

TR-114

VDSL2 Performance Test Plan

Issue: 3 Amendment 4
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Issue History

| Issue Number | Approval Date | Publication Date | Issue Editor | Changes |
|---------------------|----------------------|-------------------------|-------------------------------|--------------------------|
| 1 | November 2009 | November 2009 | Arlynn Wilson, ADTRAN | Original |
| 2 | 26 November 2012 | 17 December 2012 | Aleksandra Kozarev, Lantiq | See Executive Summary |
| 3 | 13 March 2017 | 13 March 2017 | Aleksandra Kozarev, Intel | See Executive Summary |
| 3 Amendment 1 | 8 May 2017 | 9 June 2017 | Aleksandra Kozarev, Intel | See Executive Summary |
| 3 Amendment 2 | 16 March 2018 | 10 May 2018 | Aleksandra Kozarev, Intel | See Executive Summary |
| 3 Amendment 3 | TBD | TBD | Aleksandra Kozarev, Intel | See Executive Summary |
| 3 Amendment 4 | 13 June 2018 | 8 August 2018 | Aleksandra Kozarev, Intel | See Executive Summary |

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Table of Contents

| | |
|-------------------------------------------------------------------------------------------------------------------------|----|
| Executive Summary | 6 |
| 1 Purpose and Scope | 7 |
| 1.1 Purpose | 7 |
| 1.2 Scope | 7 |
| 2 References and Terminology | 8 |
| 2.1 Conventions | 8 |
| 2.2 References | 8 |
| 2.3 Definitions | 9 |
| 2.4 Abbreviations | 9 |
| 3 Technical Report Impact | 10 |
| 3.1 Energy Efficiency | 10 |
| 3.2 Security | 10 |
| 3.3 Privacy | 10 |
| 4 UPDATE TO SECTION B.1.1 Pass/fail criteria for Annex B testing | 11 |
| 5 UPDATE TO SECTION B.15.2 Rate adaptive performance tests for BA17ade with DPBO and UPBO, retransmission enabled | 12 |

Executive Summary

See *Executive Summary/TR-114 Issue 3*.

Content of TR-114 Issue 3 Amendment 4 is as follows:

1. Update to SECTION B.1.1
2. Update to SECTION B.15.2

1 Purpose and Scope

1.1 Purpose

See *Purpose/TR-114 Issue 3*.

1.2 Scope

See *Scope/TR-114 Issue 3*.

Performance tests applicable to BA17ade_D&UPBO band profile, retransmission enabled Class 1 implementations.

2 References and Terminology

2.1 Conventions

In this Technical Report, several words are used to signify the requirements of the specification. These words are always capitalized. More information can be found in RFC 2119 [2].

| | |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SHALL | This word, or the term “REQUIRED”, means that the definition is an absolute requirement of the specification. |
| SHALL NOT | This phrase means that the definition is an absolute prohibition of the specification. |
| SHOULD | This word, or the adjective “RECOMMENDED”, means that there could exist valid reasons in particular circumstances to ignore this item, but the full implications need to be understood and carefully weighed before choosing a different course. |
| SHOULD NOT | This phrase, or the phrase "NOT RECOMMENDED" means that there could exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications need to be understood and the case carefully weighed before implementing any behavior described with this label. |
| MAY | This word, or the adjective “OPTIONAL”, means that this item is one of an allowed set of alternatives. An implementation that does not include this option SHALL be prepared to inter-operate with another implementation that does include the option. |

2.2 References

The following references are of relevance to this Technical Report. At the time of publication, the editions indicated were valid. All references are subject to revision; users of this Technical Report are therefore encouraged to investigate the possibility of applying the most recent edition of the references listed below.

A list of currently valid Broadband Forum Technical Reports is published at www.broadband-forum.org.

See *References/TR-114 Issue 3*.

| Document | Title | Source | Year |
|------------------------------------|-----------------------------------------------------------------|--------|------|
| [1] TR-114 Issue 3 | <i>VDSL2 Performance Test Plan</i> | BBF | 2017 |
| [2] RFC 2119 | <i>Key words for use in RFCs to Indicate Requirement Levels</i> | IETF | 1997 |

2.3 Definitions

See *Definitions/TR-114 Issue 3*.

