| TITLE | **SpM-1 & SpM-2 meeting report.** | | |
|---|---|---|---|

PROJECTS    SpM-1 & SpM-2

SOURCE:    Rapporteur

AUTHOR:    Rob van den Brink (TNO)

CONTACT:    Rob F. M. van den Brink,    tel    +31.15.2857059
TNO Telecom    fax:    +31.15.2857354
PO Box 5050    e-mail:    R.F.M.vandenBrink@telecom.tno.nl
2600 GB  Delft
The Netherlands

STATUS    for inclusion in the TM6 meeting report

**4.8 Spectral Management (TR 101 830)**

**4.8.1 TM-06042 Spectral Management (TR 101 830-1 Part 1: Definitions and Signal Library)**
The work item TM-06042, to revise part 1 by adding new signal descriptions, was opened in the meeting of February 2005 (TM6-37)

**4.8.1.1 Work Plan**
The Rapporteur, Rob van den Brink, chaired this session and presented his work plan in WD03r1.
- TD18    Signal descriptions of various ADSL2+ variants - KPN,TNO
- TD17    "Same pair" POTS noises: to be referenced by SpM? - LEA
There were no objections raised against this work plan.

**4.8.1.2 Contributions**
TD18 (KPN,TNO) proposes literal text for adding 10 signal descriptions to the SpM-1 document, that enable a correct specification for national access rule for various ADSL2plus variants. These signal descriptions are designed to suit signals generated by ADSL2plus products that are compliant with the associated ITU standard. A new studypoint (SP1-4) was created.

TD17 proposes to include a reference to AT-A documents dealing with POTS disturbances. It was decided that this could be an SpM-2 issue, but does not fit in the scope of SpM-2

**4.8.1.3 Status of Living List for Spectral Management part 1**
A first living list was uploaded before the meeting under a temporary filename TM-06042-LL-a01, and reviewed during the meeting. Permanent document xxxxxxx is allocated for the working draft of the deliverable. The table below summarizes the status of the Study Points for this Work item.

| SP | Title | Owner/Champion | Status |
|---|---|---|---|
| 1-1 | Alignment of definitions and terminology as adopted in SpM-2 and SpM-3 | Rapporteur | PA (TM6-38) |
| 1-2 | Refinement of references in text on "DC Power feeding" | Rapporteur | PA (TM6-38) |
| 1-3 | Signal descriptions for enhanced SDSL | Infineon (Bernd Heise) | PA (TM6-38) |
| The following new study points were created at this meeting (TM6-38): | | | |
| 1-4 | Signal descriptions for various variants of ADSL2plus | KPN/TNO (Rob van den Brink) | US (TM6-38) |

(**PA** - Provisionally Agreed; **PD** - Provisionally Deleted; **US** – Under Study.

The meeting number indicates the meeting at which the study item was created or the status last changed or confirmed.)

### 4.8.1.4 Status of Draft deliverable for Spectral Management part 1
A first draft with these revisions was not created yet.

### 4.8.2 TM-06030 Spectral Management part 2
  **(TR 101 830-2 Technical methods for performance evaluations)**

### 4.8.2.1 Work Plan
The Rapporteur, Rob van den Brink, chaired this session and presented his work plan in WD03r1.

*<Chapter 4: transmitter models>*
TD26 Proposal for transmitter signal model for HDSL.CAP/1 - SwissCom
TD35 Proposed text for transmitter model for VDSL - Alcatel
TD36 Out of band values for ADSL template - Alcatel
TD17 "Same pair" POTS noises: to be referenced by SpM? - LEA
TD22 Extended Line-Shared Signal Models for ISDN - DTAG
*<Chapter 7: Transmission/reflection models>*
TD43 Cable model for SpM-2 - DTAG
*<Chapter 8: Crosstalk/Topology models>*
TD06 Generic crosstalk model for one node / multi-node co-location - Czech Telcom
TD07 Crosstalk model based on distribution of crosstalk couplings - Czech Telcom

There were no objections raised against this work plan.

### 4.8.2.2 Contributions
TD26 provides numbers to include a PSD template dedicated to one-pair HDSL.CAP. This proposal was agreed for inclusion in the draft.

TD35 Proposes some additional text on the PSD templates of VDSL1, to warn against simplified assumptions in some of the PSD template of VDSL. The assumption of a common ceiling value, to keep the total power under the allowed aggregate power limit, will not be representative for several VDSL implementations. It was agreed to add a warning note, as drafted during the meeting by the Rapporteur in an update of the living list, and to incorporate the templates that were left for further, as specified in the published VDSL1 standard.

