



Test Report MT2301

			2011



Test Report MT2301

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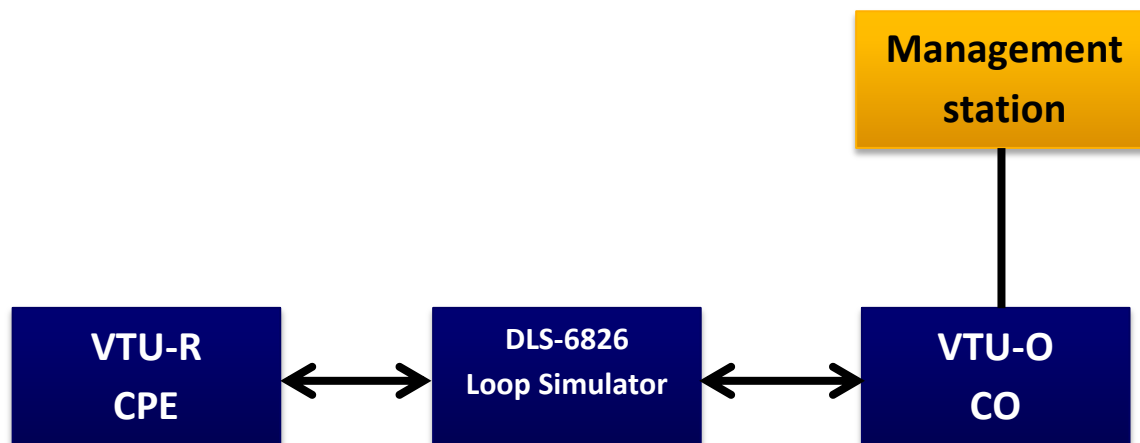
I. Introduction

The purpose of this document is to help set up testing environment and evaluate MT2301's capabilities. The report covers MT2301's physical layer throughput test result, interoperability test result with other COs, the package throughput performed under different conditions, network characteristic, and real application behavior.

III. Rate vs. reach tests

Test setup

The CPE tested in these tests is Metanoia's reference design, which includes MT2301 DMT and MT3301 AFE. In all of these tests a target SNR of 6dBm has been used.



Test overview

CO	Profile	Annex	Limit PSD mask (short)	Limit PSD mask (long)	USO type	Line Setting	Page
Metanoia	30a	B	B8-15	998ADE30-M2x-NUS0-M	n/A	I-8/2	-HERE-
Metanoia	30a	B	B8-13	998E30-M2x-NUS0	n/A	I-8/2	-HERE-
Metanoia	30a	A	Annex A std. ¹	-	n/A	I-8/2	-HERE-
Metanoia	8c	B	B7-1	997-M1c-A-7	A	I-8/2	-HERE-
Metanoia	8c	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-
Metanoia	8b	B	B8-6	998-M2x-B	B	I-8/2	-HERE-
Metanoia	8b	B	B8-4	998-M2x-a	A	I-8/2	-HERE-
Metanoia	8b	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-
Metanoia	12a	B	B8-6	998-M2x-B	B	I-8/2	-HERE-
Metanoia	12a	B	B8-4	998-M2x-A	A	I-8/2	-HERE-
Metanoia	12a	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-
Metanoia	17a	B	B8-12	998ADE17-M2x-B	B	I-8/2	-HERE-
Metanoia	17a	B	B8-8	998E17-M2x-NUS0	n/A	I-8/2	-HERE-
Metanoia	17a	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-
Metanoia	30a	B	B8-15	998ADE30-M2x-NUS0-M	n/A	F-1/0	-HERE-

Metanoia	30a	B	B8-13	998E30-M2x-NUS0	n/A	F-1/0	-HERE-
Metanoia	30a	A	Annex A std. ¹	-	n/A	F-1/0	-HERE-
Metanoia	8c	B	B7-1	997-M1c-A-7	A	F-1/0	-HERE-
Metanoia	8c	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Metanoia	8b	B	B8-6	998-M2x-B	B	F-1/0	-HERE-
Metanoia	8b	B	B8-4	998-M2x-A	A	F-1/0	-HERE-
Metanoia	8b	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Metanoia	12a	B	B8-6	998-M2x-B	B	F-1/0	-HERE-
Metanoia	12a	B	B8-4	998-M2x-A	A	F-1/0	-HERE-
Metanoia	12a	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Metanoia	17a	B	B8-12	998ADE17-M2x-B	B	F-1/0	-HERE-
Metanoia	17a	B	B8-8	998E17-M2x-NUS0	n/A	F-1/0	-HERE-
Metanoia	17a	A	Annex A std. ¹	-	A	F-1/0	-HERE-
Ikanos	30a	B	B8-15	998ADE30-M2x-NUS0-M	n/A	F-1/0	-HERE-
Ikanos	30a	B	B8-13	998E30-M2x-NUS0	n/A	F-1/0	-HERE-
Ikanos	30a	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Ikanos	8c	B	B7-1	997-M1c-A-7	A	F-1/0	-HERE-
Ikanos	8c	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Ikanos	8b	B	B8-6	998-M2x-B	B	F-1/0	-HERE-
Ikanos	8b	B	B8-4	998-M2x-A	A	F-1/0	-HERE-
Ikanos	8b	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Ikanos	12a	B	B8-6	998-M2x-B	B	F-1/0	-HERE-
Ikanos	12a	B	B8-4	998-M2x-A	A	F-1/0	-HERE-
Ikanos	12a	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Ikanos	17a	B	B8-12	998ADE17-M2x-B	B	F-1/0	-HERE-
Ikanos	17a	B	B8-8	998E17-M2x-NUS0	n/A	F-1/0	-HERE-
Ikanos	17a	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Broadcom	30A	A	Annex A std. ¹	-	EU32	F-1/0	-HERE-
Broadcom	30A	B	B8-15	998ADE30-M2x-NUS0-M	n/A	F-1/0	-HERE-
Broadcom	17a	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-
Broadcom	17a	B	B8-8	998E17-M2x-NUS0	n/A	I-8/2	-HERE-
Broadcom	17a	B	B8-12	998ADE17-M2x-B	B	I-8/2	-HERE-
Broadcom	12a	B	B8-4	998-M2x-A	A	I-8/2	-HERE-
Broadcom	12a	B	B8-6	998-M2x-B	B	I-8/2	-HERE-
Broadcom	8b	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-
Broadcom	8b	B	B8-4	998-M2x-A	A	I-8/2	-HERE-
Broadcom	8b	B	B8-6	998-M2x-B	B	I-8/2	-HERE-
Broadcom	8c	A	Annex A std. ¹	-	EU32	I-8/2	-HERE-

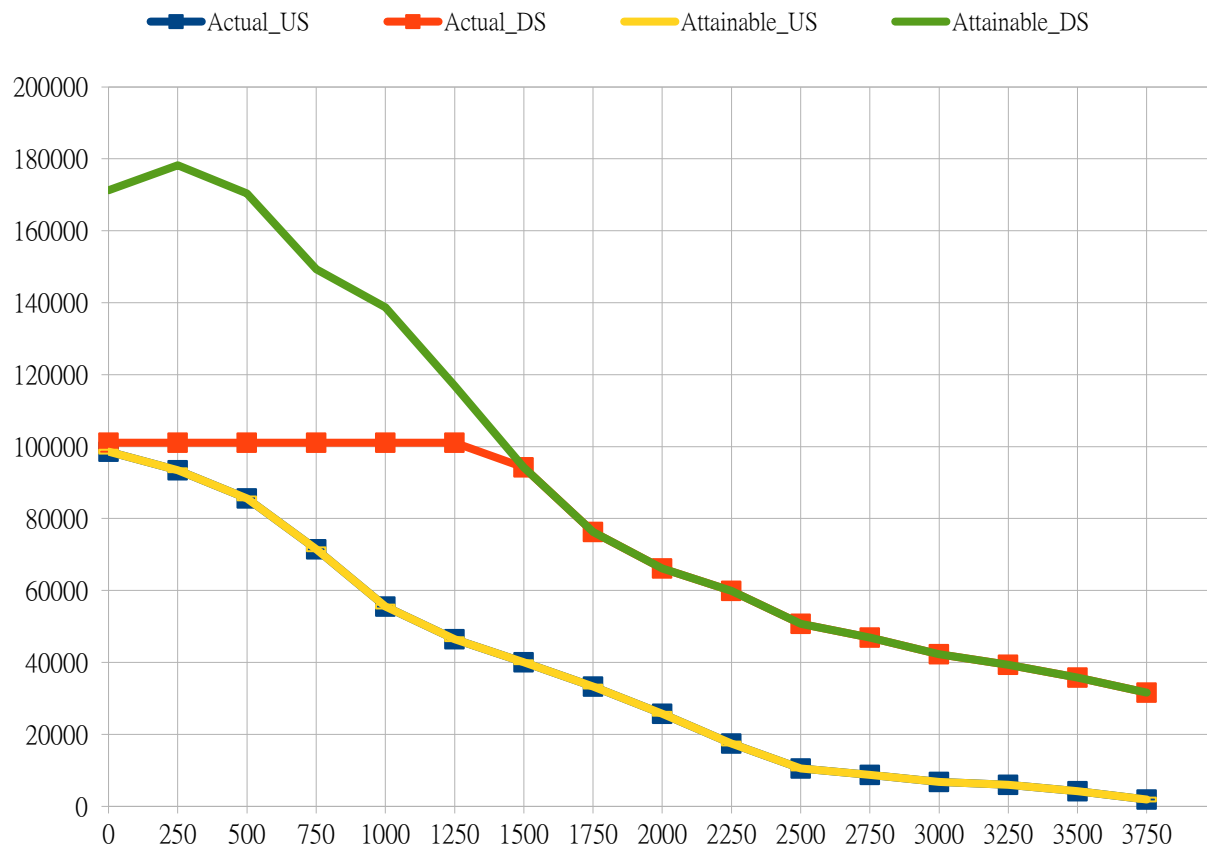
¹ The standard limit PSD mask for Annex A is described in Table A.1 in G.993.2.

Metanoia BB30a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



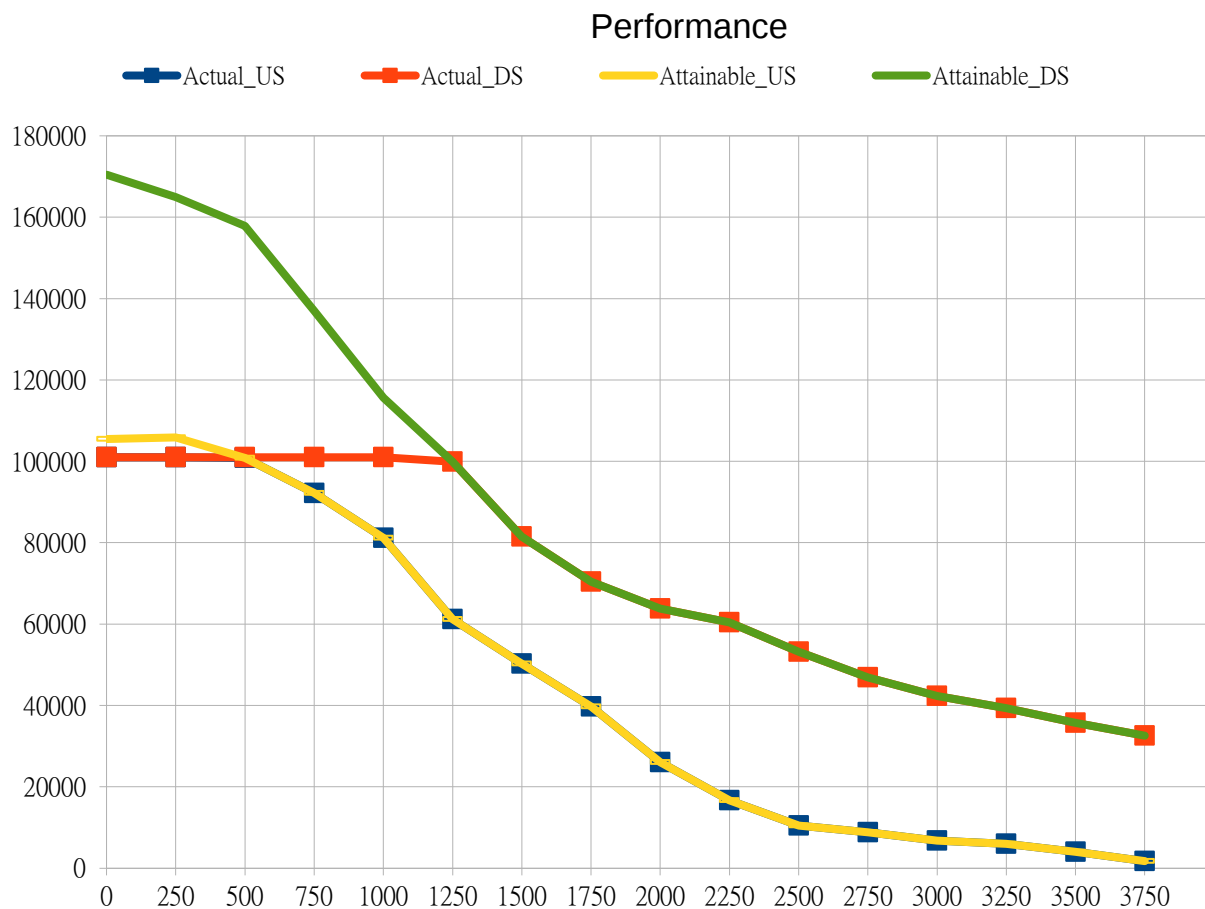
Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,033	101,033	94,254	66,153	50,675	42,225	35,752
US (kbit/s)	85,550	55,535	40,029	25,739	10,526	6,795	4,148

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Metanoia BA30a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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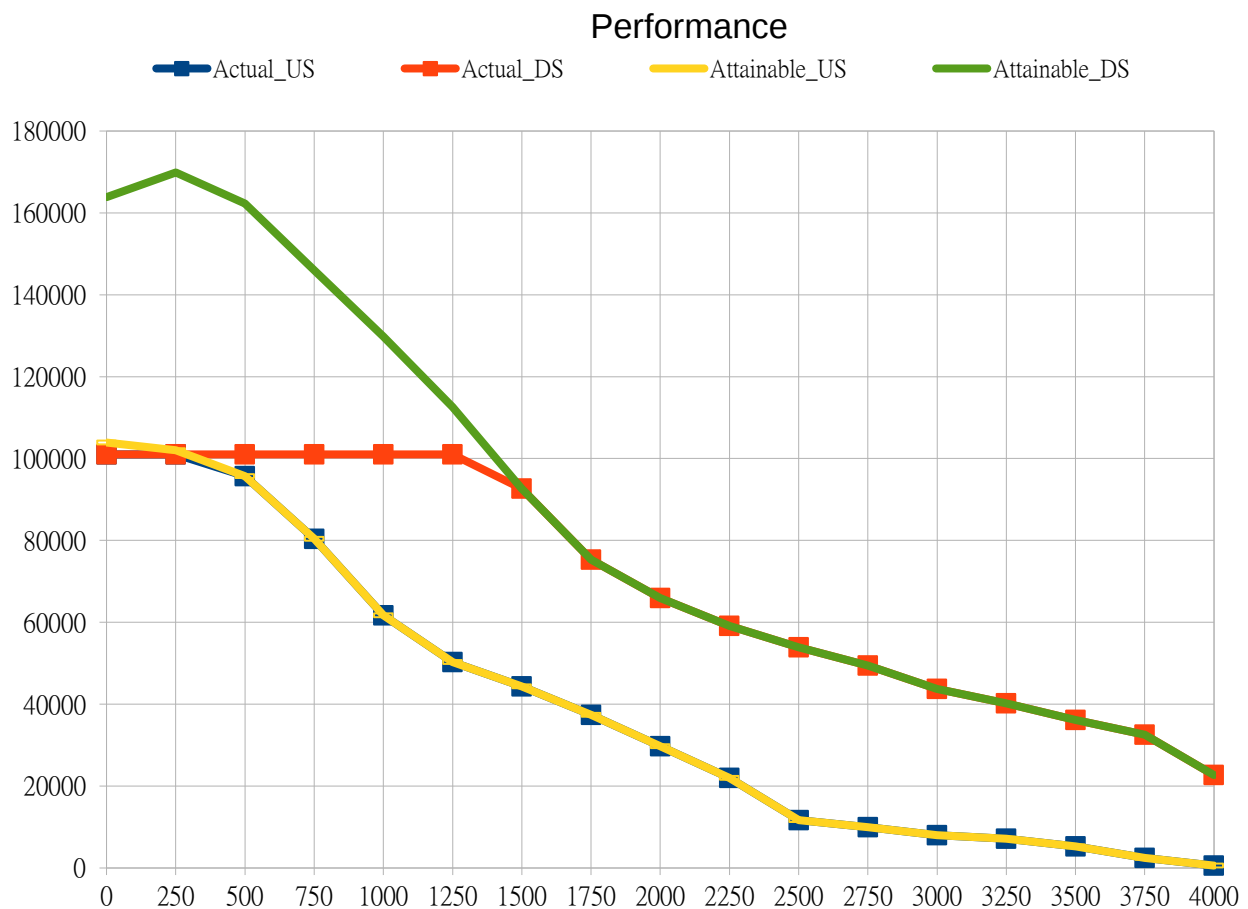
Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,030	101,030	81,505	63,794	53,168	42,352	35,729
US (kbit/s)	100,876	81,156	50,257	26,038	10,490	6,734	4,022

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Metanoia AA30a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,030	101,030	92,670	65,929	53,908	43,732	36,147
US (kbit/s)	95,733	61,714	44,373	29,702	11,680	7,962	5,271

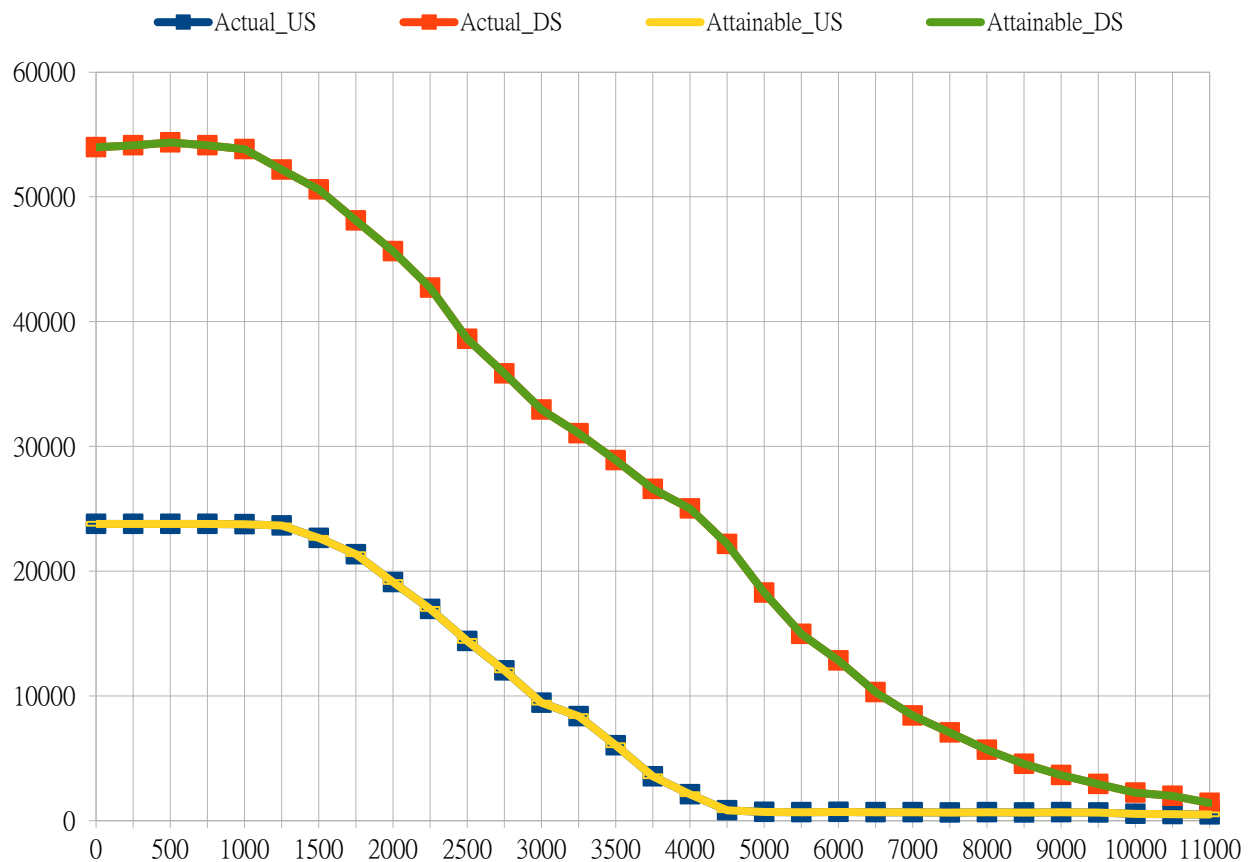
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Metanoia BA8c

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	53,827	38,615	25,012	14,955	8,415	4,556	2,248
US (kbit/s)	23,770	14,409	2,117	686	686	650	550

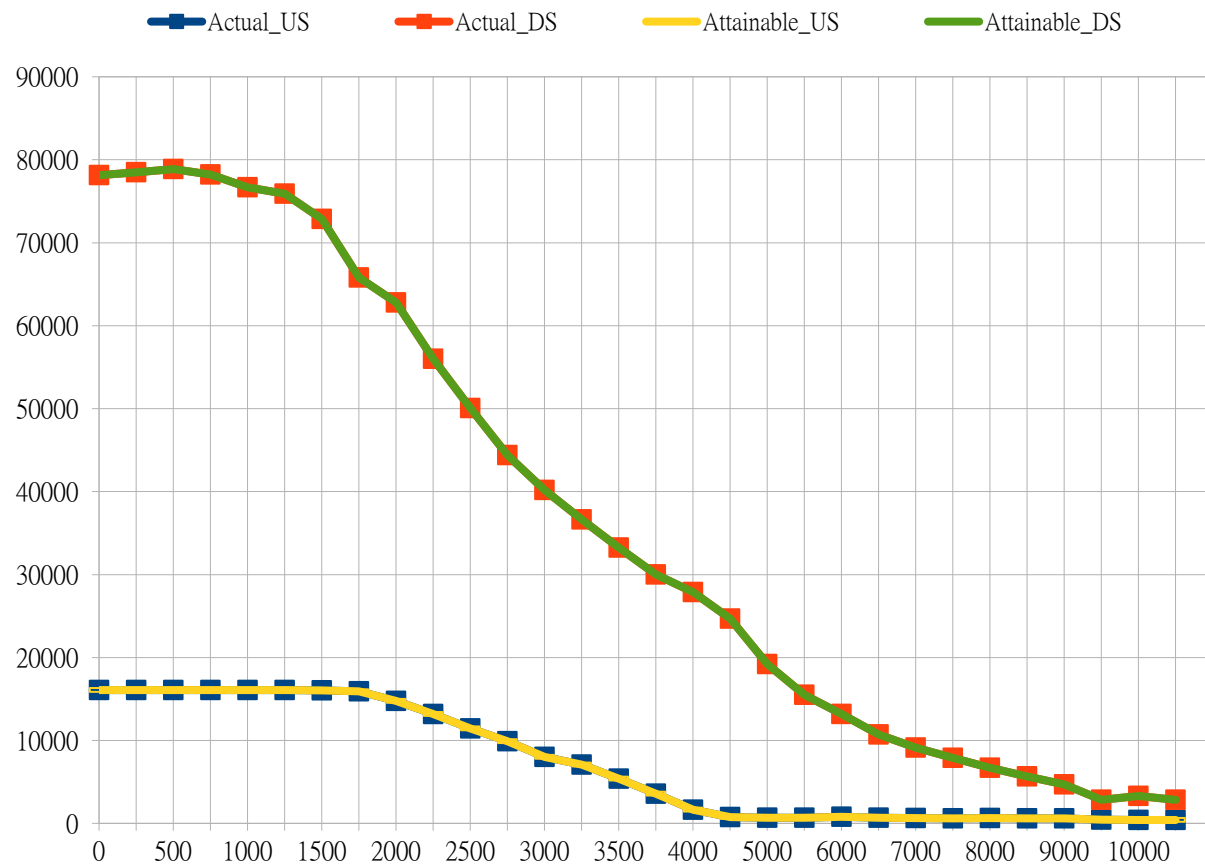
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Metanoia AA8c

CO	Metanoia
Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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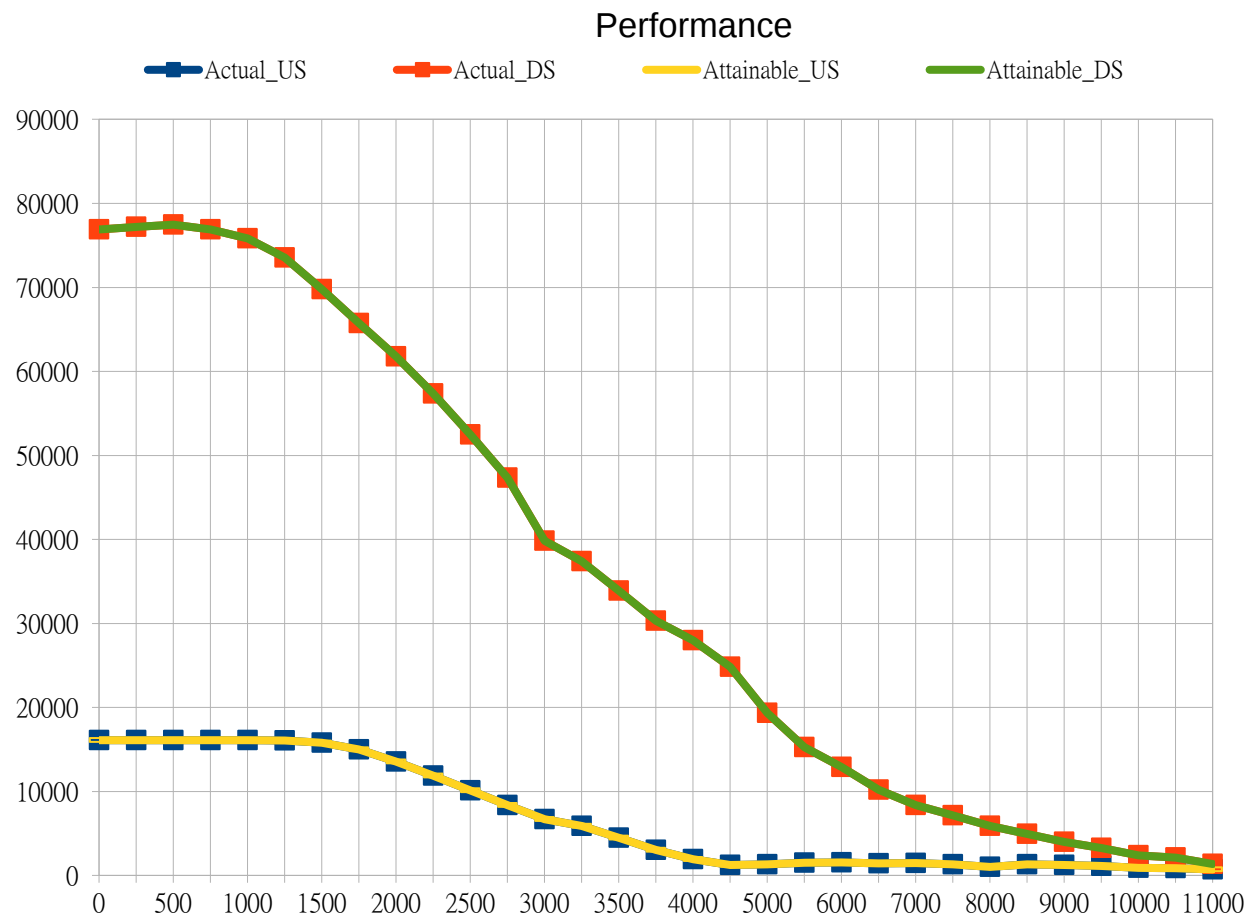
Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	76,686	50,065	27,869	15,511	9,138	5,681	3,334
US (kbit/s)	16,094	11,454	1,669	690	666	622	435

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Metanoia BB8b

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	75,832	52,466	27,981	15,274	8,377	4,952	2,416
US (kbit/s)	16,091	10,125	1,957	1,515	1,474	1,313	897

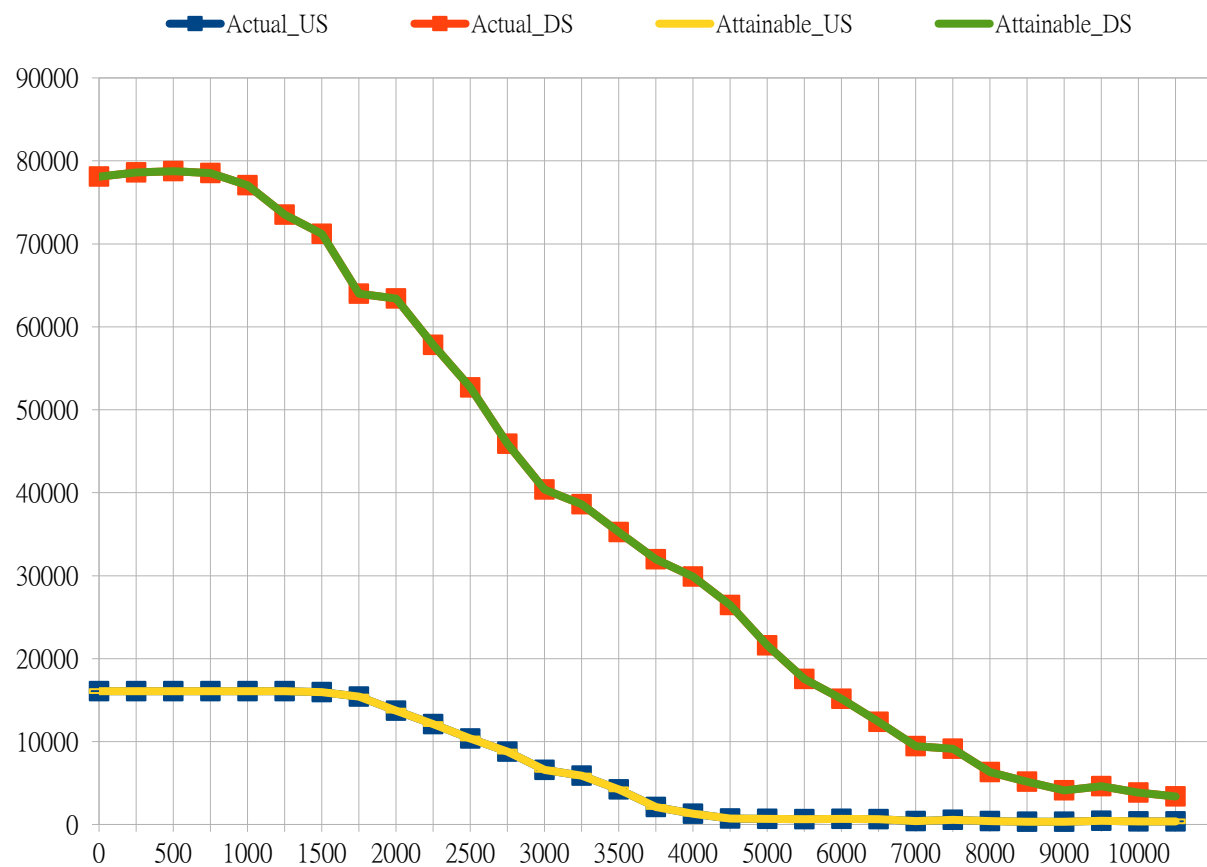
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Metanoia BA8b

CO	Metanoia
Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	77,051	52,696	29,906	17,545	9,442	5,179	3,862
US (kbit/s)	16,091	10,376	1,299	666	426	339	402

