



Spreadsheet contents: **FTTx subscriber and broadband spending forecast for APAC FTTH Council—
Subscriber forecast: 2005-2011; equipment spending forecast: 2005-2011**

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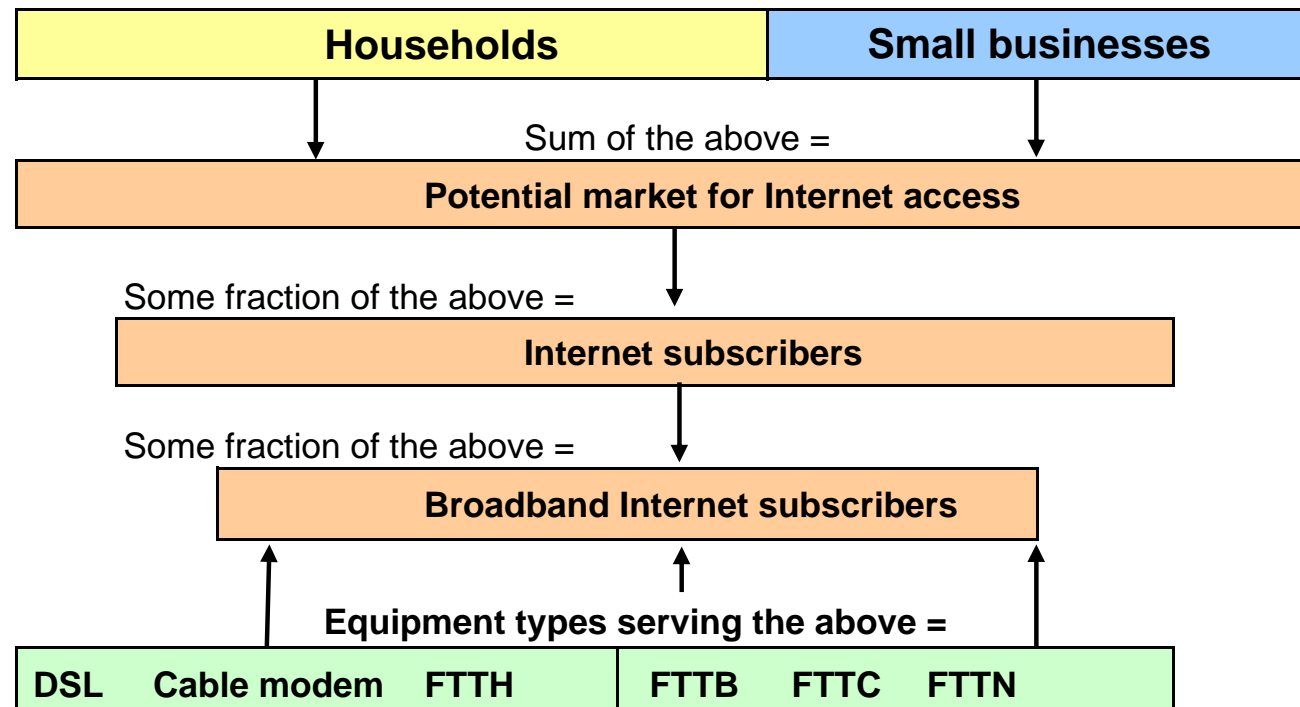
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Category	Notes
Revenues	Sales by equipment vendors to service providers/network operators
Broadband access spending forecast	Covers both network and customer premise equipment used to provide high speed internet access to residences and small businesses. This forecast includes only DSL, CMTS*, OLT, ONT ports. It does not include DSLAM chassis, DSL line cards, Ethernet switching equipment (remote building, remote node, or C.O. based). Spending on fiber cable, splice cases, distribution frames, amps, splitters, jumpers, etc. were not included in this forecast as there was insufficient information provided by the operators to factor these components into our forecast model.
Cumulative Broadband subscriber forecast	Includes residential and commercial users that subscribe to a high-speed data service (in this case, anything above 212 Kbps).
FTTB subscribers	Those subscribers in an apartment building, business building, or any multi-dwelling building that get their broadband from a fiber connected node that terminates in the basement of telecoms room of a building. In most cases, the last 100 meters or so connects to the subscriber is via twisted-pair.
FTTH subscribers	Those subscribers that are directly connected to fiber (no copper in between).
Wireless	Fixed Wimax subscriber numbers. Does not include Mobile Wimax numbers. Previous forecast included other categories