2.4 Abbreviations

See *Abbreviations/TR-114 Issue 3*.

3 Technical Report Impact

3.1 Energy Efficiency

TR-114 Issue 3 Amendment 4 has no impact on Energy Efficiency.

3.2 Security

TR-114 Issue 3 Amendment 4 has no impact on Security.

3.3 Privacy

Any issues regarding privacy are not affected by TR-114 Issue 3 Amendment 4.

4 UPDATE TO SECTION B.1.1 Pass/fail criteria for Annex B testing

In section B.1.1 in TR-114 Issue 3 modify Table 70 (Data rate pass/fail requirements for rate adaptive testing) as follows:

Table 70: Data rate pass/fail requirements for rate adaptive testing

| Section number | Number of test cases | 10% limit |
|-------------------------|----------------------------------|-----------------------|
| B.3 | 20 | 2 |
| B.5 | 20 | 2 |
| B.6 | 16 | 2 |
| B.7 | 16 | 2 |
| B.9 | 16 | 2 |
| B.13 | 16 | 2 |
| B.14 | 16 | 2 |
| B.15 | 16 | 2 |
| B.16 | 16 | 2 |
| B.15.1 | 10 | 1 |
| <u>B.15.2 (Class 1)</u> | <u>10</u> | <u>1</u> |
| Section number | Number of test cases (per table) | 10% limit (per table) |
| B.4 | 6 | 1 |
| B.8 | 6 | 1 |

5 UPDATE TO SECTION B.15.2 Rate adaptive performance tests for BA17ade with DPBO and UPBO, retransmission enabled

Modify section B.15.2 in TR-114 Issue 3 as follows:

B.15.2 Rate adaptive performance tests for BA17ade with DPBO and UPBO, retransmission enabled

The tests with retransmission-enabled profiles are designed to be passed by implementations with a MAXDELAYOCTET-split parameter (MDOSPLIT) set to 80%.

Table 120: Class 1 Performance tests with BA17ade_D&UPBO_RA_R-17/2/41_150_150 is for further study.

10 individual tests – 9 SHALL be passed

Table 120: Class 1 Performance tests with BA17ade D&UPBO RA R-17/2/41 150 150

| <u>Loop Length (m, TP100 loop)</u> | <u>BA17ade D&UPBO RA R-17/2/41 150 150</u> | | | | | | | | | |
|----------------------------------------|------------------------------------------------|-----------------|------------------|------------------------------------------|----------------------------------------|----------------------------------------|-----------------|------------------|------------------------------------------|----------------------------------------|
| | <u>Downstream</u> | | | | | <u>Upstream</u> | | | | |
| | <u>Actual net data rate (kbps)</u> | | | <u>Actual data rate (ETR) (kbps)</u> | <u>Noise Margin, Reported (dB)</u> | <u>Actual net data rate (kbps)</u> | | | <u>Actual data rate (ETR) (kbps)</u> | <u>Noise Margin, Reported (dB)</u> |
| | <u>Expected</u> | <u>Measured</u> | <u>Pass/Fail</u> | | | <u>Expected</u> | <u>Measured</u> | <u>Pass/Fail</u> | | |
| <u>150</u> | <u>56403</u> | | | | <u>20080</u> | | | | | |
| <u>450</u> | <u>41437</u> | | | | <u>14726</u> | | | | | |
| <u>1050</u> | <u>24178</u> | | | | <u>4992</u> | | | | | |
| <u>1200</u> | <u>21004</u> | | | | <u>4271</u> | | | | | |
| <u>1500</u> | <u>14167</u> | | | | <u>1845</u> | | | | | |

Table 121: Class 2 Performance tests with BA17ade_D&UPBO_RA_R-17/2/41_150_150 is for further study.

End of Broadband Forum Technical Report TR-114 Issue 3 Amendment 4