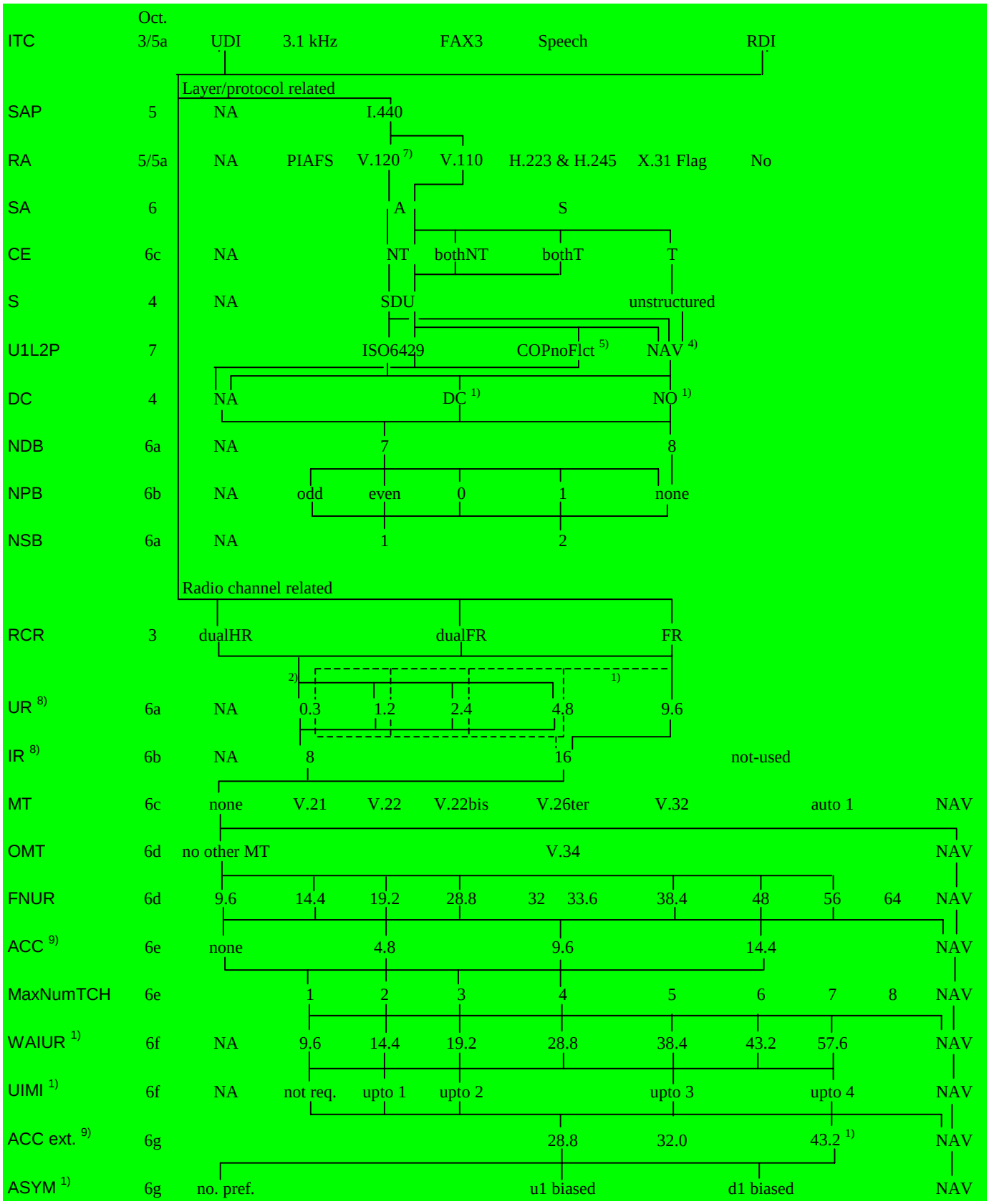
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

B.1.2 Bearer Service 20, Data Circuit Duplex Asynchronous

B.1.2.1 Unrestricted / restricted digital information transfer capability




1) not req. upto 1 upto 2 upto 3 upto 4 NAV
UIMI
1 2 3 4 5 6 7 8 NAV
MaxNumTCH
1) no pref ul biased dl biased NAV
ASYM


Oct.
ITC 3/5a UDI 3.1 kHz FAX3 Speech RDI
Layer/protocol related
SAP 5 NA I.440
RA 5/5a NA PIAFS V.120 7) V.110 H.223 & H.245 X.31 Flag No
SA 6 A S
CE 6c NA NT bothNT bothT T
S 4 NA SDU unstructured
U1L2P 7 ISO6429 COPnoFlct 5) NAV 4)
DC 4 NA DC 1) NO 1)
NDB 6a NA 7 8
NPB 6b NA odd even 0 1 none
NSB 6a NA 1 2
Radio channel related
RCR 3 dualHR dualFR FR
UR 8) 6a NA 0.3 1.2 2.4 4.8 9.6
IR 8) 6b NA 8 16 not-used
MT 6c none V.21 V.22 V.22bis V.26ter V.32 auto 1 NAV
OMT 6d no other MT V.34 NAV
FNUR 6d 9.6 14.4 19.2 28.8 32 33.6 38.4 48 56 64 NAV
ACC 9) 6e none 4.8 9.6 14.4 NAV
MaxNumTCH 6e 1 2 3 4 5 6 7 8 NAV
WAIUR 1) 6f NA 9.6 14.4 19.2 28.8 38.4 43.2 57.6 NAV
UIMI 1) 6f NA not req. upto 1 upto 2 upto 3 upto 4 NAV
ACC ext. 9) 6g 28.8 32.0 43.2 1) NAV
ASYM 1) 6g no. pref. u1 biased d1 biased NAV

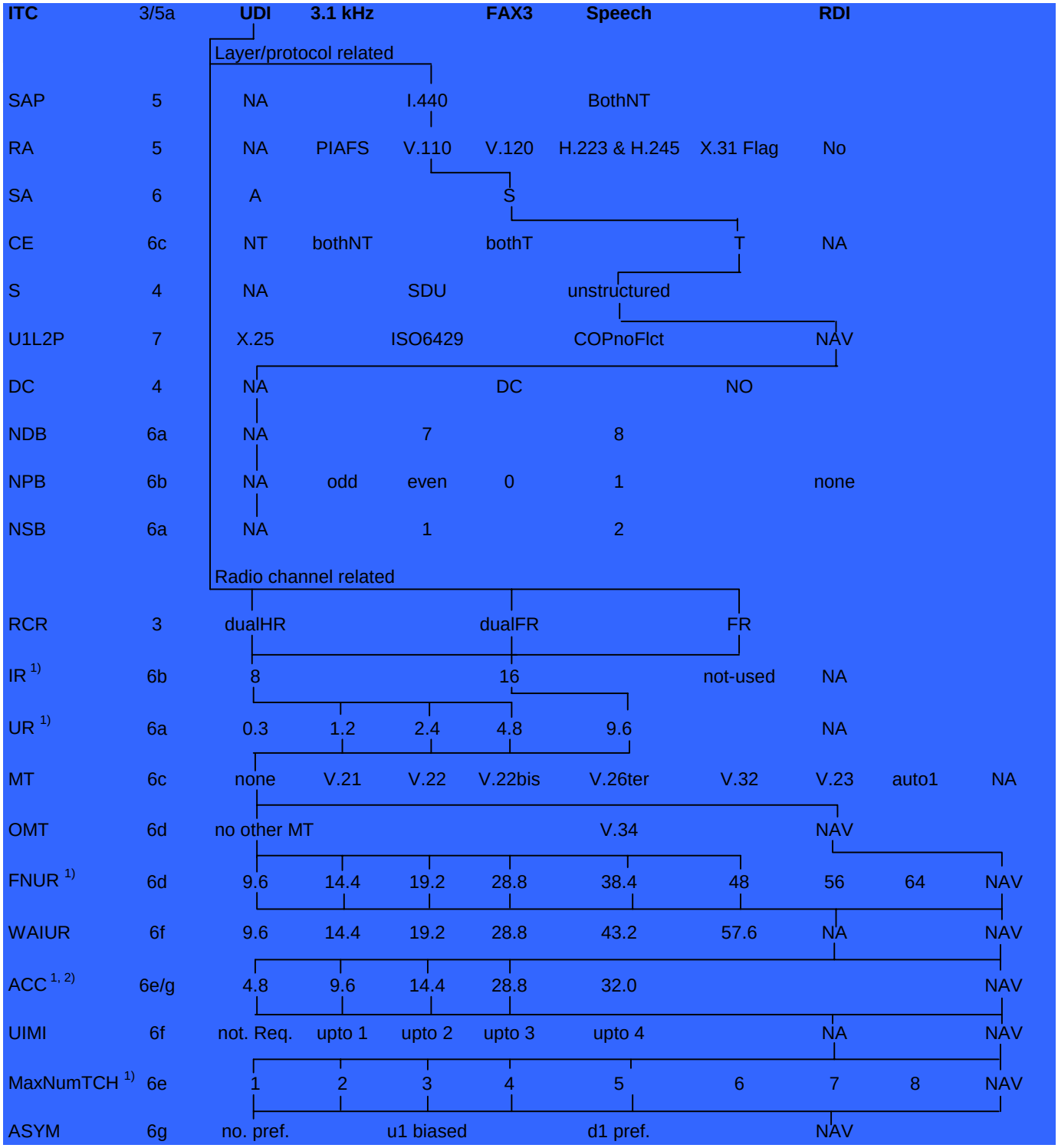
1) for CE:NT or "both";
2) for CE:T only or CE:NT and NIRR:6kb/s (not for the SETUP message);
3) Void;
4) for MT CALLS in the SETUP message or MO/MT CALLS with "out-band" flow control requested;
5) for MO/MT CALLS with no flow control requested;
6) Void;
7) the V.120 relevant BC parameters (octet 5b) shall be set according to the LLC (see clause B.2);
8) IR and UR are overridden ~~if~~ by FNUR, ACC and MaxNumTCH ~~are available;~~
9) ACC may have several values simultaneously (bit map coding).

