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JOINT RESEARCH CENTRE
Institute for the Energy and Transport
Renewable and Energy Efficiency Unit

Ispra, 17 July 2015
RE/PB /pb/

Subject: Minutes of the Meeting of the working group on Energy Consumption of Broadband Communication Equipment and Networks, 15 and 16 June 2015, JRC Ispra

Present: see attached list

Presentations will be available at the JRC website:
http://re.jrc.ec.europa.eu/energyefficiency/html/standby_initiative.htm

1. Opening, welcome, status of the Code of Conduct

Mr. Bertoldi (European Commission DG JRC) opened the meeting and welcomed the meeting participants. The participants introduced themselves. On the agenda were the following items: the analysis of the 2014 reports and the preparation of version 6. It is aimed that Version 6 will be valid from 1 January 2017.

2. Annual report 2014

Mr. Bertoldi thanked the companies that provided data: British Telecom, Nokia, Alcatel Lucent, OTE, KPN, Cisco, Belgacom, Telecom Italia, Telecom Portugal, Huawei, Telia Sonera. Since some of the reports only arrived at the last moment before the meeting, there was no presentation on the results 2014.

Telefonica, Orange (was: France Telecom), TDC, Swiss Telecom, Deutsche Telekom, Technicolor, Telenor and ZTE 2014 annual reports are missing. Telefonica was also missing for 2013.

Mr Bertoldi will send out a reminder to provide results by end of July; if no data is received by then, the participant is considered to be non-compliant. Analysis of 2014 report will be sent to the participants by end of September 2015.

3. Report for 2015

Mr. Bertoldi informed that 2015 data will have to be provided by end March 2016.

4. Discussion on the future of the Code of Conduct

4.1 Developments at ETSI

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CEN/CENELEC/ETSI received the mandate M/462 in the field of ICT to enable efficient energy use in fixed and mobile information and communication networks. Under this mandate ETSI TC-ATTM and TC-EE are developing standards for energy efficiency measurement methods and KPIs. ETSI TC-ATTM and TC-EE have also considered to publish standards (ES) with power consumption values of ICT equipment, including broadband equipment. At the present ETSI TC-ATTM has already started a Work Item to publish a Technical Report with the power values of ICT equipment.

CEN/CENELEC/ETSI are preparing a report that lists the current initiatives. The standards to be published under this mandate should be published by the end of 2017. As the Code of conduct version 6 should be available by the end of 2016, the comment made on this is on how the ETSI standard(s) will match with the CoC v6 and how the values in the ETSI standard(s) will be periodically revised. The opinion of the JRC chairman is that Code of Conduct could be more ambitious than the basic requirements in the ETSI document.

Mr. Bertoldi will clarify with ETSI (through colleagues at DG GROW in Brussels) on the relation between the Code of Conduct and the ETSI work. Also signatories of the Code of Conduct are asked to check internally.

4.2 Presentation of analysis of 2013 data; additional analysis

Prof. Bolla presented the analysis of 2013 reports including additional contributions received after the last meeting (October 2014). In the version that will be distributed the following will be taken into account:

- number of models per graph
- no old equipment will be presented
- for CPE, breakdown according to technology
- number of models per technology
- presenting 2013 (and 2014 when data available) data against Version 5, Tier 1 and Tier 2

It was also suggested to rank vendors and operators according to the results, but this was not supported by everybody.

Some products do not have enough data to present the results split by technology, e.g. OLT and Wireless. Also some of the technologies are no further developed. This would call for a prioritisation for which technologies or product targets should be further developed in the next version.

Data should be only reported for new equipment, but with an indication with the share of their sales and purchases this new equipment has in the total. The data sheet should make clear how to report backup equipment maybe as a separate guidance document; this will be dealt with in a separate discussion by conference call. The data sheet will be updated to collect this information. Data from operators mostly also include old equipment, thus in general showing lower “compliance” rates.

Conclusions

- CPE
    - On State: version 4: all products comply, version 5: 85 % already complies.

    - Idle State: version 4: 85 % comply, version 5: 55 % already complies.
- Broadband DSL Network Equipment:
    - Devices that have both ADSL and VDSL functionality have larger standby values; the standby refers to ADSL because standby is not defined for VDSL (idle is used as a proxy).
    - ADSL is a fallback option. Compliance for ADSL is low (around 50 %), compliance for VDSL is 80 %.
    - Standby might not be relevant for some broadband equipment (from the operator view).
- Broadband OLT Network Equipment:
    - Without old equipment: 83 % comply.
    - Point to Point equipment: only 20 % comply.
- Broadband wireless:
    - Medium load state has lowest compliance rates.

4.3 Suggestions for version 6

Presentation from Mr. Lejeune (Broadcom). Chipmakers have made progress in the last 6 years towards lower power consumption in on and idle mode, based on available technology. To achieve further reductions, new ideas are needed and standards need to change. So, influencing standards becomes more important.

The following suggestions were made for version 6 of the Code of Conduct were discussed.

- To make separate CoC documents for CPE and network equipment: this was not supported because maintaining one document is easier than two and vendors procure both types of products.
- To include the Code of Conduct for Complex Set Top Boxes (CSTB): only to be considered for those CSTB that are home gateways and to be discussed by the participants of the CSTB Code of Conduct.
- New items to be included in the revision: network equipment for mobile networks, G.fast, differentiation between high end and low end products (e.g. based on application processor and network processor); see further suggestions in presentations.
- Exclude or freeze technology that is not developed any longer, e.g. ADSL, or is never used.
- Duty cycle approach with Total Energy Consumption (TEC) as target: not generally supported.
- Measure power consumption at various performance levels, e.g. full load (100%), 50%, 30%, 10% and idle (0%) and possibly set targets to stimulate the proportionality principle.
- Regarding timing: version 6 will have two tiers: 2017-2018 and 2019-2020. There was agreement on this.

The following suggestions for version 6 of the Code of Conduct at the network side were discussed:

1. Content restructuring in v6:
    - Remove ADSL2 from all tables
    - Remove ADSL2 fall back from VDSL2
    - Remove combined DSL/narrowband (MSAN POTS) section

2. Add VDSL2 35MHz for 2017-2018
3. Define G.fast test methodology as the baseline for the definition of 2017- 2018 power numbers
4. Add G.fast w/o RPF for 2017-2018
5. Add G.fast w RPF for 2018
6. Add G.fast 212MHz as TBD for 2019-2020

It was decided to create two working groups, one on CPE and one on network equipment. The WGs would work through conference calls in order to agree on the proposed values for V6 Tier 1 and Tier 2. Proposal by WGs will have to be ready for a final discussion by March 2016, when the next F2F meeting will be organised. Mr Lejeune will co-ordinate the CPE group and Ms. Kozarev will co-ordinate the Network Equipment group. Experts from participating companies may contact the coordinators to express their interest in participation in the WGs.

5. AOB

The following meetings for CoC V6 were defined:

- online meetings in: October 2015, February 2016, April 2016

- face to face meeting in May 2016

- publication of CoC V6 by end of 2016.

Mr. Bertoldi closed the meeting and thanked all for their participation.