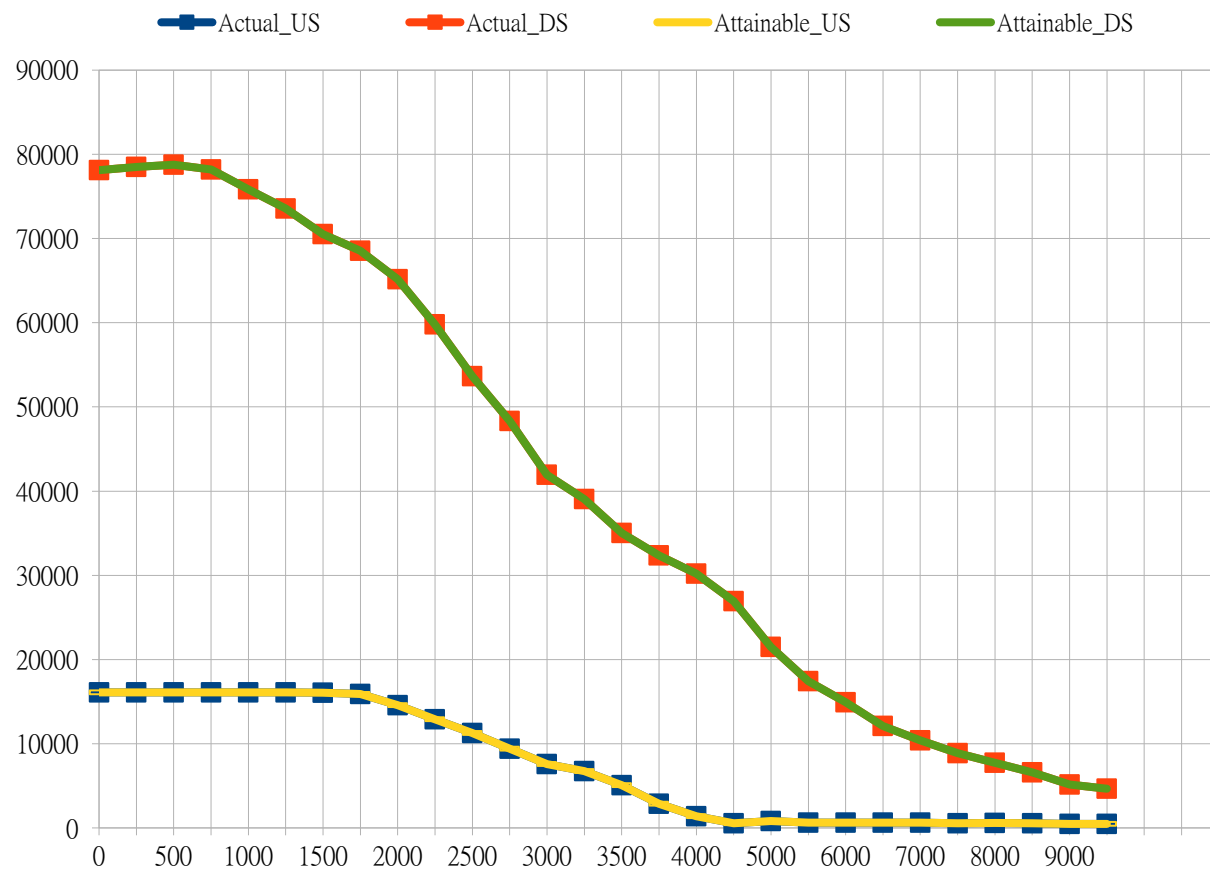
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Metanoia AA8b

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	9500
DS (kbit/s)	75,836	53,650	30,213	17,430	10,397	6,594	4,683
US (kbit/s)	16,091	11,277	1,387	662	629	578	491

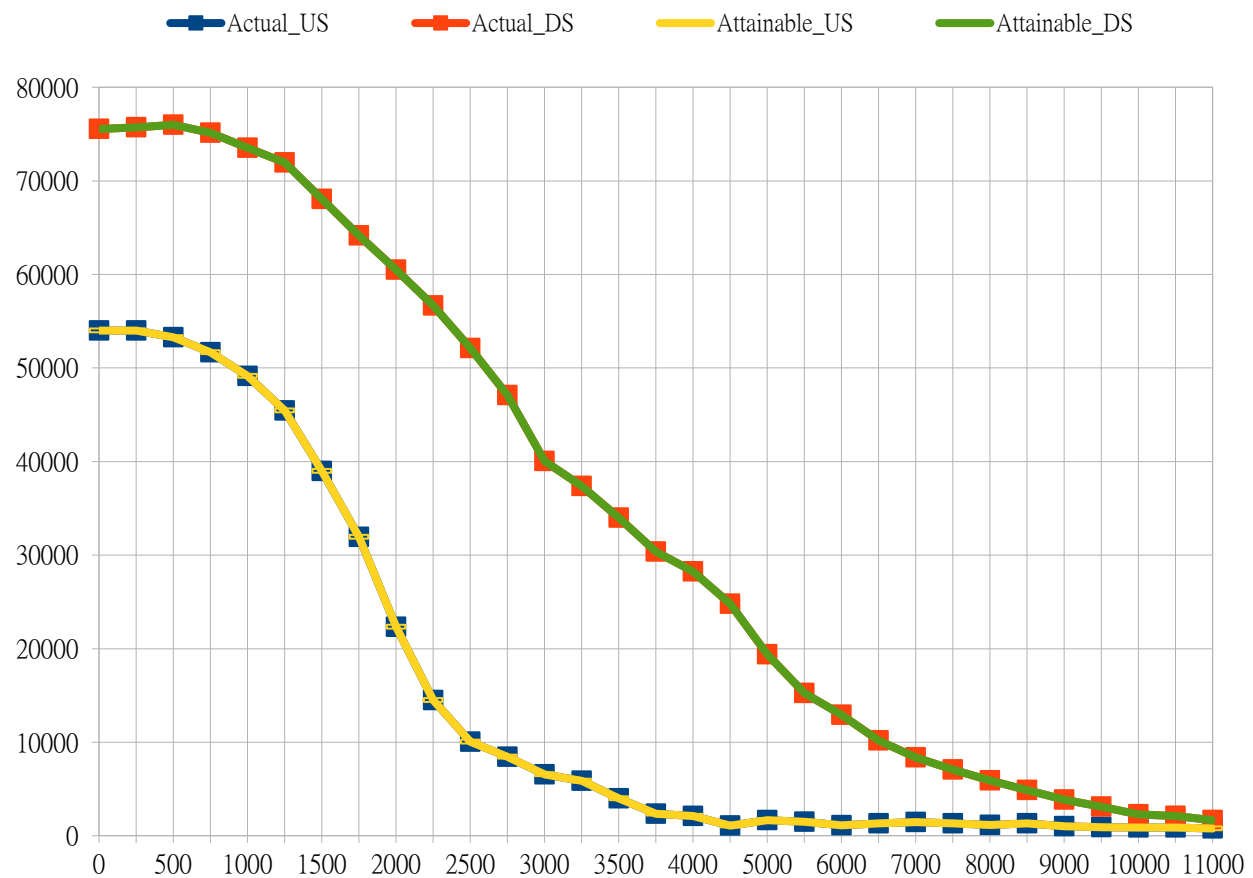
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Metanoia BB12a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	73,515	52,114	28,242	15,242	8,380	4,898	2,282
US (kbit/s)	49,147	10,066	2,109	1,488	1,460	1,327	893

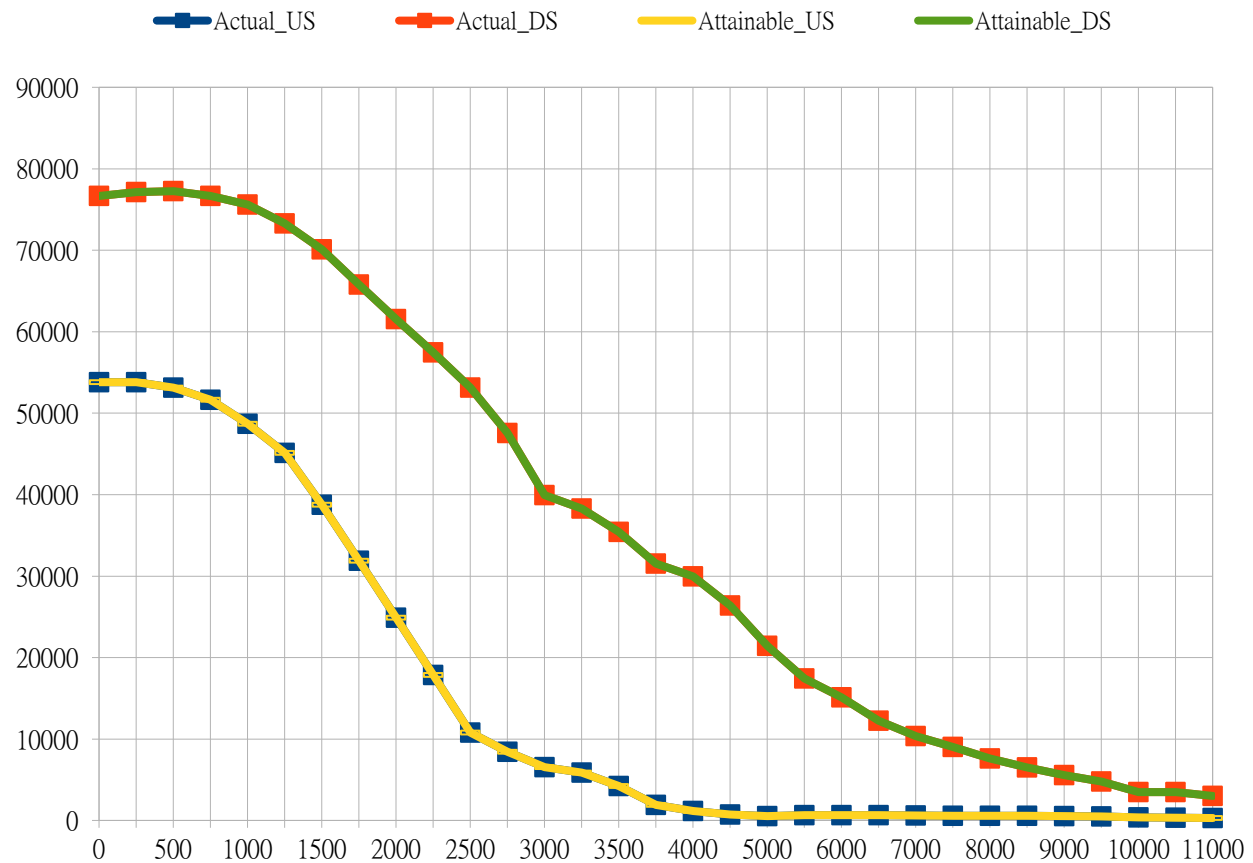
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Metanoia BA12a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



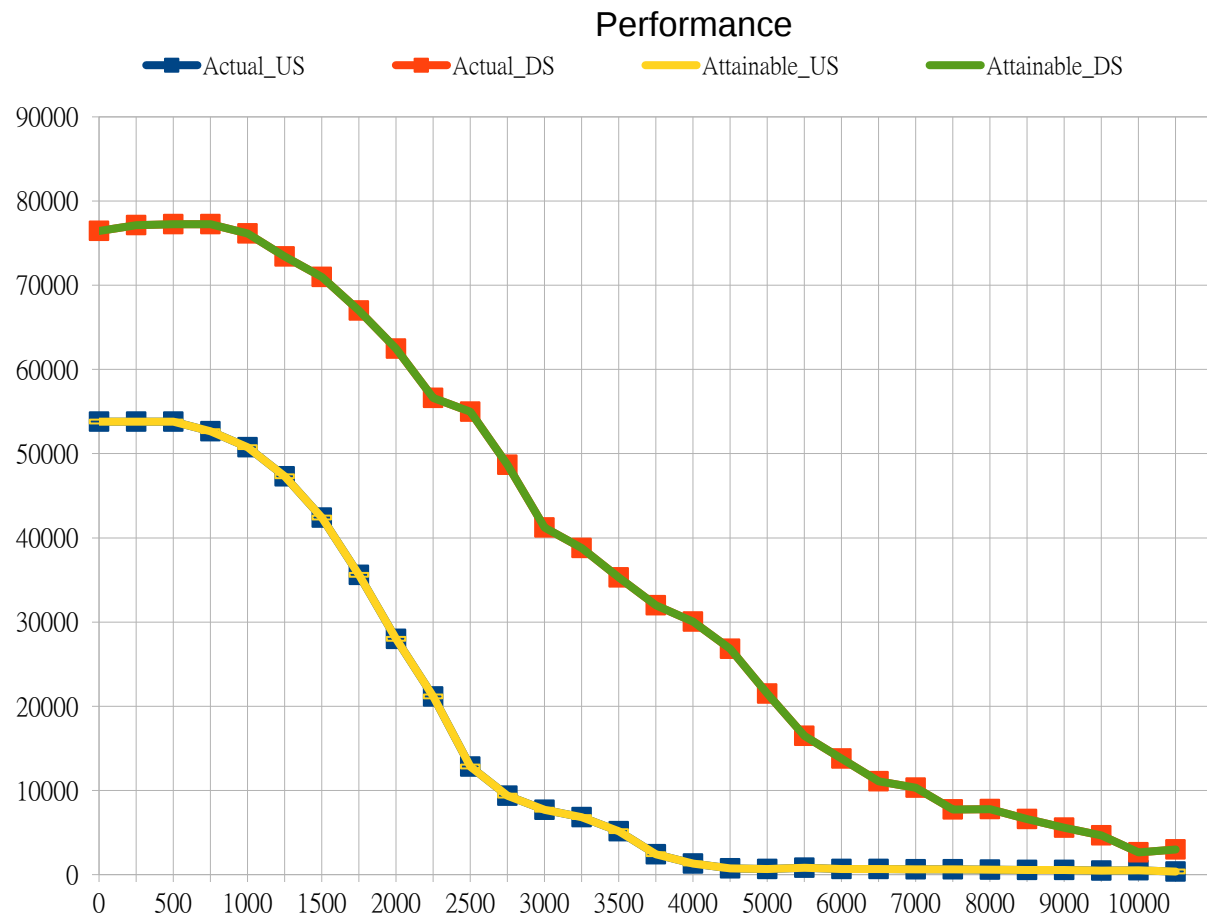
Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	75,618	53,149	29,958	17,420	10,369	6,517	3,510
US (kbit/s)	48,693	10,809	1,164	664	642	569	402

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Metanoia AA12a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	76,147	54,987	30,040	16,488	10,319	6,604	2,658
US (kbit/s)	50,750	12,828	1,330	817	632	582	526

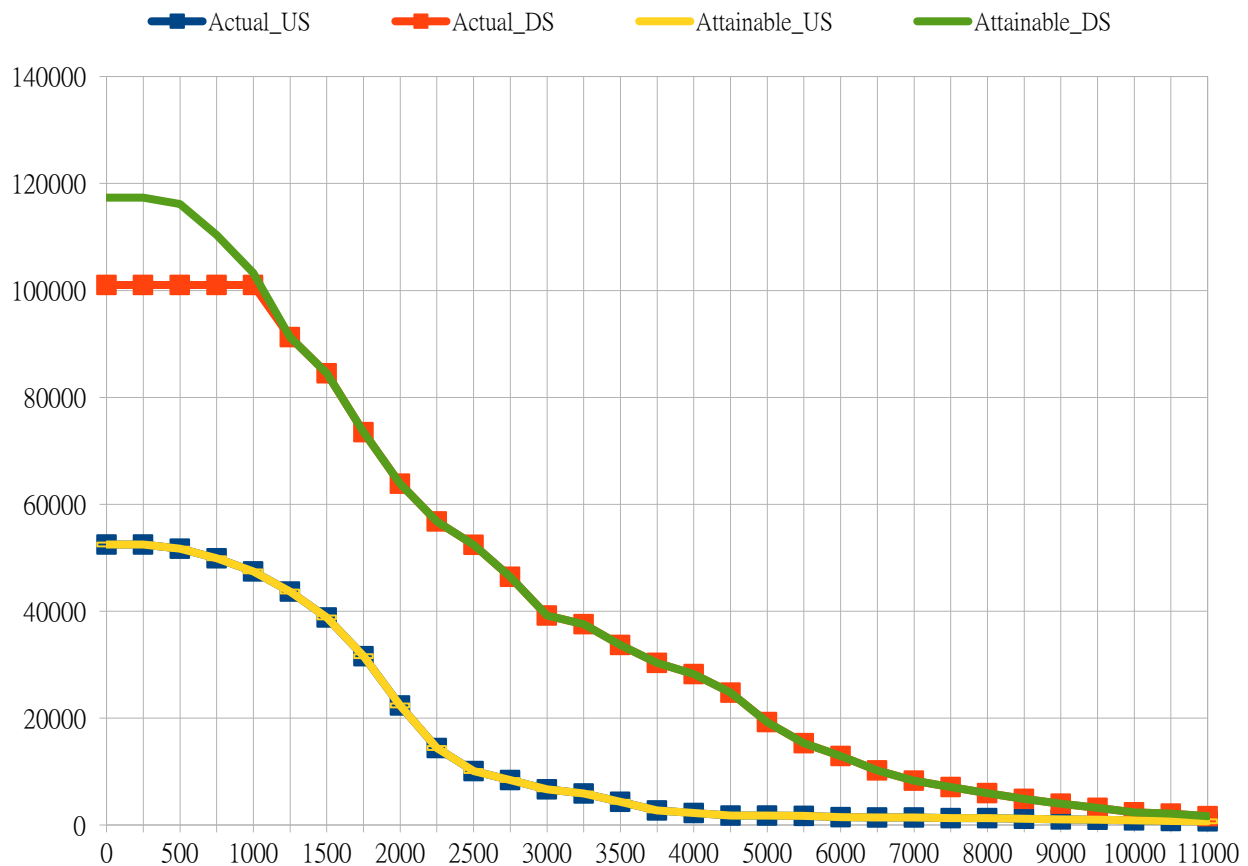
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Metanoia BB17a

CO	Metanoia
Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



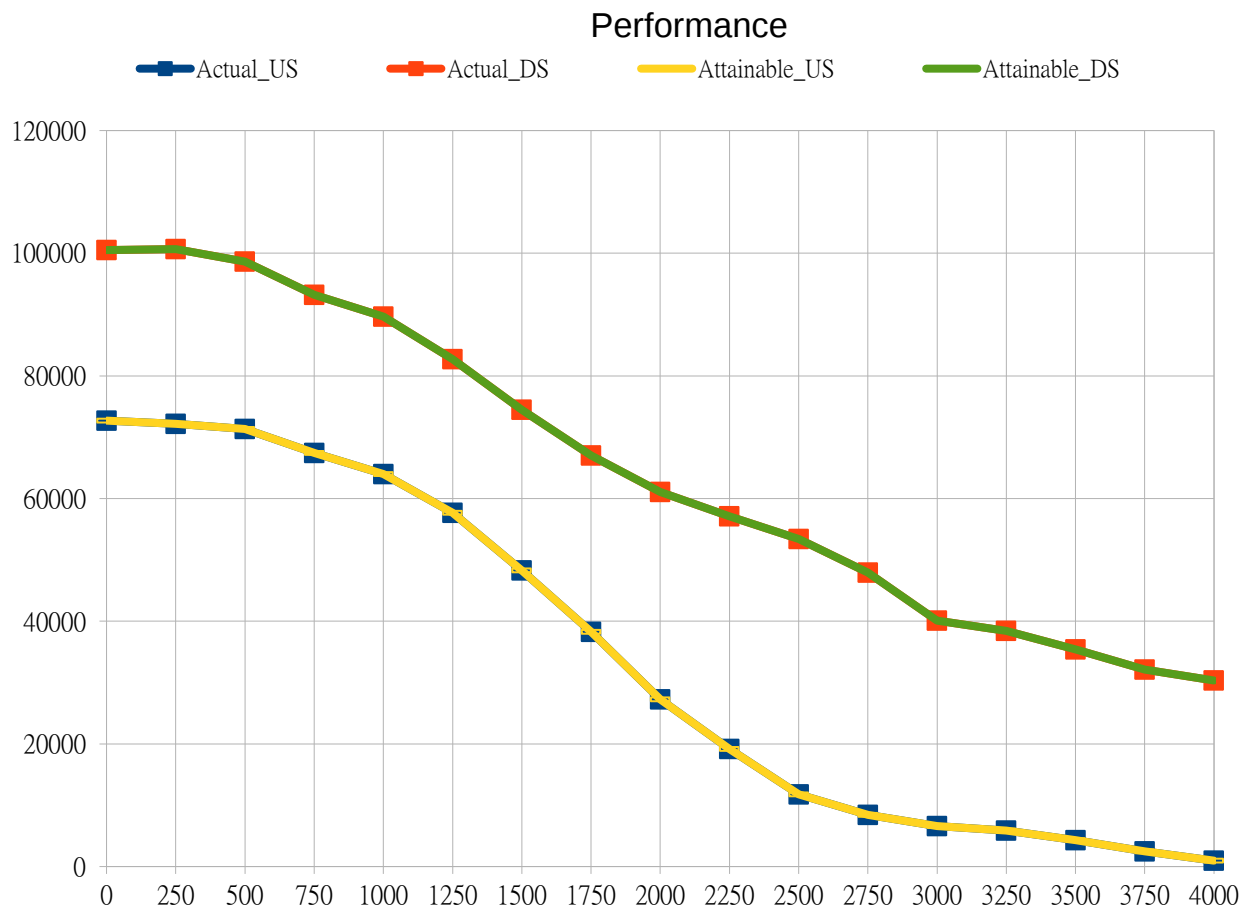
Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	101,048	52,414	28,256	15,300	8,343	4,880	2,372
US (kbit/s)	47,473	10,118	2,261	1,708	1,404	1,210	881

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Metanoia BA17a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	98,604	89,633	74,477	61,048	53,410	40,110	35,383
US (kbit/s)	71,353	63,981	48,276	27,266	11,769	6,622	4,335

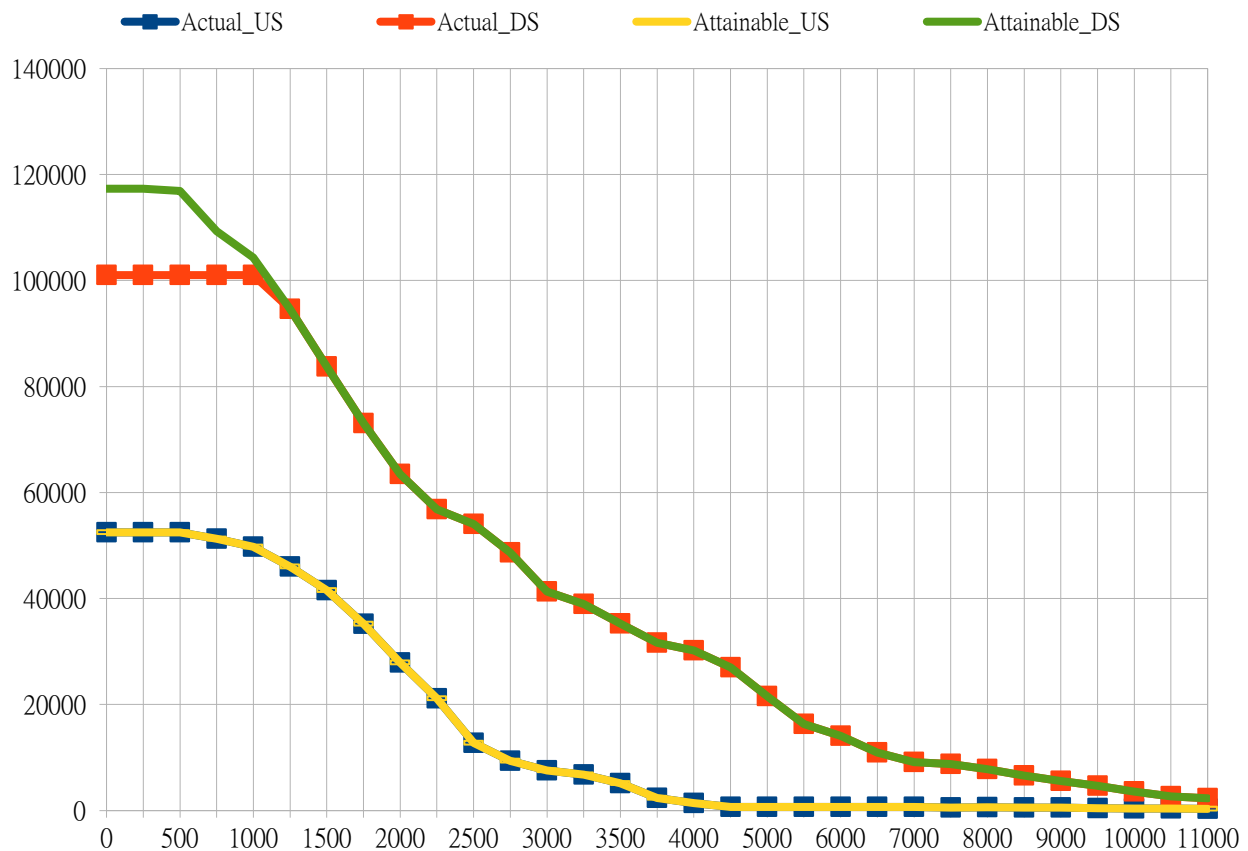
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Metanoia AA17a

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	101,048	54,037	30,200	16,303	9,117	6,574	3,561
US (kbit/s)	49,783	12,752	1,383	677	666	553	363

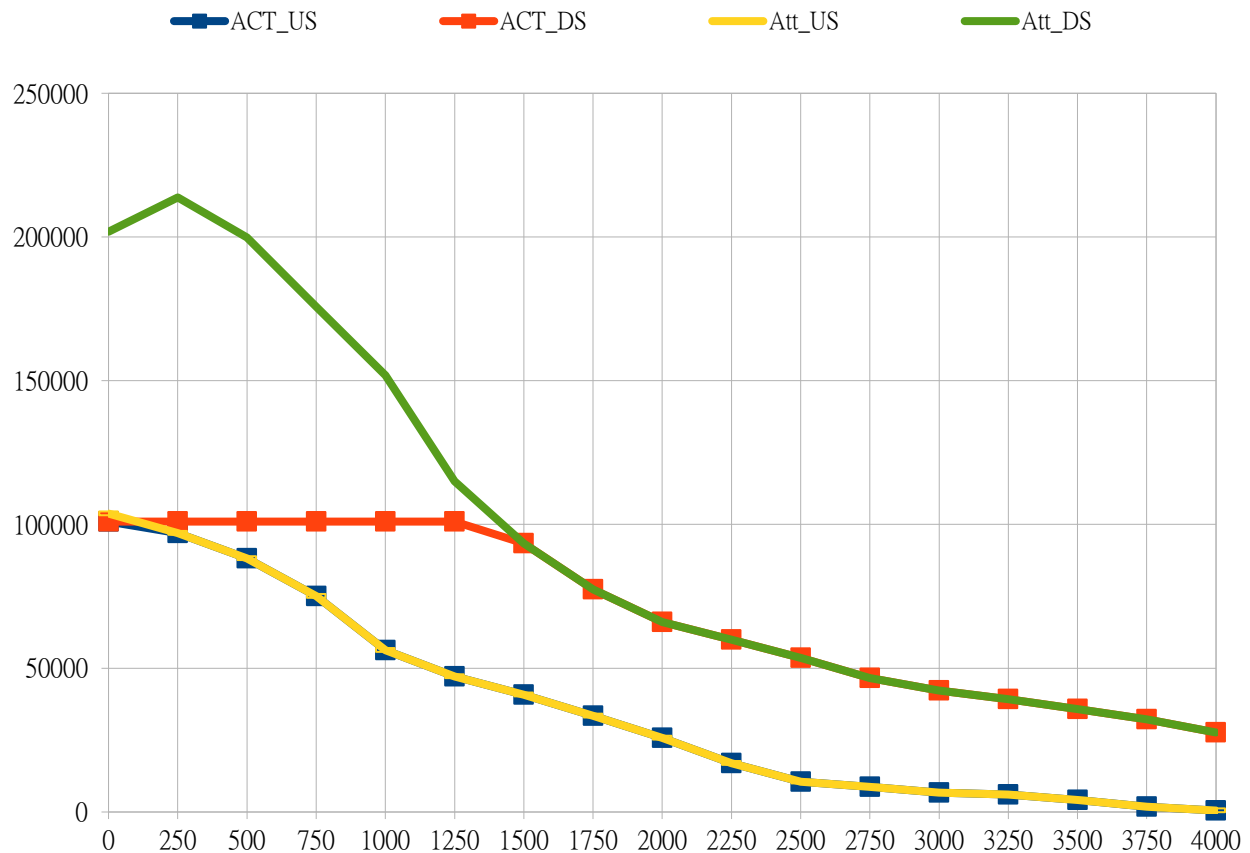
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Metanoia BB30a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,033	101,033	93,386	66,026	53,564	42,195	35,797
US (kbit/s)	88,222	56,291	40,797	25,709	10,425	6,645	4,077

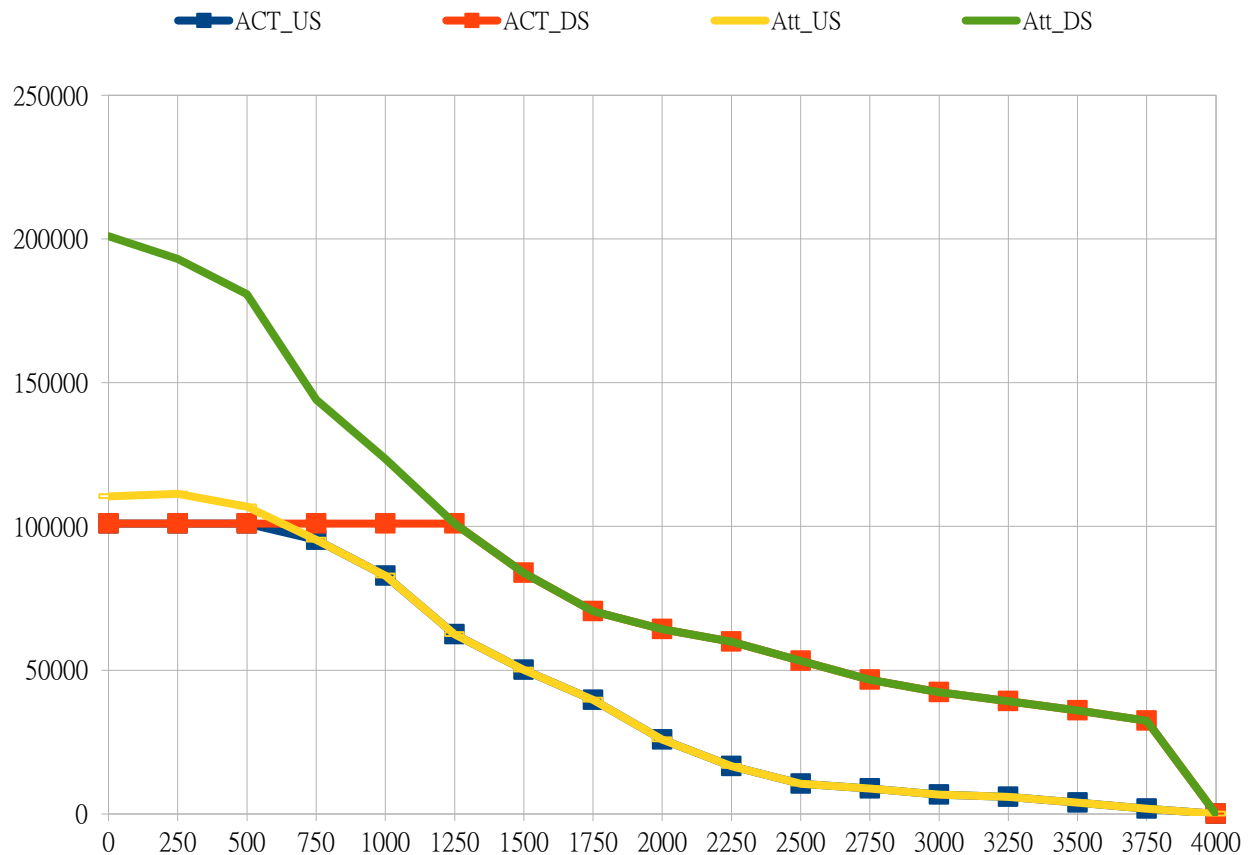
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Metanoia BA30a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,033	101,033	83,833	64,309	53,198	42,359	35,976
US (kbit/s)	101,033	82,869	50,138	25,844	10,425	6,659	3,956