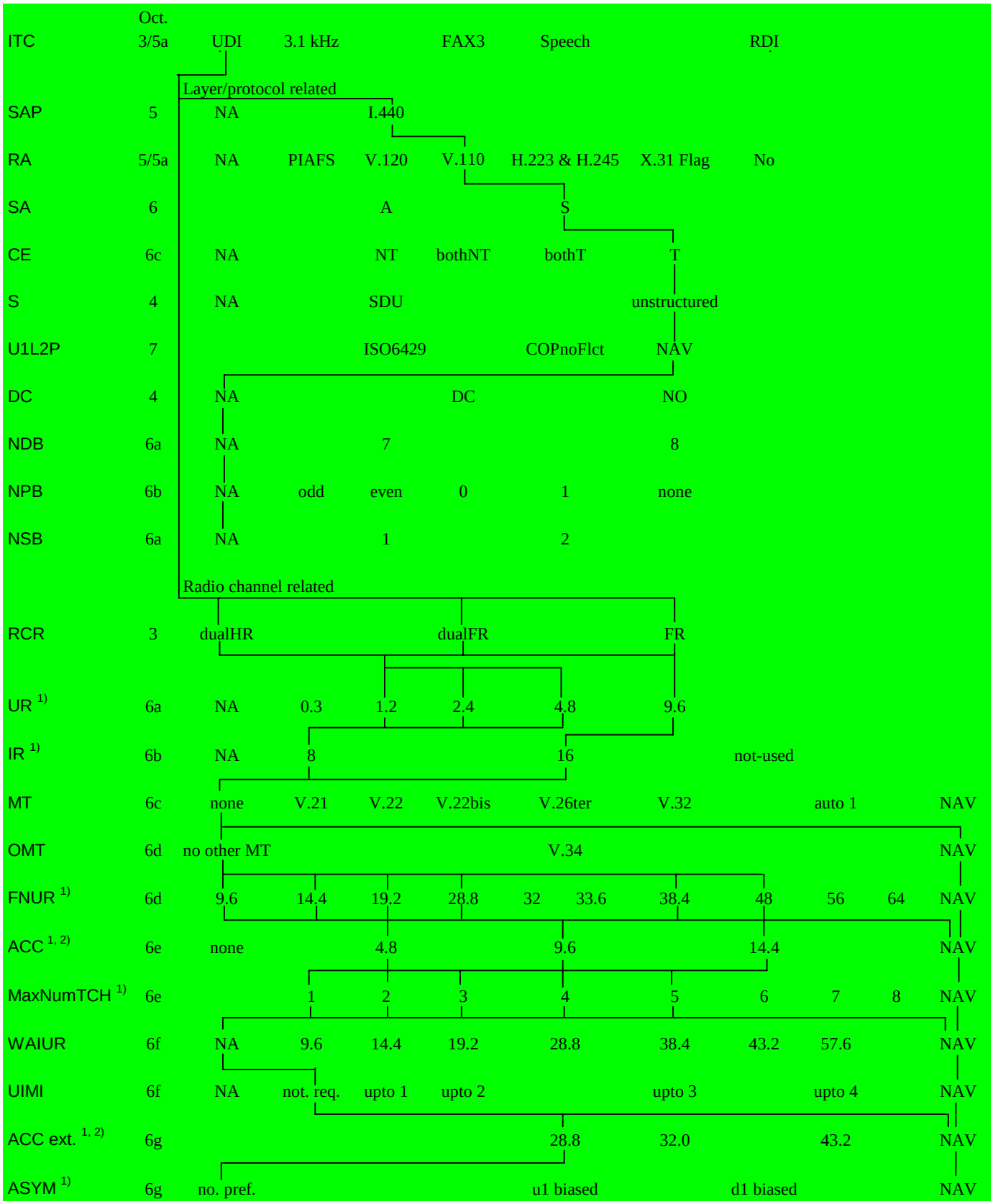
B.1.3 Bearer Service 30, Data Circuit Duplex Synchronous

B.1.3.1 Unrestricted/restricted digital information transfer capability

B.1.3.1.1 Transparent FNUR <= 48 kbit/s (TCH/F4.8, TCH/F9.6, TCH/14.4, TCH/F28.8)

Applies to GSM/GERAN only. No HO to/from UTRAN


ITC
3/5a
UDI
3.1 kHz
FAX3
Speech
RDI
Layer/protocol related
SAP 5 NA I.440 BothNT
RA 5 NA PIAFS V.110 V.120 H.223 & H.245 X.31 Flag No
SA 6 A S
CE 6c NT bothNT bothT T NA
S 4 NA SDU unstructured
U1L2P 7 X.25 ISO6429 COPnoFlct NAV
DC 4 NA DC NO
NDB 6a NA 7 8
NPB 6b NA odd even 0 1 none
NSB 6a NA 1 2
Radio channel related
RCR 3 dualHR dualFR FR
IR 1) 6b 8 16 not-used NA
UR 1) 6a 0.3 1.2 2.4 4.8 9.6 NA
MT 6c none V.21 V.22 V.22bis V.26ter V.32 V.23 auto1 NA
OMT 6d no other MT V.34 NAV
FNUR 1) 6d 9.6 14.4 19.2 28.8 38.4 48 56 64 NAV
WAIUR 6f 9.6 14.4 19.2 28.8 43.2 57.6 NA NAV
ACC 1, 2) 6e/g 4.8 9.6 14.4 28.8 32.0 NAV
UIMI 6f not. Req. upto 1 upto 2 upto 3 upto 4 NA NAV
MaxNumTCH 1) 6e 1 2 3 4 5 6 7 8 NAV
ASYM 6g no. pref. u1 biased d1 pref. NAV