*Now includes both downstream and upstream ports

Forecasting Method



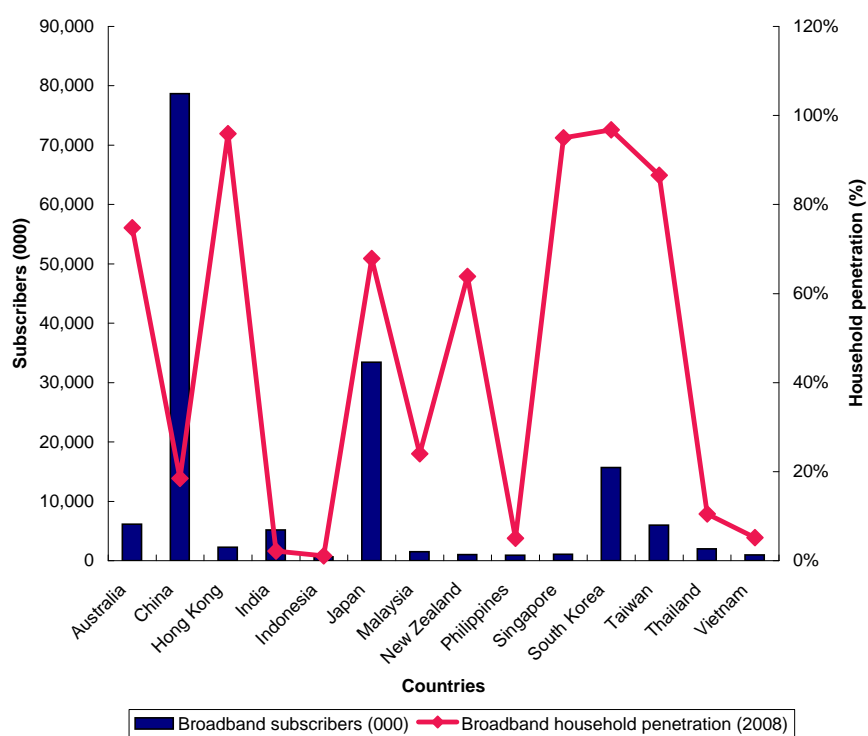
Forecasting Method

Forecast numbers were updated with the latest information available.

Current Broadband Subscribers and Household Penetration in Asia-Pacific

Country	Households (000)	Broadband subscribers (000)	Broadband household penetration (2008)	Broadband household penetration (2007)	Rank order (2008)
Australia	8,254	6,174	75%	56%	6
China	426,241	78,665	18%	17%	9
Hong Kong	2,353	2,257	96%	91%	2
India	236,544	5,182	2%	1%	13
Indonesia	59,731	662	1%	1%	14
Japan	49,251	33,416	68%	60%	5
Malaysia	6,338	1,521	24%	20%	8
New Zealand	1,612	1,029	64%	45%	7
Philippines	18,220	923	5%	3%	12
Singapore	1,116	1,060	95%	81%	3
South Korea	16,198	15,671	97%	91%	1
Taiwan	6,911	5,982	87%	76%	4
Thailand	19,028	1,996	10%	7%	10
Vietnam	19,068	991	5%	4%	11
Total	870,865	155,529	18%	14%	