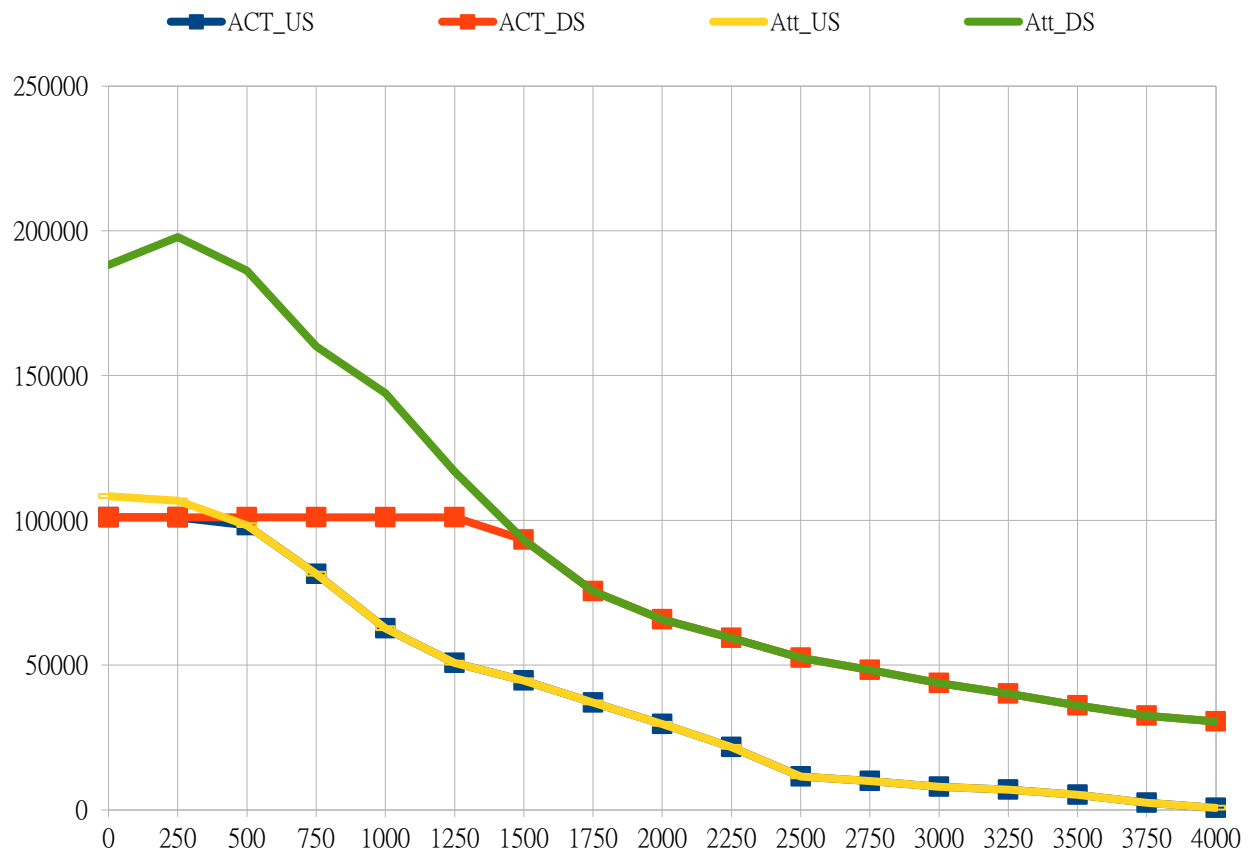
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Metanoia AA30a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,033	101,033	93,296	65,780	52,519	43,798	36,096
US (kbit/s)	98,262	62,733	44,642	29,643	11,560	8,004	5,219

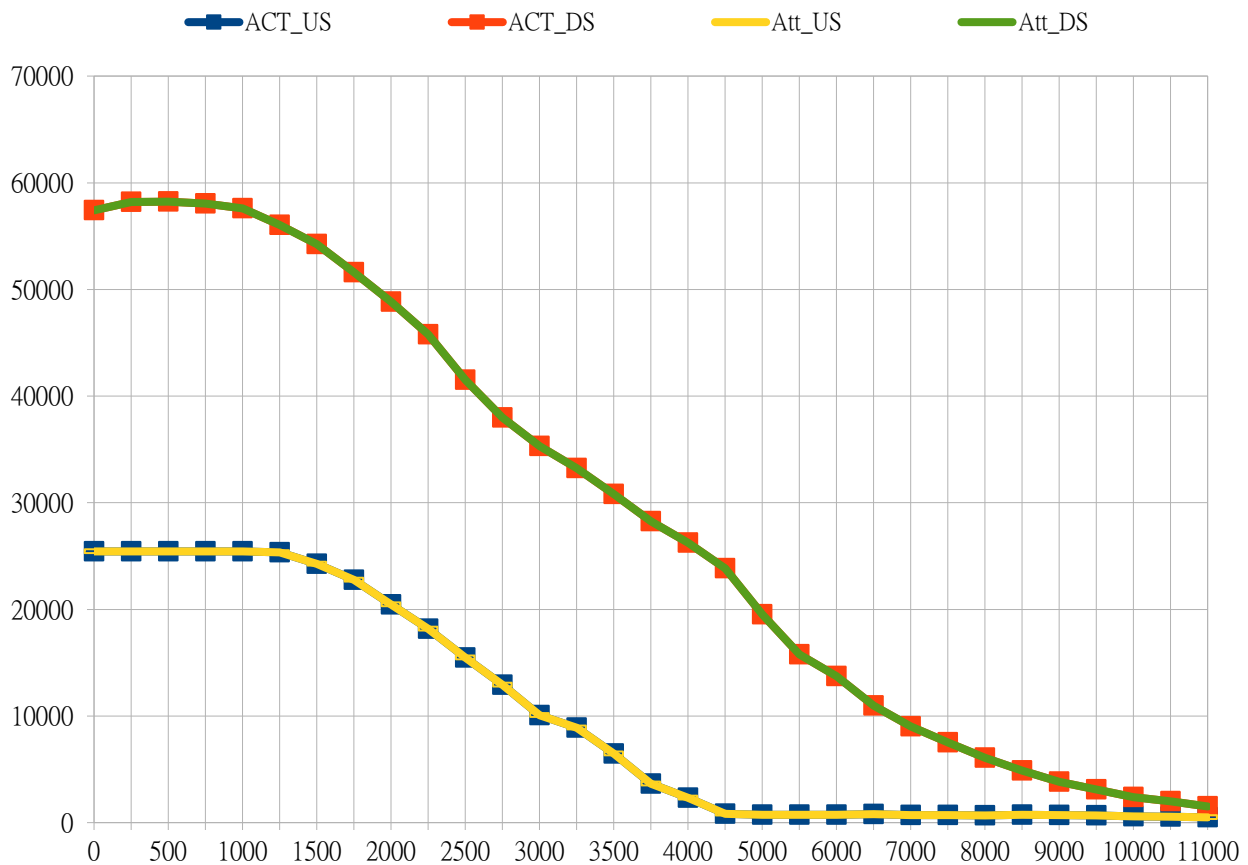
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Metanoia BA8c Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	57,615	41,512	26,264	15,766	9,024	4,883	2,392
US (kbit/s)	25,438	15,479	2340	738	731	738	588

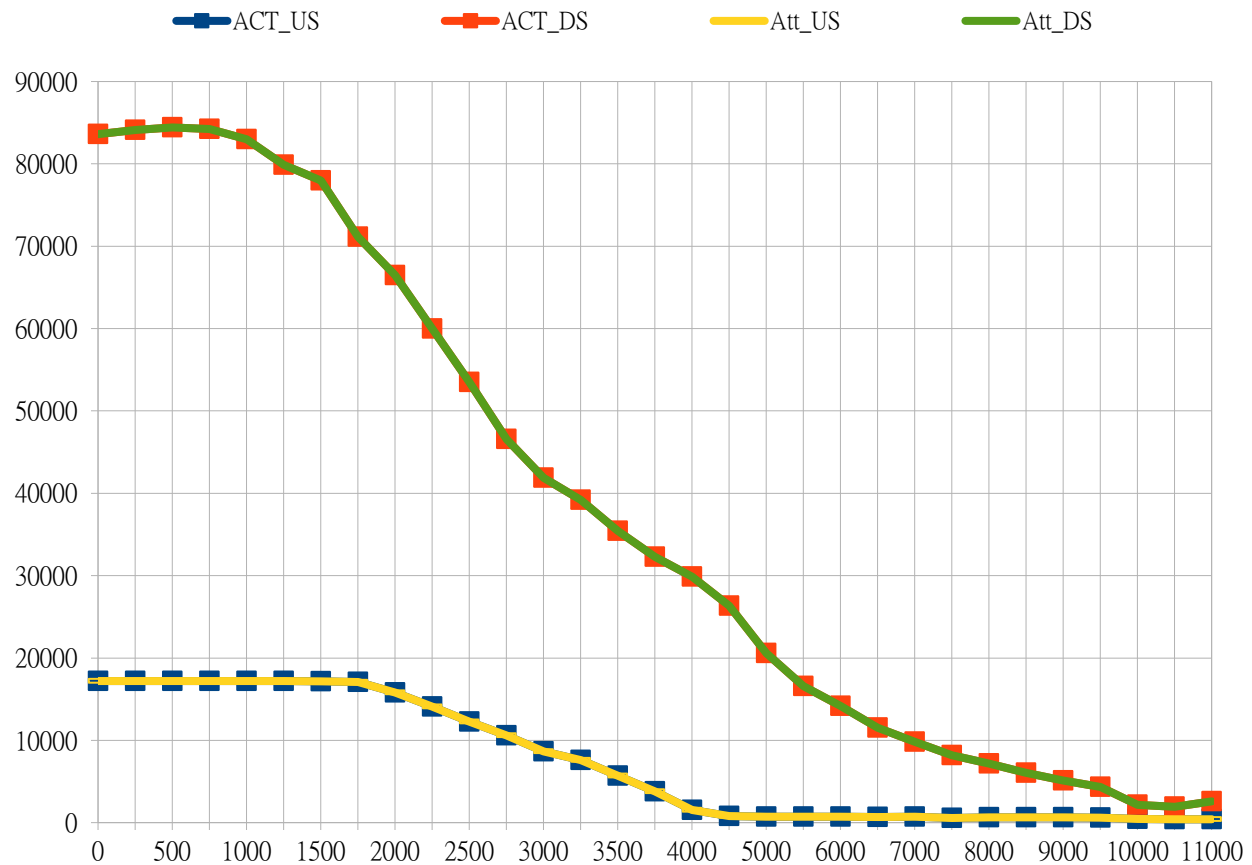
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Metanoia AA8c Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	82,974	53,499	29,880	16,595	9,808	6,056	2,187
US (kbit/s)	17,218	12,290	1,548	724	720	652	470

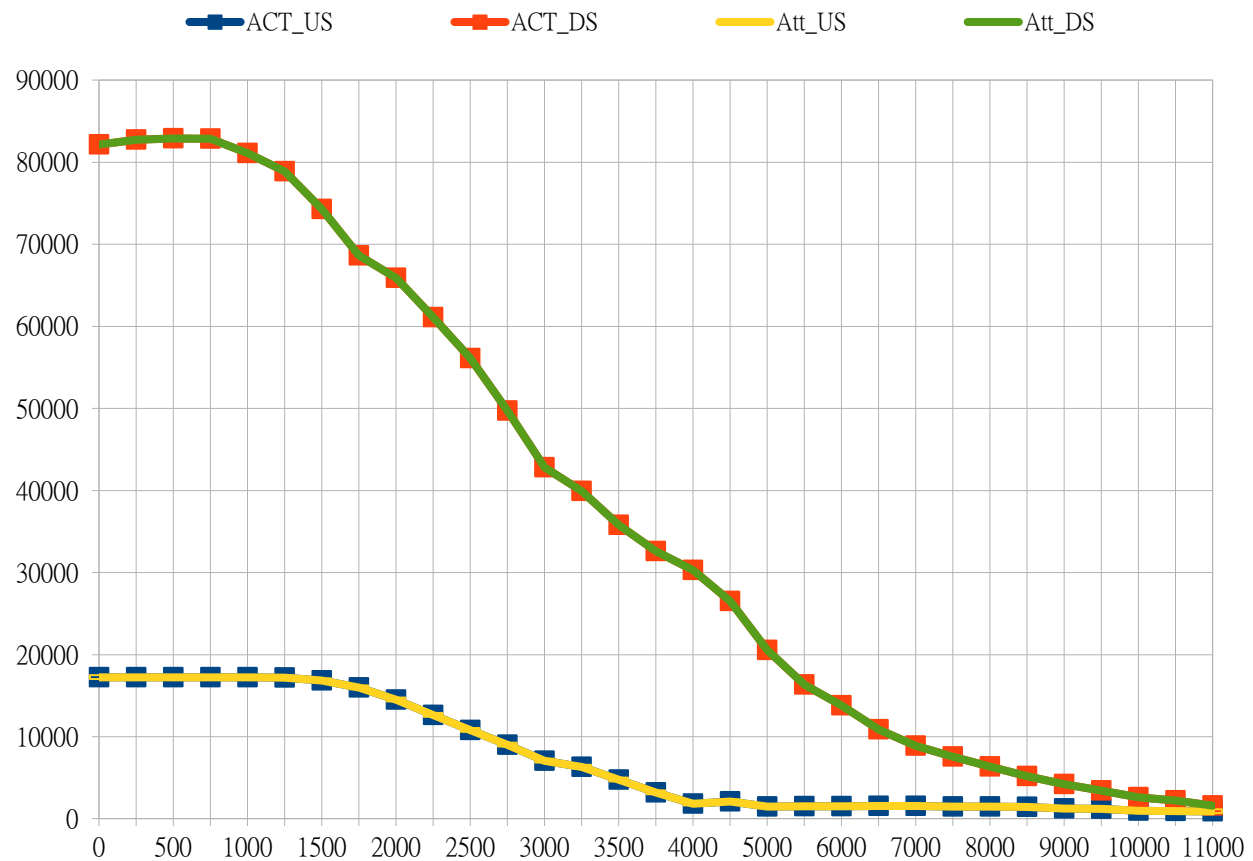
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Metanoia BB8b Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	81,104	56,103	30,302	16,327	8,897	5,174	2,594
US (kbit/s)	17,218	10,779	1,843	1,537	1,563	1,440	989

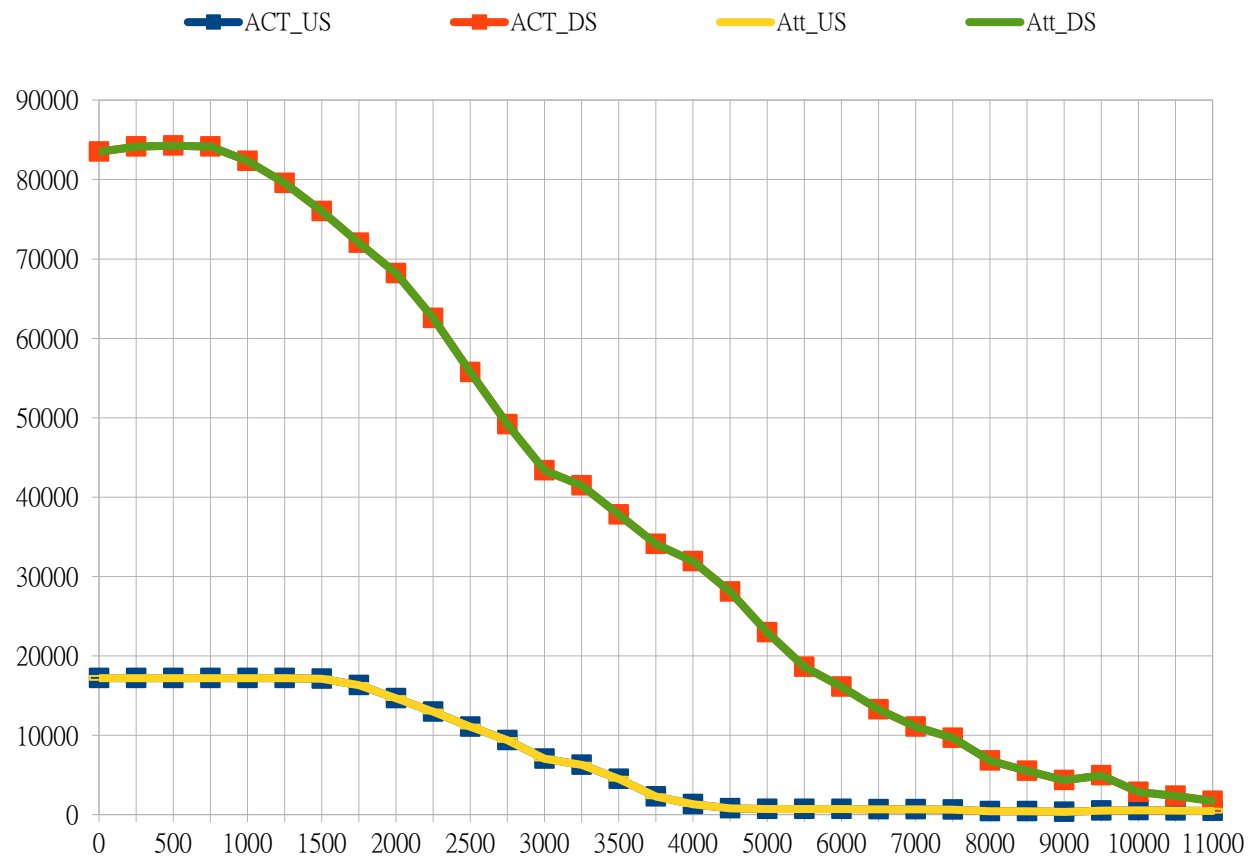
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Metanoia BA8b fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	82,340	55,745	31,931	18,607	11,084	5,537	2,844
US (kbit/s)	17,218	11,062	1,335	724	675	432	547

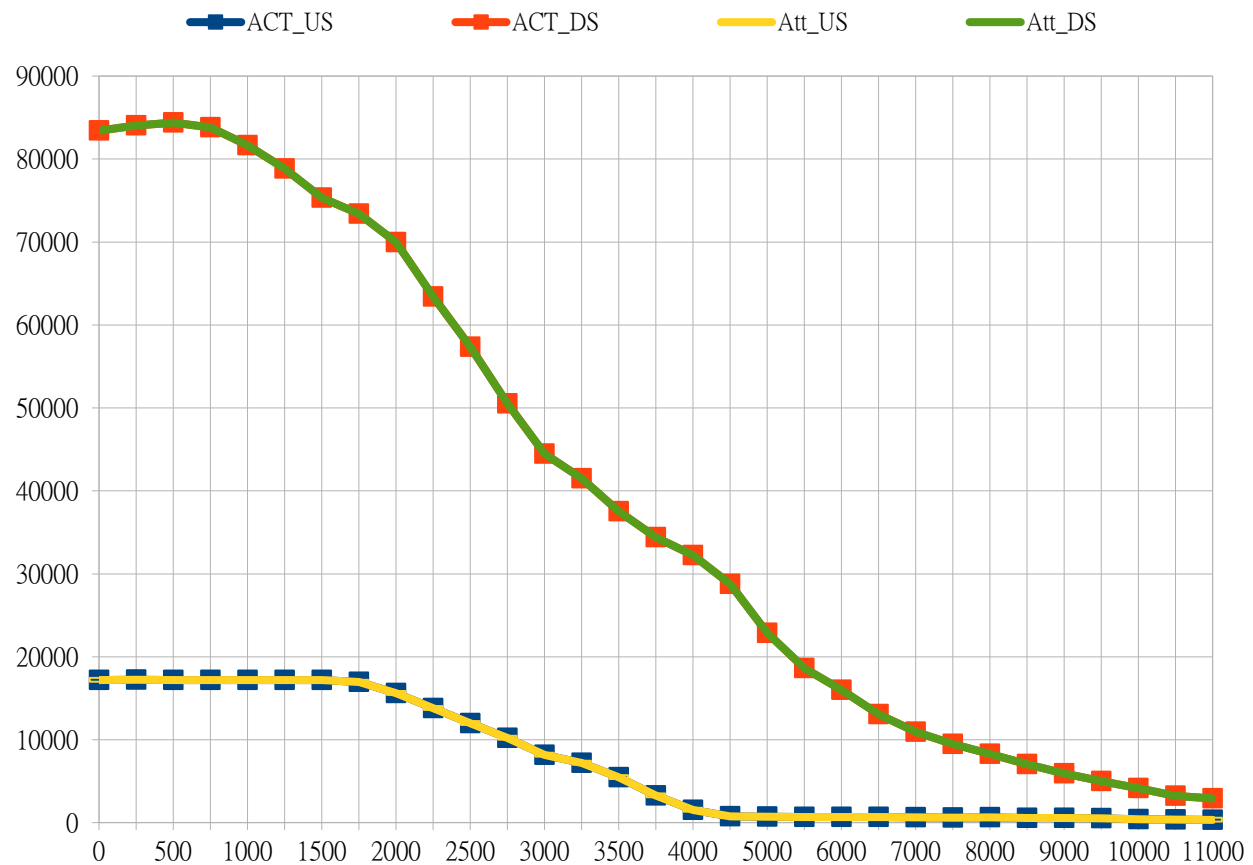
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Metanoia AA8b fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	81,661	57,357	32,230	18,622	10,955	7,042	4,159
US (kbit/s)	17,218	12,000	1,544	709	667	595	416

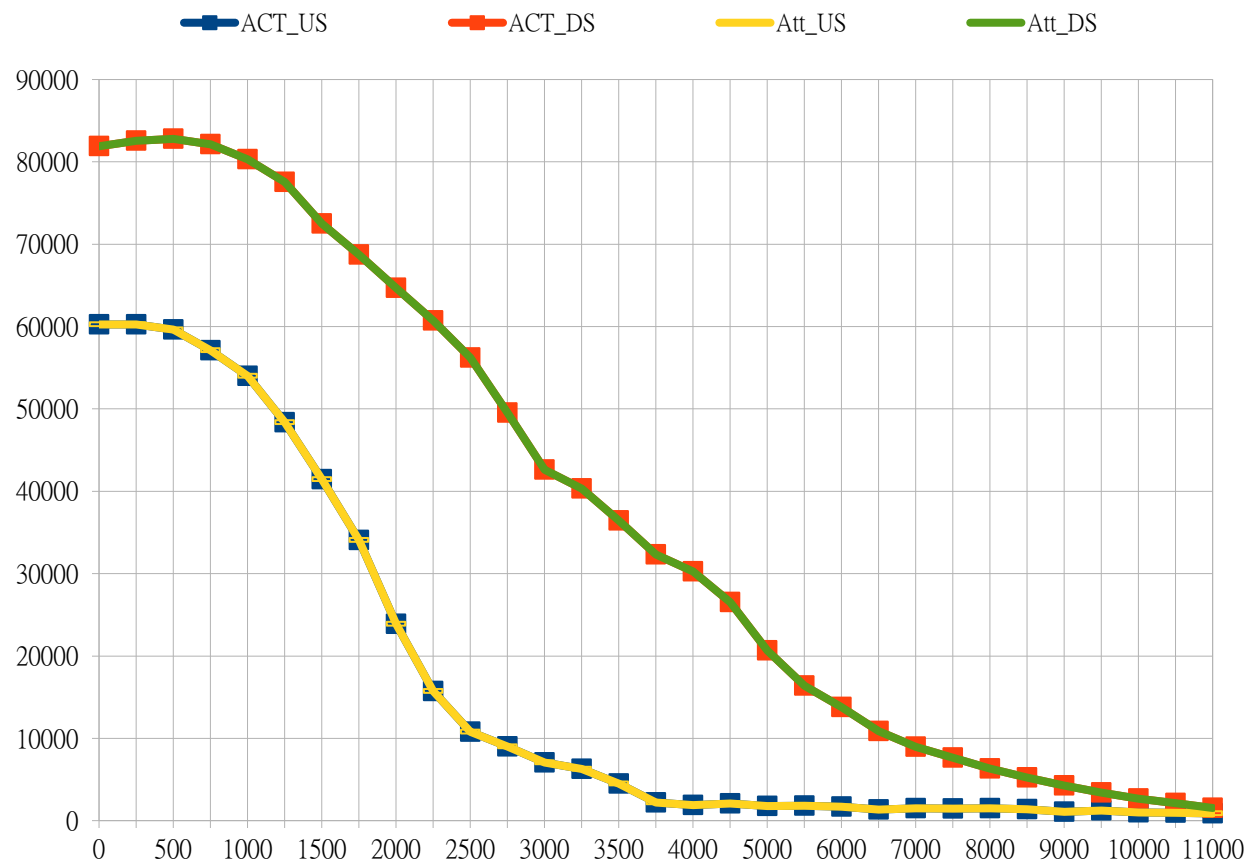
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Metanoia BB12a fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	80,313	56,219	30,265	16,375	8,967	5,246	2,661
US (kbit/s)	53,989	10,794	1,907	1,821	1,512	1,399	1,010

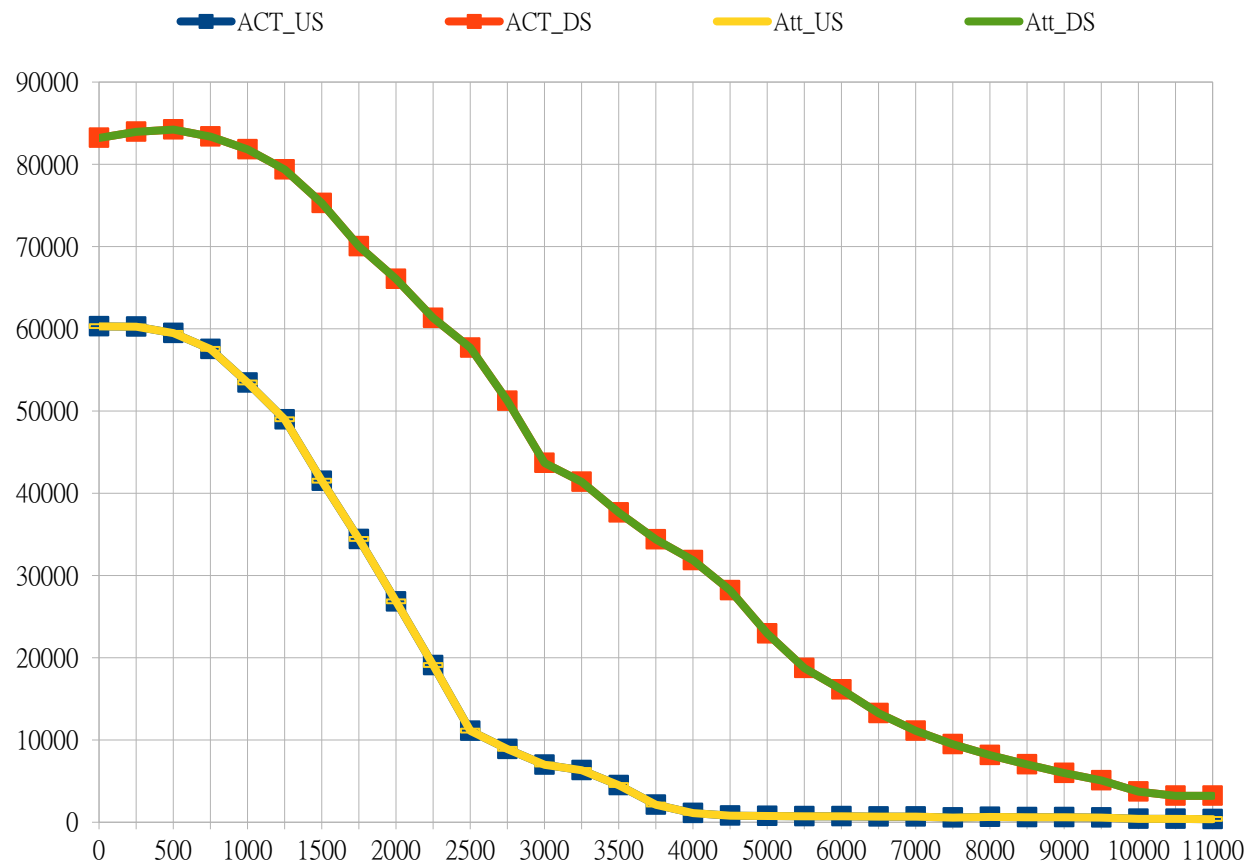
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Metanoia BA12a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	81,825	57,678	31,856	18,715	11,095	7,019	3,707
US (kbit/s)	53,454	11,114	1,104	709	675	603	416

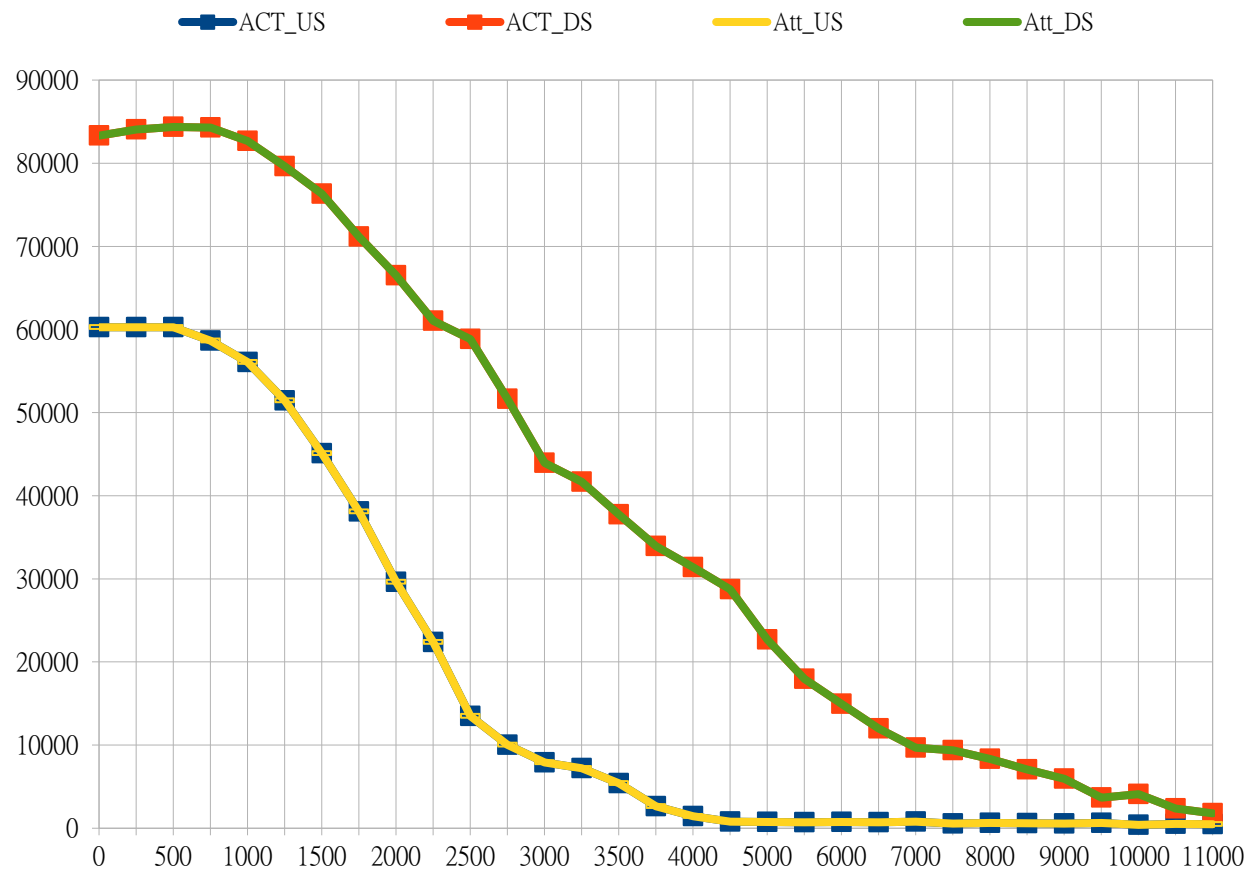
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Metanoia AA12a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



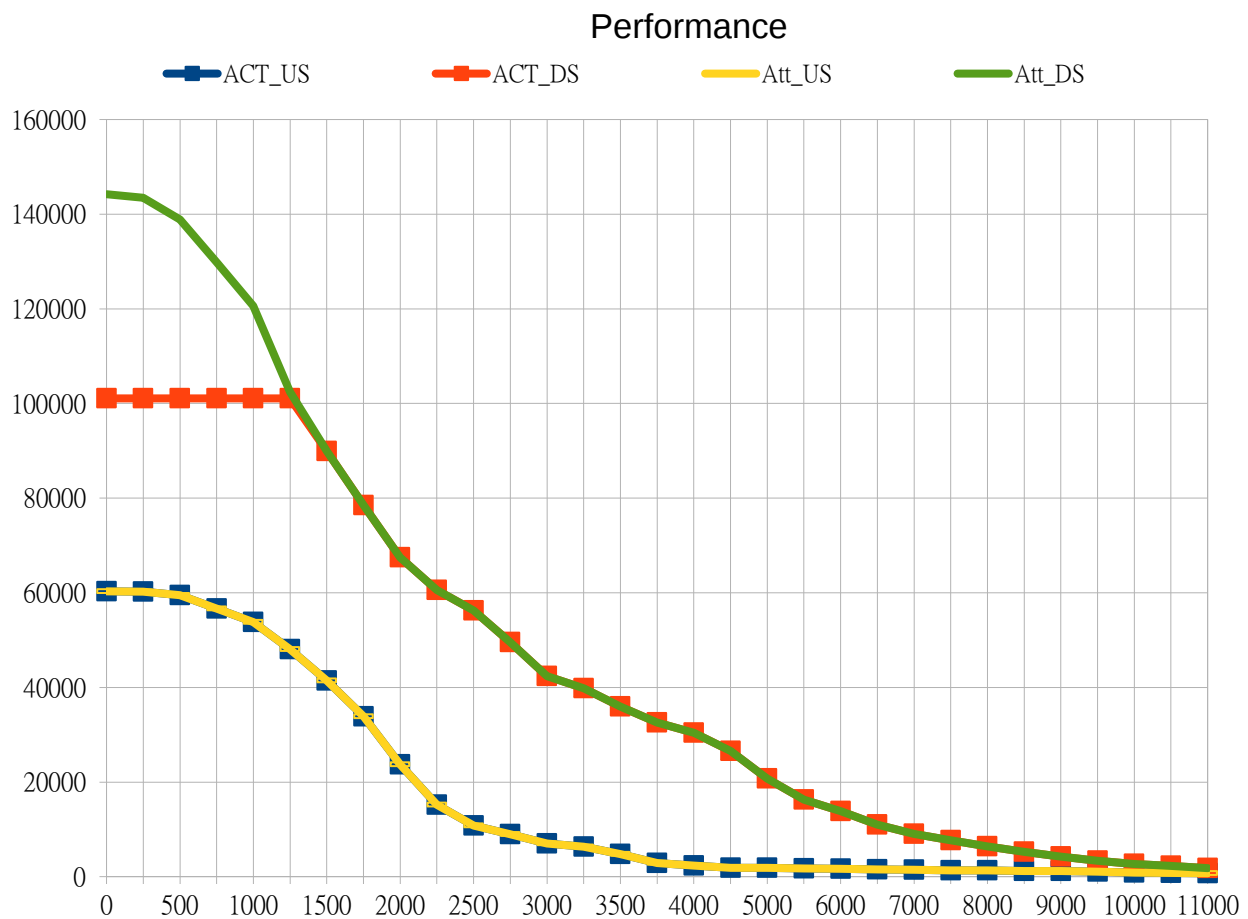
Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	82,669	58,840	31,382	17,968	9,681	7,068	4,088
US (kbit/s)	56,066	13,485	1,425	720	771	595	404