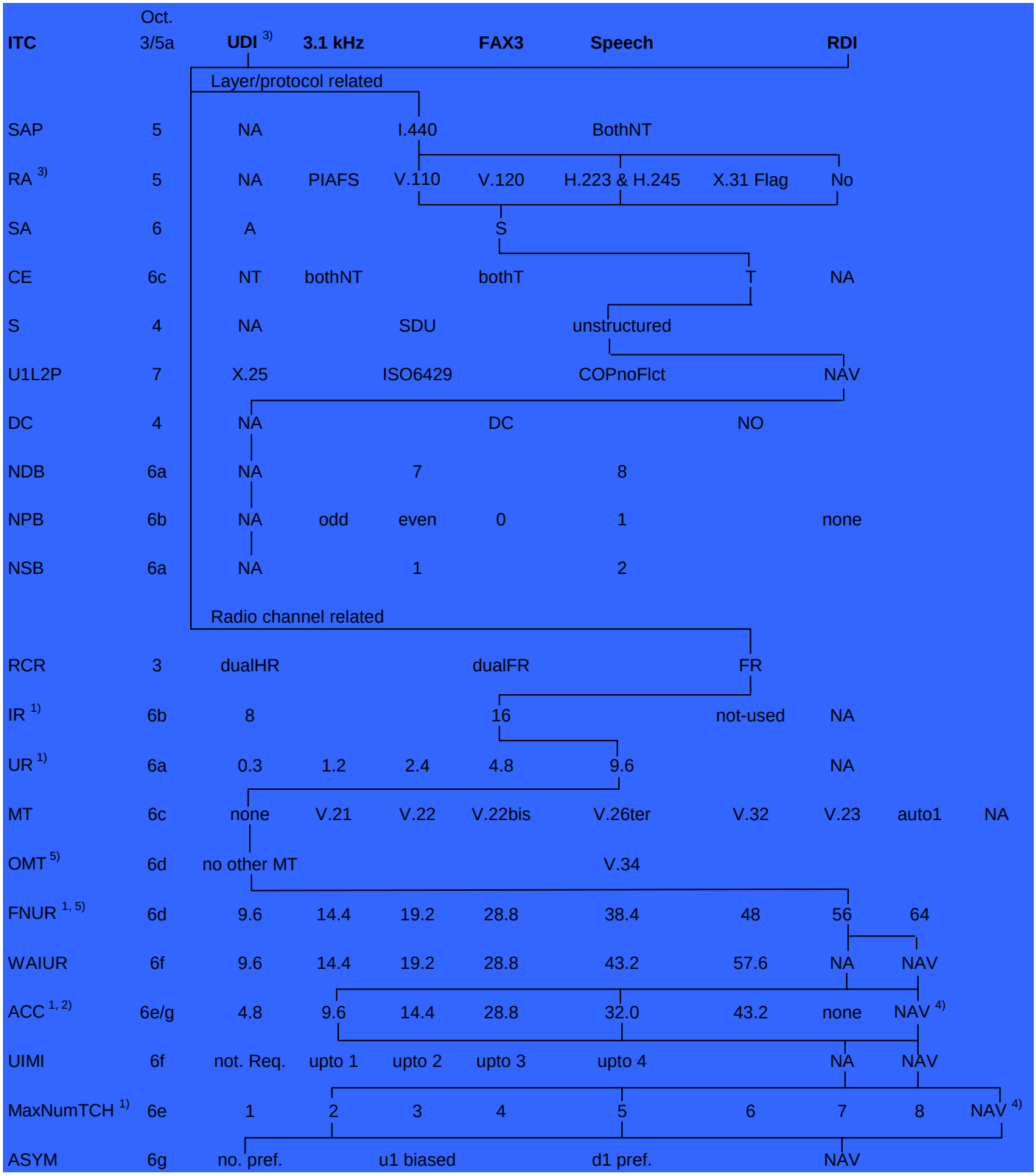
1) IR and UR are overridden by~~if~~ FNUR, ACC and MaxNumTCH ~~are available~~.

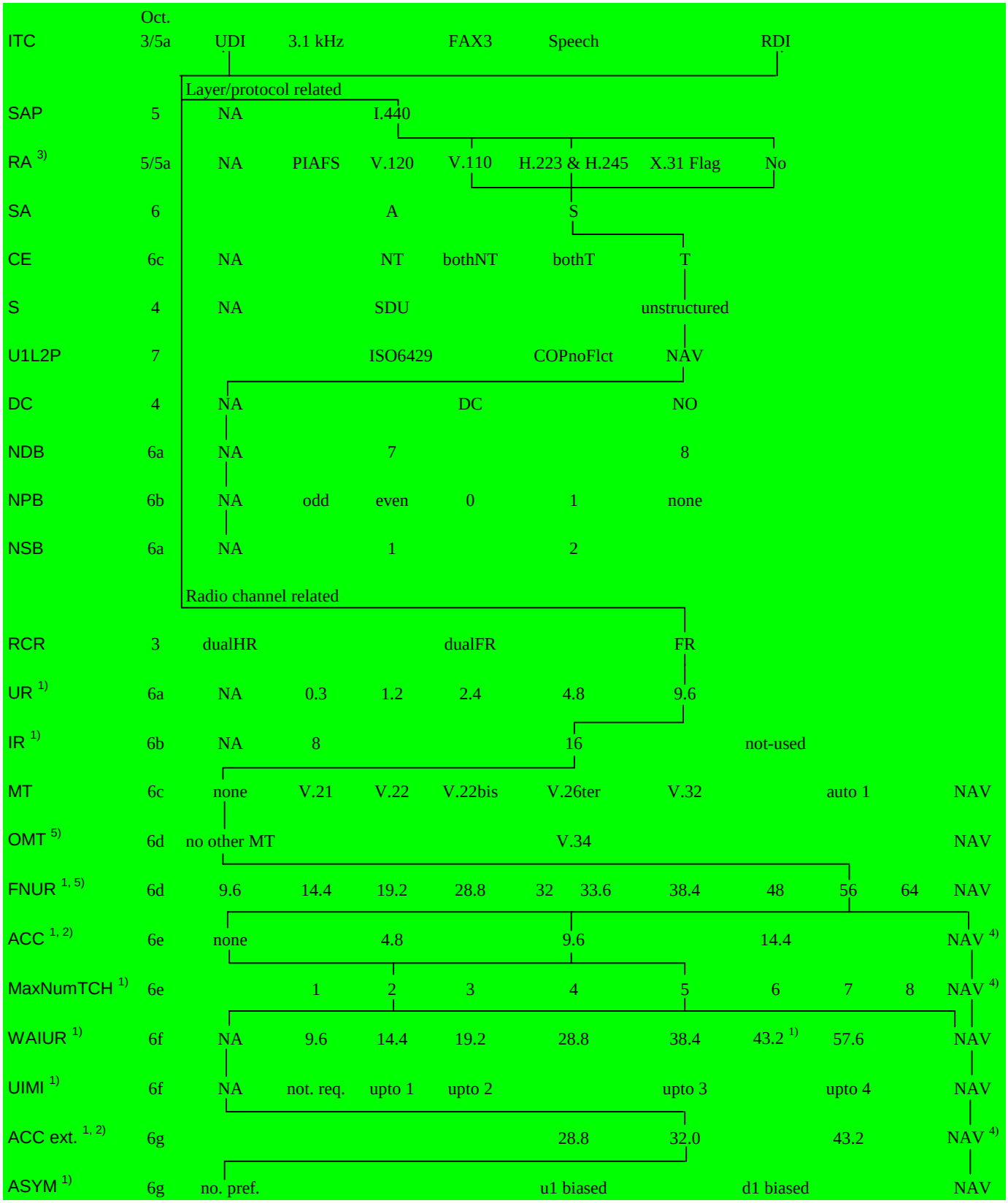
2) ACC may have several values simultaneously (bit map coding).

B.1.3.1.2 X.32 Case

Void.

B.1.3.1.3 Transparent FNUR=56 kbit/s, including 3G-H.324/M, (TCH/F9.6, TCH/F32.0, UTRAN)





1) IR and UR are overridden by FNUR, ACC and MaxNumTCH ~~if available~~. ~~These parameters~~ IR and UR are not applicable to UMTS.

2) ACC may have several values simultaneously (bit map coding). However, handover to/from UTRAN is not possible if the network assigns other traffic channels than TCH/F9.6 or TCH/F32.0.

