

TITLE **Test Sequences for ADSL**

PROJECTS ADSL

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STATUS for decision

ABSTRACT This proposal completes this missing description of what performance tests are
 mandatory to prove compliance with the ADSL standard.

Problem to be solved

Performance objective for various ADSL variants have been proposed, but to prove compliance with the ADSL standards a subset of these objectives are to be demonstrated by real tests. This contribution proposes the mandatory subset, that is currently missing in the ADSL draft.

Proposed text for the ADSL draft:

X.X Test sequences

Compliance with the performance objectives in clause [*] shall be demonstrated by means of a mandatory subset of all possible performance test described in this document. Table [x] specifies these mandatory conformance tests for downstream, and table [y] for upstream transmission.

Each symbolic name in this table refers to a specified noise model, as defined in subclause [*]. The injection of the impairment noise shall be at the receiver side of the ADSL transmission direction under test. The test sequences apply to "ADSL over POTS" as well as "ADSL over ISDN" variants.

Two groups of conformance tests are defined. Group 1 is about injecting crosstalk noise only, while group 2 is about injecting the combination of crosstalk noise and ingress noise. Group 2 is associated with a modified (shorter) reach requirement.

Table [x] Testmatrix for downstream conformance testing, defining the composition of testloops and noise models that are to be used for various downstream bitrates.

group	Bitrate kb/s	Test loops	G1.DN.# (#=model)	G2.DN.# (#=model)	G3	G4	G5	G6	G7	reach	number of tests
1	512	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.d	36
	1024	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.d	36
	2048	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.d	36
	6144	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.d	36
2	512	1,7	A,B	A,B	-	x	x	-	-	R2.d	4
	1024	1,7	A,B	A,B	-	x	x	-	-	R2.d	4
	2048	1,7	A,B	A,B	-	x	x	-	-	R2.d	4
	6144	1,7	A,B	A,B	-	x	x	-	-	R2.d	4

1-8 means all eight test loops

x means that the equivalent noise generator is activated

- means absent or not activated

R1.d means the downstream performance objectives, specified in clause [*]

R2.d means the (modified) downstream performance objectives, specified in clause [*]

Mark that the different variants of ADSL use different noise models and performance objectives

Table [y] Testmatrix for upstream conformance testing, defining the composition of testloops and noise models that are to be used for various upstream bitrates.

group	Bitrate kb/s	Test loops	G1.UP.# (#=model)	G2.UP.# (#=model)	G3	G4	G5	G6	G7	reach	number of tests
1	64	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.u	36
	256	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.u	36
	640	0,1-8	A,B,C,D	A,B,C,D	-	x	-	-	-	R1.u	36
2	64	1,7	A,B	A,B	-	x	x	-	-	R2.u	4
	256	1,7	A,B	A,B	-	x	x	-	-	R2.u	4
	640	1,7	A,B	A,B	-	x	x	-	-	R2.u	4

1-8 means all eight test loops

x means that the equivalent noise generator is activated

- means absent or not activated

R1.u means the upstream performance objectives, specified in clause [*]

R2.u means the (modified) upstream performance objectives, specified in clause [*]

Mark that the different variants of ADSL use different noise models and performance objectives