In TD36, PSD measurements were presented of ADSL equipment from Alcatel. It was observed that these results were not conflicting with the provisionally agreed PSD templates for ADSL, and this contribution was accepted for information.

TD17 proposes to include a reference to AT-A documents dealing with POTS disturbances. It was decided to create a new studypoint for inclusion in a future revision of SpM-2

TD22 proposes additional PSD templates to model for instance crosstalk being caused by ISDN that is filtered by splitters (e.g. for ADSL). It was agreed to include the numbers of this proposal into the draft, as drafted during the meeting by the Rapporteur in an update of the Living list.

TD43 proposes to add references to cable models specified in the VDSL standard. This was agreed from the floor, and a text proposal was drafted during the meeting by the Rapporteur in an update of the Living list.

TD06 and TD07 proposes views for extending the existing crosstalk models. After some discussion it was decided to keep this under study, and to move it to the living list of a future revision of SpM-2.

### 4.8.2.3 Status of Living List for Spectral Management part 2
The Living List, Permanent Document m01p21a13, was reviewed during the meeting, and m01p21a14 was created and uploaded during the meeting to reflect all agreements made in this meeting. The table below summarizes the status of the Study Points for this Work item.

| SP | Title | Owner/Champion | Status |
|---|---|---|---|
| 2-1 | Spectral management rules for non-stationary signals. (Will be re-opened if contributions are brought) | Tioga (Reuven Franco) | Deleted (TM6-26) |
| 2-2 | Basic model of receiver input block | Conexant (Ragnar Jonsson) | AGREED (TM6-28) |
| 2-3 | Basic model of 2-node cross-talk | KPN/TNO (Rob van den Brink) | AGREED (TM6-28) |
| 2-4 | Generic detection models | KPN/TNO (Rob van den Brink) | AGREED (TM6-29) |
| 2-5 | Transmitter / disturber models (ADSL) | TI Labs (Rosaria Persico) | SPLIT (TM6-33) |
| 2-5.1 | Downstream ADSL PSD template without slope at 1.1 MHz | TI Labs (Rosaria Persico) | AGREED (TM6-33) |
| 2-5.2 | Downstream slope of ADSL PSD template at 1.1 MHz | TI Labs (Rosaria Persico) | AGREED (TM6-38) |
| 2-6 | Transmitter / disturber models (SDSL) | KPN/TNO (Rob van den Brink) | AGREED (TM6-28) |
| 2-7 | Transmitter / disturber models (HDSL-CAP ) | KPN/TNO (Rob van den Brink) | AGREED (TM6-28) |
| 2-8 | Transmitter / disturber models (HDSL-2B1Q ) | KPN/TNO (Rob van den Brink) | AGREED (TM6-32) |
| 2-9 | Performance model for ETSI compliant SDSL | Adtran (Marc Kimpe) | AGREED (TM6-30) |
| 2-10 | Performance model for ETSI compliant HDSL-CAP | KPN/TNO (Rob van den Brink) | AGREED (TM6-30) |
| 2-11 | Transmitter / disturber models ISDN-2B1Q | KPN/TNO (Rob van den Brink) | AGREED (TM6-30) |
| 2-12 | Implementation loss for PAM QAM and DMT systems | Conexant (Ragnar Jonsson) | Deleted (TM6-33) |
| 2-13 | Method / model for Crosstalk Cumulative Distributions | Paradyne (Jack Douglass) | Deleted (TM6-33) |
| 2-14 | Method / model for multiple Impairment Combinations | Paradyne (Jack Douglass) | Deleted (TM6-33) |
| 2-15 | Method / model Cumulative Distributions and Occurrence | Paradyne (Jack Douglass) | Deleted (TM6-33) |
| 2-16 | Method / model Network Model Coverage scores | Paradyne (Jack Douglass) | Deleted (TM6-33) |
| 2-17 | Transmitter / disturber models ISDN-MMS43 (4B3T) | T-Systems Nova (Marko Löffelholz) | AGREED (TM6-37) |
| 2-18 | Detection Model for DMT | FTW (Tomas Nordström) | AGREED (TM6-33) |
| 2-19 | Performance Models for Echo Cancelled ADSL | Connexant (Ragnar Jonsson) | AGREED (TM6-34) |
| 2-20 | Disturber Model for Line shared Noise (ISDN) | T-Systems Nova (Marko Löffelholz) | AGREED (TM6-37) |
| 2-21 | Collection of PSD Measurements | TeliaSonera (Marcus Jonsson) | US (TM6-30) |