Broadband subscriber and household penetration in Asia-Pacific

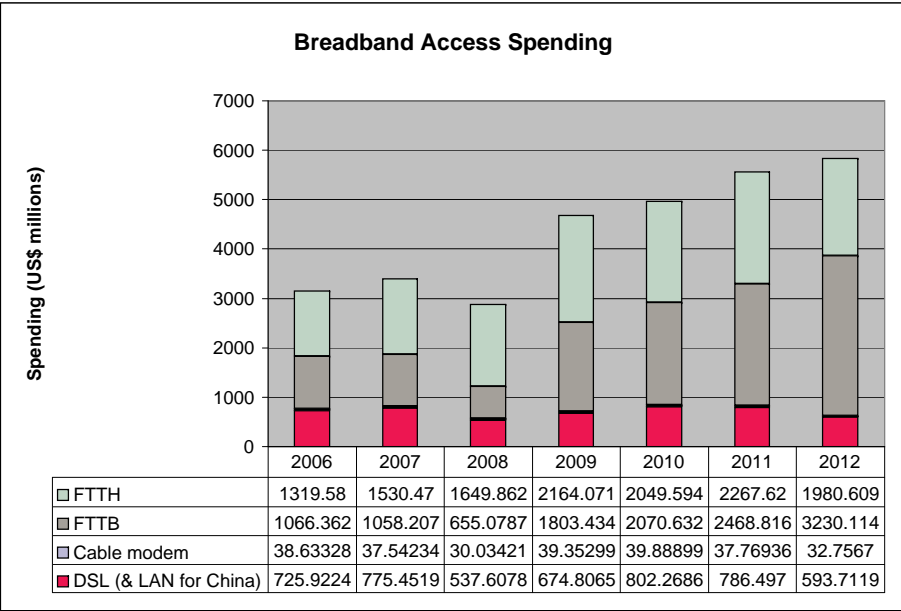
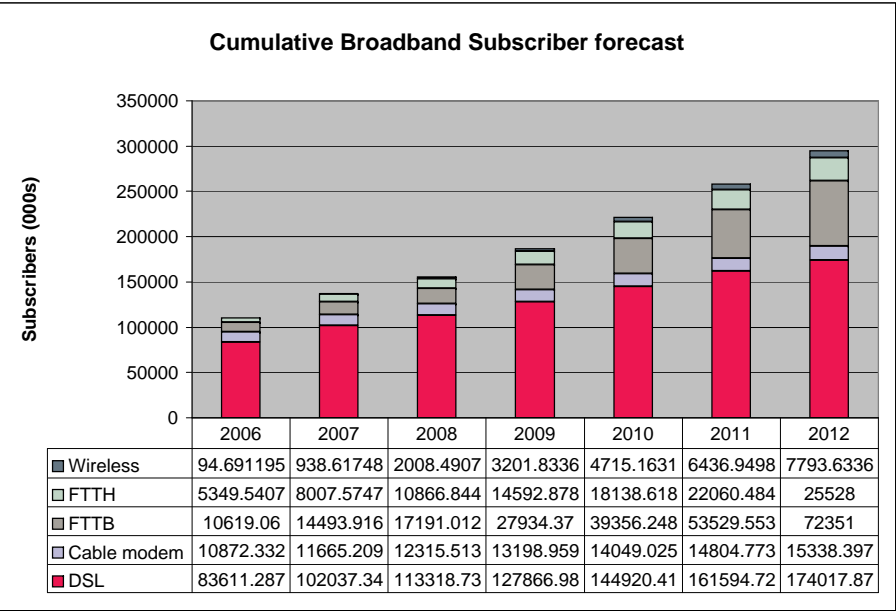


Broadband Subscriber and Spending Growth in Asia-Pacific

APAC broadband subscriber forecast (000)															CAGR
	2006	2007	% Growth	2008	% Growth	2009	% Growth	2010	% Growth	2011	% Growth	2012	% Growth	Total	
DSL	83,611	102,037	22%	113,319	11%	127,867	13%	144,920	13%	161,595	12%	174,018	8%	907,367	13%
Cable modem	10,872	11,665	7%	12,316	6%	13,199	7%	14,049	6%	14,805	5%	15,338	4%	92,244	6%
FTTB	10,619	14,494	36%	17,191	19%	27,934	62%	39,356	41%	53,530	36%	72,351	35%	235,475	38%
FTTH	5,350	8,008	50%	10,867	36%	14,593	34%	18,139	24%	22,060	22%	25,528	16%	104,544	30%
Wireless	95	939	891%	2,008	114%	3,202	59%	4,715	47%	6,437	37%	7,794	21%	25,189	109%
Total	110,547	137,143	24%	155,701	14%	186,795	20%	221,179	18%	258,426	17%	295,029	14%	1,364,820	18%

