ETSI WG TM6
(ACCESS TRANSMISSION SYSTEMS ON METALLIC CABLES)

Permanent Document

TM6(99)08

Revision 5

Living List for updating TR 101 830-1 Spectral Management

This document is the living list of current issues connected with the updating of ETSI's spectral management report TR 101 830-1, which is dedicated to "Part 1" issues. The latest version (v1.2.1) has officially been published on august 28th 2001, by ETSI.

The Rapporteur proposes to extend the work (by opening a new work item) for including full signal descriptions for VDSL and ADSL-FDD (both "over POTS" and "over ISDN"). Possible target is to achieve working group approval by the end of the ETSI-TM6 meeting in (may 2002). This means that the second update of the SpM report can be published by ETSI during summer 2002. Issues that are (still) unsolved by that time, may be scheduled for a succeeding update.

The issues labeled as "Part 2" form an informal living list containing items for further study, either as a revision of part 1 or as a potential new part 2 work item. This has not been decided yet by ETSI-TM6. The Rapporteur will poll this every ETSI-TM6 meeting, to inquire if such a decision is required/desired.

Rapporteur/Editor

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1. STUDY POINTS PART 1

SP	Title	Owner	Status
1-1	Complete signal description for ADSL FDD over POTS	Peter Reusens	Under Study
1-2	Complete signal description for ADSL FDD over ISDN	Peter Reusens	Under Study
1-3	*Complete signal description for ISDN-PRA*	Marco Loeffelholz DTAG	Deleted
1-4	*Improvement of scope and legal status of report*	George Eisler	Deleted
1-5	*Review of peak amplitudes of all signals in the library*	Bill Pechey - Paradyne	Deleted
1-6	*Complete signal description for SDSL*	Ragnar Jonsson - Conexant	Agreed
1-7	Review of power feeding issues	Rasmus Trevland - NPTA	Under Study
1-8			
1-9			
1-10			
1-11			
1-12			
1-13			
1-14			
1-15			
1-16			
1-17			
1-18			
1-19			

2. STUDY POINTS POSSIBLE PART 2 (SCOPE NOT YET DEFINED)

SP	Title	Owner	Status
2-1	Spectral management rules for non-stationary signals.	Rami Verbin (Tioga)	under study
2-2	Limits for noise that may leak into the local loop wiring	Rob Kirkby (BT)	under study
2-3	Scope, Objective and Table of Contents	Rob Kirkby & Kevin Foster	under study
2-4	Wetting Current requirements	BT	under study
2-5	Interworking issues in case of linesharing	Rob van den Brink (KPN)	under study
2-6			
2-7			
2-8			
2-9			

The current agreed procedure for changing the status of living list items is in Annex A of TM6 working methods.

Part 1 study points

SP 1-1.   Complete signal description for ADSL FDD over POTS
The ADSL standard is dedicated to echo cancelled systems, using signals with frequency overlap. FDD versions of ADLS, with no frequency overlap, do exist as proprietary systems, but are not (yet) covered by ETSI standards. As a result a signal description for Spectral Management purposes is lacking.
This study point is dedicated to define the description of a signal category for FDD versions of ADSL over POTS, that follows the ETSI standard that is being prepared for FDD versions of ADSL.
Status: Under study (this issue has to be solved by the ADSL standard first)

SP 1-2.   Complete signal description for ADSL FDD over ISDN
Similar to study point 1-1, but dedicated to ADSL-FDD over ISDN.
Status: Under study (this issue has to be solved by the ADSL standard first)

SP 1-3.   Complete signal description for ISDN PRA.
Status: Deleted

SP 1-4.   Improvement of scope and legal status of report.
Status: Deleted

SP 1-5.   Review of peak amplitudes of all signals in the library
Status: Deleted