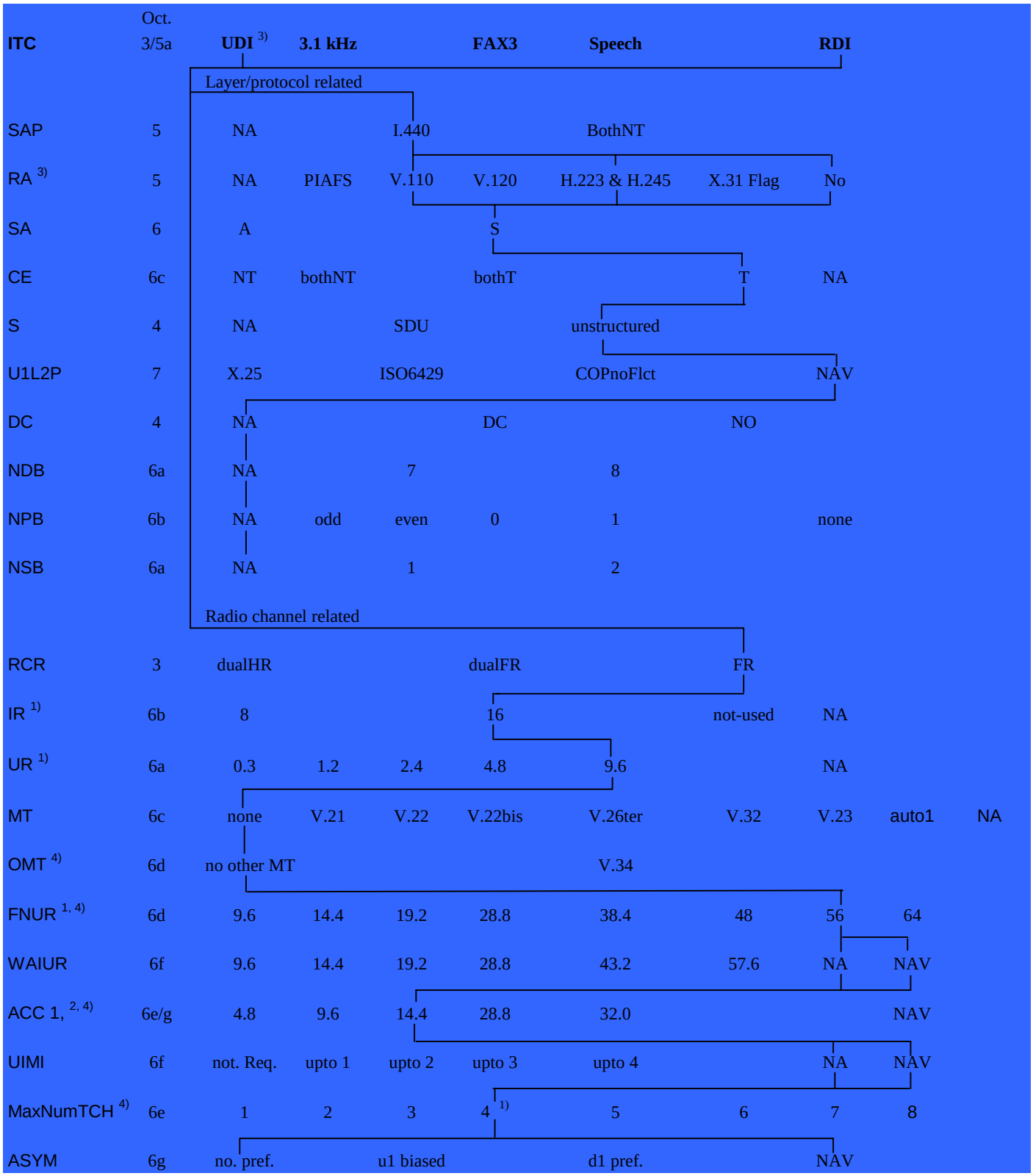
3) In case ITC=UDI, RA shall be set to V.110 or H.223 & H245.

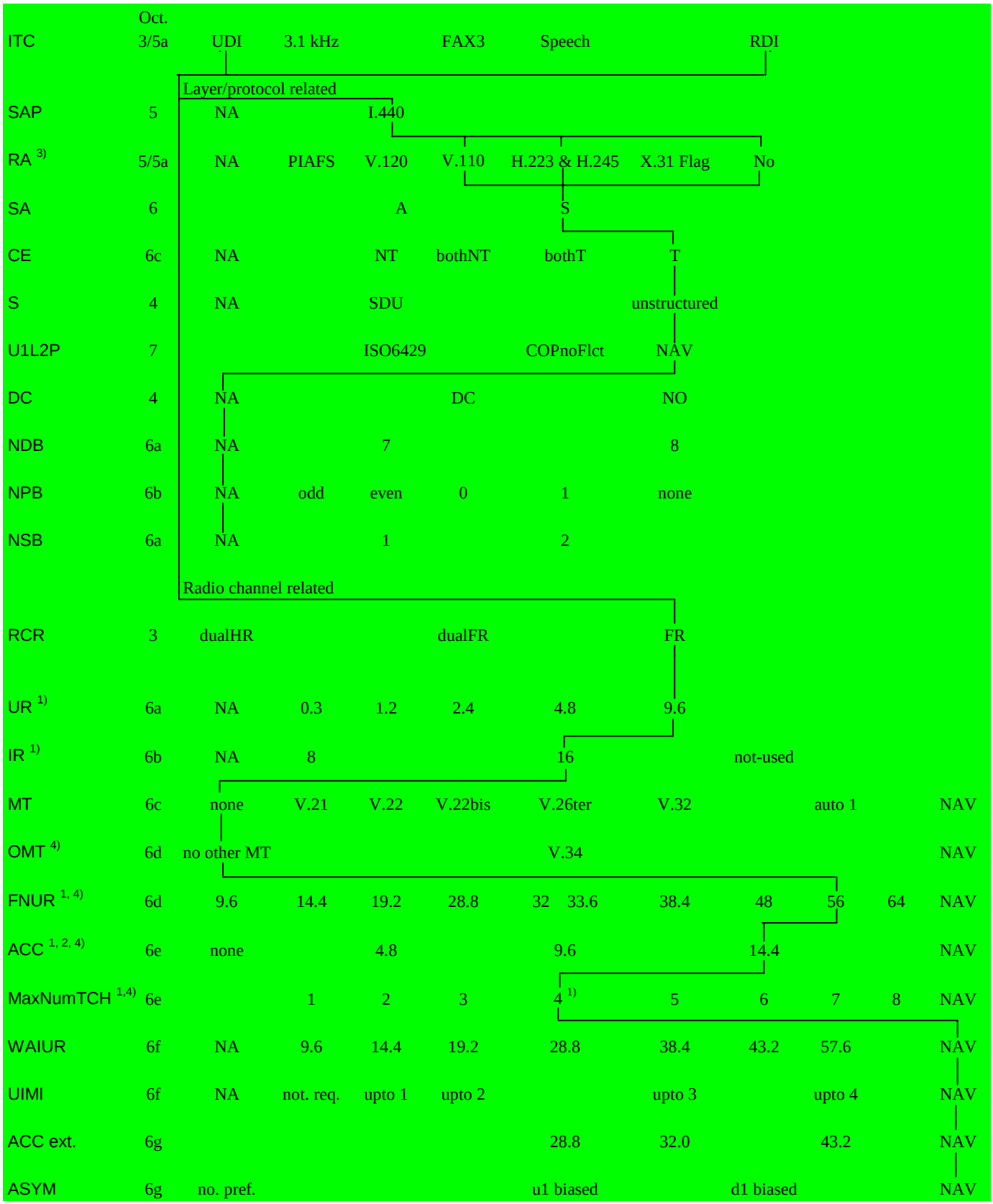
4) In case ACC and MaxNumTCH are not available operation is restricted to UTRAN.

5) The parameters FNUR and OMT are mandatory for this service.