APAC telco wireline broadband access spending forecast (US\$ million)															
	2006	2007	% Growth	2008	% Growth	2009	% Growth	2010	% Growth	2011	% Growth	2012	% Growth	Total	CAGR
DSL (& LAN for China)	\$726	\$775	7%	\$538	-31%	\$675	26%	\$802	19%	\$786	-2%	\$594	-25%	\$4,896	-3%
Cable modem	\$39	\$38	-3%	\$30	-20%	\$39	31%	\$40	1%	\$38	-5%	\$33	-13%	\$256	-3%
FTTB	\$1,066	\$1,058	-1%	\$655	-38%	\$1,803	175%	\$2,071	15%	\$2,469	19%	\$3,230	31%	\$12,353	20%
FTTH	\$1,320	\$1,530	16%	\$1,650	8%	\$2,164	31%	\$2,050	-5%	\$2,268	11%	\$1,981	-13%	\$12,962	7%
Total	\$3,150	\$3,402	8%	\$2,873	-16%	\$4,682	63%	\$4,962	6%	\$5,561	12%	\$5,837	5%	\$30,467	11%

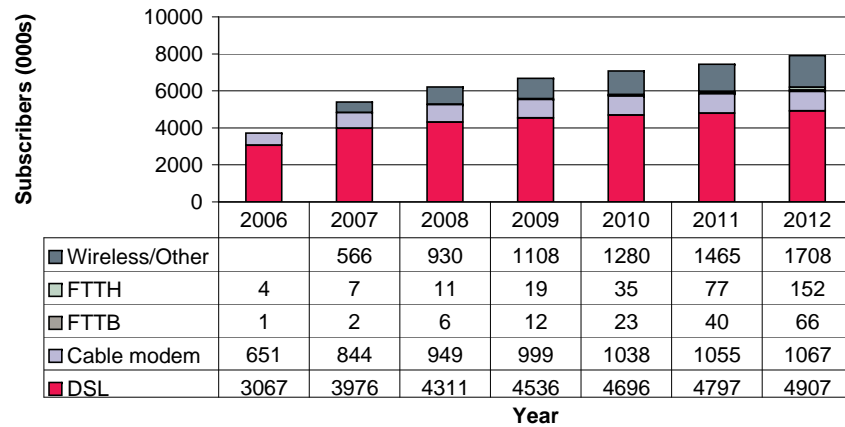
Asia-Pacific



Australia

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	3067	3976	4311	4536	4696	4797	4907
Cable modem	651	844	949	999	1038	1055	1067
FTTB	1	2	6	12	23	40	66
FTTH	4	7	11	19	35	77	152
Wireless/Other		566	930	1108	1280	1465	1708
Total	3723	5396	6206	6674	7072	7434	7899

Cumulative Broadband subscriber forecast



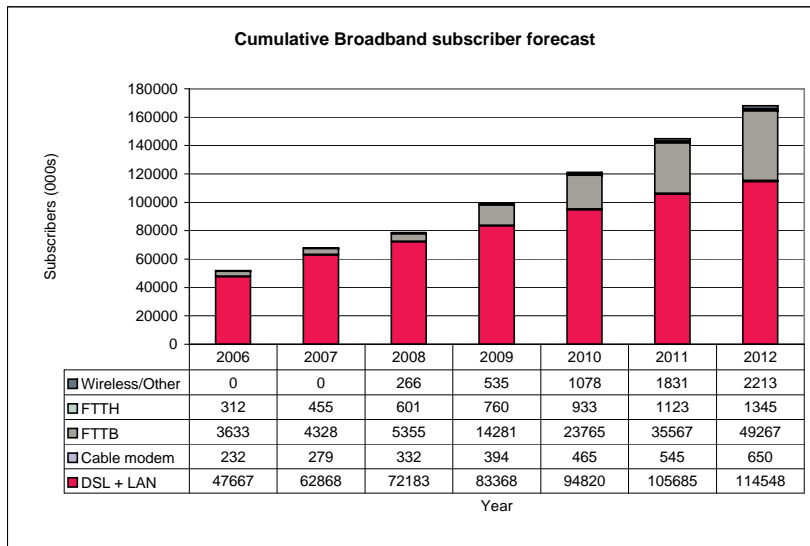
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$36	\$36	\$13	\$9	\$6	\$4	\$4
Cable modem	\$9	\$8	\$4	\$2	\$2	\$1	\$0
FTTB	\$0	\$0	\$1	\$2	\$3	\$5	\$8
FTTH	\$1	\$2	\$2	\$5	\$10	\$25	\$45
Total	\$46	\$46	\$21	\$18	\$21	\$35	\$58