SP 1-6.   Complete signal description for SDSL
Status: Agreed

SP 1-7.   Review of power feeding issues
This study point is dedicated to improve some inconsistenties and ambiguities on the Power Feeding clauses. The current numbers are system dependent, while the power feeding issue is more related to (system independent) safety requirement.
The update of TR 101 830-1 (v1.2.1) has made this visible, by dedicating class "A" and "B" power feeding to (system independent) safety requirement, and by dedicating class "X" and "Y" to system dependent implementations. When the descriptions of class "A" and "B" have been completed, these classes "X" and "Y" may become obsolete. Contributions are invited.
Status: Under study
Related Contributions:
- *TD20, Monterey 2000 - Modification of information on Feeding Power - NPTA*
- *TD13, Sophia 2001 - Modification of information on Feeding Power - NPTA*

Part 2 study points

SP 2-1.   Spectral management rules for non-stationary signals.
It was observed that the combined impairment from modems that are rapidly switching on and off over a period of time is much more destructive to ADSL then when these modems are continuously transmitting their signals. This is identified as "non stationairy noise". The effect of non-stationairy transmission in general on ADSL modems has not been fully understood. Is it a performance issue, related to the way a victim xDSL modem is implemented, or is it a spectral management issue that requires a way to bound the amount of non-stationairy behaviour of signals that are injected into the Local Loop Wiring.
This study point is dedicated to the analysis of the impact of non-stationary cross talkers on legacy systems, and to find a way to <u>bound</u> the amount of non stationary noise.
Status: Under study
Related Contributions:

- *TD25, TD26,TD35,TD53, Montreux 2000 - Alcatel*
- *TD24, Helsinki 2000, Impact of non-stationary crosstalk on legacy ADSL modems - Orckit*
- *TD52, Vienna - Alcatel*
- *TD53, Vienna 2000, Stationarity requirements for spectral compatibility - Tioga*

SP 2-2.   Limits for noise that may leak into the local loop wiring

The signal library of the Spectral Management report Part 1 is intended to be refered to when transmitting signals through unbundled access networks. This scope is restricted to transmission through the local loop wiring, and does not cover signals that leak by accident into the loocal loop wiring from one end side . This may occur for signals that flow through in house networks, such as home PNA systems, that are not isolated in a proper way from the LLW (e.g. by means of low-pass filters). This study point is dedicated to defining proper limits for the amount of signals that my leak into the LLW to prevent impairment of xDSL systems that make use of the LLW. It also addresses how to measure it.

Status: Under study
Related Contributions:
- *TD40, Helsinki 2000, Consideration if ITU-T G.pnt.f in ETSI Spectral Management Plan*
- *TD 16, Sophia 2001, To measure noise leaking into the local loop - BT*

SP 2-3.   Scope, objectives and Table of contents

There is a common feeling that a "Part 2" document is required in near future. To open a work item on this topic, there shall be a clear view on its scope, its objectives and its TOC. This studypoint is dedicated to define this. TD17 (Sophia) proposed some initial text

Status: Under study
Related Contributions:
- *WD04, Monterey 2000 - Text proposal for Scope of SpM part 2 - BT*
- *TD 17, Sophia 2001, To measure noise leaking into the local loop - BT*

SP 2-4.   Wetting current

Loop unbundling can bring a situation that wires are used by xDSL systems only, without any remote power feeding or ringing current. Some splices can degenerate from this lack of dc-current due to oxidation. If true, a wetting current requirement can prevent this. If only true for a limited number of cables this "requirement" cannot be mandatory. This issue is for further study, since we are dealing with expertise from the past, that is currently not available within ETSI-TM6, and might even have been lost.

Status: Under study
Related Contributions:
- *TD10, Sophia 2001 - BR requirements for SDSL Wetting Current - BT*

SP 2-5.   Interworking issues in case of linesharing

While deploying ADSL in combination with ISDN, sometimes malfunctioning ISDN modems have been reported. Replacement of that ISDN modem may solve the problem, but it is currently unclear if this malfunctioning is restricted to "first-generation" ISDN products or improper splitter requirements. This observation may have some impact on how to deal with this practice in case of linesharing. The purpose of this studypoint is to collect information from the operational practice of linesharing, in order to learn if splitter requirements have to be refined, of dedicated Spectral management rules are to be developed.

Status: Under study
Related Contributions:
- *TD45, Gent 2001 - Problems with ISDN after inserting ADSL splitters - KPN*
- *TD31, Gent 2001 - Influence from ADSL into ISDN in several rare states - DTAG*