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Metanoia BB17a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	101,048	56,272	30,433	16,315	9,031	5,287	2,676
US (kbit/s)	53,846	10,827	2,332	1,784	1,493	1,238	884

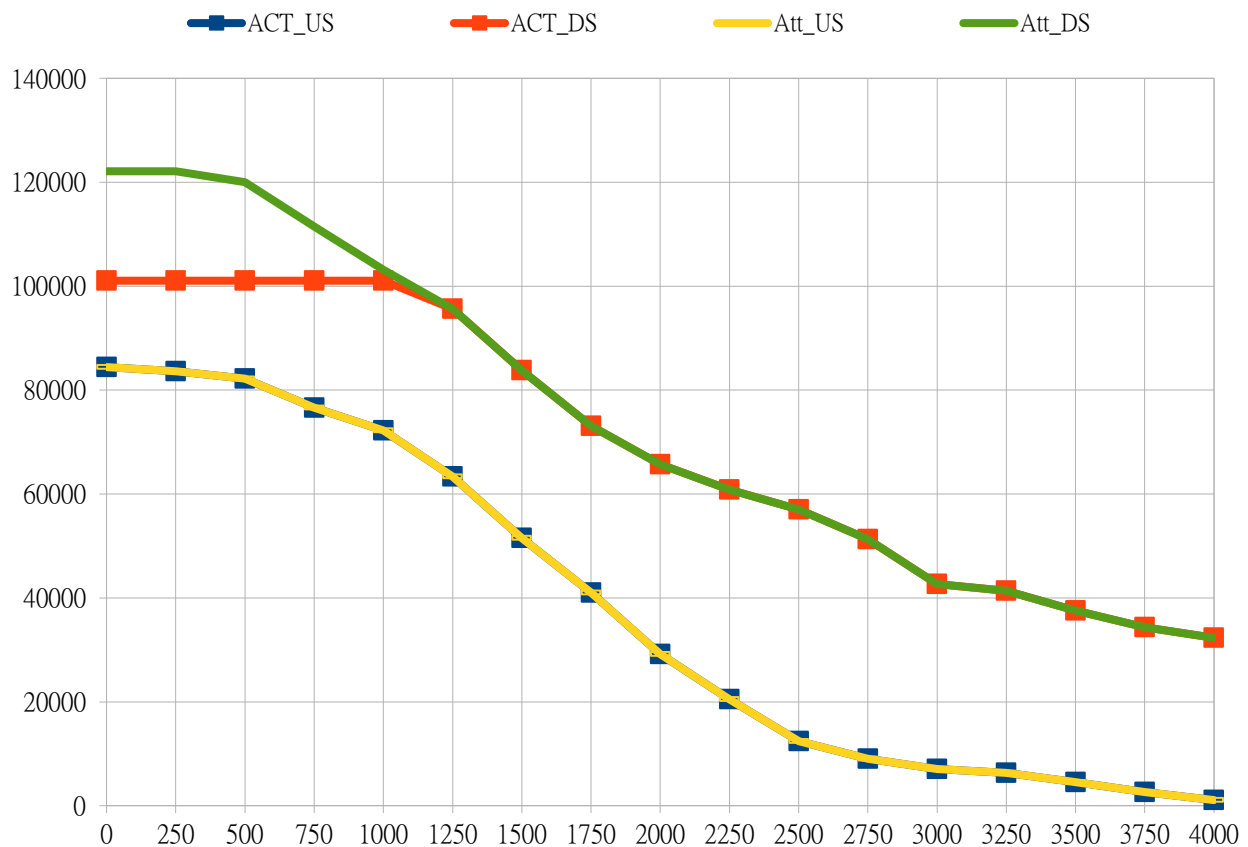
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Metanoia BA17a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,048	101,048	83,800	65,696	57,038	42,644	37,537
US (kbit/s)	82,187	72,259	51,528	29,197	12,410	7,057	4,570

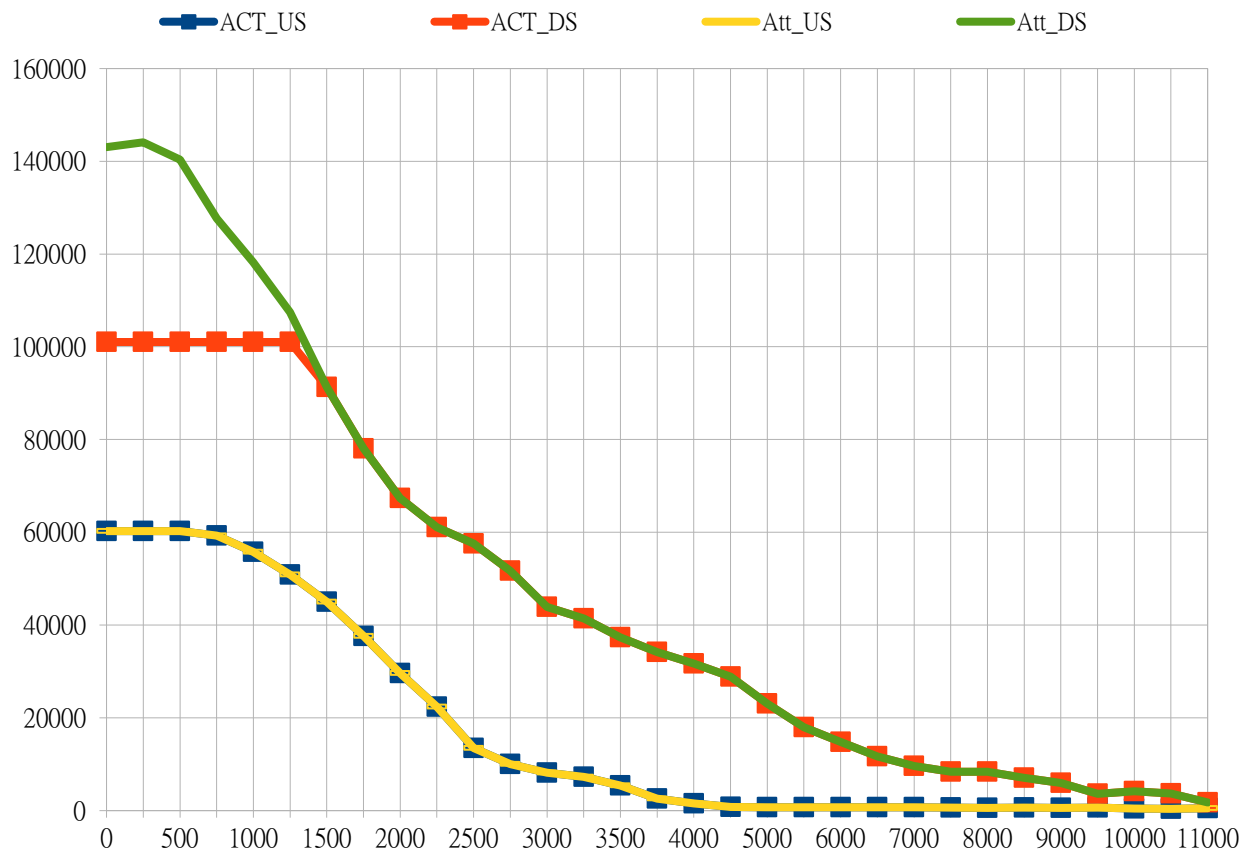
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Metanoia AA17a Fast

CO	Metanoia
CO Firmware	1.4.1.1.f.0
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	I-8/2

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	101,048	57,571	31,680	17,961	9,625	7,023	4,129
US (kbit/s)	55,772	57,571	1,541	724	716	614	412

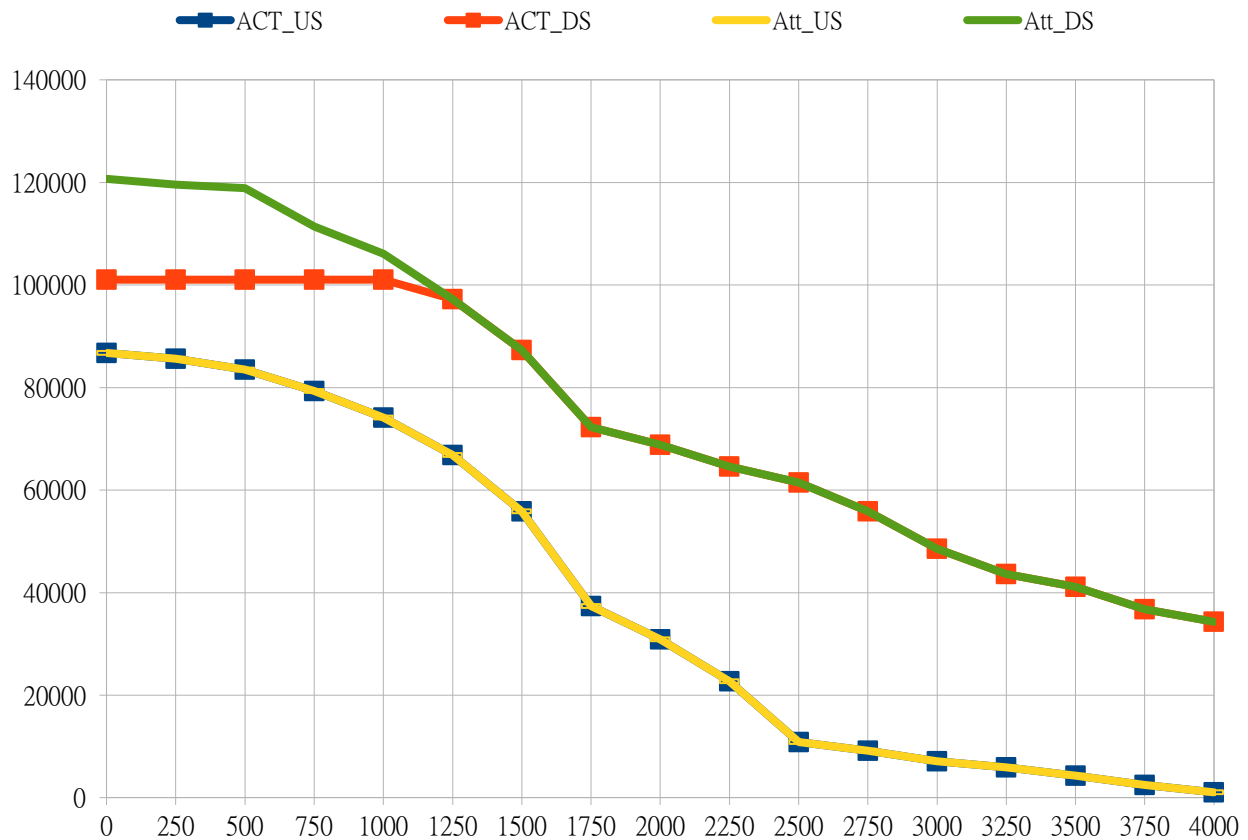
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Ikanos BB30a Fast

CO	Ikanos
CO Firmware	-
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	n/A
Line Setting	F-1/0

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,048	101,048	87,288	68,824	61,464	48,455	41,144
US (kbit/s)	83,480	74,168	55,880	30,904	10,840	7,120	4,328

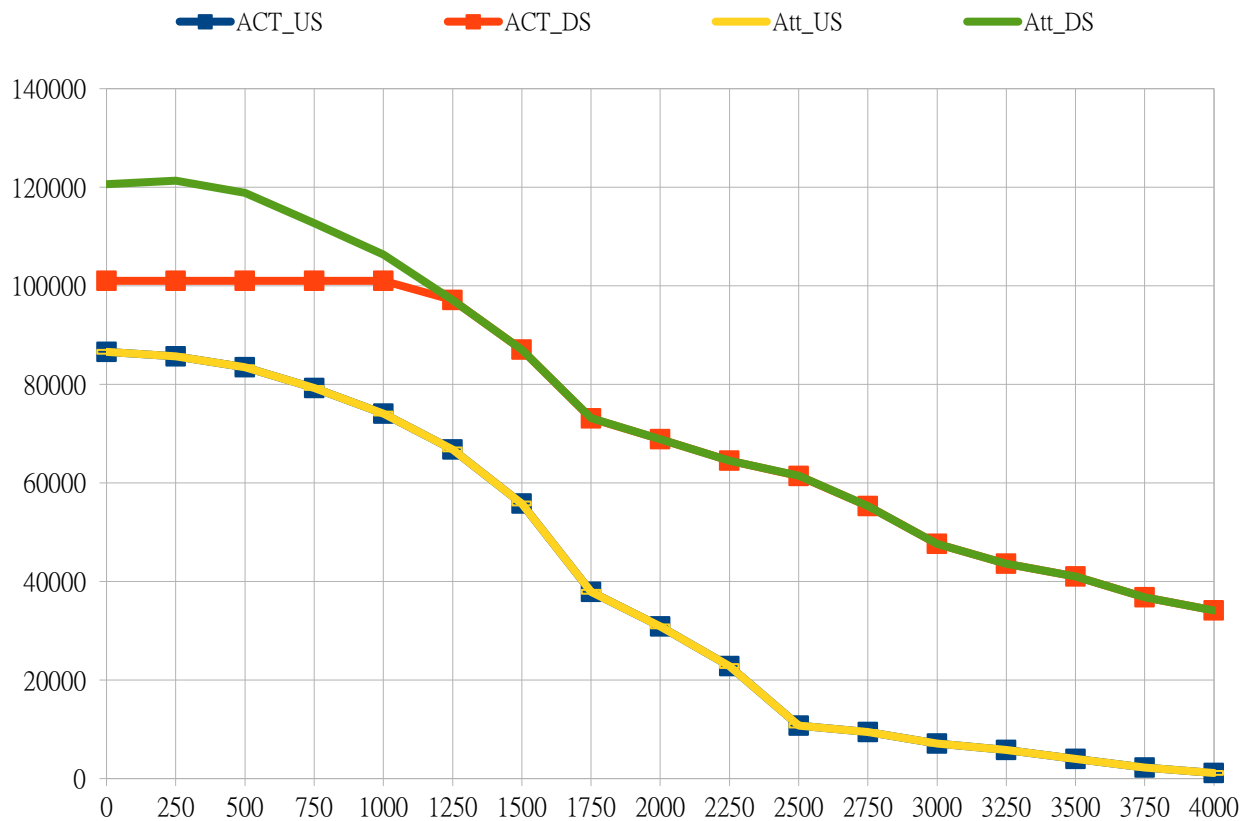
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Ikanos BA30a_B8-13 Fast

CO	Ikanos
CO Firmware	-
Profile	30a
Annex	B
PSD (short)	B8-13
PSD (long)	998E30-M2x-NUS0
US0 type	n/A
Line Setting	F-1/0

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,048	101,048	87,056	68,904	61,456	47,680	41,040
US (kbit/s)	83,512	74,104	55,856	30,904	10,808	7,128	4,056

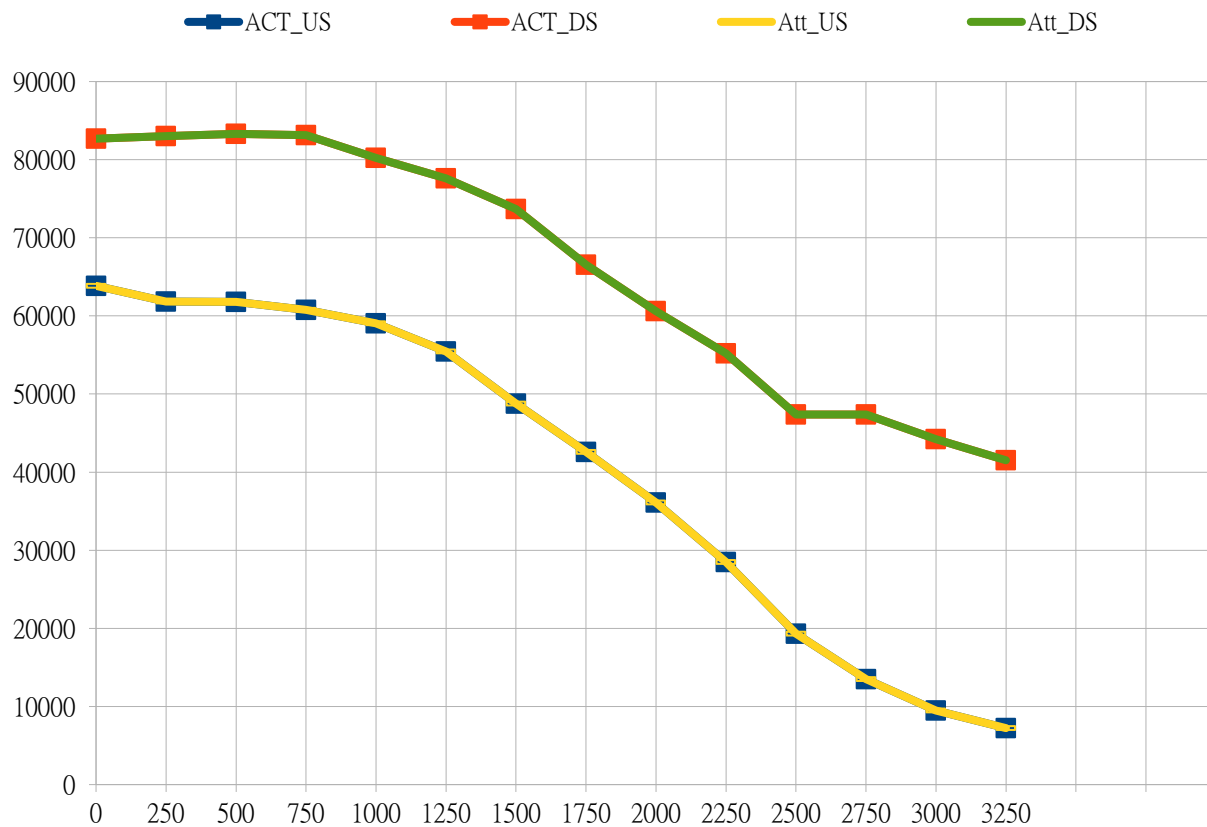
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Ikanos AA30a Fast

CO	Ikanos
CO Firmware	-
Profile	30a
Annex	A
PSD (short)	Annex A std.
PSD (long)	-
US0 type	EU32
Line Setting	F-1/0

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3250
DS (kbit/s)	83,272	80,224	73,688	60,608	47,360	44,216	41,520
US (kbit/s)	61,808	59,056	48,760	36,128	19,336	9,512	7,240

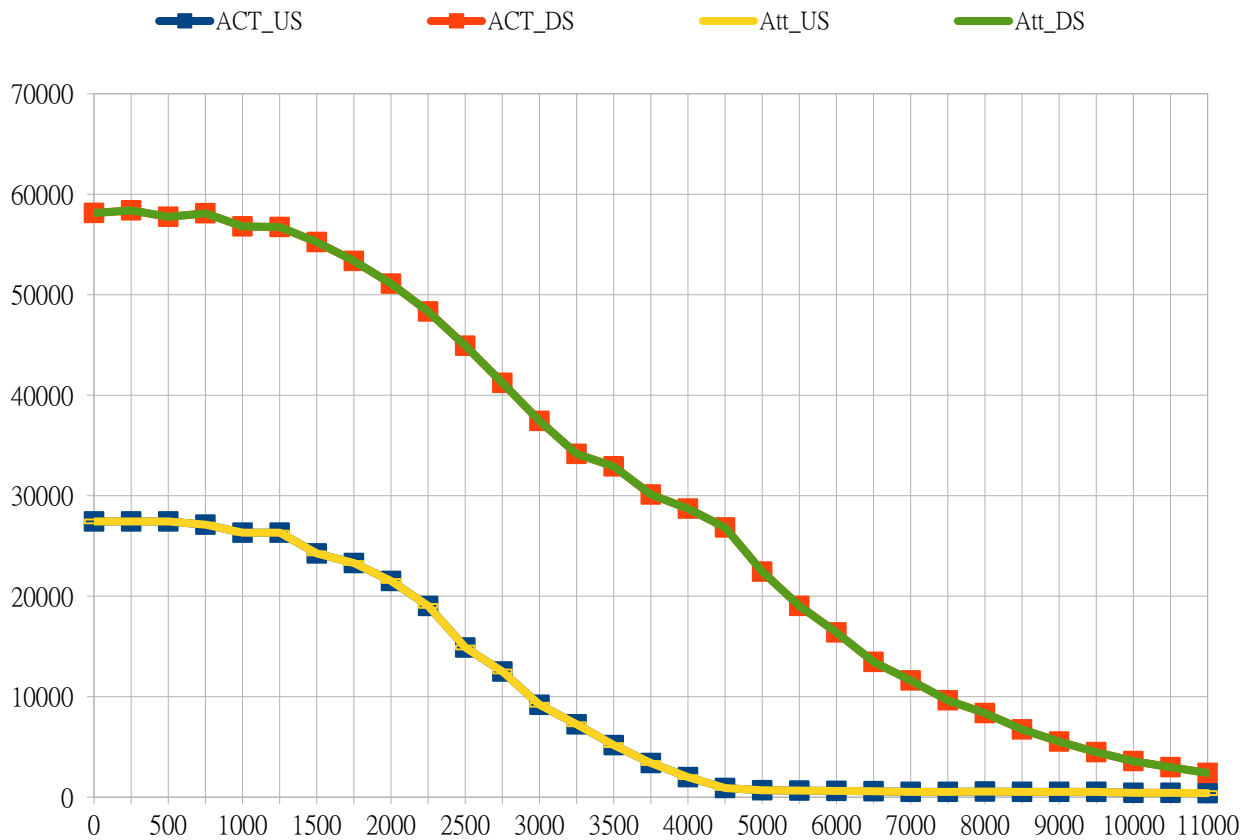
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Ikanos BA8c fast

CO	Ikanos
CO Firmware	-
Profile	8c
Annex	B
PSD (short)	B7-1
PSD (long)	997-M1c-A-7
US0 type	A
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	56,808	44,936	28,728	19,024	11,600	6,752	3,592
US (kbit/s)	26,336	14,896	1,992	648	536	536	424

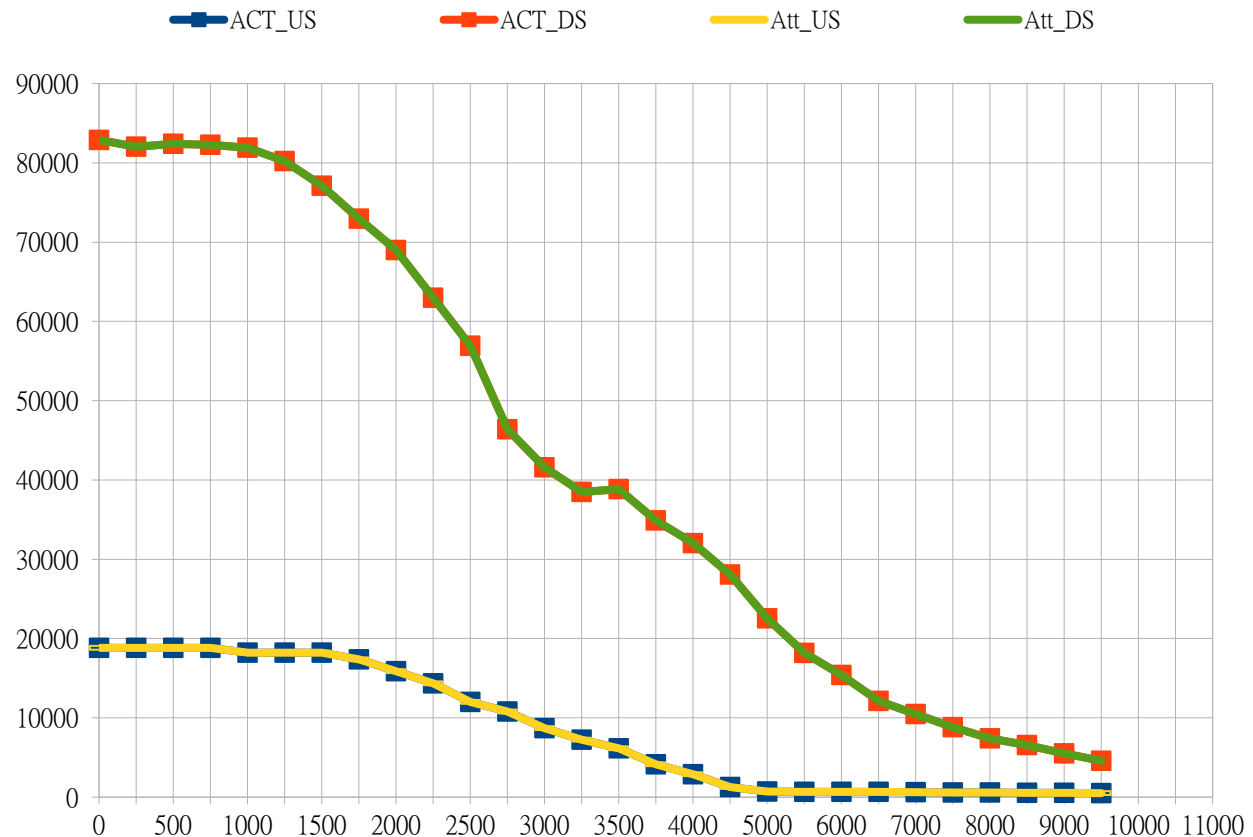
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Ikanos AA8c Fast

CO	Ikanos
CO Firmware	-
Profile	8c
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	9500
DS (kbit/s)	81,904	56,912	32,040	18,184	10,480	6,552	4,568
US (kbit/s)	18,208	11,992	2,864	680	616	520	488

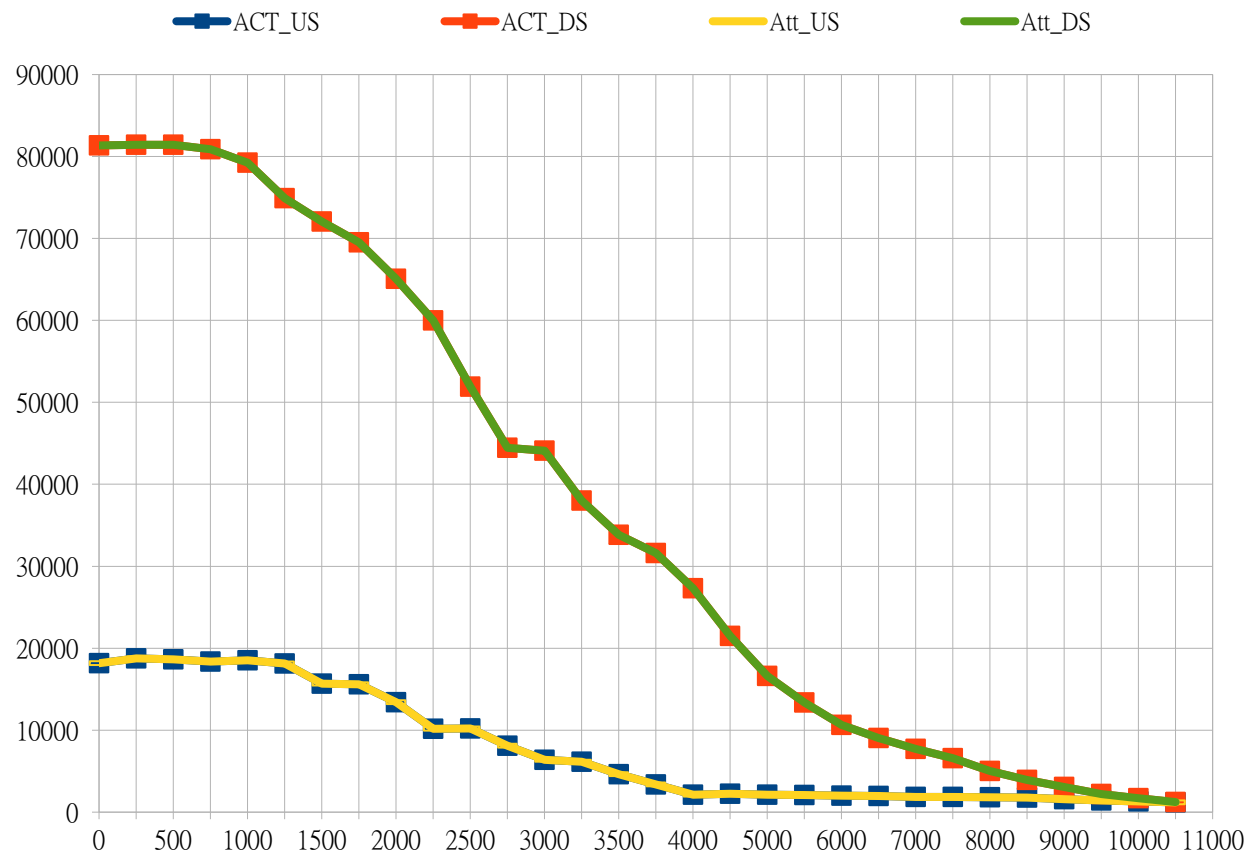
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Ikanos BB8b Fast

CO	Ikanos
CO Firmware	-
Profile	8b
Annex	B
PSD (short)	B8-6
PSD (long)	998-M2x-B
US0 type	B
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	79,240	51,912	27,320	13,376	7,704	3,904	1,696
US (kbit/s)	18,512	10,200	2,120	2,080	1,856	1,760	1,296

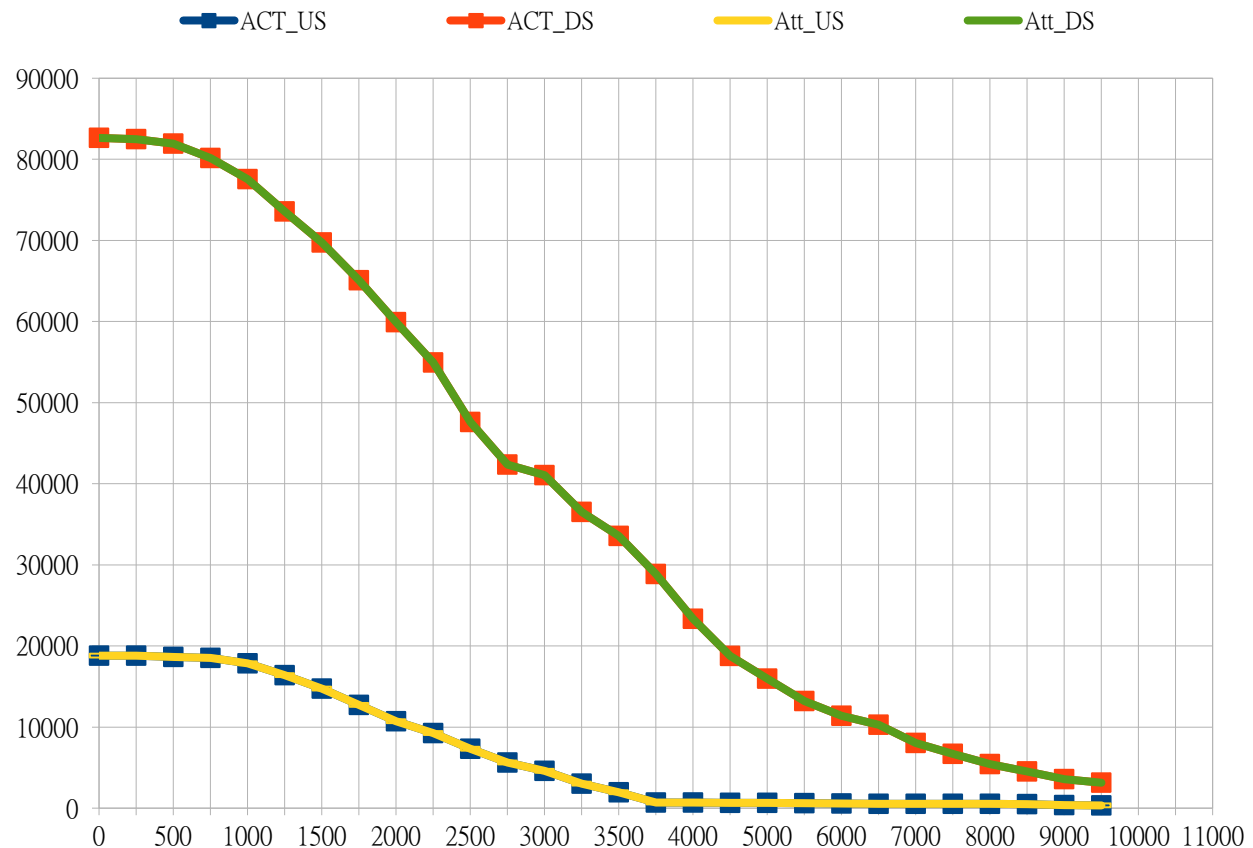
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Ikanos BA8b Fast