Broadband access spending forecast

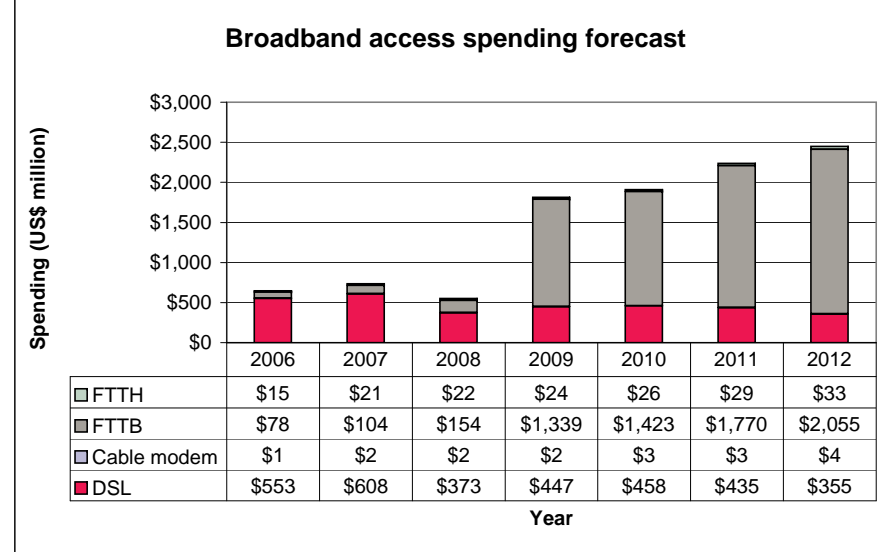


China

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL + LAN	47667	62868	72183	83368	94820	105685	114548
Cable modem	232	279	332	394	465	545	650
FTTB	3633	4328	5355	14281	23765	35567	49267
FTTH	312	455	601	760	933	1123	1345
Wireless/Other	0	0	266	535	1078	1831	2213
Total	51844	67930	78738	99339	121061	144751	168023

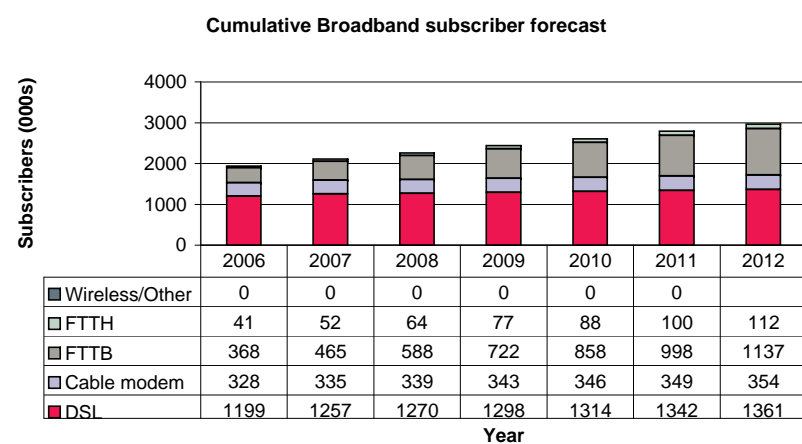


Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$553	\$608	\$373	\$447	\$458	\$435	\$355
Cable modem	\$1	\$2	\$2	\$2	\$3	\$3	\$4
FTTB	\$78	\$104	\$154	\$1,339	\$1,423	\$1,770	\$2,055
FTTH	\$15	\$21	\$22	\$24	\$26	\$29	\$33
Total	\$647	\$736	\$551	\$1,813	\$1,909	\$2,237	\$2,447

