ITU - Telecommunication Standardization Sector Temporary Document MC-128R3~~2~~

STUDY GROUP 15 Original: English

Millbrae, CA – 8-12 March 2004

Question: 4/15

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TITLE: G.gen: G.hs: G.vdsl: Proposal for mandatory handshake tones and tone sets for VDSL

ABSTRACT

This paper is intended to reflect the agreements achieved during the G.hs session on Wednesday, March 10, 2004, as modified by the discussions in the G.hs session on Thursday, March 11, 2004 . It is provided for discussion and confirmation of the Q4/15 group.

The R3 version of this paper corrects Note 1 to Table 2, removing the "or B43" text.

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1. Introduction/Discussion:

Contribution MC-128 brought forward discussion material targeted at defining the G.hs tonesets and usage for VDSL.

MC-128R1 was intended to reflect the agreements achieved during the G.hs session on Wednesday, March 10, 2004.

This paper is intended to reflect the agreements of the discussions in the G.hs session on Thursday, March 11, 2004. It is provided for discussion and confirmation of the Q4/15 group.

Section 3 of this document shows "Table 1/G.994.1 – Carrier sets for the 4.3125 kHz signalling family" and "Table 2/G.994.1 – Mandatory carrier sets" with all changes accepted, in order to provide a clear view of what the tables should look like in the standard.

2. Summary:

This paper should be presented in the G.hs session under issue 2.1 of the G.hs issues list (U16). It should also be available for discussion in the G.vdsl session (U11, issue 3.5) in the interest of completing that work.

This paper seeks agreement to the following to answer item 2.1 "What carrier frequencies should be specified to support G.vdsl?" in the G.hs issues list (U16):

1. That the modified "Table 1/G.994.1 – Carrier sets for the 4.3125 kHz signalling family" and "Table 2/G.994.1 – Mandatory carrier sets", shall be adopted in G.994.1.

2. That Q4/15 shall communicate these changes to the IEEE 802.3ah, T1E1 and ETSI TM6 organizations.

3. Proposed Text

Table 1/G.994.1 – Carrier sets for the 4.3125 kHz signalling family

Carrier set designation	Upstream carrier sets		Downstream carrier sets		Transmission mode
	Frequency indices (N)	Maximum power level/carrier (dBm)	Frequency indices (N)	Maximum power level/carrier (dBm)	
A43	9 17 25	–1.65	40 56 64	–3.65	duplex only
A43C (Note 1)	9 17 25	–1.65	257 293 337	–3.65	duplex only
B43	37 45 53	–1.65	72 88 96	–3.65	duplex only
C43	7 9	–1.65	12 14 64	–3.65	duplex only
J43	9 17 25	–1.65	72 88 96	–3.65	duplex only
V43 (Notes 1,2)	944 972 999	-16.65	257 383 511	–3.65	duplex only
V43P (Note 1)	9 17 25	–1.65	257 383 511	–3.65	duplex only
V43I (Note 1)	37 45 53	–1.65	257 383 511	–3.65	duplex only
V43-S (Notes 1,2)	944 999	-16.65	257 383	–3.65	duplex only
V43P-S (Note 1)	17 25	–1.65	257 383	–3.65	duplex only
V43I-S (Note 1)	45 53	–1.65	257 383	–3.65	duplex only

Note 1: In some jurisdictions it may be necessary to limit the maximum downstream power level, for example –23.65 dBm/carrier where the PSD is limited to –60 dBm/Hz.

Note 2: It is expected that the sufficient power back-off is applied to the upstream tones of short lines to avoid excessive crosstalk into adjacent pairs during the handshake.

Table 2/G.994.1 – Mandatory carrier sets

xDSL Recommendation(s)	Carrier set designation
G.992.1 – Annex A, G.992.2 – Annex A/B, G.992.3 – Annex A/I/L, G.992.4 – Annex A/I G.992.5 – Annex A/I	A43
G.992.5 – Annex A/I (Note 1)	A43C
G.992.1 – Annex B, G.992.3 – Annex B G.992.5 – Annex B	B43
G.992.1 – Annex C/H/I, G.992.2 – Annex C	C43
G.992.3 – Annex J/M, G.992.5 – Annex J/M	J43
G.993.1 – Using multi-carrier modulation (except Annex C)	V43
G.993.1 – Annex C using multi-carrier modulation, over POTS	V43P
G.993.1 – Annex C using multi-carrier modulation, over ISDN-BA	V43I
G.993.1 – Using single-carrier modulation, over POTS	V43P-S
G.993.1 – Using single-carrier modulation, over ISDN-BA	V43I-S
G.993.1 – Using single-carrier modulation, over TCM-ISDN	V43-S
Note 1: To be used where spectrum management forbids use of the downstream carrier set A43~~ or B43~~, typically where G.992.5 is deployed from a cabinet.	