CO	Ikanos
CO Firmware	-
Profile	8b
Annex	B
PSD (short)	B8-4
PSD (long)	998-M2x-A
US0 type	A
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	77,560	47,600	23,336	13,208	8,016	4,528	3,144
US (kbit/s)	17,872	7,312	680	616	536	488	328

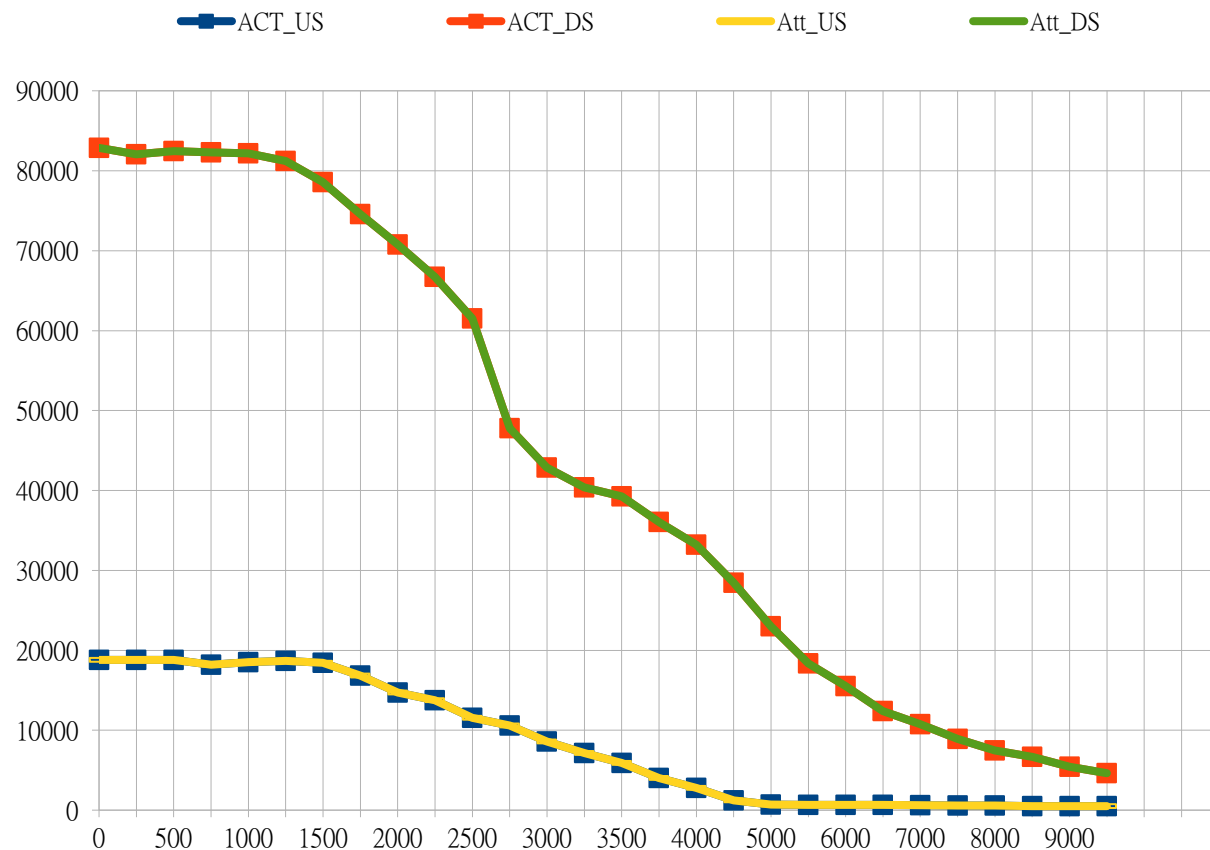
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Ikanos AA8b Fast

CO	Ikanos
CO Firmware	-
Profile	8b
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	F-1/0

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Performance



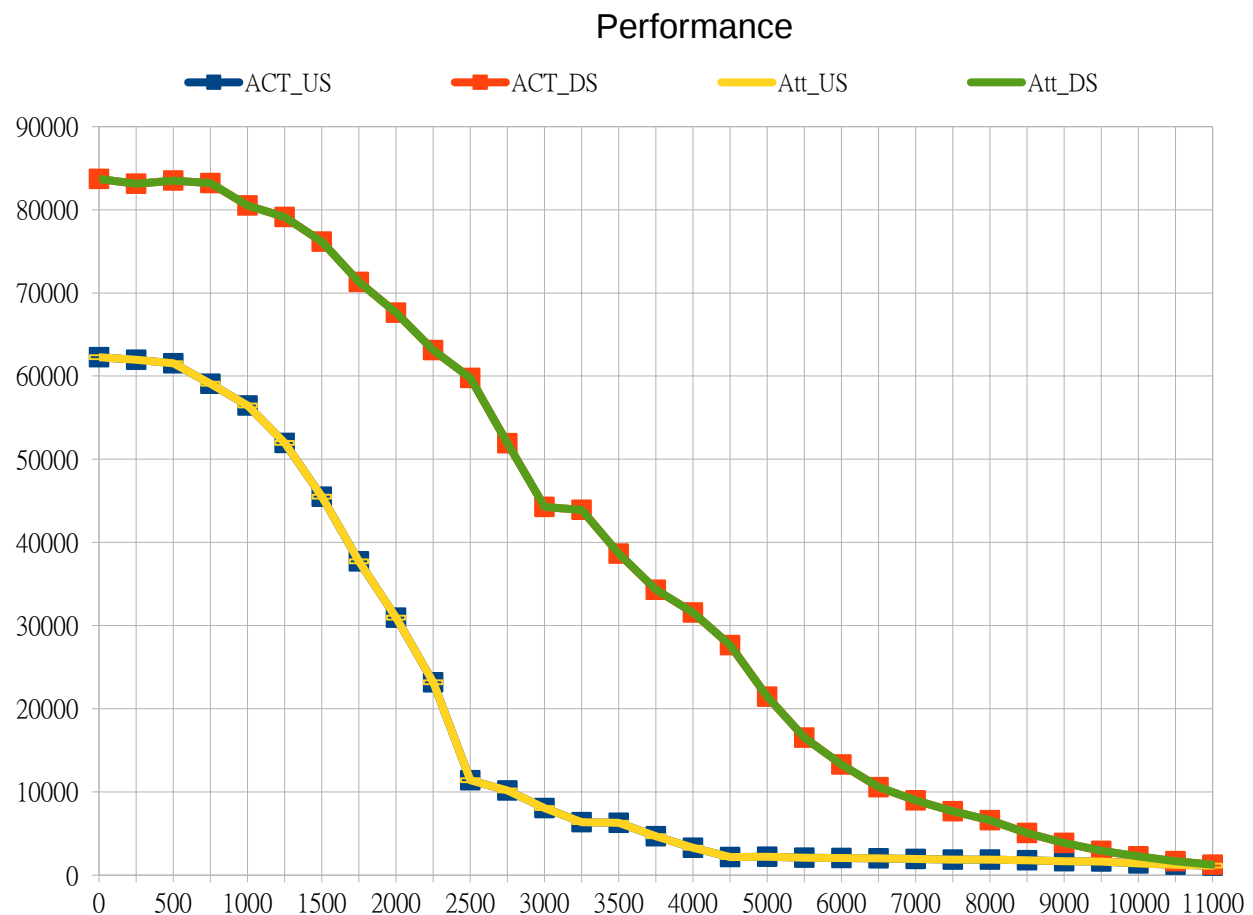
Distance (ft.)	1000	2500	4000	5500	7000	8500	9500
DS (kbit/s)	82,184	61,520	33,232	18,368	10,744	6,672	4,648
US (kbit/s)	18,512	11,576	2,800	680	616	520	488

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Ikanos BB12a Fast

CO	Ikanos
CO Firmware	-
Profile	12a
Annex	B
PSD (short)	B8-6
PSD (long)	998-M2x-B
US0 type	B
Line Setting	F-1/0

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Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	80,512	59,768	31,584	16,528	8,992	5,064	2,264
US (kbit/s)	56,472	11,424	3,296	2,120	1,952	1,792	1,392

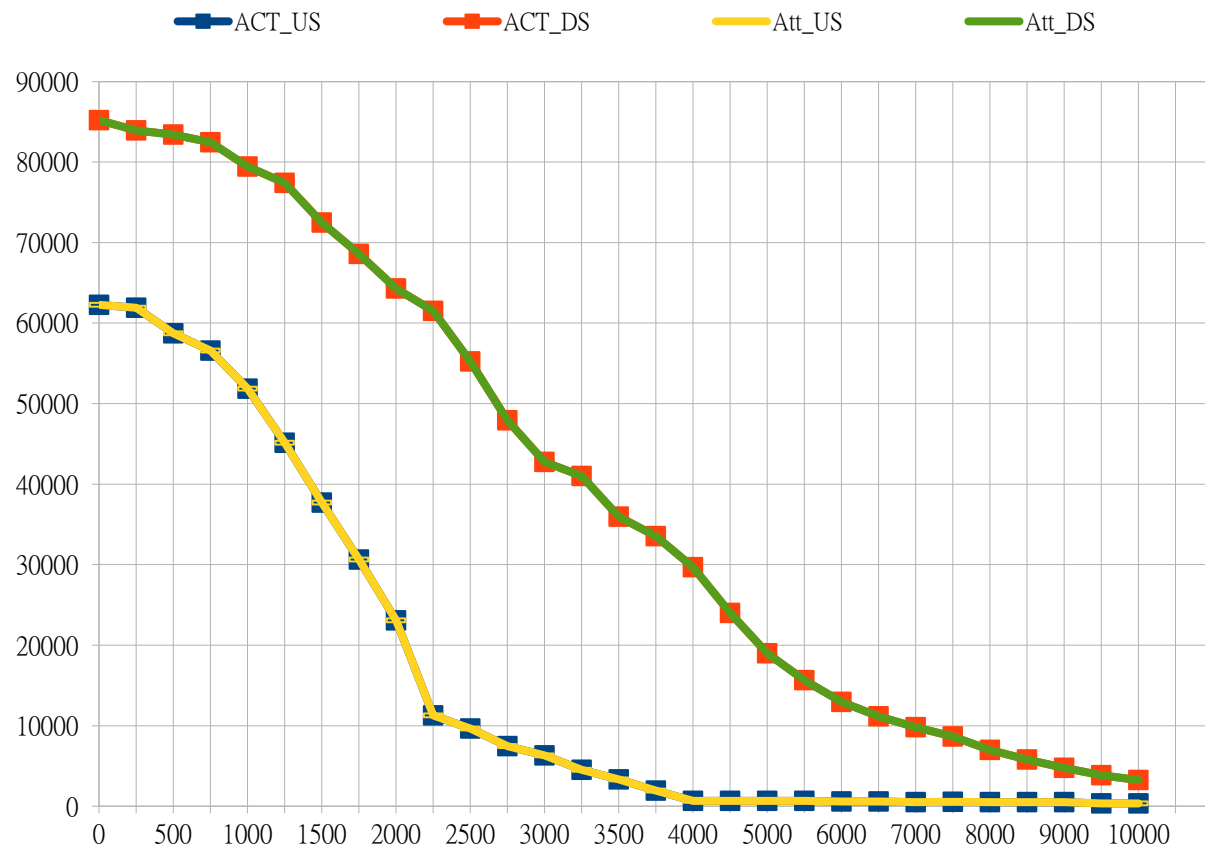
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Ikanos BA12a Fast

CO	Ikanos
CO Firmware	-
Profile	12a
Annex	B
PSD (short)	B8-4
PSD (long)	998-M2x-A
US0 type	A
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	79,440	55,240	29,656	15,632	9,816	5,776	3,256
US (kbit/s)	51,832	9,640	680	648	512	520	328

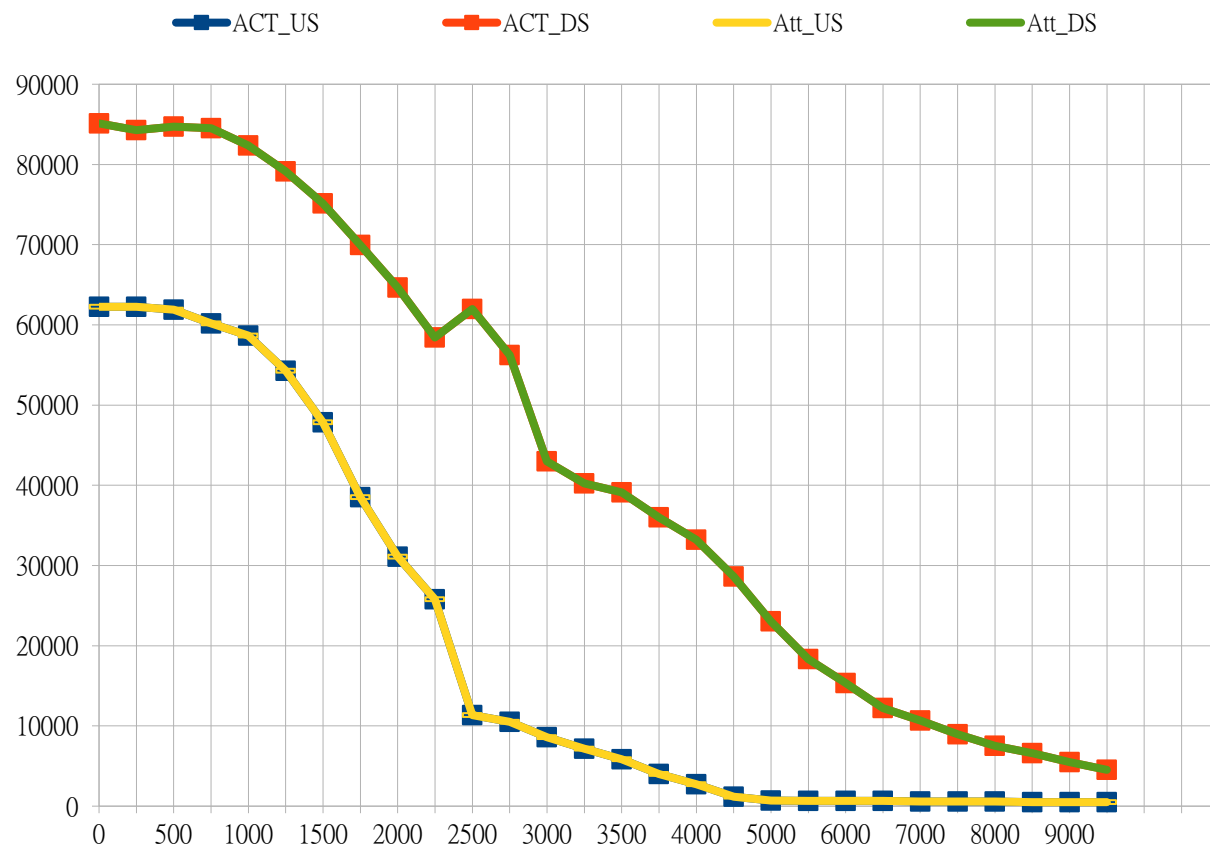
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Ikanos AA12a Fast

CO	Ikanos
CO Firmware	-
Profile	8b
Annex	A
PSD (short)	Annex A std.
PSD (long)	-
US0 type	EU32
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	9500
DS (kbit/s)	82,376	61,984	33,216	18,320	10,680	6,624	4,536
US (kbit/s)	58,680	11,336	2,744	680	584	520	488

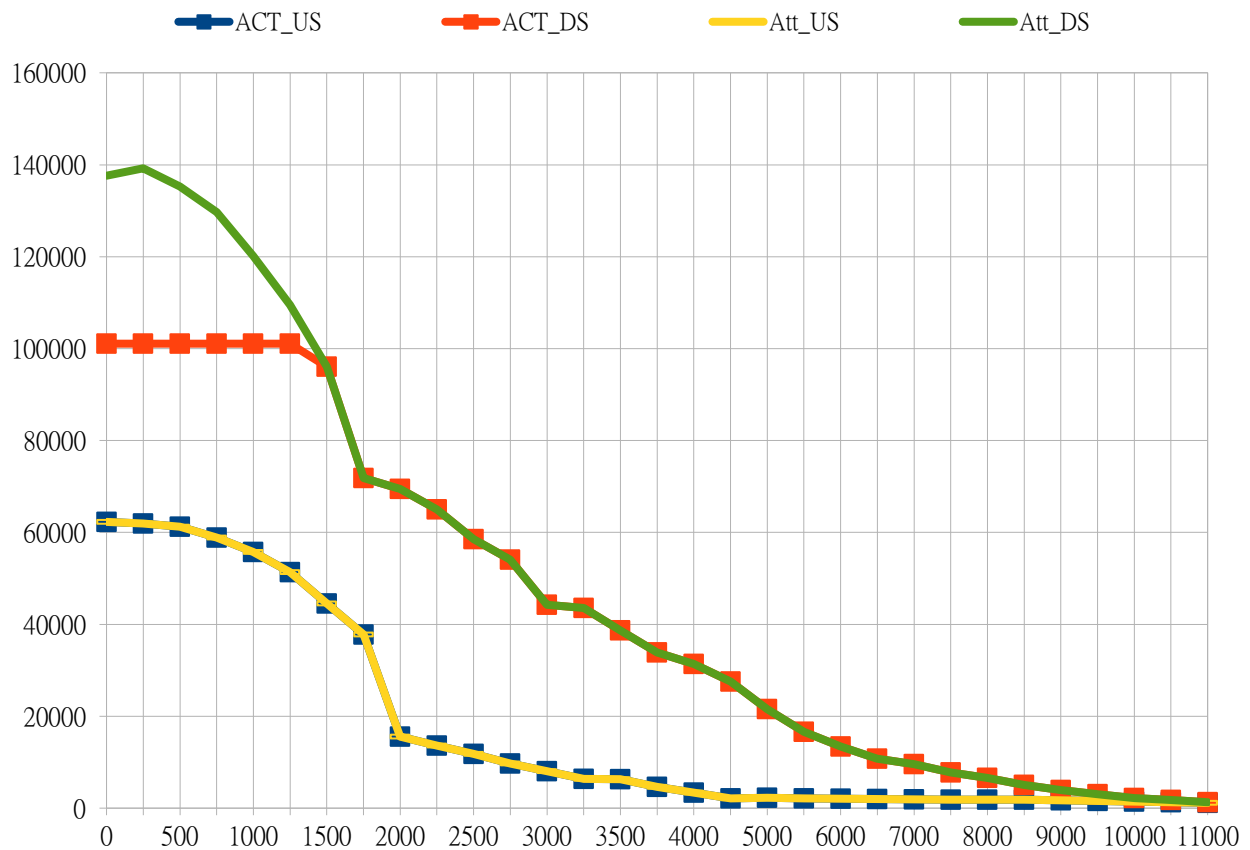
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Ikanos BB17a Fast

CO	Ikanos
CO Firmware	-
Profile	17a
Annex	B
PSD (short)	B8-12
PSD (long)	998ADE17-M2x-B
US0 type	B
Line Setting	F-1/0

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Performance



Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	101,048	58,504	31,408	16,632	9,552	5,072	2,232
US (kbit/s)	55,728	11,840	3,360	2,120	1,944	1,824	1,424

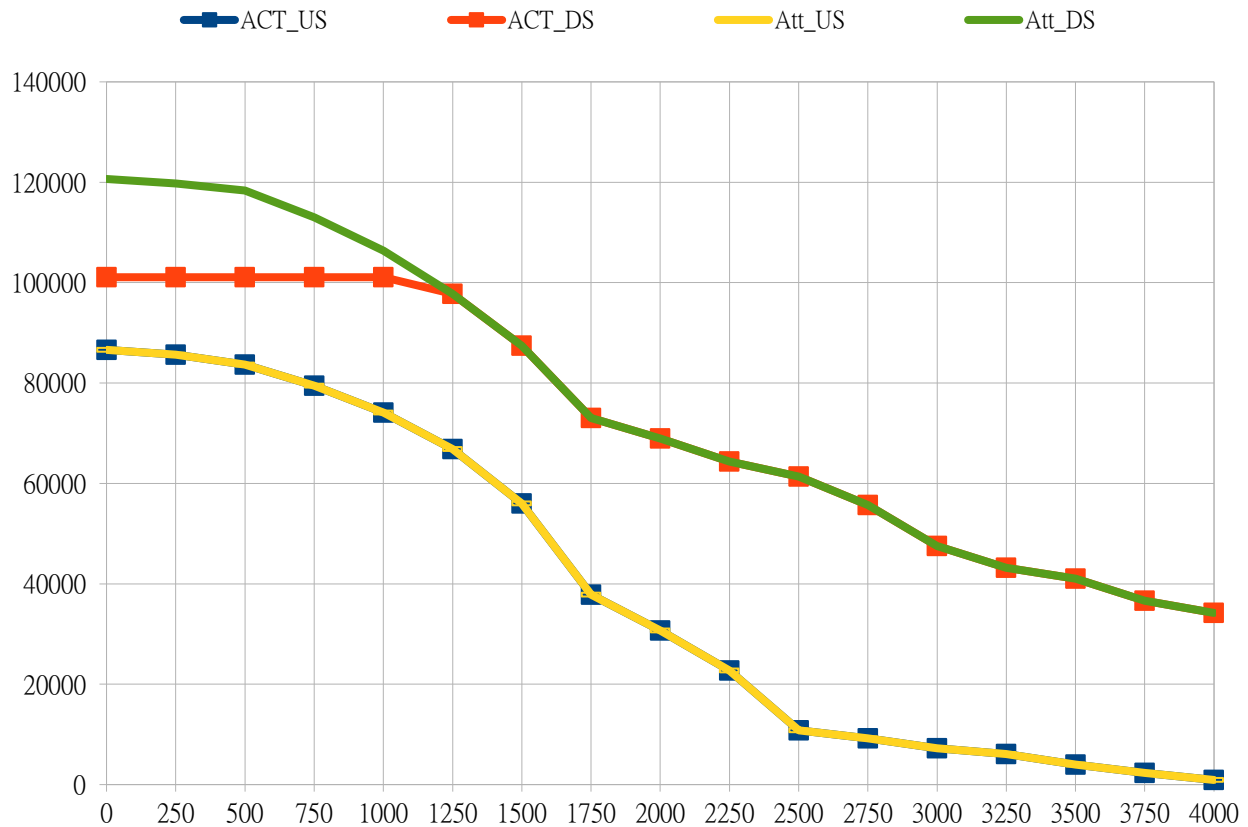
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Ikanos BA17a Fast

CO	Ikanos
CO Firmware	-
Profile	17a
Annex	B
PSD (short)	B8-8
PSD (long)	998E17-M2x-NUS0
US0 type	-
Line Setting	F-1/0

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Performance



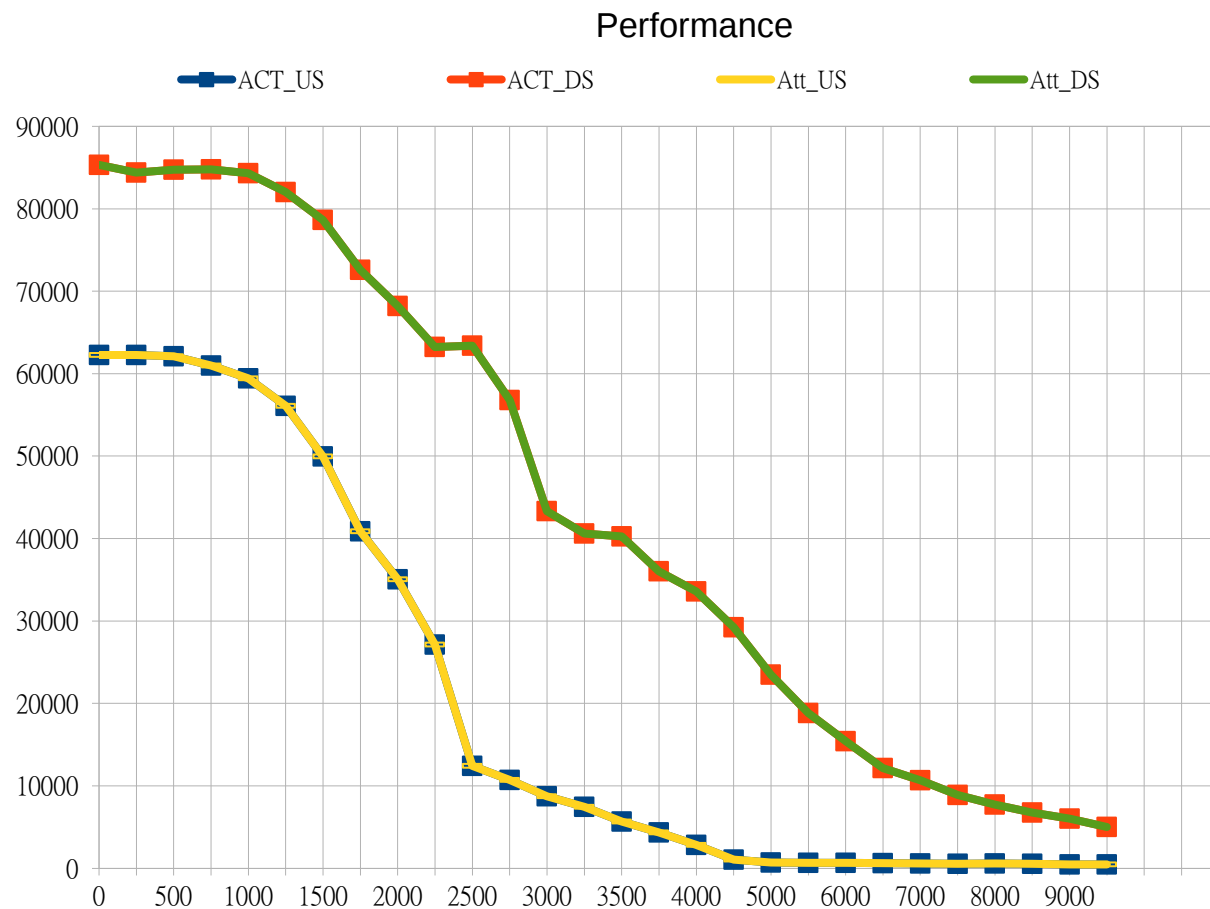
Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	101,048	101,048	87,440	68,936	61,368	47,560	41,032
US (kbit/s)	83,664	74,136	56,032	30,696	10,808	7,272	3,992

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Ikanos AA17a Fast

CO	Ikanos
CO Firmware	-
Profile	17a
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	F-1/0

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Distance (ft.)	1000	2500	4000	5500	7000	8500	9500
DS (kbit/s)	84,328	63,384	33,576	18,824	10,664	6,768	5000
US (kbit/s)	59,440	12,408	2,824	680	584	536	488

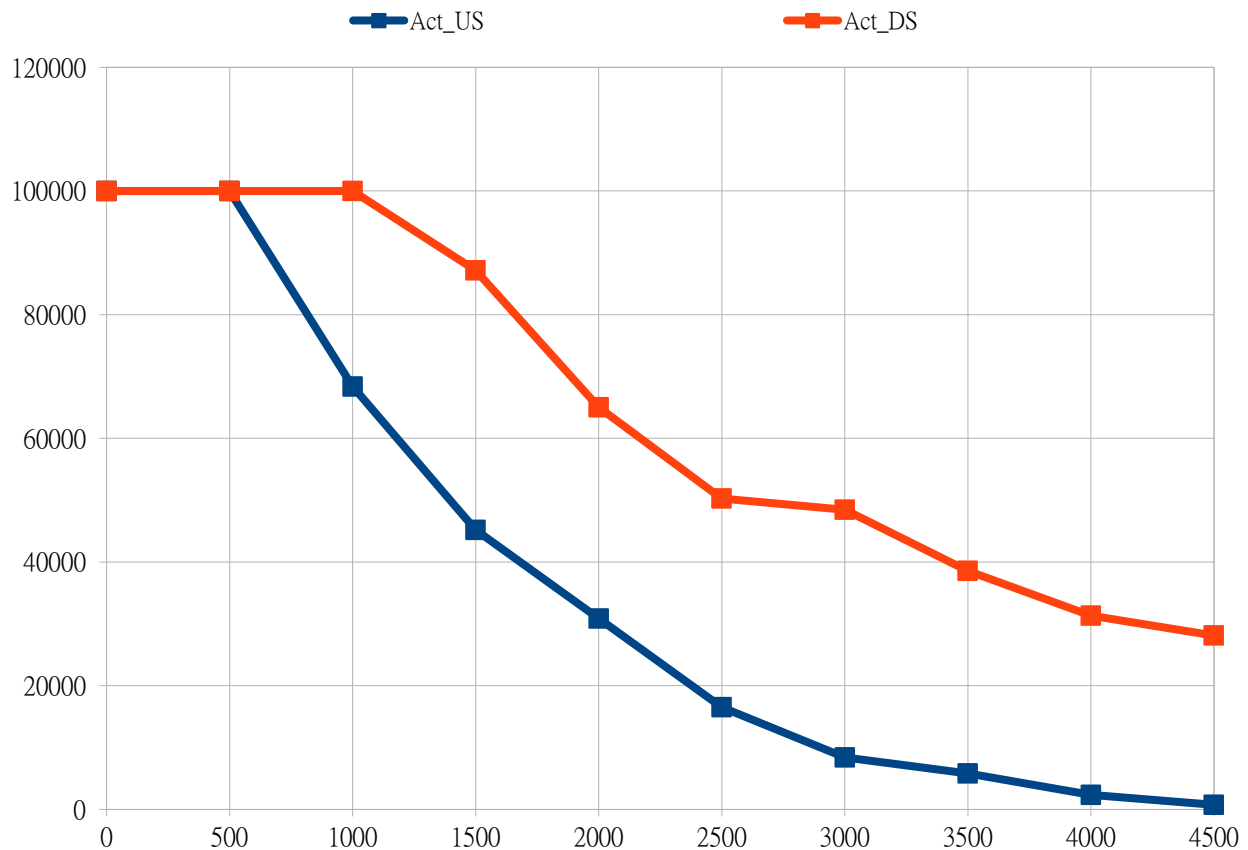
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Broadcom AA30a Fast

CO	Broadcom
CO Firmware	-
Profile	30a
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	F-1/0

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Performance



Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	99,987	99,987	87,170	64,996	50,250	48,439	38,573
US (kbit/s)	100,014	68,388	45,192	30,873	16,512	8,403	5,808