B.1.3.1.4 Transparent FNUR = 56kbit/s, including 3G-H.324/M (TCH/F14.4)

Applies to GSM/GERAN only, no HO to/from UTRAN

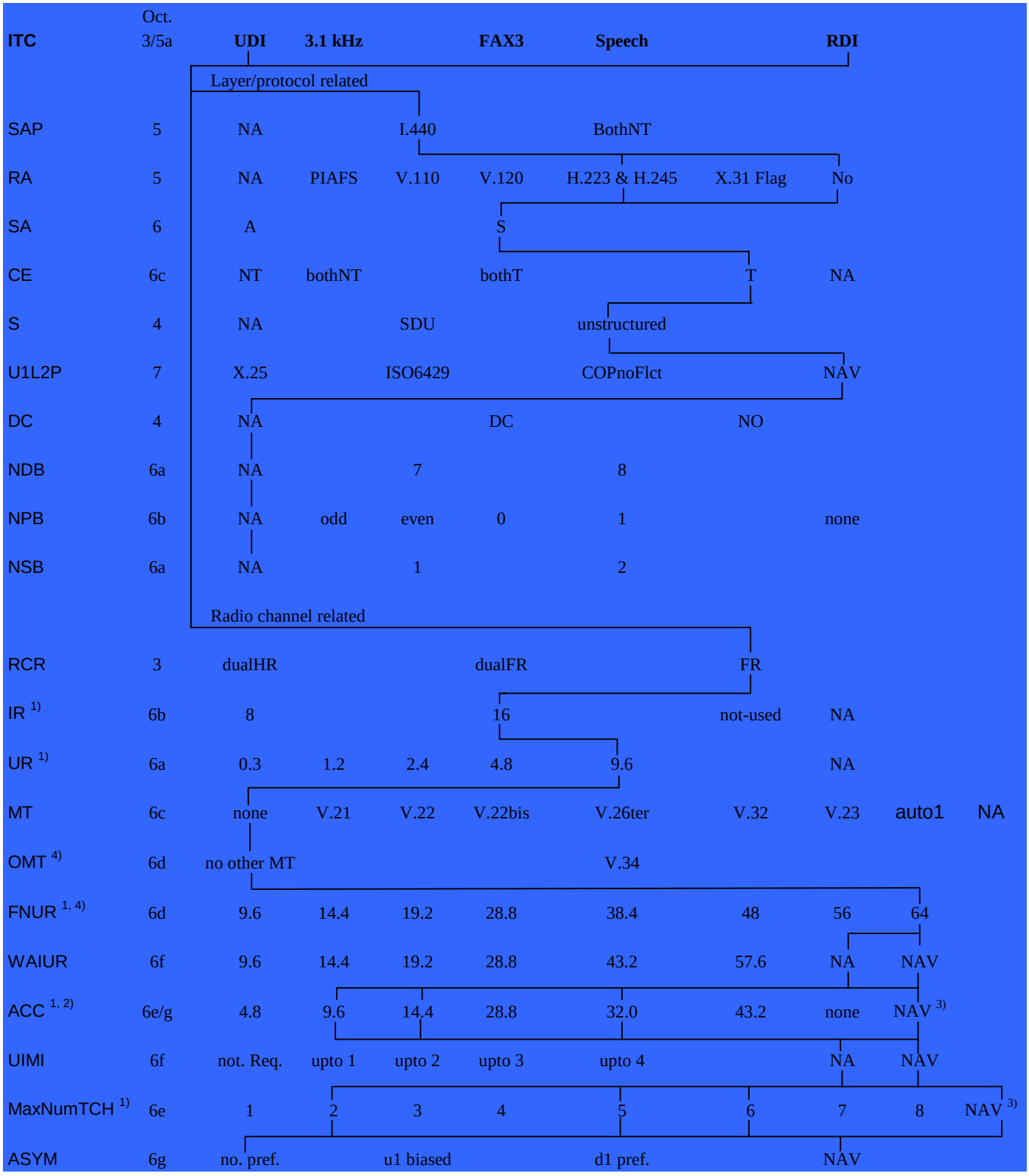

ITC
Oct. 3/5a
UDI 3)
3.1 kHz
FAX3
Speech
RDI
Layer/protocol related
SAP 5 NA I.440 BothNT
RA 3) 5 NA PIAFS V.110 V.120 H.223 & H.245 X.31 Flag No
SA 6 A S
CE 6c NT bothNT bothT T NA
S 4 NA SDU unstructured
U1L2P 7 X.25 ISO6429 COPnoFlct NAV
DC 4 NA DC NO
NDB 6a NA 7 8
NPB 6b NA odd even 0 1 none
NSB 6a NA 1 2
Radio channel related
RCR 3 dualHR dualFR FR
IR 1) 6b 8 16 not-used NA
UR 1) 6a 0.3 1.2 2.4 4.8 9.6 NA
MT 6c none V.21 V.22 V.22bis V.26ter V.32 V.23 auto1 NA
OMT 4) 6d no other MT V.34
FNUR 1, 4) 6d 9.6 14.4 19.2 28.8 38.4 48 56 64
WAIUR 6f 9.6 14.4 19.2 28.8 43.2 57.6 NA NAV
ACC 1, 2, 4) 6e/g 4.8 9.6 14.4 28.8 32.0 NAV
UIMI 6f not. Req. upto 1 upto 2 upto 3 upto 4 NA NAV
MaxNumTCH 4) 6e 1 2 3 4 1) 5 6 7 8
ASYM 6g no. pref. u1 biased d1 pref. NAV

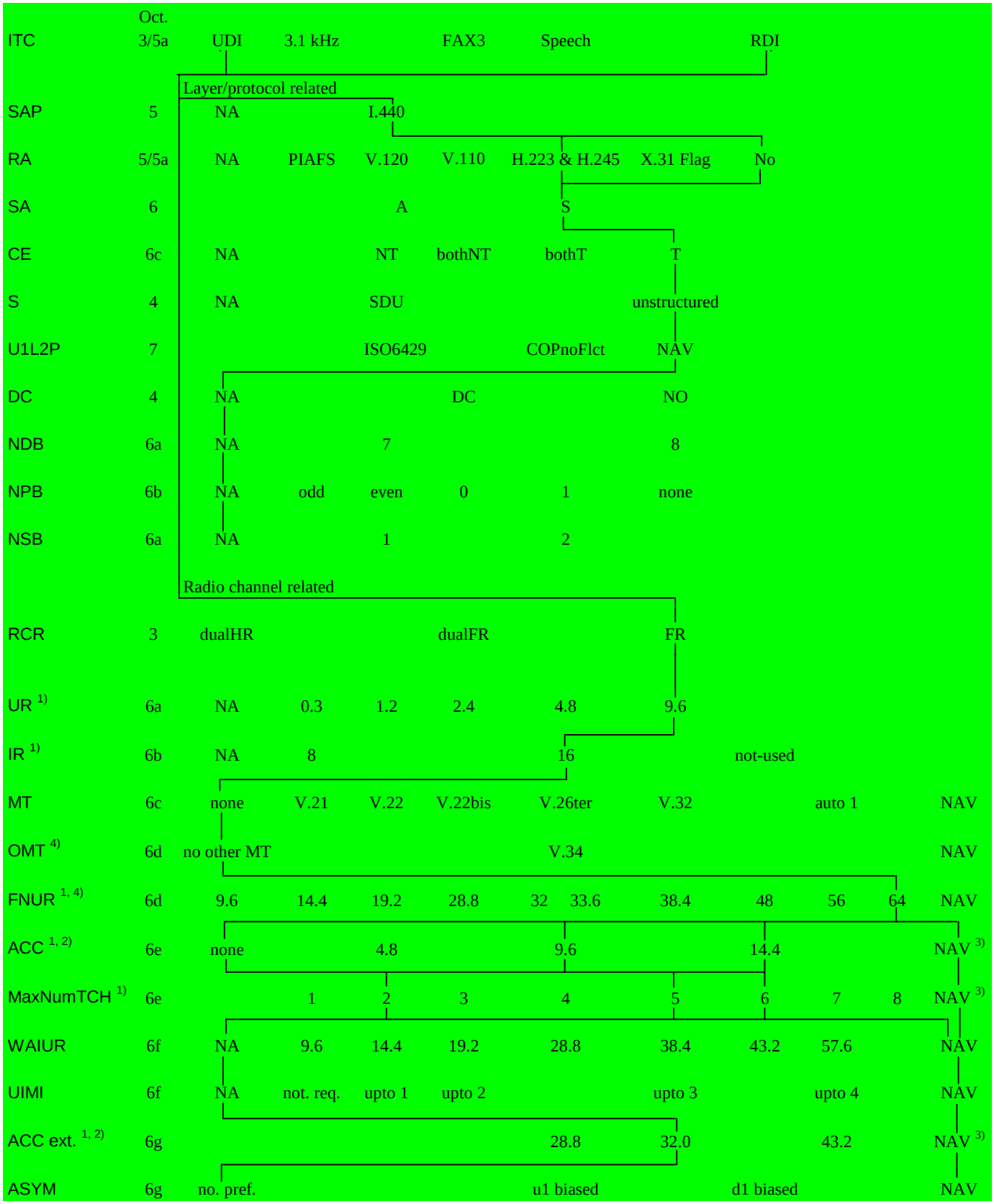


1) IR and UR are overridden by FNUR, ACC and MaxNumTCH ~~are available~~.

