T1E1.4
Meeting Report
December 8–11, 1997
Sacramento, California

Chair: *Tom Starr (Ameritech)*
Vice Chair *Massimo Sorbara (GlobeSpan)*
Secretary: *Ken Hohhof (Westell)*

1. OVERVIEW

191 persons attended this T1E1.4 meeting, which was held December 8–11, 1997.

The Working Group considered:

6 Liaisons (from T1S1, TR30.1, TR30.2, ETSI TM6, and ATM Forum)

4 Spectral Compatibility contributions

21 HDSL contributions

43 ADSL contributions

27 VDSL contributions

1 Basic Rate ISDN contribution

1 Proposed Liaison (to TR41)

There were no contributions on ISDN Basic Rate S/T Interface, Baseband Digital Data At 64 Kb/s and Below (DDS), V-Interface, or CSDC Network Interface.

2. BUSINESS

2.1 CALL TO ORDER

The meeting was called to order by the Chair at 8:38 AM on Monday, December 8, 1997. The host, Level One, was thanked for providing facilities for the meeting, and for making copies of the letter ballot comments.

2.2 ANTITRUST NOTICE

The Chair reviewed Committee T1 antitrust policies. WG members were asked to review their contributions and advise the Chair of any material that might be in violation of antitrust guidelines.

2.3 DISTRIBUTION OF CONTRIBUTIONS

The contributions were distributed according to contribution list T1E1.4/97-000R1. Several additional contributions were added to the list at this time and distributed.

3. LIAISONS/MEETING REPORTS

T1A1 Dick Bobilin, Creative Communications, reported that T1A1 met October 27–31 in Austin. T1A1.2 continued its work on Network Survivability. T1A1.3 completed development of a draft standard which provides an Overview and Reference for GSTN Multimedia Terminals. T1A1.7 completed development of a revision of ANSI T1.508 (Loss Plan for the Digital Network). The next T1A1 meeting will be March 16–20 in Boulder, Colorado.

T1M1 Curtis Brownmiller, MCI, reported that T1M1.3 met November 3–7 in Providence, Rhode Island. T1.231 (Physical Layer Performance Monitoring) is completed and should be published by ANSI in January. T1.216 (ISDN Management – Basic Rate Physical Layer) has been revised and gone forward to ANSI for publishing. There are references to T1.216-1991 in T1.601 and T1.605, Dick McDonald took note of this to update the reference when T1.601 is revised. DSL maintenance is an active work item, and T1M1.3 wants to make sure maintenance and operations needs are supported in T1.413, but contributions and/or liaisons are needed. The next major work item is the optical area along with T1X1.

Dick Bobilin, Creative Communications, reported on T1M1.5. T1 LB645 on a draft standard for Lawfully Authorized Electronic Surveillance" closed with 2 NO votes and extensive comments. Comment resolution was begun and will be continued at interim meetings.

The next T1M1 meeting will be February 9–13 in San Diego, California.

T1S1 Dick Bobilin, Creative Communications, reported that T1S1 met November 17–21 in Dallas. A new WG, T1S1.6, was formed to deal with number portability, and plans to meet monthly for the next year to get these requirements out on time. T1S1.1 resolved all comments from default T1 LB623 on the draft Intelligent Network standard, which will be published as T1.667-1998. The next T1S1 meeting will be March 23–27 in Raleigh, North Carolina.

T1E1.4/97-385 (Liaison from T1S1)

Discussion: T1S1 advises T1E1 that they are revising T1.620a-1992 "Multi-Rate Circuit-Mode Bearer Service for ISDN" and invites comments, e.g. regarding our work on Basic Rate ISDN. Dick Bobilin said the main issue is updating references to T1E1.2 documents, e.g. T1.403/408 which are being updated into a family of T1.403 document.

Resolution: No one was aware of any reference updates, so no action was necessary.

T1X1 Dick Bobilin, Creative Communications, reported that T1X1 met October 14–17 in Naperville, Illinois. T1X1.3 is concentrating its efforts on Iss. 3 text for T1.101, Synchronization Interfaces. T1X1.5 resolved comments including one NO vote on T1 LB635 for Iss. 3 of T1.105.01 (SONET Automatic Protection Switching), which will require a default letter ballot. T1X1.5 also resolved comments on revision of T1.119.02 (SONET OAM&P Communications – Performance Management Fragment). The one NO vote is likely to be changed on the default letter ballot. T1 LB634 on the Supplement to ANSI T1.105.07-1996 (SONET - Sub STS-1 Interface Rates and Formats Specification) closed on September 10, 1997 without NO vote or comment, and will be published as T1.105.07a-1997. This standard includes n×VT Group interfaces. T1X1 is getting heavily into optical networking. The next meeting of T1X1 will be January 13–16 in Orlando, Florida.