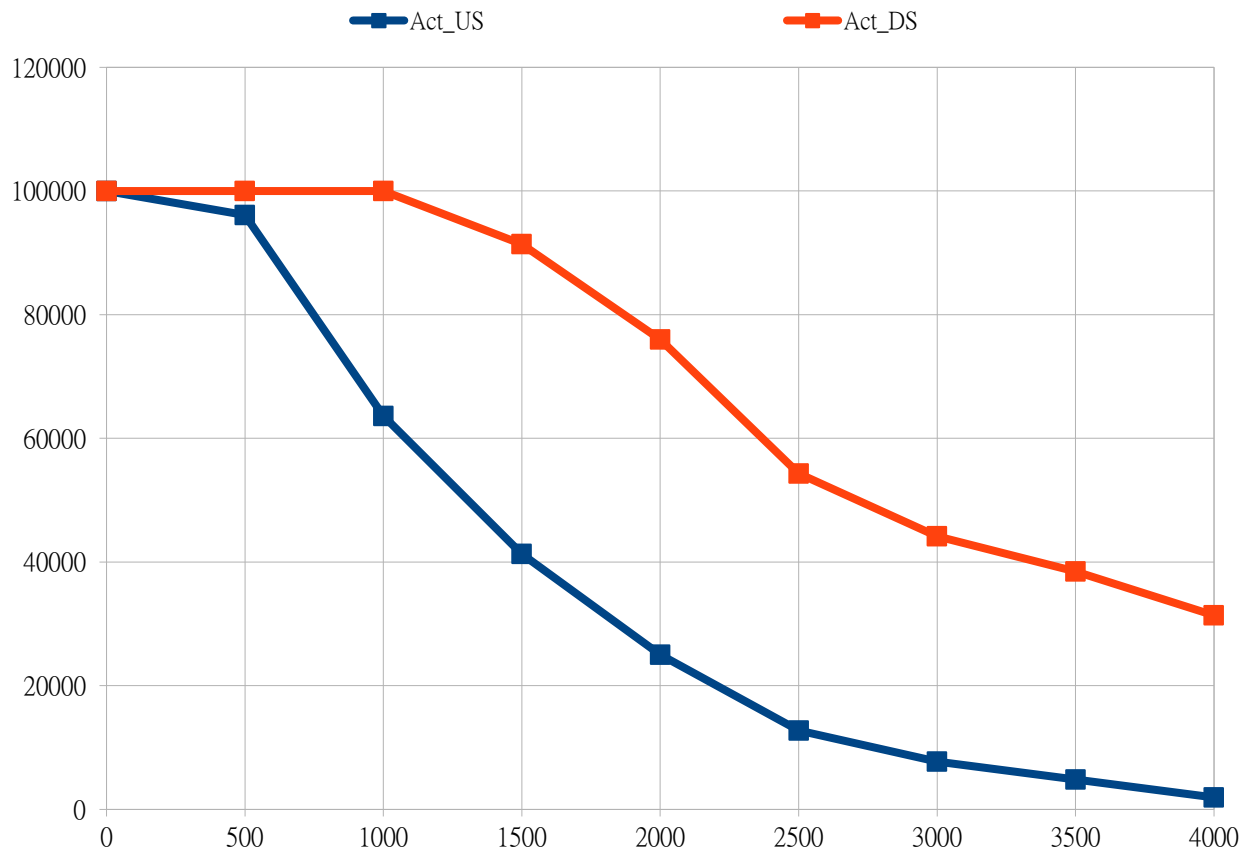
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Broadcom BB30a Fast

CO	Broadcom
CO Firmware	-
Profile	30a
Annex	B
PSD (short)	B8-15
PSD (long)	998ADE30-M2x-NUS0-M
US0 type	-
Line Setting	F-1/0

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Performance



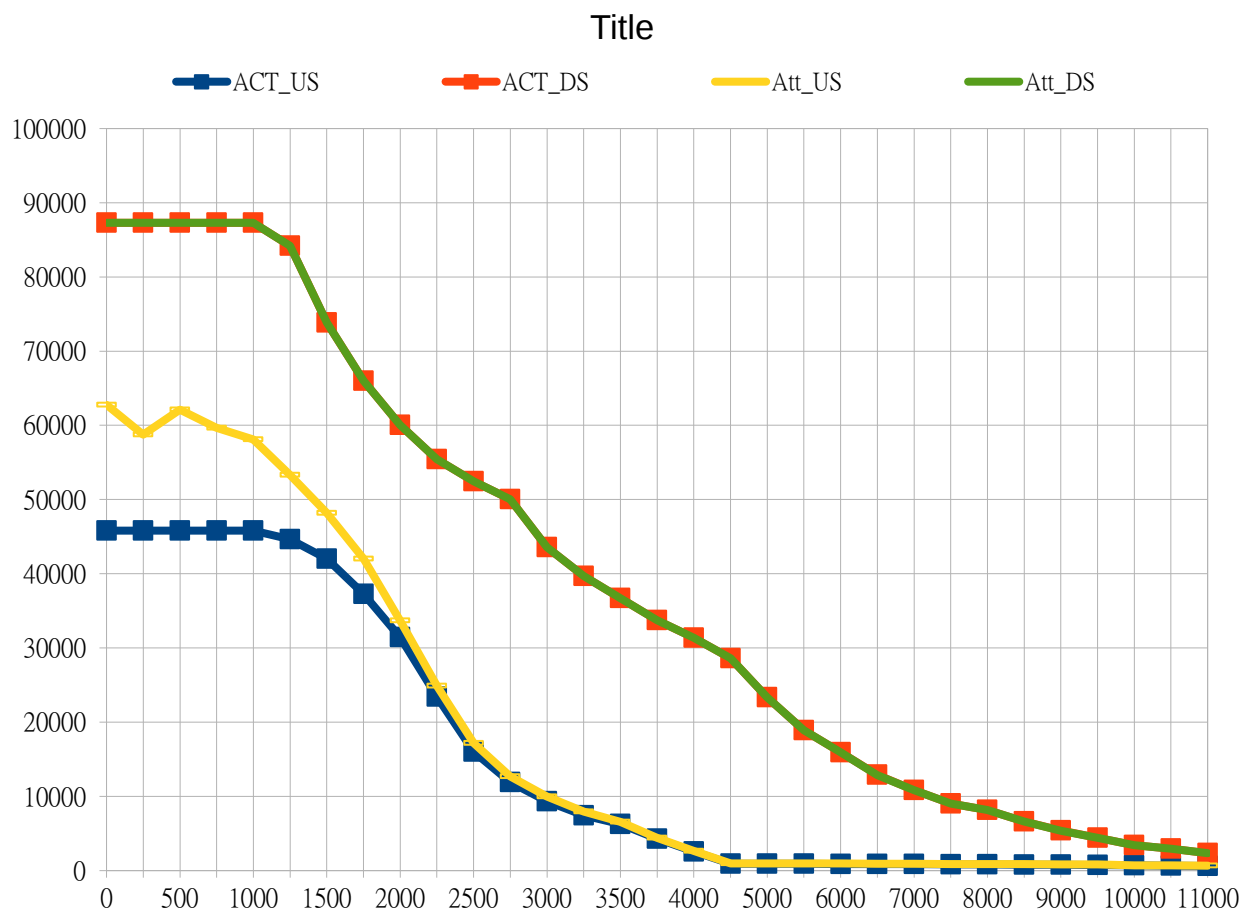
Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	99,987	99,987	91,409	75,980	54,296	44,143	38,483
US (kbit/s)	96,104	63,602	41,326	25,011	12,716	7,723	4,832

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Broadcom AA17a

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	17a
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	I-8/2

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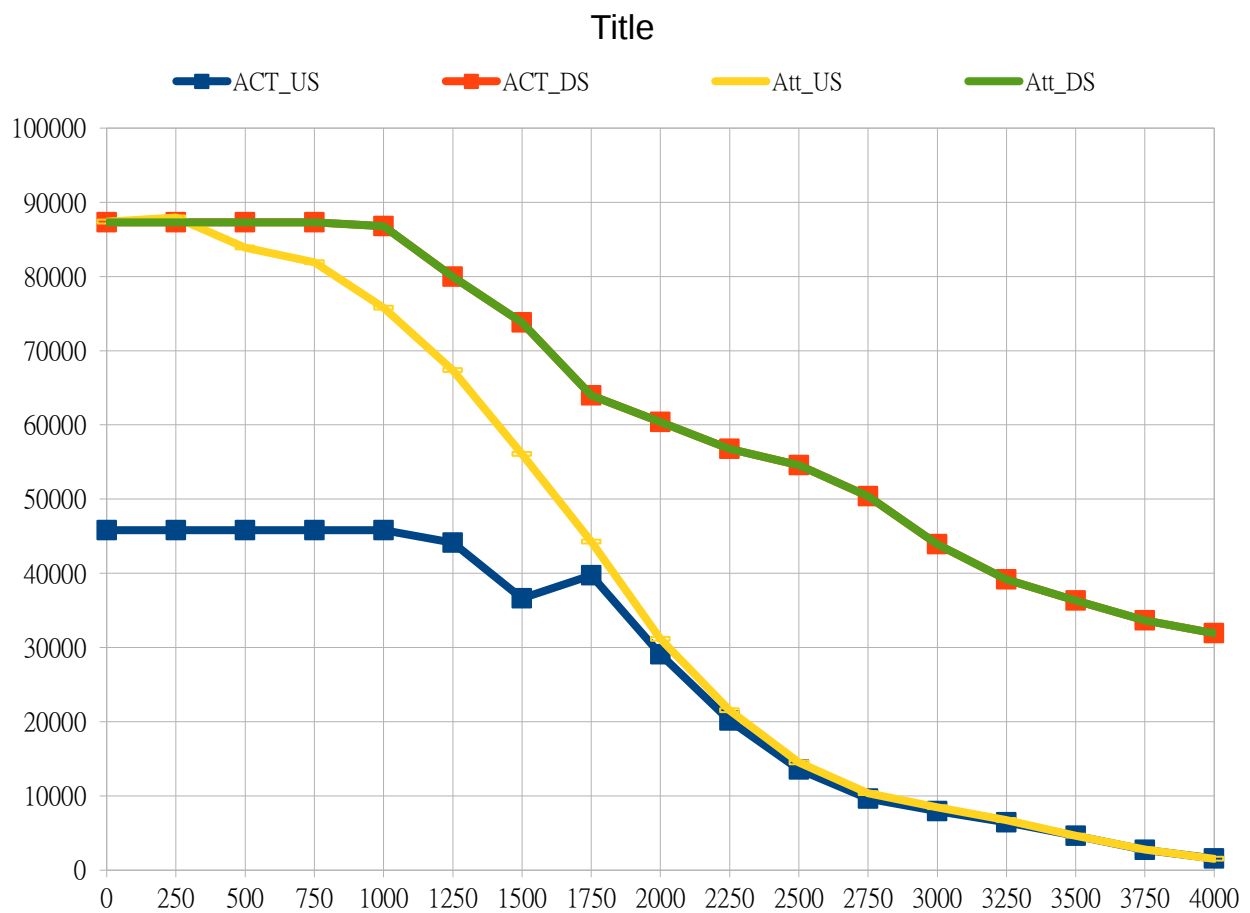
Distance (ft.)	1000	2500	4000	5500	7000	8500	9500
DS (kbit/s)	87282	52445	31361	18907	10817	6593	4392
US (kbit/s)	45799	16007	2570	894	876	799	760

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Broadcom BA17a

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	17a
Annex	B
PSD (short)	B8-8
PSD (long)	998E17-M2x-NUS0
US0 type	-
Line Setting	I-8/2

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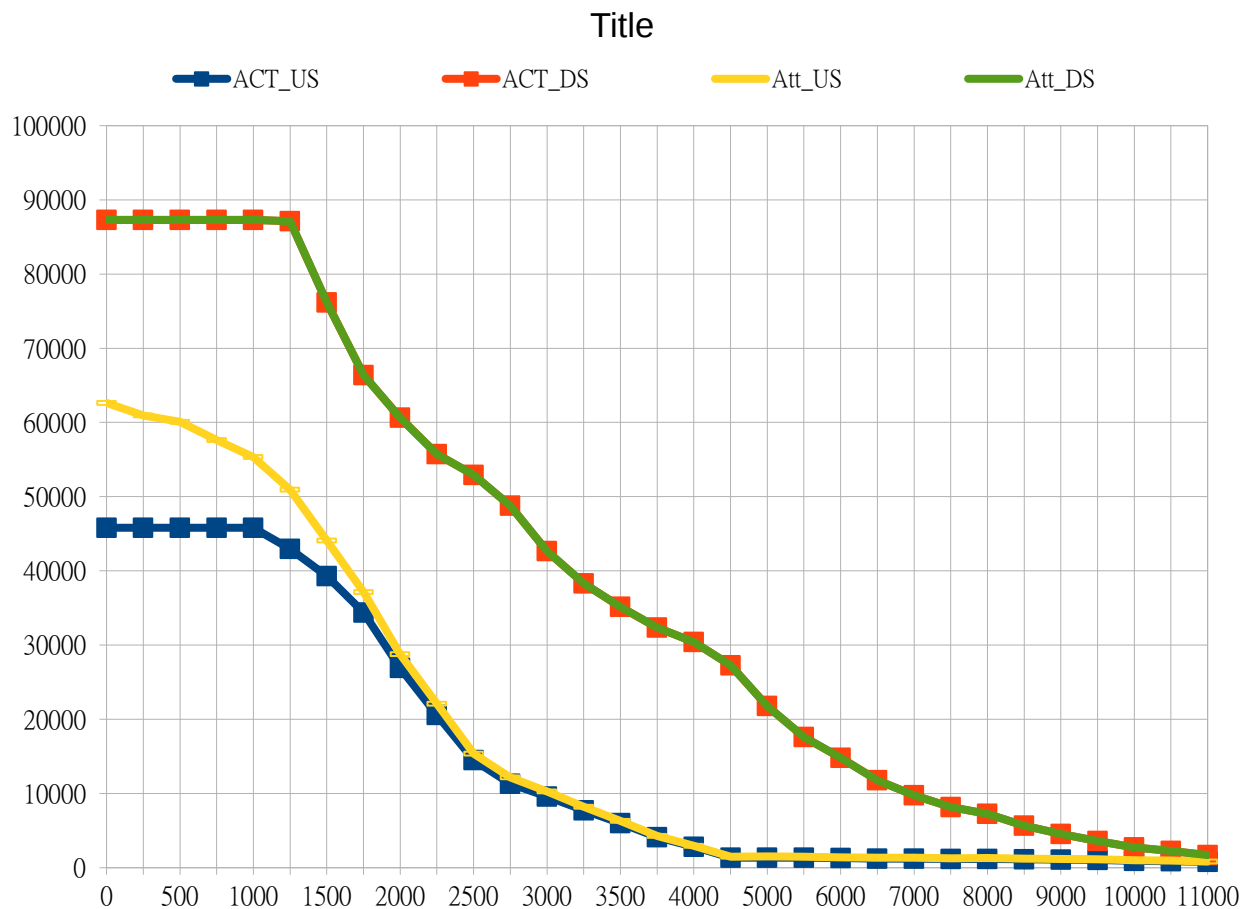
Distance (ft.)	500	1000	1500	2000	2500	3000	3500
DS (kbit/s)	87282	86758	73817	60369	54582	43895	36333
US (kbit/s)	45799	45799	36637	29055	13556	7933	4643

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Broadcom BB17a

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	17a
Annex	B
PSD (short)	B8-12
PSD (long)	998ADE17-M2x-B
US0 type	B
Line Setting	I-8/2

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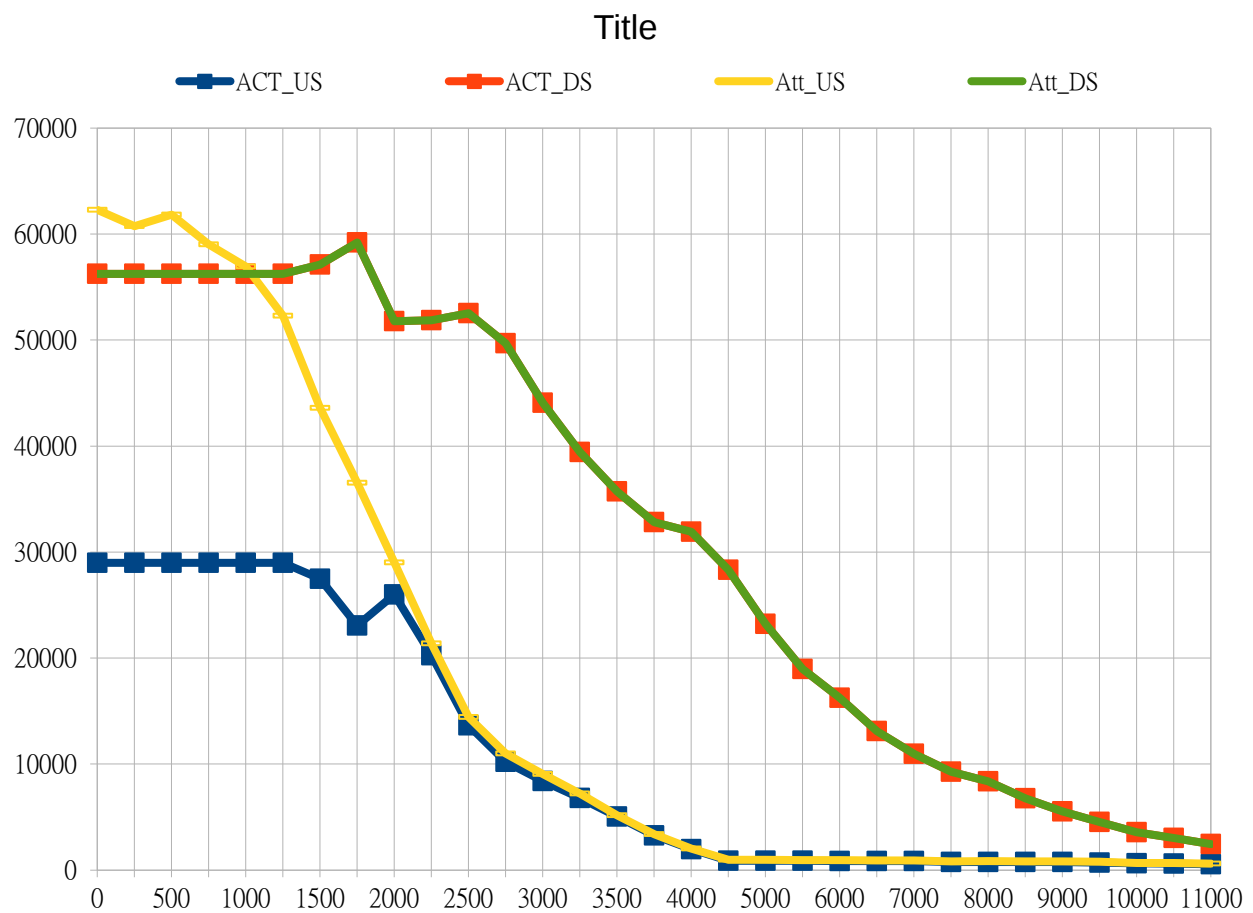
Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	87,282	14,480	30,408	17,605	9,774	5,651	2,716
US (kbit/s)	45,811	52,945	2,812	1,350	1,229	1,145	918

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Broadcom BA12a

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	12a
Annex	B
PSD (short)	B8-4
PSD (long)	998-M2x-A
US0 type	A
Line Setting	I-8/2

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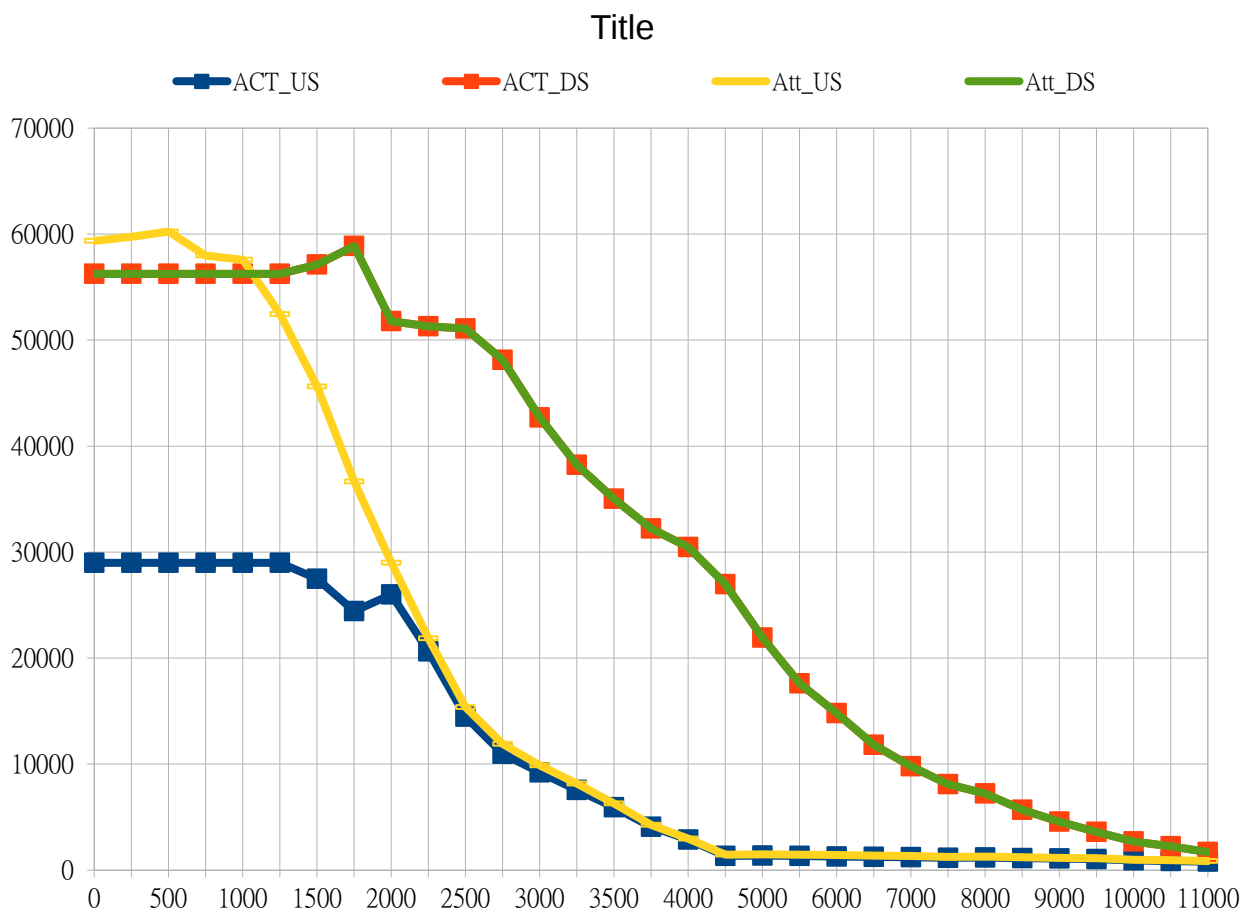
Distance (ft.)	1000	2500	4000	5500	7000	8500	10000
DS (kbit/s)	56,255	52,539	31,922	18,966	10,978	6,769	3,570
US (kbit/s)	28,975	13,640	1,971	875	840	762	625

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Broadcom BB12a

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	12a
Annex	B
PSD (short)	B8-6
PSD (long)	998-M2x-B
US0 type	B
Line Setting	I-8/2

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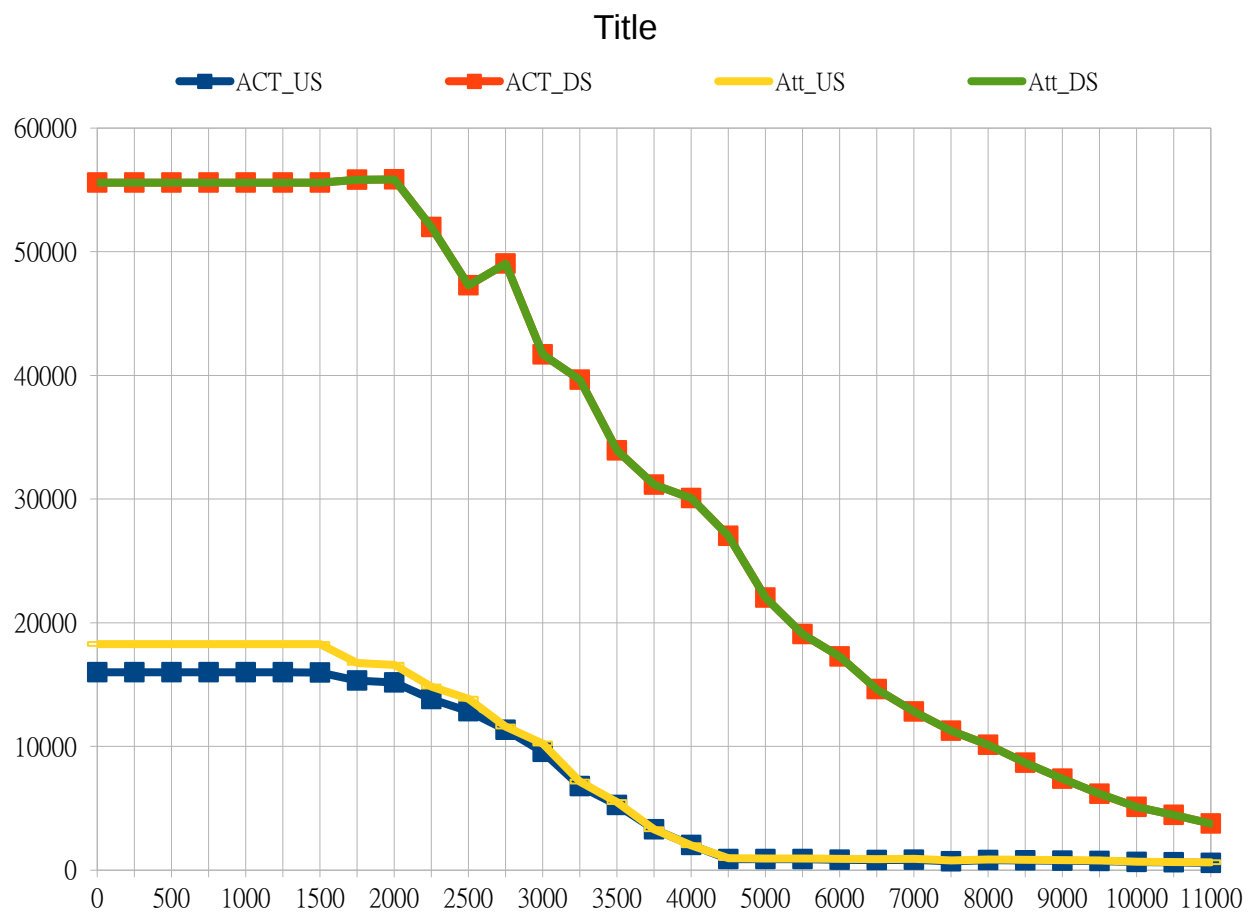
Distance (ft.)	1000	2500	4000	5500	7000	8500	10,000
DS (kbit/s)	56,255	51,084	30,479	17,602	9,784	5,691	2,693
US (kbit/s)	28,975	14,480	2,863	1,338	1,213	1,130	911

[Back to overview](#)

Broadcom AA8b

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	8b
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	I-8/2

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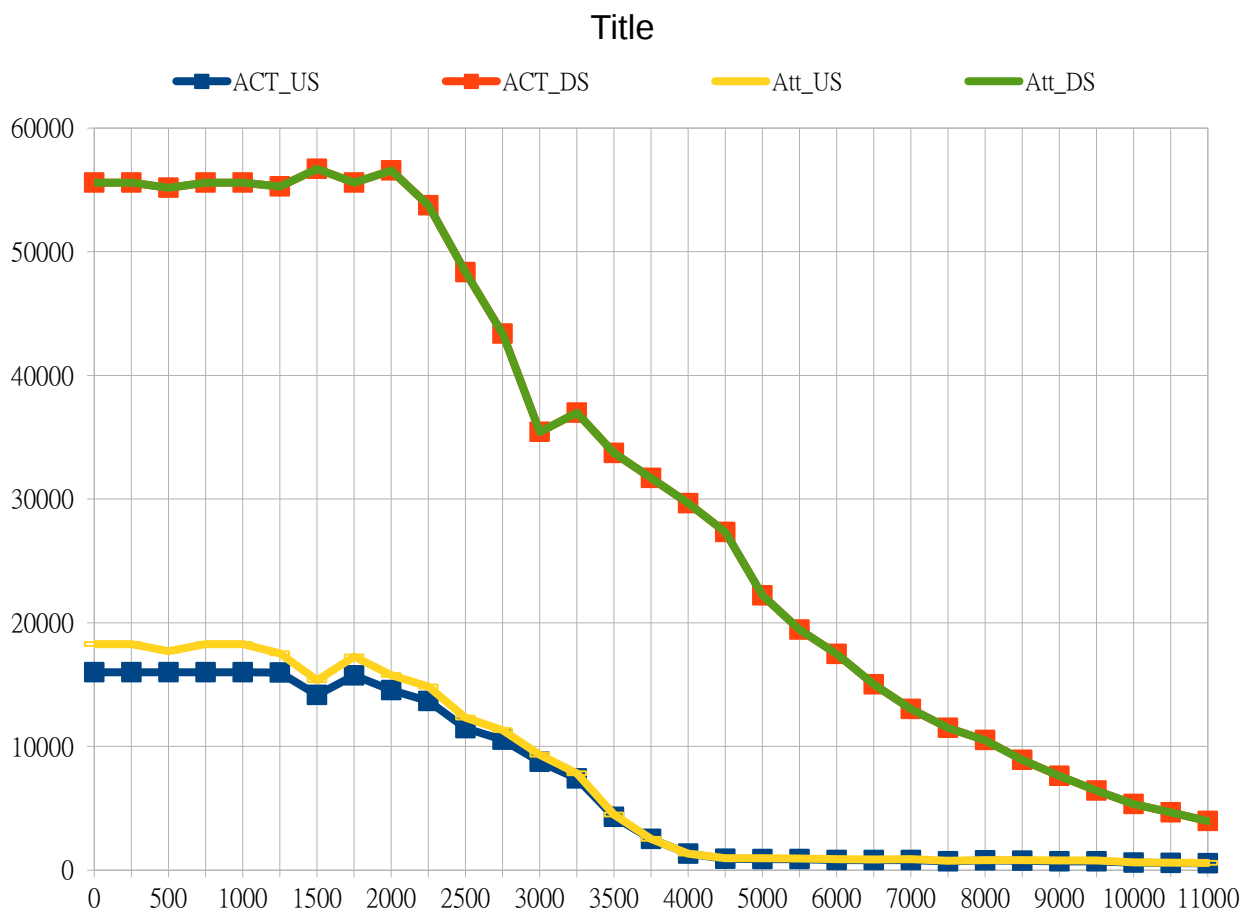
Distance (ft.)	1000	2500	4000	5500	7000	8500	10,000
DS (kbit/s)	55,597	47,292	30,071	19,067	12,800	8,660	5,102
US (kbit/s)	15,983	12,833	2,025	879	836	786	641

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Broadcom BA8b

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	8b
Annex	B
PSD (short)	B8-4
PSD (long)	998-M2x-A
US0 type	A
Line Setting	I-8/2

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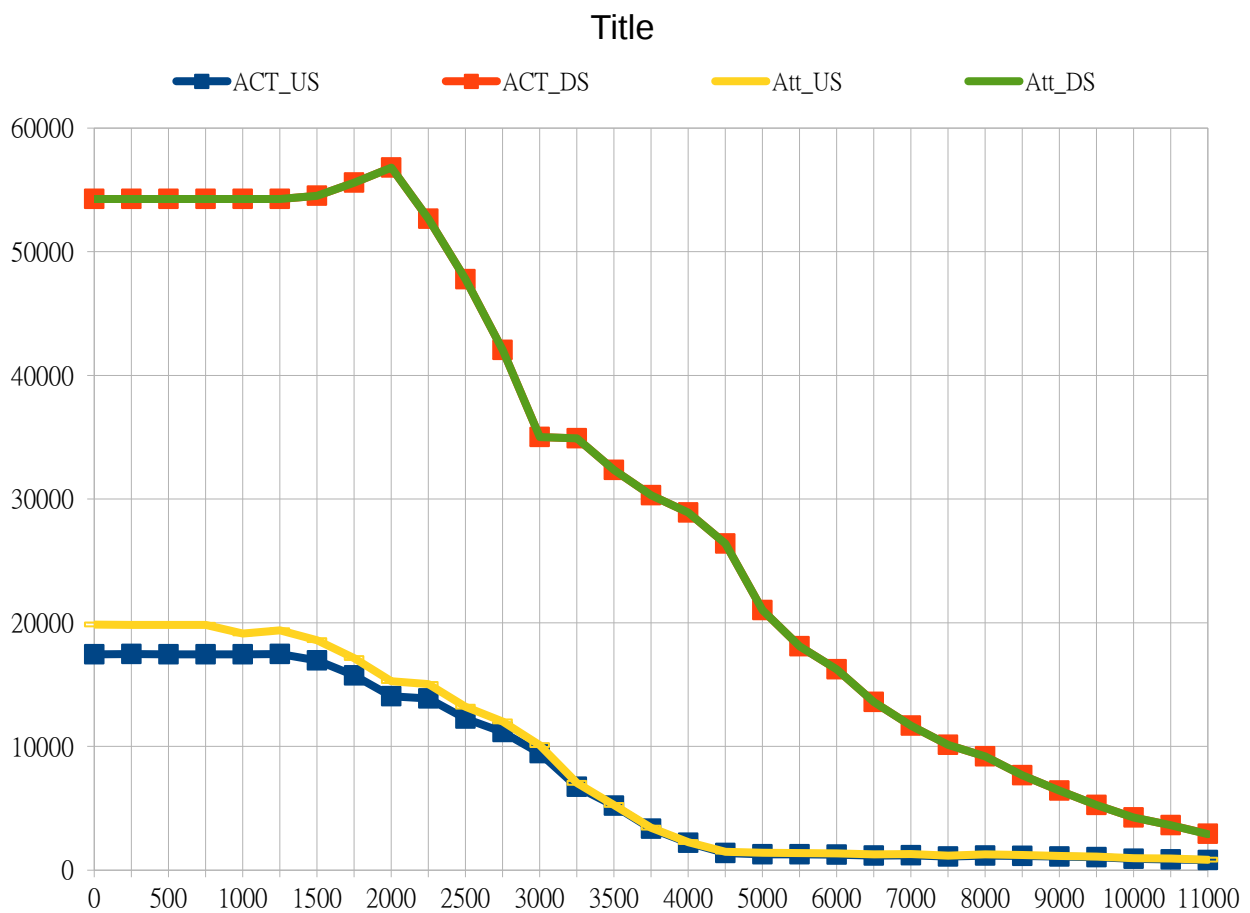
Distance (ft.)	1000	2500	4000	5500	7000	8500	10,000
DS (kbit/s)	55,597	48,347	29,661	19,444	13,020	8,900	5,336
US (kbit/s)	15,983	11,471	1,336	873	810	742	592