2) ACC may have several values simultaneously (bit map coding).
3) In case ITC=UDI, RA shall be set to V.110 or H.223 & H.245.
4) The parameters FNUR, OMT, ACC and MaxNumTCH are mandatory for this service.

B.1.3.1.5 Transparent FNUR = 64kbit/s, including 3G-H.324/M (TCH/F9.6, TCH/F14.4, TCH/F32.0, UTRAN))



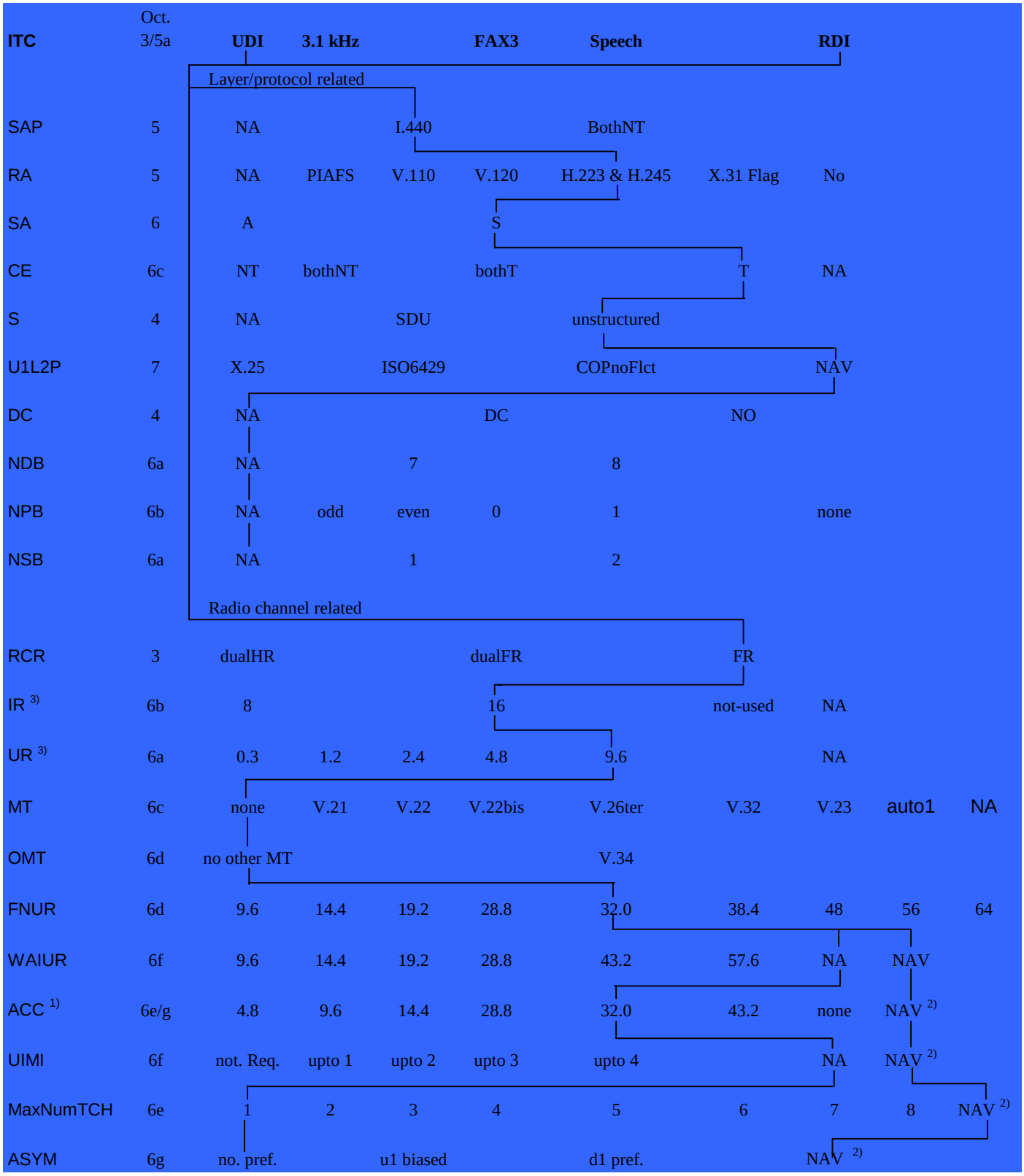


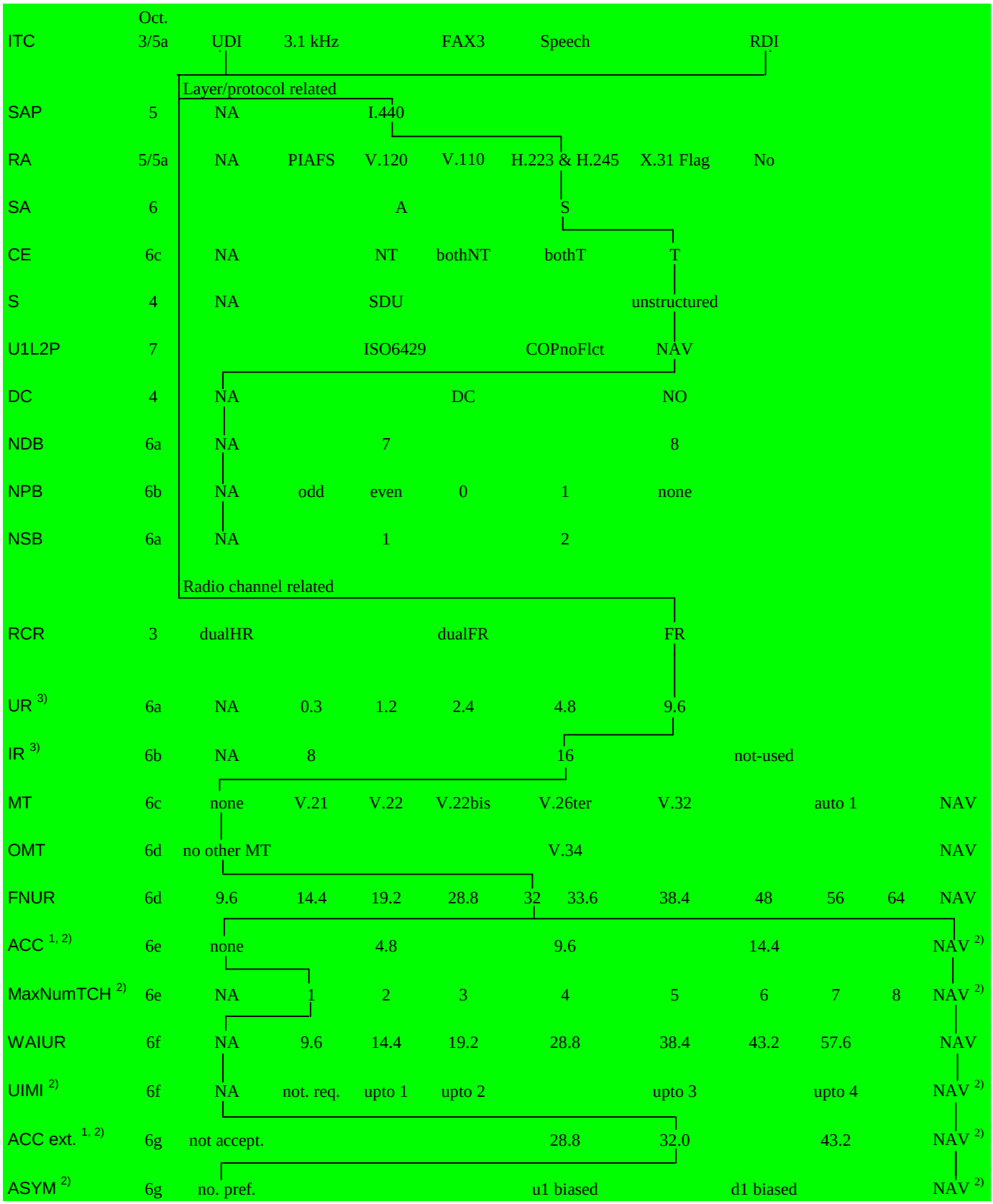
1) IR and UR are overridden by FNUR, ACC and MaxNumTCH ~~if available~~. ~~These parameters~~ IR and UR are not applicable to UMTS.