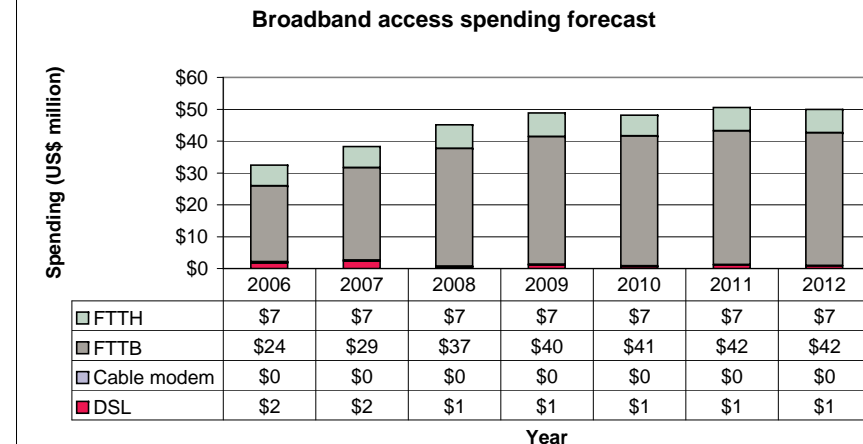


Hong Kong

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	1199	1257	1270	1298	1314	1342	1361
Cable modem	328	335	339	343	346	349	354
FTTB	368	465	588	722	858	998	1137
FTTH	41	52	64	77	88	100	112
Wireless/Other	0	0	0	0	0	0	0
Total	1936	2109	2262	2440	2606	2789	2964



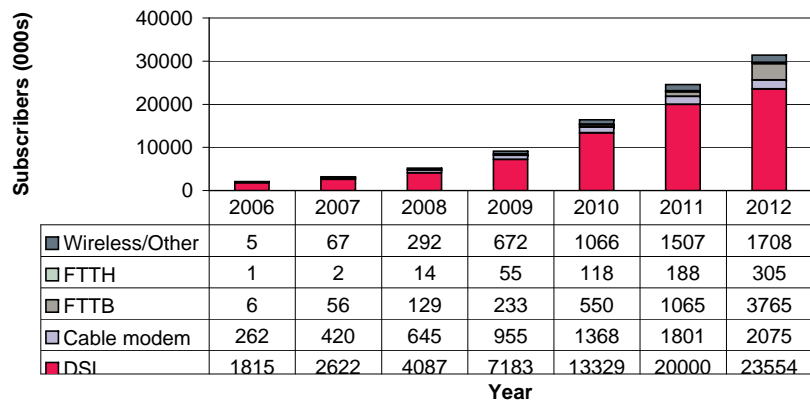
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$2	\$2	\$1	\$1	\$1	\$1	\$1
Cable mode	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTTB	\$24	\$29	\$37	\$40	\$41	\$42	\$42
FTTH	\$7	\$7	\$7	\$7	\$7	\$7	\$7
Total	\$32	\$38	\$45	\$49	\$48	\$51	\$50



India

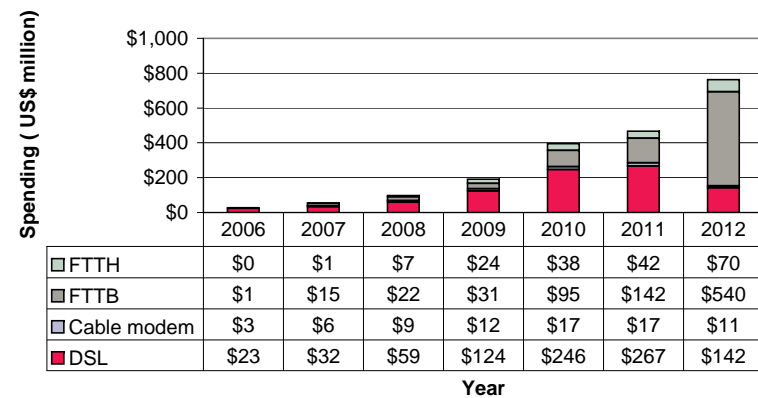
Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	1815	2622	4087	7183	13329	20000	23554
Cable modem	262	420	645	955	1368	1801	2075
FTTB	6	56	129	233	550	1065	3765
FTTH	1	2	14	55	118	188	305
Wireless/Other	5	67	292	672	1066	1507	1708
Total	2089	3166	5168	9098	16431	24561	31407

Cukulative Broadband subscriber forecast



Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$23	\$32	\$59	\$124	\$246	\$267	\$142
Cable modem	\$3	\$6	\$9	\$12	\$17	\$17	\$11
FTTB	\$1	\$15	\$22	\$31	\$95	\$142	\$540
FTTH	\$0	\$1	\$7	\$24	\$38	\$42	\$70
Total	\$28	\$54	\$97	\$192	\$395	\$468	\$763