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Broadcom BB8b

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	8b
Annex	B
PSD (short)	B8-6
PSD (long)	998-M2x-B
US0 type	B
Line Setting	I-8/2

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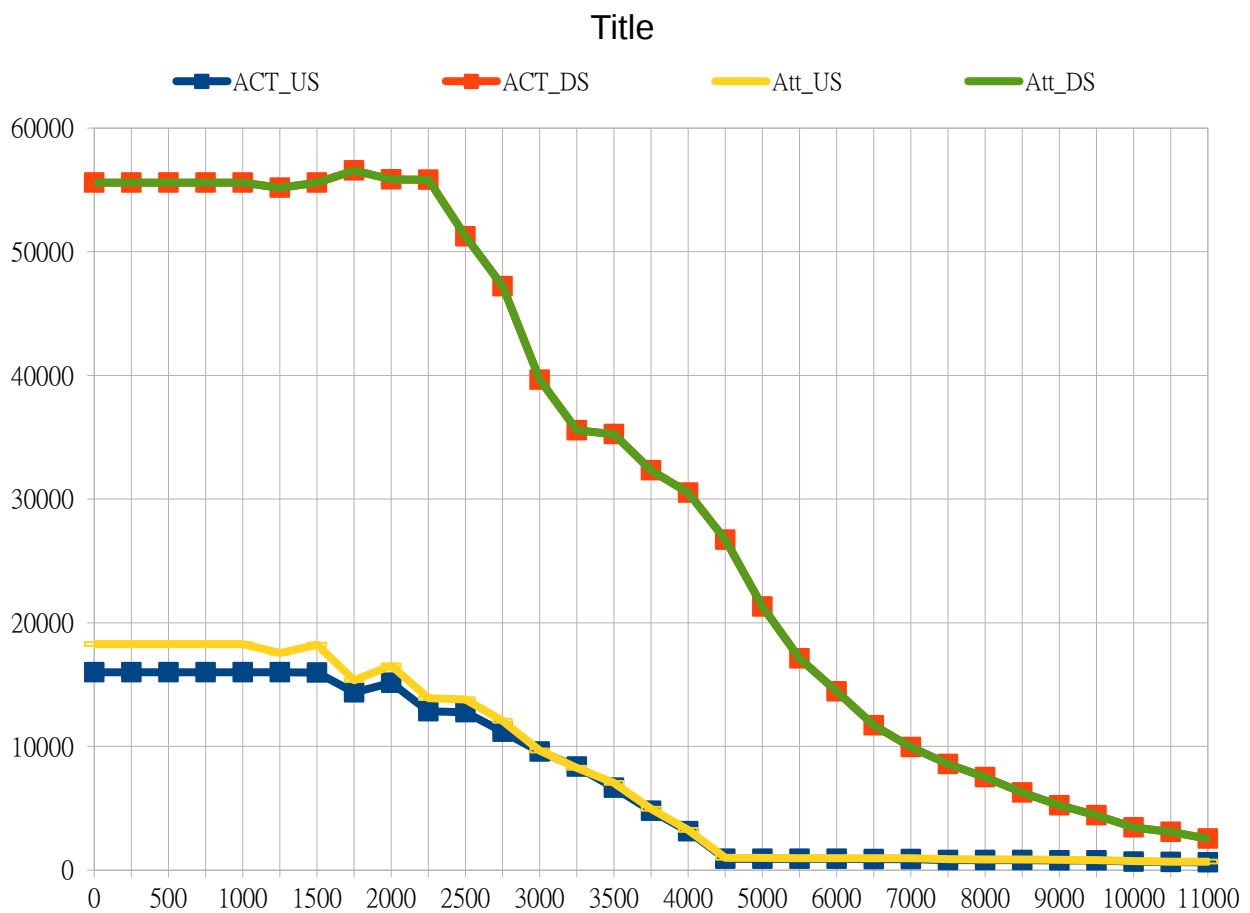
Distance (ft.)	1000	2500	4000	5500	7000	8500	10,000
DS (kbit/s)	54,276	47,773	28,899	18,100	11,668	7,663	3,457
US (kbit/s)	17,448	12,232	2,201	1,262	1,204	1,134	683

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Broadcom AA8c

CO	Broadcom
CO Firmware	1.4.1.1.f.0
Profile	8c
Annex	A
PSD (short)	Annex A Std.
PSD (long)	-
US0 type	EU32
Line Setting	I-8/2

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Distance (ft.)	1000	2500	4000	5500	7000	8500	10,000
DS (kbit/s)	55,597	51,239	30,510	17,121	9,950	6,259	3,457
US (kbit/s)	15,983	12,756	3,131	904	883	810	683

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Features Test

Target SNR

CO	META_MT2301_CO_30a			
CPE	META_MT2301_CPE_30a			
FW ver.	010100			
Mode	ANNEX A			
Setting	9dB, Interleave mode		12dB, Interleave mode	
Length (ft)	USDR	DSDR	USDR	DSDR
0	109325	190264	100210	176222
250	108295	175347	98470	180992
500	102658	170666	92052	158438
750	86064	152629	72478	140275
1000	61286	132996	52616	121148
1250	46563	103914	42367	93290
1500	38462	79543	34379	72687
1750	32026	71260	28211	63748
2000	24404	62153	19432	58322
2250	14280	58865	11214	55261
2500	8365	54372	7158	50358
2750	6784	48079	5623	43338
3000	4880	40725	3643	37373
3250	4056	37497	2387	34020
3500	1739	34499	540	32267
3750	1306	30312	533	27177

CO	META_MT2301_CO_17a			
CPE	META_MT2301_CPE_17a			
FW ver.	010100			
Mode	ANNEX A			
Setting	9dB, Interleave mode		12dB, Interleave mode	
Length (ft)	USDR	DSDR	USDR	DSDR
0	58102	134452	54204	124381
250	58277	124284	54010	114206
500	56174	110257	54050	110122
750	55966	110973	51350	102462
1000	51861	102384	47534	94617
1250	45271	87640	39941	80406
1500	36925	74261	33215	64265
1750	30897	66450	27310	59679
2000	23343	60363	19427	54376
2250	15139	54554	11376	48429
2500	8982	50510	7601	44859
2750	7139	44256	5902	38857
3000	5059	37900	3739	33336
3250	4253	36029	3054	32454
3500	2328	32791	1261	29915
3750	827	30633	170	27592
4000	85	17288	76	18373

Minimum Impulse Noise Protection

CO	META_MT2301_CO			
CPE	META_MT2301_CPE			
FW ver.	010100			
Mode	ANNEX A 30a		ANNEX A 17a	
Setting	SNR:6dB			
MININP(symbols)	USDR	DSDR	USDR	DSDR
0	121193	204195	59953	137143
1	116428	200844	57446	131210
2	103807	184796	51328	116360
3	91102	168145	45055	92465
4	78776	151542	39002	75771
5	66672	129593	33207	64796
6	55663	112707	27832	55044
7	47710	99534	23855	42808
8	41747	89437	20874	44719
9	37106	80652	18553	40326
10	33396	73376	16698	36688
11	30356	66955	15178	33478
12	27830	61478	13915	30739
13	25688	56751	12844	28376
14	23853	52695	11927	26348
15	22260	49182	11130	24591
16	20869	46110	10435	23055

CO	META_MT2301_CO_30a			
CPE	META_MT2301_CPE_30a			
FW ver.	010100			
Mode	ANNEX A			
Setting	SNR:6dB,Maxdelay:8ms			
MININP	2 symbols		6 symbols	
Length (ft)	USDR	DSDR	USDR	DSDR
0	101212	182198	55663	112707
250	102388	181485	55663	112707
500	95112	166684	55663	112707
750	84171	153396	54730	111563
1000	66273	136695	49298	104528
1250	49468	112165	40636	91673
1500	42136	90232	35804	77267
1750	36092	76397	31259	65394
2000	28660	65969	24924	57169
2250	18677	62191	16152	53595
2500	11032	58307	9457	50618
2750	7936	51901	6912	45276
3000	5977	45794	5247	39571
3250	5162	41673	4409	36325
3500	3108	36648	2683	31791
3750	965	34477	928	29880
4000	850	31104	765	27270

CO	META_MT2301_CO_17a			
CPE	META_MT2301_CPE_17a			
FW ver.	010100			
Mode	ANNEX A			
Setting	SNR:6dB,Maxdelay:8ms			
MININP	2 symbols		6 symbols	
Length (ft)	USDR	DSDR	USDR	DSDR
0	51328	118296	27382	55044
250	51328	113031	27832	55044
500	51328	109089	27832	55044
750	50347	103792	27832	55044
1000	47923	98487	27832	55044
1250	43481	89198	27532	55044
1500	37197	79568	26237	55044
1750	31282	69833	22606	48773
2000	24566	60645	17547	43905
2250	16357	57385	11287	41092
2500	9487	52380	6746	37587
2750	7074	48985	5089	34794
3000	5078	42381	3657	29961
3250	4131	39250	3022	27923
3500	2480	35284	1688	25206
3750	829	32284	341	23324
4000	430	29556	297	21018

CPE Chipset	META ARGO		CPE Chipset	Broadcom 17a	
CO Chipset	Broadcom 17a		CO Chipset	Broadcom 17a	
Chipset FW ver.	010100		Chipset FW ver.		
Mode	ANNEX A		Mode	ANNEX A	
MININP	2 Symbols		MININP	2 Symbols	
SNR	6dB		SNR	6dB	
Length (ft)	USDR	DSDR	Length (ft)	USDR	DSDR
0	30504	100003	0	14215	62986
250	30504	100003	250	14215	62986
500	30504	100003	500	14215	62986
750	30504	100003	750	14215	62986
1000	30504	95217	1000	14215	62986
1250	30516	86210	1250	14215	62479
1500	23320	76923	1500	14215	62476
1750	30415	69234	1750	14215	61966
2000	29252	59773	2000	14224	61966
2250	23216	56034	2250	15243	56673
2500	15878	51315	2500	20857	52504
2750	10431	48415	2750	13228	52861
3000	7036	41628	3000	9826	48028

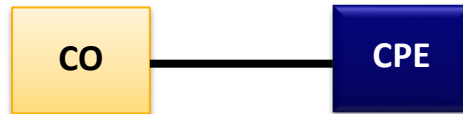
MT2301 PD-139 Test Result

PD-139 Version 6					
CO	Metanoia_CO				
CPE	Metanoia_CPE				
Chipset FW ver.	010200				
Test Case	USDR	DSDR	Test Case	USDR	DSDR
PD139_A1-2000	25088	54216	PD139_B1-2000	25088	50483
PD139_A2-2000	25088	43965	PD139_B2-2000	25088	41695
PD139_A3-2000	25088	52062	PD139_B3-2000	25088	48687
PD139_A4-2000	40142	57962	PD139_B4-2000	40141	54117
PD139_A5-6000	13507	13507	PD139_B5-6000	12668	12668
PD139_A6-6000	12773	12773	PD139_B6-6000	11961	11961
PD139_A7-2000	52234	52234	PD139_B7-2000	49118	49118
PD139_A7-6000	12011	12011	PD139_B7-6000	11758	11758
PD139_A8-2000	58078	58078	PD139_B8-2000	53981	53981
PD139_A9-400	40126	139512	PD139_B9-400	40126	124267
PD139_A10-400	99964	139445	PD139_B10-400	99963	127584
PD139_A11-2000	40142	58986	PD139_B11-2000	40141	54987
PD139_A12-2000	58369	58369	PD139_B12-2000	54753	54753
PD139_A13-400	40126	141116	PD139_B13-400	40126	132398
PD139_A14-400	99964	140975	PD139_B14-400	99963	128395
PD139_A15-400	40126	171193	PD139_B15-400	40126	157853
PD139_A16-400	99964	171103	PD139_B16-400	99963	150764

IV. PSD tests

Test SET-UP

Step1: Wait Co-CPE showtime



Step2: Setup CPE to "NO error recovery mode"



Step3: Measure PSD with spectrum

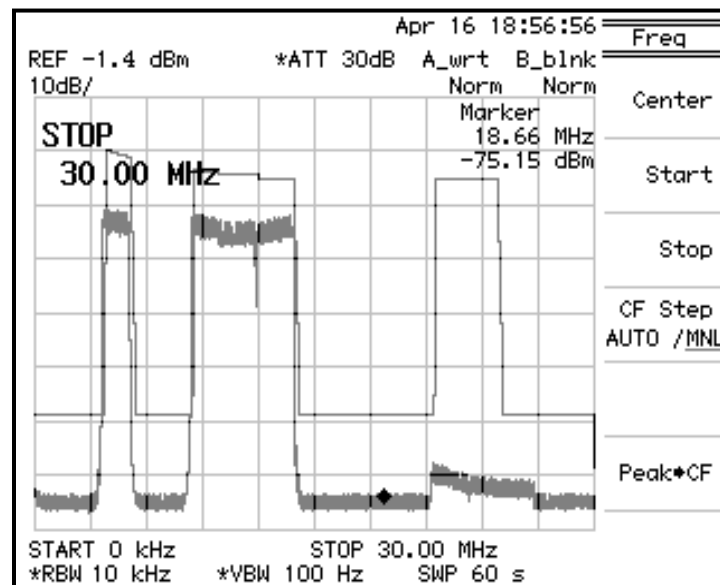
Test Equipments:

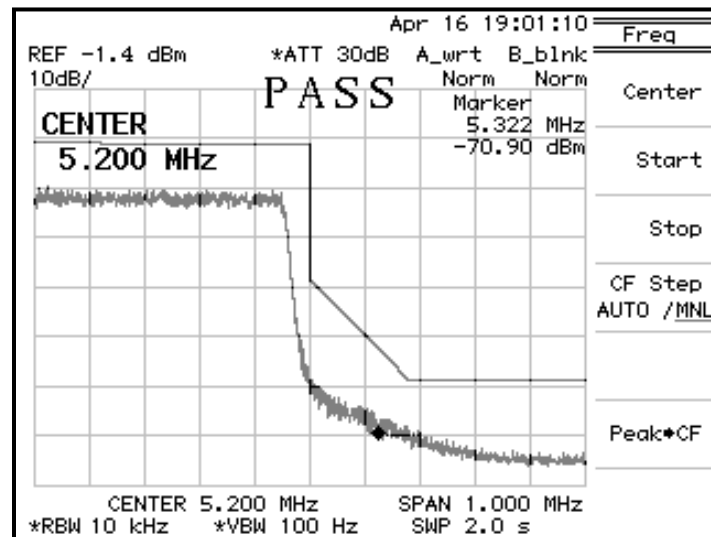
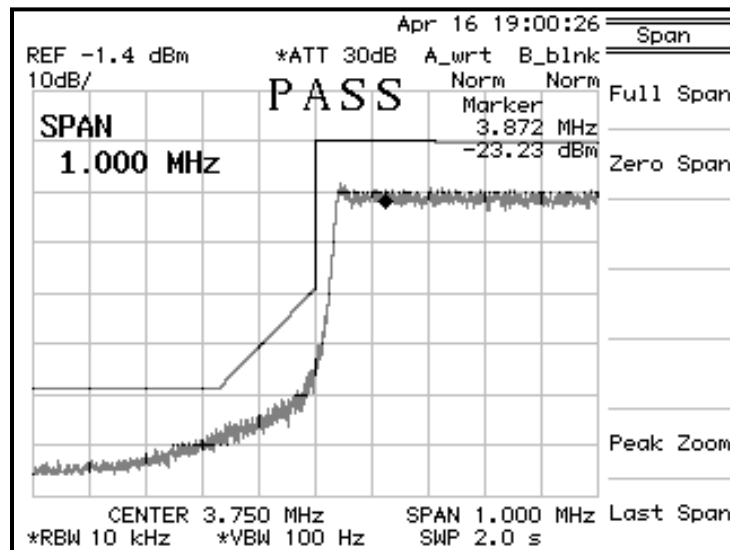
- **Spectrum:** ADVANTEST R313A
- **VTU-O**
 - BROADCOM E5-120
 - Metanoia ARGO_1.5
- **VTU-R**
 - Metanoia ARGO_1.5

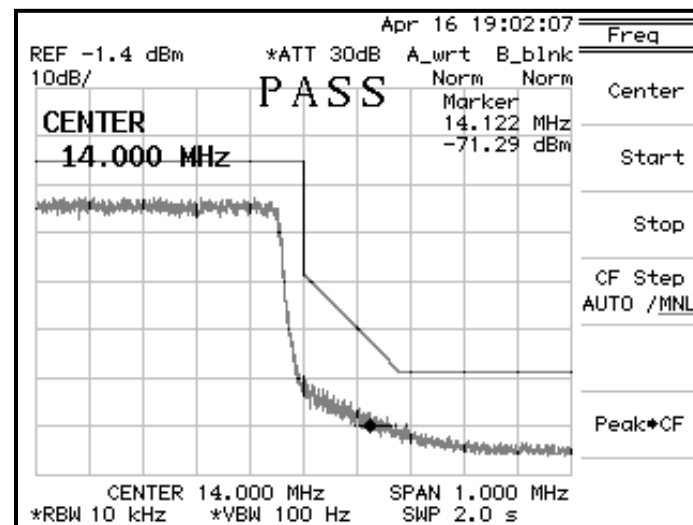
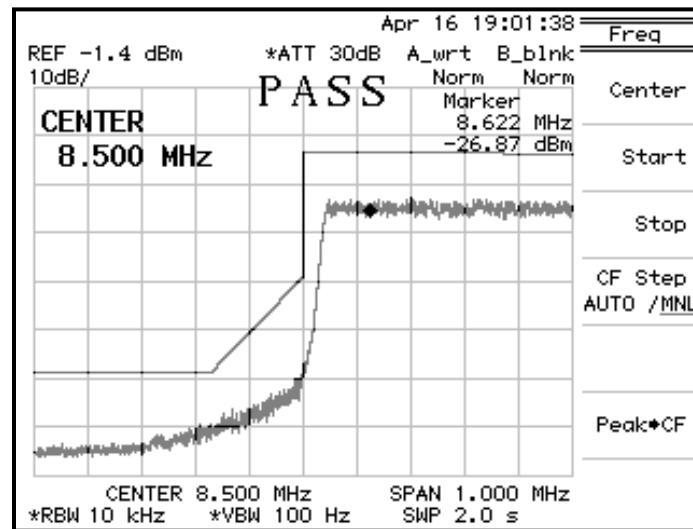
PSD TEST

Broadcom CO vs. Metanoia CPE:VDSL PSD Mask "998E17-M2X-NUS0 (B8-8)"

VUT-R	Metanoia ARGO
H/W ver.	1.5
F/W ver.	041509_132742
VUT-O	BROADCOM E5-120
Band Plan	AnnexB
G.993.2 Profile	17a
VDSL PSD Class Mask	(B8-8) 998E17-M2X-NUS0

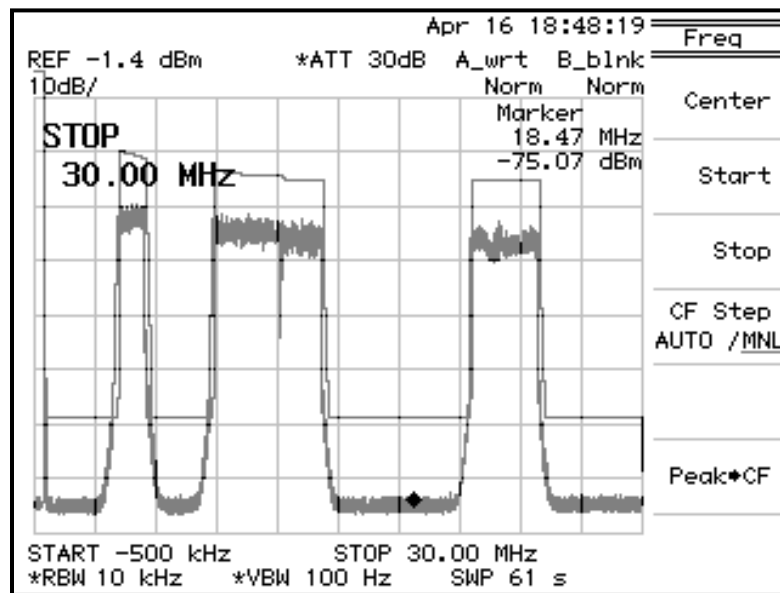


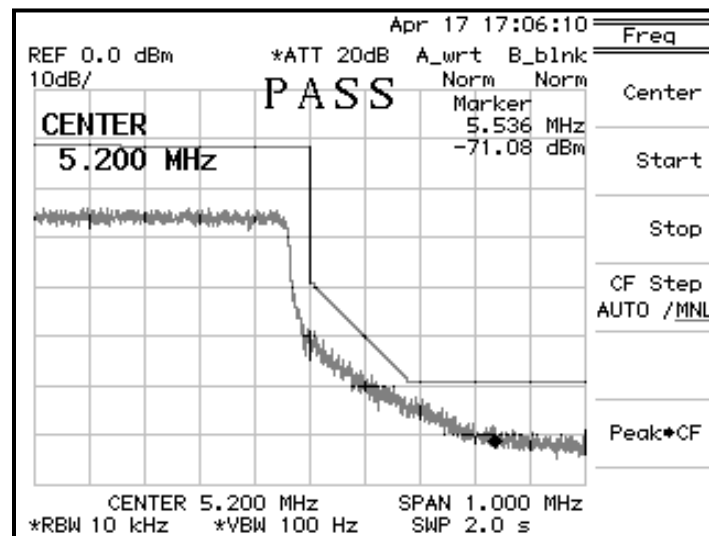
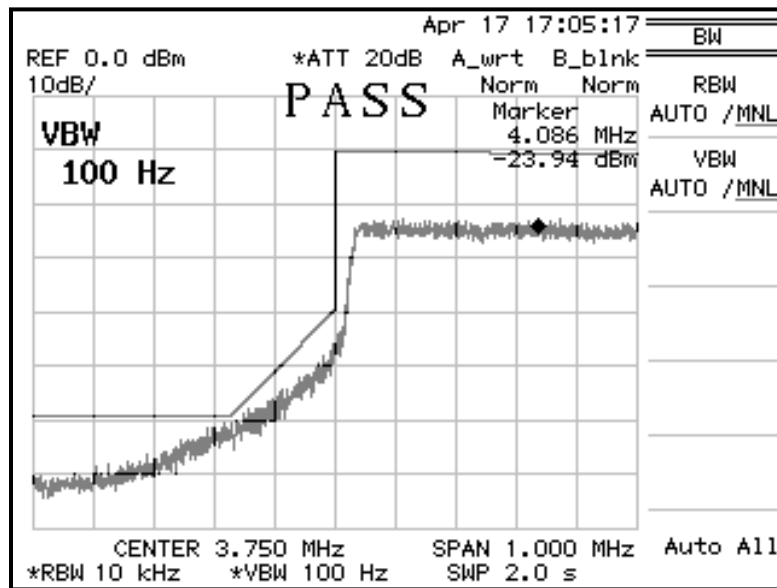


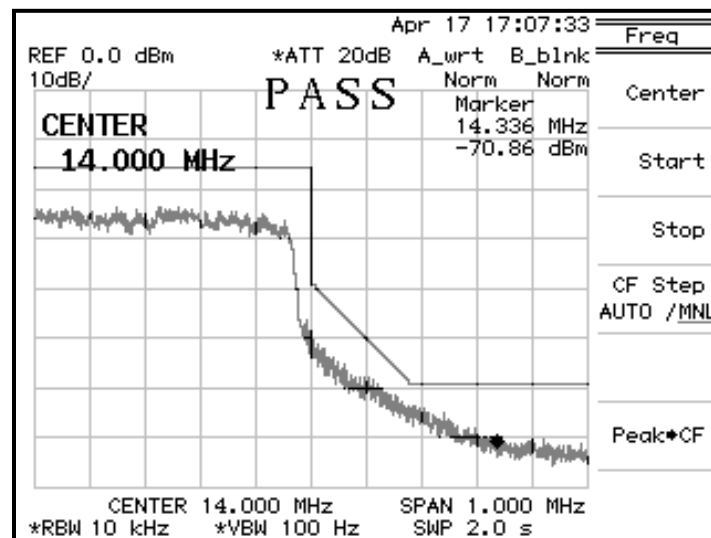
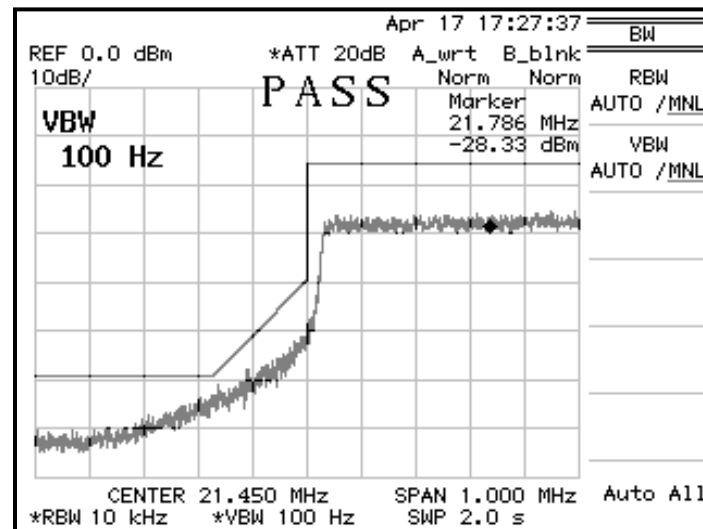


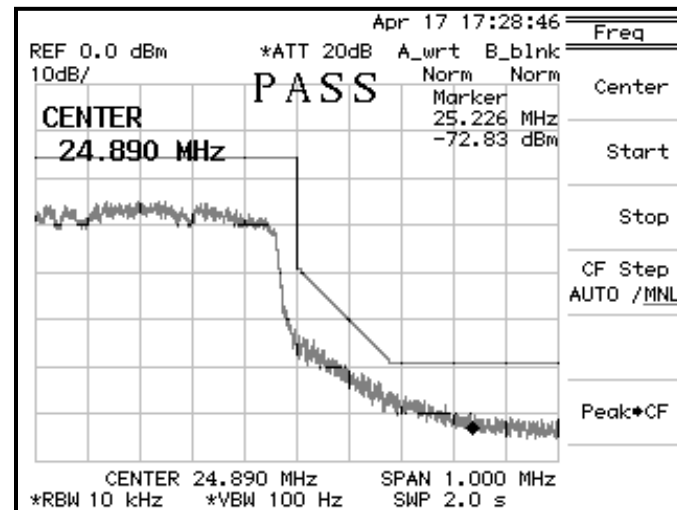
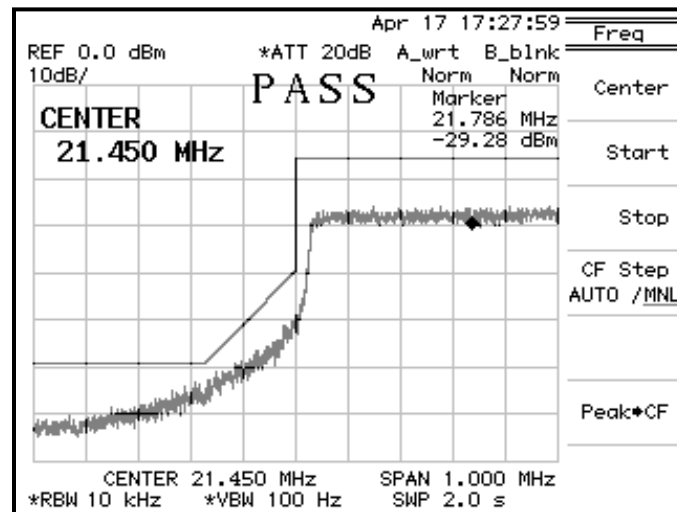
Metanoia CO vs. Metanoia CPE: VDSL PSD Mask “998E30-M2X-NUS0 (B8-13)”

VUT-R	Metanoia ARGO
H/W ver.	1.5
F/W ver.	041509_132742
VUT-O	Metanoia ARGO
Band Plan	AnnexB
G.993.2 Profile	30a
VDSL PSD Class Mask	(B8-13) 998E30-M2X-NUS0





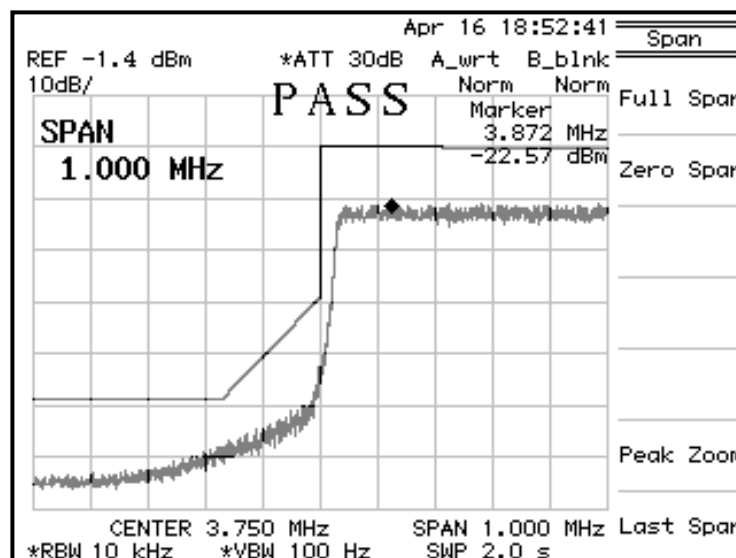
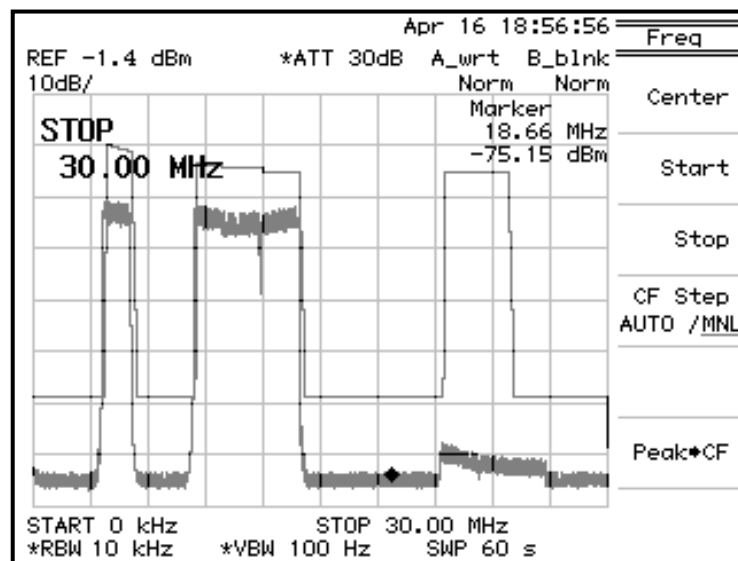