TR30 Les Brown, Motorola, reported that there was a breakthrough at the recent ITU Q16/SG23 Rapporteur's Group meeting that should result in a V.pcm recommendation in January. Les then presented the following liaisons:

T1E1.4/97-430 (Aspects of xDSL Specifications which may affect V-Series Modems – TR30.1)

Discussion: The changes made to the ADSL psd mask will meet the needs of V.pcm modems. TR30.1 reviewed the specs in Annex I, and while the attenuation and delay distortion specs are fine, they have concerns about the noise and distortion specs in section I.2.1.5 – the most troubling are the 42 dB Signal-to-C-notched-noise ratio spec. TR30.1 believes this spec should be consistent with the +15dBrn psd spec in the 0-4 kHz band, while recognizing that Annex I is informative, not normative.

Resolution: Will be considered as part of LB resolution at interim meeting

T1E1.4/97-461 (Liaison to T1E1.4 regarding work starting in TIA TR-30.2)

Discussion: TR30.2 has recently started a new project PN-4149 "Study of DTE/DCE Interfaces for xDSL modems". Past examples of this type of protocol are AT commands and V.8 inband commands.

Resolution: The work in TR30.2 was noted, no action was needed.

TR41 Donovan Nak, NEC, reported that TR41.8.1 has tentatively selected a fiber optic connector. Donovan was not at the TR41.9 meeting but his understanding was that they approved FCC part 68 limits for ADSL.

ITU-T Dick Stuart, 3Com, reported that Q4 of SG15 met October 27–29 in Red Bank, New Jersey. The number of IP announcements is up to 8. G.adsl won't be a pointer reference to T1.413 because ITU doesn't allow this, but no work is going forward on G.adsl anyway. It had been hoped to point G.hdsl to an ETSI document but no text has been made available. Work is going forward on G.dmt with good progress. T1.413 Iss. 2 text will be attached to Dick's Rapporteur's report as working text – this doesn't mean it has been agreed. G.hs will follow the same concept as V.8 for voiceband modems, Les Brown is the editor. G.test will provide for a uniform way of testing DSLs. A new G.oam was started, and an editor was assigned. It will make provisions for an eoc to transport operations and maintenance information. There was much interest and support for G.lite. The draft CAP/QAM document was made available for information only, the group is waiting to see what comes out of the letter ballot process to see if it should be progressed. The group discussed and reaffirmed the ITU direction to "divide and conquer", i.e. write separate recommendations for different layers. The next meeting is a full SG15 meeting February 9–20 in Geneva, Switzerland (note – you must be an ITU member to attend). After that, the next full SG15 meeting is October 12–23 in Geneva.

Hans Frizlen asked if G.dmt will be based on Iss. 1 or 2 of T1.413 – Dick said the intent is Iss. 1, which is the current working text, although he noted that ITU is contribution driven. There was a discussion of how to contribute to ITU – company contributions direct to US Study Group B for submission to ITU, or bring to T1E1.4 and drive toward a T1E1 submission to US Study Group B for a US country position at ITU. The conclusion was that T1E1 is the technical advisory group that US Study Group B looks to as the preferred path for US positions on DSL standards. The next Study Group B meeting is January 23 in Boulder, Colorado. Les Brown added that G.hs would be modulation, not tone, based, and G.dmt would use G.hs, so the tone-based front end negotiation would be removed from T1.413 if indeed G.dmt is based on T1.413. It has been agreed that there will be an "escape mechanism" to support interoperation with T1.413. There is some debate about where to place ADSL in the spectrum, e.g. some countries want ADSL over ISDN.

ETSI Hans-Jörg Frizlen, Ericsson, reported that ETSI TM6 had two meetings since the last T1E1 meeting – one in Lannion, France September 30 through October 3, and one in Verona, Italy November 17–21. TM6 has four work items: ISDN basic rate, HDSL, ADSL and VDSL.

Basic Rate ISDN (only at the Verona meeting):

The living list for the possible revision of ETR 80 was updated, and a number of points were either resolved or deleted (a copy of the living list was provided to Dick McDonald). One major point was brought up – when the psd mask was developed, it stopped at 500 kHz because no one expected higher speed xDSL systems in the local network. A new study point was added to extend the psd mask for 2B1Q and 4B3T transmitters up to 30 MHz to protect xDSL systems from ISDN-BA, and there was Provisional Agreement on the psd mask. The question whether to go forward with a revision (version 3) of ETR 80 will be decided at the next meeting.

HDSL:

ETR 152 covers 1, 2 and 3 pair HDSL systems using 2B1Q modulation, with an informative CAP annex. The text was upgraded into the format for the new ETSI Technical Specification (ETS) deliverable. After discussion a major change was made – it was decided to make both 2B1Q (1, 2 or 3 pairs at 2320, 1168 or

784 kb/s) and CAP (1 or 2 pairs) normative in the ETS. TM6 is monitoring the decisions made in T1E1.4 on HDSL2, and has an inactive project for rate adaptive HDSL.