| 2-22 | Improving the validity of receiver performance models | FTW (Tomas Nordström) | Deleted (TM6-38) |
| 2-23 | Performance model for ETSI compliant ADSL.FDD / POTS | Texas Instruments (Krista Jacobsen) | SP36 (TM6-35) |
| 2-23.1 | Performance model for ETSI compliant ADSL.FDD / POTS without bit-loading | | SP36 (TM6-35) |
| 2-23.2 | Values for minimum and maximum bit-loading | KPN/TNO (Rob van den Brink) | SP36 (TM6-35) |
| 2-24 | Performance model for ETSI compliant ADSL.FDD / ISDN | ALC (Sigurd Schelstraete) | SP36 (TM6-35) |
| 2-24.1 | Performance model for ETSI compliant ADSL.FDD / ISDN without bit-loading | | SP36 (TM6-35) |
| 2-24.2 | Values for minimum and maximum bit-loading | KPN/TNO (Rob van den Brink) | SP36 (TM6-35) |
| 2-25 | Performance model for ADSL2 and ADSL2+ | Alcatel (Laurent Cuvelier) | MOVED (TM6-38) |
| 2-26 | Modeling side lobe pick-up in DMT receivers | Alcatel (Laurent Cuvelier) | MOVED (TM6-38) |
| 2-27 | Additions to the scope of SpM-2 | Adtran (Angus Carrick) | AGREED (TM6-33) |
| 2-28 | Text for how to simulate power back-off | FTW (Tomas Nordström) | AGREED (TM6-34) |
| 2-29 | Transmitter disturber model for ADSL2, Annex J/M | Ericsson (Robert Baldemair) | AGREED (TM6-37) |
| 2-30 | Text for a more advanced description of bit-loading modeling | FTW (Tomas Nordström) | MOVED (TM6-38) |
| 2-31 | Out of band values of ISDN.2B1Q | Infineon (Bernd Heise) | Deleted (TM6-38) |
| 2-32 | Out of band template for SDSL | Infineon (Michael Horvat) | AGREED (TM6-38) |
| 2-33 | VDSL templates based on ETSI standards | Alcatel (Danny Van Bruyssel) | SPLIT (TM6-36) |
| 2-33.1 | VDSL1 templates based on ETSI standards, whose integral does not exceed the total aggregate power constraint | Alcatel (Denny Van Bruyssel) | AGREED (TM6-38) |
| 2-33.2 | VDSL1 templates based on ETSI standards, whose integral exceed the total aggregate power constraint | Alcatel (Denny Van Bruyssel) | AGREED (TM6-38) |
| 2-34 | ADSL out of band template (keep current values) | Alcatel (Danny Van Bruyssel) | Deleted (TM6-38) |
| 2-35 | Out of band values for HDSL.CAP/2 | Schmid Telecom (Marc Laeser) | AGREED (TM6-38) |
| 2-36 | ADSL.FDD performance model (over POTS & ISDN) | Conexant (Ragnar Jonsson) | AGREED (TM6-38) |
| 2-37 | Performance model for HDSL.2B1Q | Swisscom (Andreas Thöny) | AGREED (TM6-38) |
| 2-38 | Collecting public available cable models | DTAG (Marko Löffelholz) | AGREED (TM6-38) |
| 2-39 | Restructuring Clause 5 | Telecom Italia (Rosaria Persico) | Deleted (TM6-38) |
| 2-40 | Text for sub-clauses 8.1 to 8.3 | Telecom Italia (Rosaria Persico) | Deleted (TM6-38) |
| 2-41 | Compiling available text for sub-clauses on multi node Xtalk | Infineon (Michael Horvat) | SP44 (TM6-38) |
| 2-42 | Describing the scenarios (without calculation results) identified within NESP | Swisscom (Andreas Thöny) | AGREED (TM6-38) |
| 2-43 | Revising scope, or inclusion of chapter dedicated to measurements | DTAG (Marko Löffelholz) | Deleted (TM6-38) |
| 2-44 | Calculation methods for distributed cable tree topologies | Czech Telecom (Milan Meninger) | MOVED (TM6-38) |

The following new study points were created at this meeting for a future revision:

2-45    Transmitter/disturber model for POTS signals                LEA (Peter Reusens)                **US (TM6-38)**

(**PA** - Provisionally Agreed; **PD** - Provisionally Deleted; **US** – Under Study. **MOVED** – Moved to new living list for future revision
The meeting number indicates the meeting at which the study item was created or the status last changed or confirmed.)

### 4.8.2.4 Status of Draft Deliverable

The latest draft was uploaded before the meeting as m01p20a10.pdf. Version m01p20a11.pdf was created and uploaded during the meeting, reflecting all agreements made in this meeting. TM6 declared "working group approved" of this document. After some editorial correction by the Rapporteur, it will be send out for AbC