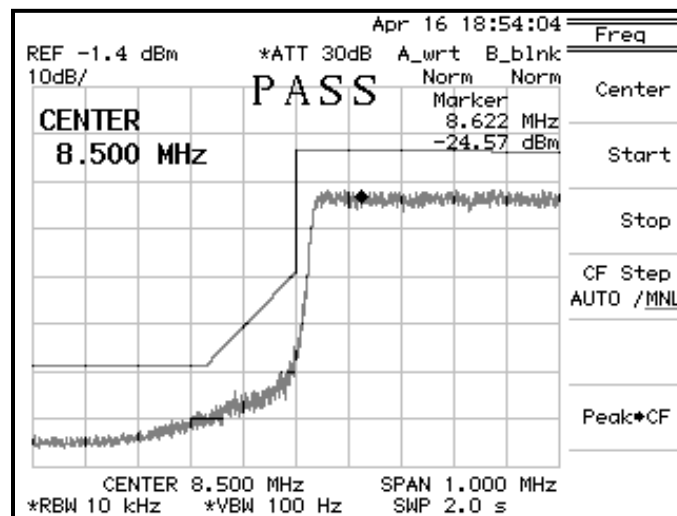
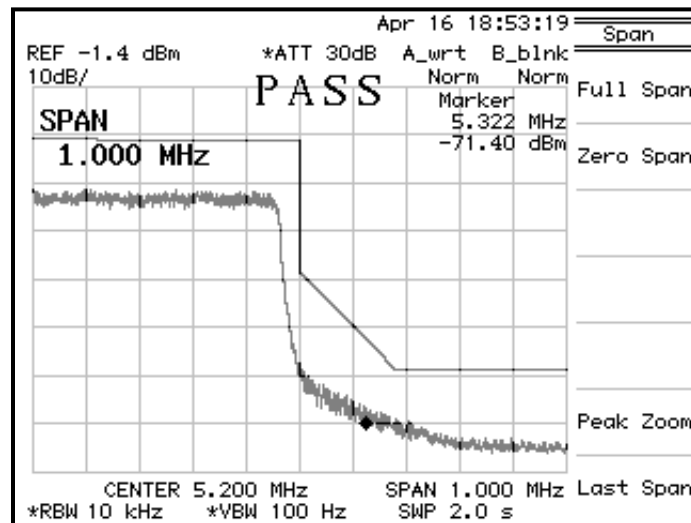


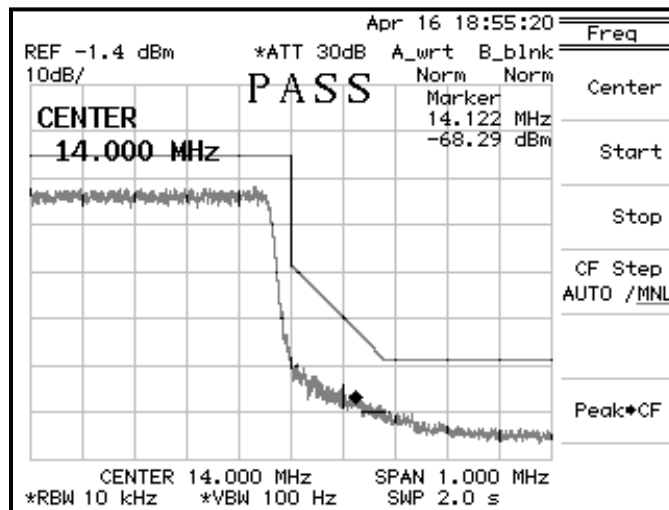
Metanoia CO vs. Metanoia CPE: VDSL PSD Mask

"998E17-M2X-NUS0 (B8-8)"

VUT-R	Metanoia ARGO
H/W ver.	1.5
F/W ver.	041509_132742
VUT-O	Metanoia ARGO
Band Plan	AnnexB
G.993.2 Profile	17a
VDSL PSD Class Mask	(B8-8) 998E17-M2X-NUS0

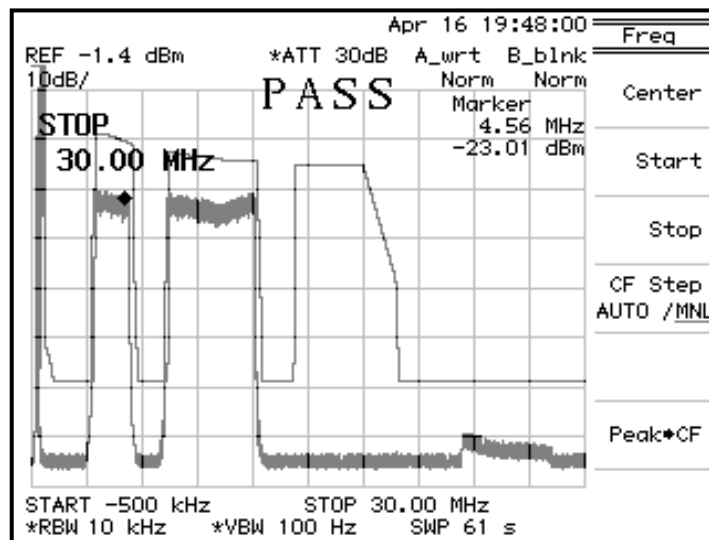


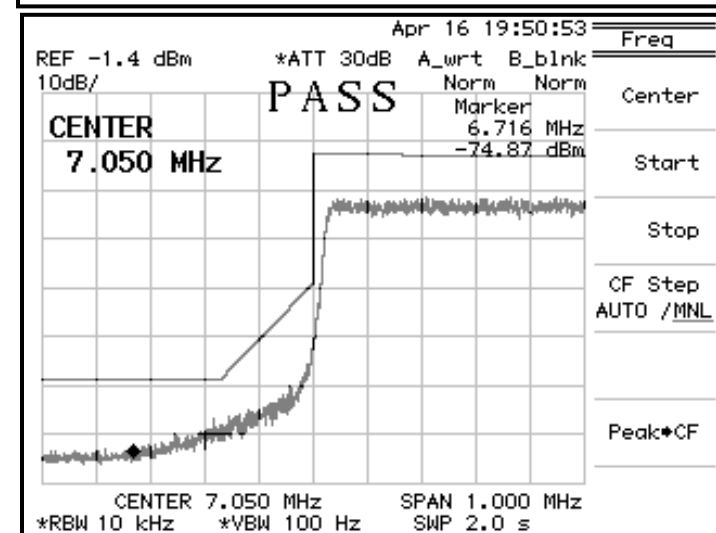
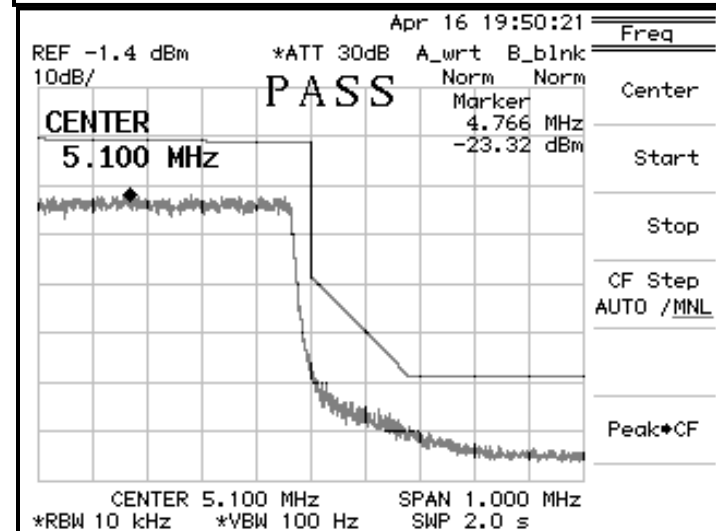
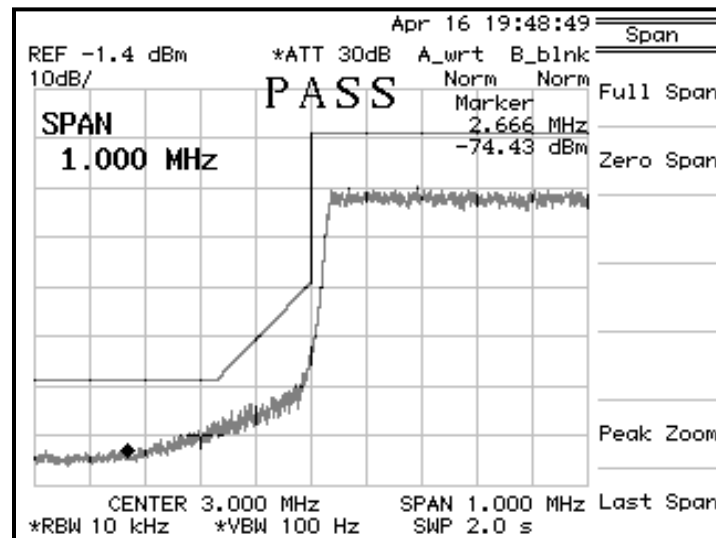


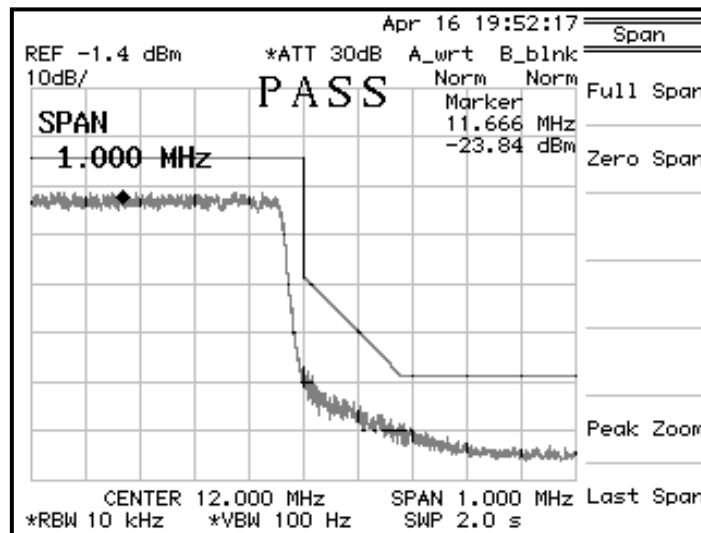


Metanoia CO vs. Metanoia CPE: VDSL PSD Mask“997E17-M2X-A(B7-9)”

VUT-R	Metanoia ARGO
H/W ver.	1.5
F/W ver.	041509_132742
VUT-O	Metanoia ARGO
Band Plan	AnnexB
G.993.2 Profile	17a
VDSL PSD Class Mask	(B7-9) 997E17-M2X-A

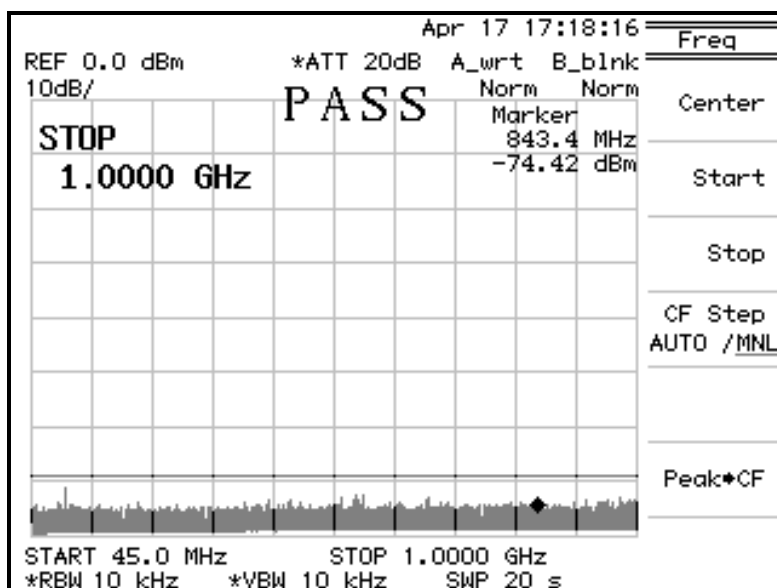
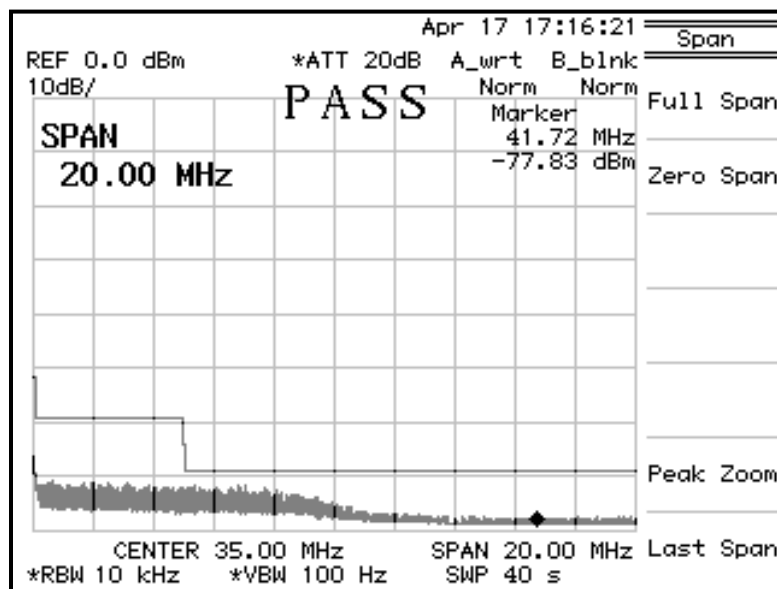






Metanoia CPE: VDSL PSD Mask 30MHz~1GHz

VUT-R	Metanoia ARGO
H/W ver.	1.5
F/W ver.	041509_132742
VUT-O	Metanoia ARGO
Band Plan	AnnexB
G.993.2 Profile	all profiles
VDSL PSD Class Mask	30MHz to 1GHz

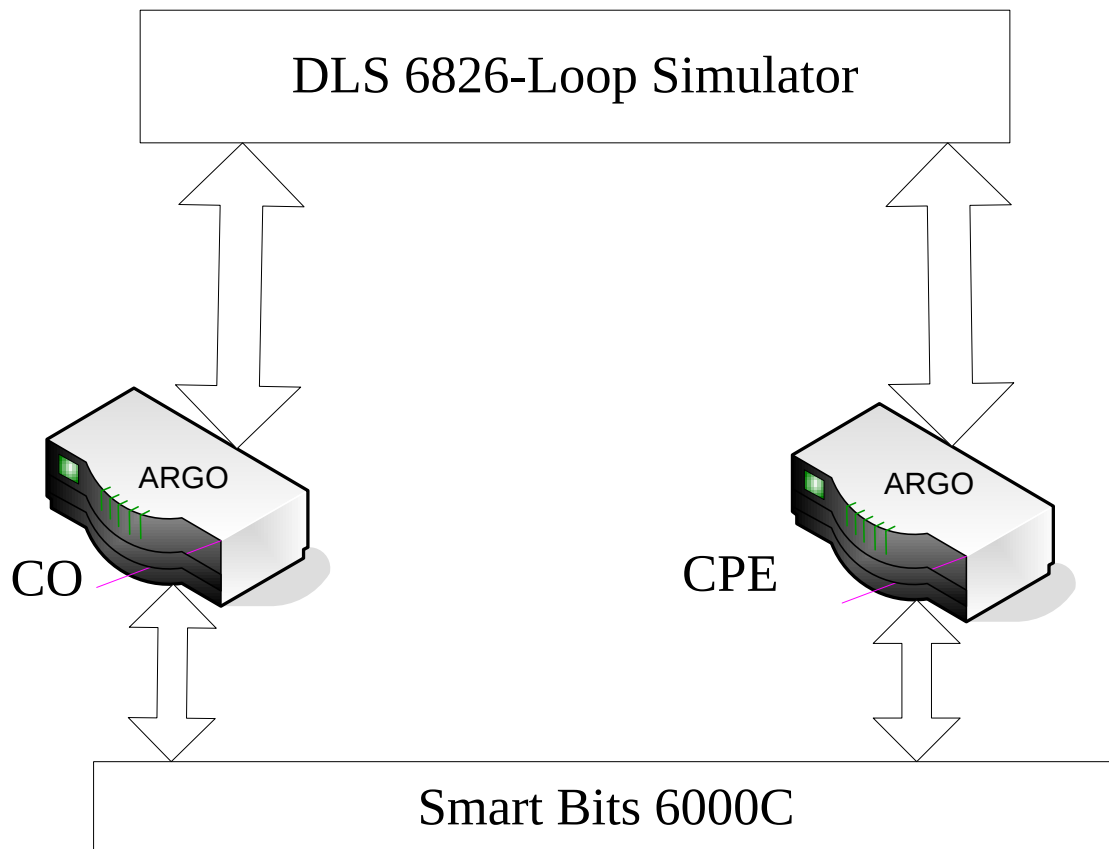


Summary of VDSL PSD Testing Result

VUT-R	Metanoia ARGO	Metanoia ARGO	Metanoia ARGO	Metanoia ARGO	Metanoia ARGO
H/W ver.	1.5	1.5	1.5	1.5	1.5
F/W ver.	041509_132742	041509_132742	041509_132742	041509_132742	041509_132742
VUT-O	BROADCOM E5-120	Metanoia ARGO	Metanoia ARGO	Metanoia ARGO	Metanoia ARGO
Band Plan	AnnexB	AnnexB	AnnexB	AnnexB	AnnexB
G.993.2 Profile	17a	30a	17a	17a	all profiles
VDSL PSD Class Mask	(B8-8) 998E17-M2X-NUS0	(B8-13) 998E30-M2X-NUS0	(8-8) 998E17-M2X-NUS0	(B7-9) 997E17-M2X-A	30MHz to 1GHz
Test Result	PASS	PASS	PASS	PASS	PASS

V. Packet tests

Test Setup



MT2301 Test Result: Packet size vs. Throughput

Big packet, Utilization=100, both direction

Test Condition: 30a, 6dB, back to back, data rate: 135Mb US, s129Mb DS

Smartbit packet size: 1514byte both direction

Result: 100M both direction. No packet loss in 5 min.

Transmit Setup - Traditional Mode [Port 1A-02]

LAN-3324A Dual Media Ethernet SmartMetrics
Use Traditional Mode Setup to configure the content of the frame(s) to be transmitted.

General

Transmit Mode
Continuous

Length (bytes)
(without 4 byte FCS)
☒ Fixed 1514
☐ Random

Background
Random
☐ Auto IP Flow
Edit...

Interpacket Gap
Time: 100
Units: %Utilization

VFD1 Setup (MAC Destination)
State: Static
Start Value: 00 00 00 00 00 01
Offset (bytes): 0

VFD2 Setup (MAC Source)
State: Static
Start Value: 00 00 00 00 00 02
Offset (bytes): 6
☐ Adjacent to VFD1

VFD3 Setup (Protocol)
State: Off
Value: Edit...
☐ Edit MAC Offset (bytes): 12
of Packets: 1 Length(bytes): 12
☐ Adjacent to VFD2

Error Generation
☐ CRC

Default

Output Packet >>

確定
取消
説明

0000: 00 00 00 00 00 01 00 00 00 00 00 02 77 88 E8 43
0010: 2F 20 1A F5 7E 4B 98 C3 80 40 09 C4 C2 E8 FF 52
0020: 05 95 D9 61 3F F1 E8 10 E3 35 D0 7E 62 9B 31 DF
0030: F2 15 87 CF 8E 3F 4F E5 3E 92 6C 8C 98 DB C8 0E
0040: 87 EC 3E F2 4B 92 B8 88 C1 C7 94 C2 E5 28 4D 45
0050: 95 A9 57 C0 98 87 4A 7D DE 7E 43 36 09 3D 87 29

VFD1 Data
VFD2 Data
VFD3 Data
VLAN Data

Byte Offset: (Hex:0x0000) - (Dec:0000)

Results Framework

File View Actions Tools Help

Ports Explo... Port Statistics

Port Counters

	Events Port 1A-01 LAN-3324A	Rates Port 1A-01 LAN-3324A	Events Port 1A-02 LAN-3324A	Rates Port 1A-02 LAN-3324A
Tx Frames	104,723,791	8,127	104,723,020	8,128
Rx Frames	104,723,224	8,128	104,723,522	8,128
Tx Bytes	8,821,194,658	12,337,541	8,820,780,360	12,337,912
Rx Bytes	8,821,090,032	12,337,540	8,820,786,316	12,337,912
Tx Triggers	0	0	0	0
Rx Triggers	104,723,224	8,128	104,723,522	8,128
CRC Errors	0	0	0	0
OverSize	0	0	0	0
Frag/UnderSize	0	0	0	0
Tx From Stack	0	0	0	0
Rx To Stack	17,474,876	8,130	17,474,624	8,128
ARP Replies Sent	0	0	0	0
ARP Requests Sent	0	0	0	0
ARP Replies Received	0	0	0	0
ARP Requests Received	0	0	0	0
Gratuitous ARP Received	0	N/A	0	N/A
PING Replies Sent	0	0	0	0
PING Requests Sent	0	0	0	0
PING Replies Received	0	0	0	0
PING Requests Received	0	0	0	0
Signature Frames Sent	0	0	0	0
Signature Frames Received	0	0	0	0
Data Integrity Errors	0	0	0	0
VLAN Frames Received	1,639	0	1,602	0
Jumbo Frames Received	0	0	0	0
Pause Frames Received	0	0	0	0
IPv4 Frames Received	320	0	322	0

Port Statistics Clear Counters

Results Framework

File View Actions Tools Help

Ports Explo... Port Statistics

Port Counters

	Events Port 1A-01 LAN-3324A	Rates Port 1A-01 LAN-3324A	Events Port 1A-02 LAN-3324A	Rates Port 1A-02 LAN-3324A
Tx Frames	107,881,962	0	107,881,419	0
Rx Frames	107,881,419	0	107,881,962	0
Tx Bytes	13,615,298,236	0	13,615,230,042	0
Rx Bytes	13,615,230,042	0	13,615,298,236	0
Tx Triggers	0	0	0	0
Rx Triggers	107,881,419	0	107,881,962	0
CRC Errors	0	0	0	0
OverSize	0	0	0	0
Frag/UnderSize	0	0	0	0
Tx From Stack	0	0	0	0
Rx To Stack	20,633,071	0	20,633,063	0
ARP Replies Sent	0	0	0	0
ARP Requests Sent	0	0	0	0
ARP Replies Received	0	0	0	0
ARP Requests Received	0	0	0	0
Gratuitous ARP Received	0	N/A	0	N/A
PING Replies Sent	0	0	0	0
PING Requests Sent	0	0	0	0
PING Replies Received	0	0	0	0
PING Requests Received	0	0	0	0
Signature Frames Sent	0	0	0	0
Signature Frames Received	0	0	0	0
Data Integrity Errors	0	0	0	0
VLAN Frames Received	1,685	0	1,651	0
Jumbo Frames Received	0	0	0	0
Pause Frames Received	0	0	0	0
IPv4 Frames Received	333	0	329	0

Port Statistics Clear Counters

Random packet, Utilization=100, both direction

Test Condition: 30a, 6dB, back to back, data rate: 135Mb US, 129Mb DS

Smartbit packet size: random packet both direction

Result: 100M both direction. No packet loss in 5 mins.

Small packet, Utilization=100, both direction

Test Condition: 30a, 6dB, back to back, data rate: 135Mb US, 129Mb DS

Smartbit packet size: 1514byte both direction

Result: Packet rate: 148810. Throughput 76M, No packet loss in 5 mins

Transmit Setup - Traditional Mode [Port 1A-01]

LAN-3324A Dual Media Ethernet SmartMetrics
Use Traditional Mode Setup to configure the content of the frame(s) to be transmitted.

General

Transmit Mode
Continuous

Length (bytes)
(without 4 byte FCS)
☒ Fixed 60
☐ Random

Background
Random
☐ Auto IP Flow
Edit...

Interpacket Gap
Time: 100
Units: %Utilization

VFD1 Setup (MAC Destination)
State: Static
Start Value: 00 00 00 00 00 02
Offset (bytes): 0

VFD2 Setup (MAC Source)
State: Static
Start Value: 00 00 00 00 00 01
Offset (bytes): 6
☐ Adjacent to VFD1

VFD3 Setup (Protocol)
State: Off
Value: Edit...
☐ Edit MAC
Offset (bytes): 12
of Packets: 1
Length(bytes): 12
☐ Adjacent to VFD2

Error Generation
☐ CRC

Default

Output Packet >>

確定
取消
説明

0000: 00 00 00 00 00 02 00 00 00 00 00 01 DD 1F 8D D3
0010: BD 7E B0 EB 35 1B 09 8F 7F D6 4B B3 93 5A C0 8B
0020: A5 98 EB 9E EF 74 6D 1C B0 BD 25 71 75 63 9B 1A
0030: 97 E4 9F B7 05 08 2D 62 43 CE 94 40

VFD1 Data
VFD2 Data
VFD3 Data
VLAN Data

Byte Offset: (Hex:0x0000) - (Dec:0000)

Results Framework

File View Actions Tools Help

Ports Explo... Port Statistics

Port Counters

	Events Port 1A-01 LAN-3324A	Rates Port 1A-01 LAN-3324A	Events Port 1A-02 LAN-3324A	Rates Port 1A-02 LAN-3324A
Tx Frames	48,948,159	148,810	48,997,021	148,809
Rx Frames	48,947,235	148,809	48,996,872	148,810
Tx Bytes	3,132,682,176	9,523,837	3,135,809,344	9,523,784
Rx Bytes	3,132,623,104	9,523,837	3,135,799,808	9,523,784
Tx Triggers	0	0	0	0
Rx Triggers	48,947,236	148,810	48,996,872	148,809
CRC Errors	0	0	0	0
OverSize	0	0	0	0
Frag/UnderSize	0	0	0	0
Tx From Stack	0	0	0	0
Rx To Stack	7,589,226	23,168	7,596,783	23,110
ARP Replies Sent	0	0	0	0
ARP Requests Sent	0	0	0	0
ARP Replies Received	0	0	0	0
ARP Requests Received	0	0	0	0
Gratuitous ARP Received	0	N/A	0	N/A
PING Replies Sent	0	0	0	0
PING Requests Sent	0	0	0	0
PING Replies Received	0	0	0	0
PING Requests Received	0	0	0	0
Signature Frames Sent	0	0	0	0
Signature Frames Received	0	0	0	0
Data Integrity Errors	0	0	0	0
VLAN Frames Received	745	1	737	1
Jumbo Frames Received	0	0	0	0
Pause Frames Received	0	0	0	0
IPv4 Frames Received	149	0	143	0

Port Statistics Clear Counters

Results Framework

File View Actions Tools Help

Ports Explo... Port Statistics

Port Counters

	Events Port 1A-01 LAN-3324A	Rates Port 1A-01 LAN-3324A	Events Port 1A-02 LAN-3324A	Rates Port 1A-02 LAN-3324A
Tx Frames	103,266,520	0	103,266,000	0
Rx Frames	103,266,000	0	103,266,520	0
Tx Bytes	6,609,057,280	0	6,609,024,000	0
Rx Bytes	6,609,024,000	0	6,609,057,280	0
Tx Triggers	0	0	0	0
Rx Triggers	103,266,000	0	103,266,520	0
CRC Errors	0	0	0	0
OverSize	0	0	0	0
Frag/UnderSize	0	0	0	0
Tx From Stack	0	0	0	0
Rx To Stack	16,017,652	0	16,017,622	0
ARP Replies Sent	0	0	0	0
ARP Requests Sent	0	0	0	0
ARP Replies Received	0	0	0	0
ARP Requests Received	0	0	0	0
Gratuitous ARP Received	0	N/A	0	N/A
PING Replies Sent	0	0	0	0
PING Requests Sent	0	0	0	0
PING Replies Received	0	0	0	0
PING Requests Received	0	0	0	0
Signature Frames Sent	0	0	0	0
Signature Frames Received	0	0	0	0
Data Integrity Errors	0	0	0	0
VLAN Frames Received	1,621	0	1,575	0
Jumbo Frames Received	0	0	0	0
Pause Frames Received	0	0	0	0
IPv4 Frames Received	316	0	315	0

Port Statistics Clear Counters

Random packet, Utilization=100, flow control enable, both direction

Test Condition: 17a, 6dB, 1500ft, data rate: 32Mb US, 81Mb DS

Smartbit packet size: random both direction

Result: Throughput 31M/80M, No packet loss in 5 mins

Transmit Setup - Traditional Mode [Port 1A-01]

LAN-3324A Dual Media Ethernet SmartMetrics
Use Traditional Mode Setup to configure the content of the frame(s) to be transmitted.

General

Transmit Mode
Continuous

Length (bytes)
(without 4 byte FCS)
☐ Fixed 1514
☒ Random

Background
Random
☐ Auto IP Flow
Edit...

Interpacket Gap
Time: 100
Units: %Utilization

VFD1 Setup (MAC Destination)
State: Static
Start Value: 00 00 00 00 00 02
Offset (bytes): 0

VFD2 Setup (MAC Source)
State: Static
Start Value: 00 00 00 00 00 01
Offset (bytes): 6
☐ Adjacent to VFD1

VFD3 Setup (Protocol)
State: Off
Value: Edit...
☐ Edit MAC
Offset (bytes): 12
of Packets: 1
Length(bytes): 12
☐ Adjacent to VFD2

Error Generation
☐ CRC

Default

Output Packet >>

確定 取消 説明

0000:	00 00 00 00 00 02	00 00 00 01	12 00 21 2D	- t ½ ¶ Å ò à 8
0010:	2D 74 BD B6 C1 6F E5 38	91 3B 09 70 37 9D 2C 69		e . F K q . ç s .
0020:	65 08 46 4B 71 11 E7 73	11 23 1E C9 63 74 99 4E		0 7 . ö q . Ü .
0030:	30 37 0D F5 71 14 D9 B4	12 D5 E6 DA F7 62 D1 A3		= i L . Å t Å þ ç
0040:	3D EF 4C 0A C2 74 C1 DE	E7 5D 39 18 94 83 7D 6C		} \ z . ð n è .
0050:	7D 5C 7A 1E A4 6E EA 17	1F 0A 31 38 1C 36 85 EE		

■ VFD1 Data ■ VFD2 Data ■ VFD3 Data ■ VLAN Data Byte Offset: (Hex:0x0000) - (Dec:0000)

Results Framework

File View Actions Tools Help

Ports Explo... Port Statistics

Port 1A-01 LAN-3324A
Port 1A-02 LAN-3324A
Port 1A-03 LAN-3324A
Port 1A-04 LAN-3324A

Port Counters

	Events Port 1A-01 LAN-3324A	Rates Port 1A-01 LAN-3324A	Events Port 1A-02 LAN-3324A	Rates Port 1A-02 LAN-3324A
Tx Frames	133,802,992	18,180	133,806,126	18,225
Rx Frames	133,802,273	18,385	133,806,760	18,224
Tx Bytes	30,892,604,156	12,136,870	30,894,997,470	12,134,545
Rx Bytes	30,892,388,478	12,132,031	30,895,115,014	12,135,181
Tx Triggers	0	0	0	0
Rx Triggers	133,802,273	18,385	133,806,760	18,224
CRC Errors	0	0	0	0
OverSize	0	0	0	0
Frag/UnderSize	0	0	0	0
Tx From Stack	0	0	0	0
Rx To Stack	46,464,609	18,387	46,466,485	18,212
ARP Replies Sent	0	0	0	0
ARP Requests Sent	0	0	0	0
ARP Replies Received	0	0	0	0
ARP Requests Received	0	0	0	0
Gratuitous ARP Received	0	N/A	0	N/A
PING Replies Sent	0	0	0	0
PING Requests Sent	0	0	0	0
PING Replies Received	0	0	0	0
PING Requests Received	0	0	0	0
Signature Frames Sent	0	0	0	0
Signature Frames Received	0	0	0	0
Data Integrity Errors	0	0	0	0
VLAN Frames Received	2,089	0	2,097	1
Jumbo Frames Received	0	0	0	0
Pause Frames Received	0	0	0	0
IPv4 Frames Received	409	0	416	1

Port Statistics Clear Counters

Results Framework

File View Actions Tools Help

Ports Explo... Port Statistics

Port 1A-01 LAN-3324A
Port 1A-02 LAN-3324A
Port 1A-03 LAN-3324A
Port 1A-04 LAN-3324A

Port Counters

	Events Port 1A-01 LAN-3324A	Rates Port 1A-01 LAN-3324A	Events Port 1A-02 LAN-3324A	Rates Port 1A-02 LAN-3324A
Tx Frames	134,251,411	0	134,250,404	0
Rx Frames	134,250,404	0	134,251,411	0
Tx Bytes	31,191,796,362	0	31,191,645,003	0
Rx Bytes	31,191,645,003	0	31,191,796,362	0
Tx Triggers	0	0	0	0
Rx Triggers	134,250,404	0	134,251,411	0
CRC Errors	0	0	0	0
OverSize	0	0	0	0
Frag/UnderSize	0	0	0	0
Tx From Stack	0	0	0	0
Rx To Stack	46,911,276	0	46,909,649	0
ARP Replies Sent	0	0	0	0
ARP Requests Sent	0	0	0	0
ARP Replies Received	0	0	0	0
ARP Requests Received	0	0	0	0
Gratuitous ARP Received	0	N/A	0	N/A
PING Replies Sent	0	0	0	0
PING Requests Sent	0	0	0	0
PING Replies Received	0	0	0	0
PING Requests Received	0	0	0	0
Signature Frames Sent	0	0	0	0
Signature Frames Received	0	0	0	0
Data Integrity Errors	0	0	0	0
VLAN Frames Received	2,097	0	2,105	0
Jumbo Frames Received	0	0	0	0
Pause Frames Received	0	0	0	0
IPv4 Frames Received	412	0	417	0

Port Statistics Clear Counters

VI. Stability tests

24 Hours No packet loss

Test Condition: 30a, 6dB, back to back, data rate: 135Mb US, 129Mb DS

Smartbit packet size: 1514byte both direction

Result: 100M both direction. No packet loss in 24 hours.



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