ADSL:

After discussion at two meetings, a request to immediately start work on a detailed ADSL spec was not accepted. TM6 decided to wait for finalization of T1.413 Iss. 2 and possibly the CAP/QAM standard. When T1E1.4 has completed the letter ballot process, then TM6 will decide whether to write a delta document or a complete spec, based on the T1 standard with necessary European additions.

T1E1.4/97-433 (Liaison from ETSI TM6)

Discussion: T1E1.4 is asked to reconsider the ADSL psd mask spilling into VDSL as part of the T1.413 Iss. 2 letter ballot resolution process. There are some concerns about G.lite from the European point of view – Europe doesn't always have metallic lines available in the access network, they have tax and metering pulses in the range 12–16 kHz, and they have a problem with impedance change when POTS goes off hook and there is no POTS splitter. TM6 is not planning to submit a formal liaison to SG15. A VDSL report is included for information. Progress and near agreement was accomplished on noise models, payload rates and test loops. TM6 hopes that T1E1.4 can use much of the Part 1 VDSL ETS document.

Les Brown asked if metering pulses didn't affect G.dmt as well as G.Lite? Hans said this was recognized as an issue for G.dmt as well, but in this case there is a POTS splitter which can have requirements placed on it to keep the metering pulses out. If you have a splitterless system, the metering pulses go straight into the ADSL system, so the problem is much more severe.

Resolution: Will be addressed as part of letter ballot resolution at the January interim meeting.

VDSL:

The Draft TS Part 1 covering system and network requirements, noise environment, the amateur radio issue, and all those points that are independent of the electrical solution and which are mostly coming from the network operators is about 40 pages, and is due to be finalized and accepted at the TM6 level at the next meeting in Madrid the end of January. The rules for an ETS do not require that it go to public inquiry, so it is possible that Part 1 may be published in spring of 1998. After this TM6 will start on Part 2 which will contain electrical and transmission requirements. TM6 originally had the idea that T1E1.4 had made a lot of progress on VDSL that TM6 could take over, but this is not the case, and T1E1.4 has the two ADSL letter ballots to deal with. In any case, TM6 work will be done in cooperation with T1E1.4, and there will not be different solutions between the two groups if it can be avoided.

Hans will be retiring from Ericsson at the end of December 1997. He will continue as chair of TM6 under ETSI sponsorship for the next 1 or 2 years. Official liaison from TM6 to T1E1.4 will be maintained by Jan Boström of Ericsson.

Future meetings:

January 26–30, 1998	Madrid, Spain
April 20–24	Antwerp, Belgium
June 22–26	Luleå, Sweden
September 21–25	Wien, Austria
February 22–26, 1999	tbd
May 3–7	tbd
September 13–17	tbd
November 29–December 3	tbd

The Chair and the WG thanked Hans for his many years of liaison to T1E1.4 and his efforts toward the close working relationship between TM6 and T1E1.4.

IEEE 802.14 No report at this meeting.

ADSL Forum Frank Van der Putten, Alcatel, reported that ADSL Forum met December 3–5 in San Francisco. There were no liaisons. 5 documents went to letter ballot including the ADSL line MIB (line code independent), CPE interfaces and configurations, and packet mode. Work started on CO interfaces and configurations. There was a round table on splitterless ADSL, and it was decided to form a task force to continue discussion. Work started on test suites for interoperability, and on ATM layer configuration considering dual latency and rate adaptation. The next meeting is March 31 to April 2 in Tel Aviv.

ATM Forum Subra Ambati, Lucent-ACGS, reported that the RBB group reviewed new proposals from Nortel et al, and sent a liaison on PPP over ATM to ADSL Forum.

T1E1.4/97-386 (Liaison from ATM Forum dated September 5)

Discussion: This liaison was addressed to ADSL Forum with a copy to T1E1. ADSL Forum is requested to reconsider fixed allocation between fast and interleaved channels at startup, and consider non-service affecting dynamic reallocation. Information is requested for the September 22, 1997 joint meeting in Paris. Concerns are raised about the practicality of fixed delay in the event of DRA because of the granularity of the interleaver depth.

Resolution: For information only.

T1E1.4/97-387 (Liaison from ATM Forum dated October 31)

Discussion: This liaison responds to our liaison T1E1/97-029, and agrees to study the effects of data loss on ATM. Tom Starr noted that as we get further into DRA and rate repartitioning, we should keep ATM Forum informed. Alan Weissberger noted the importance of characterizing the maximum time for DRA and rate repartitioning to be completed, asks why T1E1.4 doesn't want to address. Frank Van der Putten thought the question was the time until the ATM layer is informed, and in fact we do better than this because, according to the DRA Annex, we inform the ATM layer ahead of time (Alan disagreed with this view). Frank also noted the Annex is still informative and people are still working on DRA, so the information to quantify these delays is not available yet.

Resolution: For information only.

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