2) ACC may have several values simultaneously (bit map coding).

3) If ACC and MaxNumTCH are not available operation is restricted to UTRAN.
4) The parameters FNUR and OMT are mandatory for this service.

B.1.3.1.6 3G-H.324/M, FNUR=32.0 kbit/s (TCH/F32.0, UTRAN)





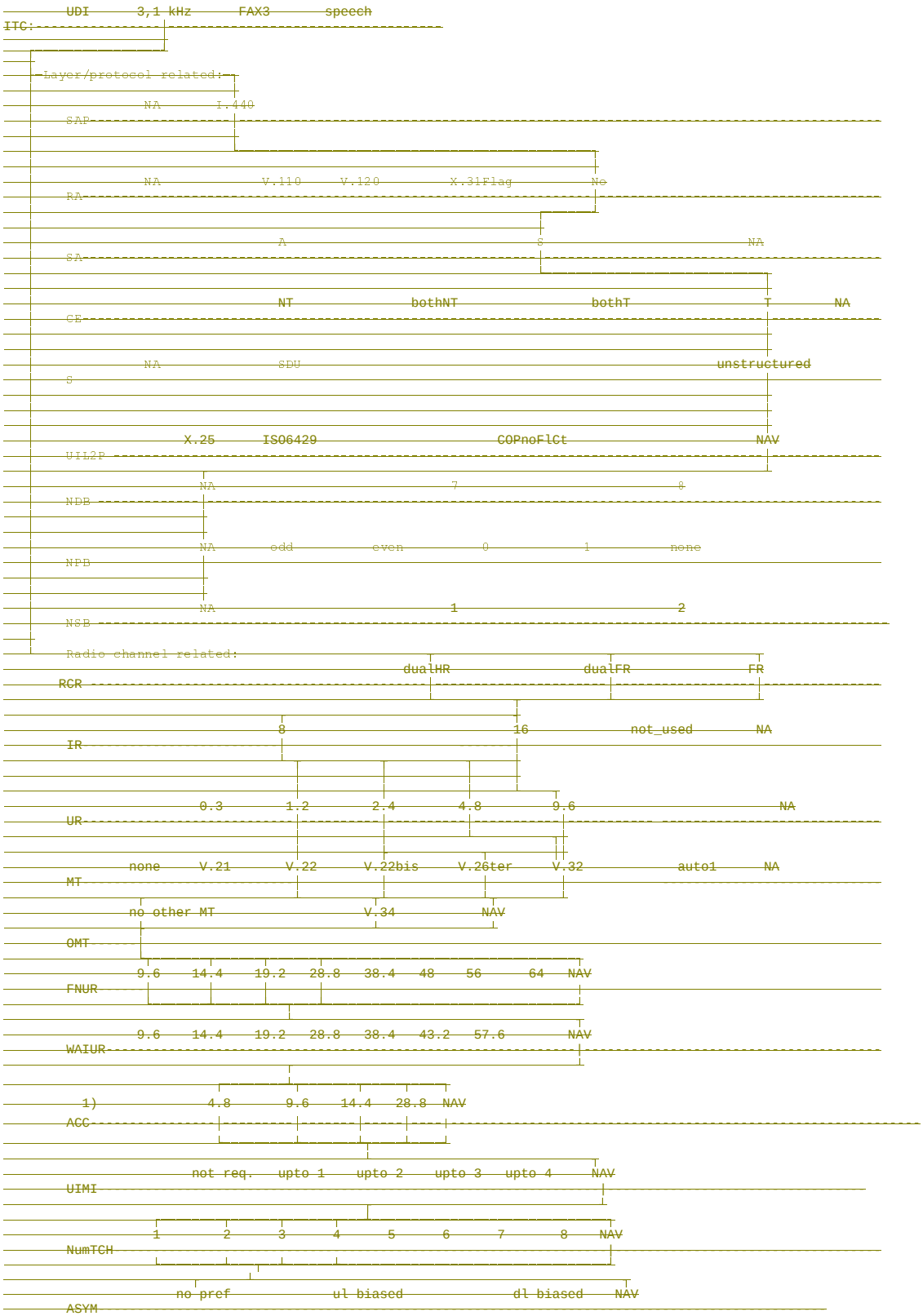
1) ACC may have several values simultaneously (bit map coding).

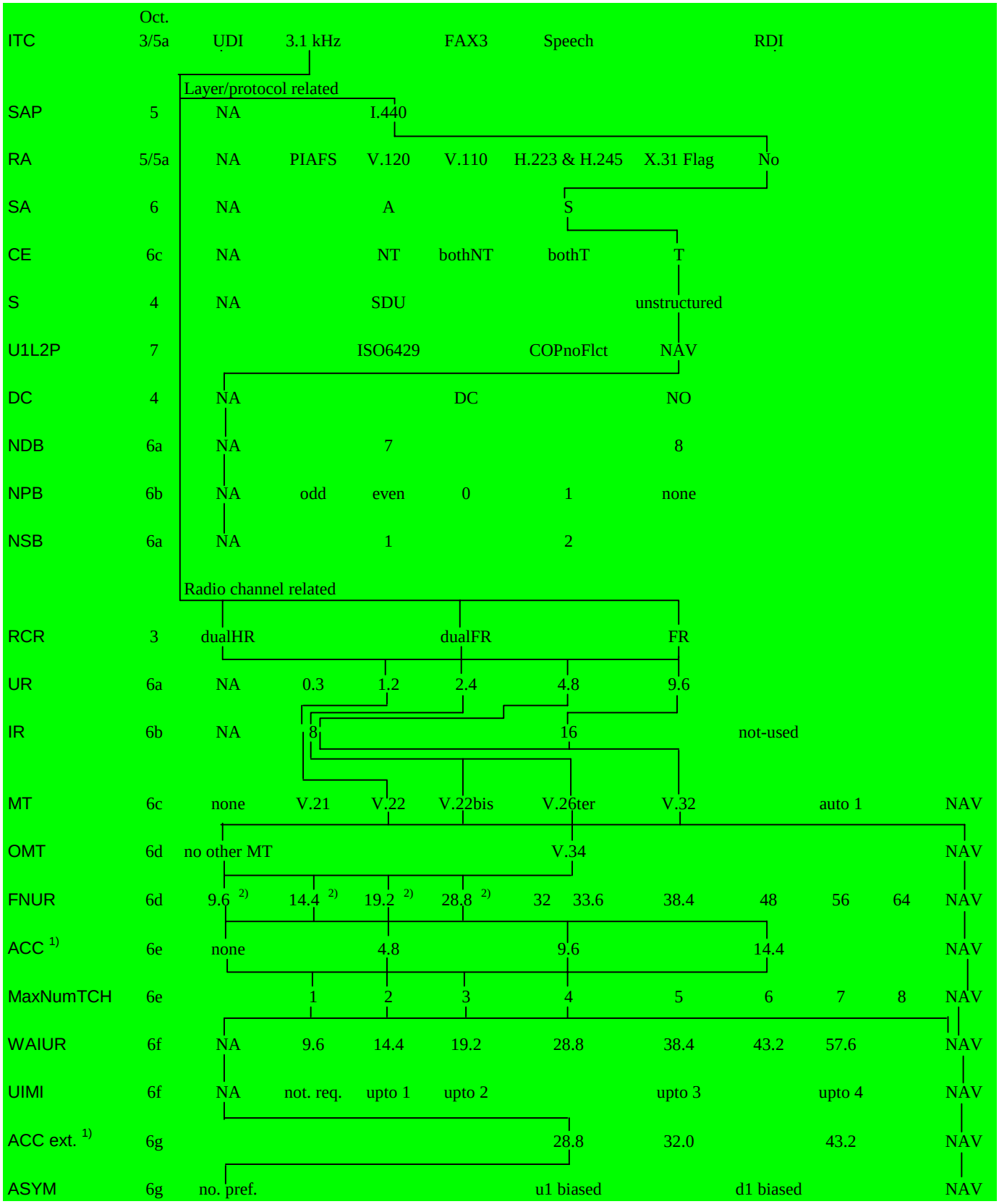
2) ~~2)~~ If ACC, UIMI, MaxNumTCH and ASYM are not available operation is restricted to UTRAN.

3) IR and UR are overridden by FNUR, ACC and MaxNumTCH. ~~These parameters~~ IR and UR are not applicable to UMTS.

B.1.3.2 3,1 kHz audio ex-PLMN information transfer capability

B.1.3.2.1 Non-X.32 Cases



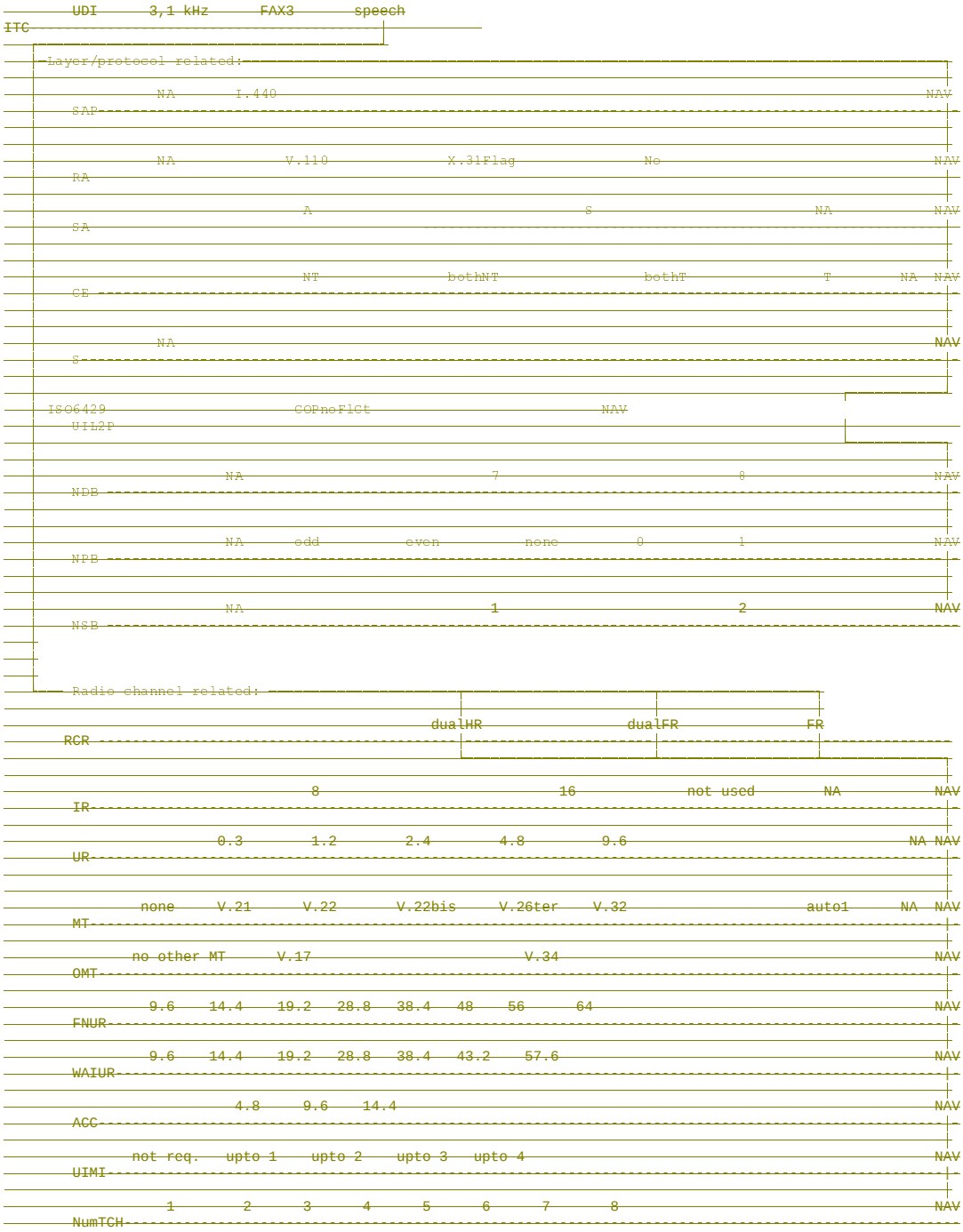

Oct.
ITC 3/5a UDI 3.1 kHz FAX3 Speech RDI
Layer/protocol related
SAP 5 NA I.440
RA 5/5a NA PIAFS V.120 V.110 H.223 & H.245 X.31 Flag No
SA 6 NA A S
CE 6c NA NT bothNT bothT T
S 4 NA SDU unstructured
U1L2P 7 ISO6429 COPnoFlct NAV
DC 4 NA DC NO
NDB 6a NA 7 8
NPB 6b NA odd even 0 1 none
NSB 6a NA 1 2
Radio channel related
RCR 3 dualHR dualFR FR
UR 6a NA 0.3 1.2 2.4 4.8 9.6
IR 6b NA 8 16 not-used
MT 6c none V.21 V.22 V.22bis V.26ter V.32 auto 1 NAV
OMT 6d no other MT V.34 NAV
FNUR 6d 9.6 2) 14.4 2) 19.2 2) 28.8 2) 32 33.6 38.4 48 56 64 NAV
ACC 1) 6e none 4.8 9.6 14.4 NAV
MaxNumTCH 6e 1 2 3 4 5 6 7 8 NAV
WAIUR 6f NA 9.6 14.4 19.2 28.8 38.4 43.2 57.6 NAV
UIMI 6f NA not. req. upto 1 upto 2 upto 3 upto 4 NAV
ACC ext. 1) 6g 28.8 32.0 43.2 NAV
ASYM 6g no. pref. u1 biased d1 biased NAV

1) ACC may have several values simultaneously (bit map coding).

B.1.3.2.2 X.32 Case

Void.

B.1.8 Teleservice 11 ... 12, Speech



	Oct.										
ITC	3/5a	UDI	3.1 kHz		FAX3	Speech		RDI			
		Layer/protocol related									
SAP	5	NA		I.440							NAV
RA	5/5a	NA	PIAFS	V.120	V.110	H.223 & H.245	X.31 Flag	No			NAV
SA	6	NA		A		S					NAV
CE	6c	NA		NT	bothNT	bothT	T				NAV
S	4	NA		SDU			unstructured				NAV
U1L2P	7			ISO6429		COPnoFlct					NAV
DC	4	NA			DC		NO				NAV
NDB	6a	NA		7			8				NAV
NPB	6b	NA	odd	even	0	1	none				NAV
NSB	6a	NA		1		2					NAV
		Radio channel related									
RCR	3	dualHR			dualFR		FR				
UR	6a	NA	0.3	1.2	2.4	4.8	9.6				NAV
IR	6b	NA	8			16		not-used			NAV
MT	6c	none	V.21	V.22	V.22bis	V.26ter	V.32		auto 1		NAV
OMT	6d	no other MT				V.34					NAV
FNUR	6d	9.6	14.4	19.2	28.8	32	33.6	38.4	48	56	64 NAV
ACC	6e	none		4.8		9.6		14.4			NAV
MaxNumTCH	6e		1	2	3	4	5	6	7	8	NAV
WAIUR	6f	NA	9.6	14.4	19.2	28.8	38.4	43.2	57.6		NAV
UIMI	6f	NA	not. req.	upto 1	upto 2		upto 3		upto 4		NAV
ACC ext.	6g					28.8	32.0		43.2		NAV
ASYM	6g	no. pref.				u1 biased		d1 biased			NAV

End of modified section