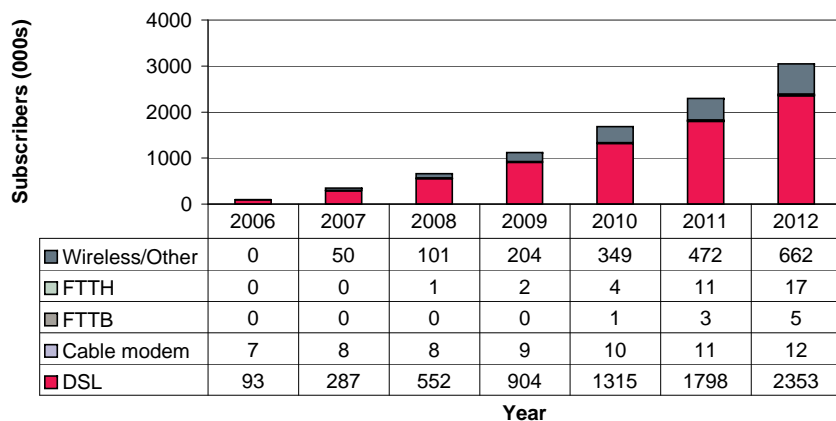
Broadband access spending forecast



Indonesia

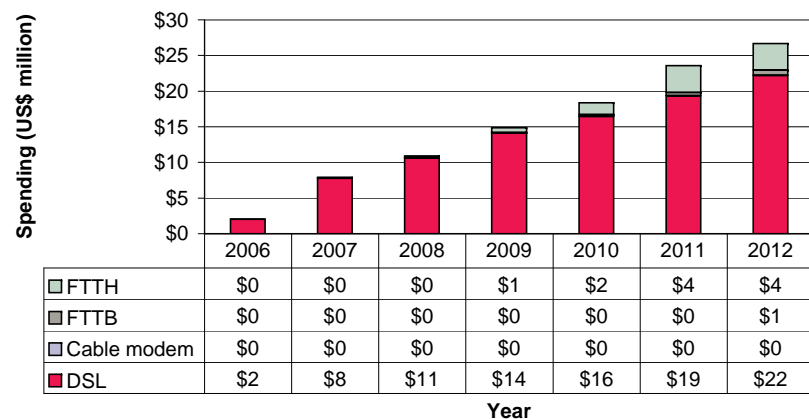
Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	93	287	552	904	1315	1798	2353
Cable modem	7	8	8	9	10	11	12
FTTB	0	0	0	0	1	3	5
FTTH	0	0	1	2	4	11	17
Wireless/Other	0	50	101	204	349	472	662
Total	100	345	662	1120	1680	2294	3049

Cumulative Broadband subscriber forecast



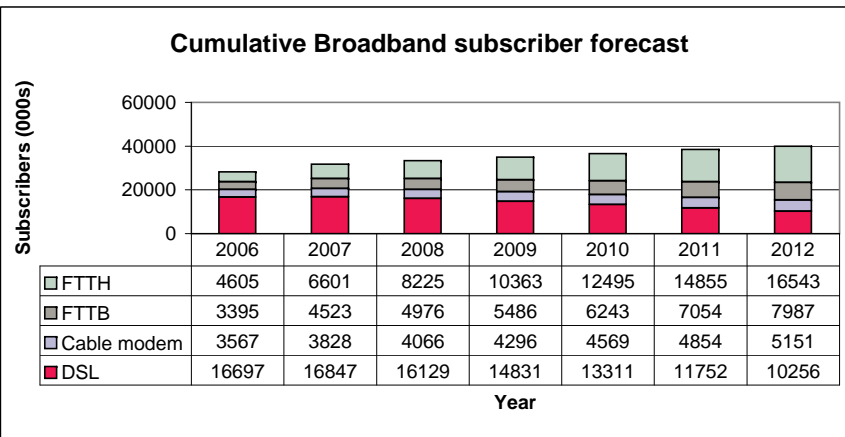
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$2	\$8	\$11	\$14	\$16	\$19	\$22
Cable modem	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTTB	\$0	\$0	\$0	\$0	\$0	\$0	\$1
FTTH	\$0	\$0	\$0	\$1	\$2	\$4	\$4
Total	\$2	\$8	\$11	\$15	\$18	\$24	\$27

Broadband access spending forecast

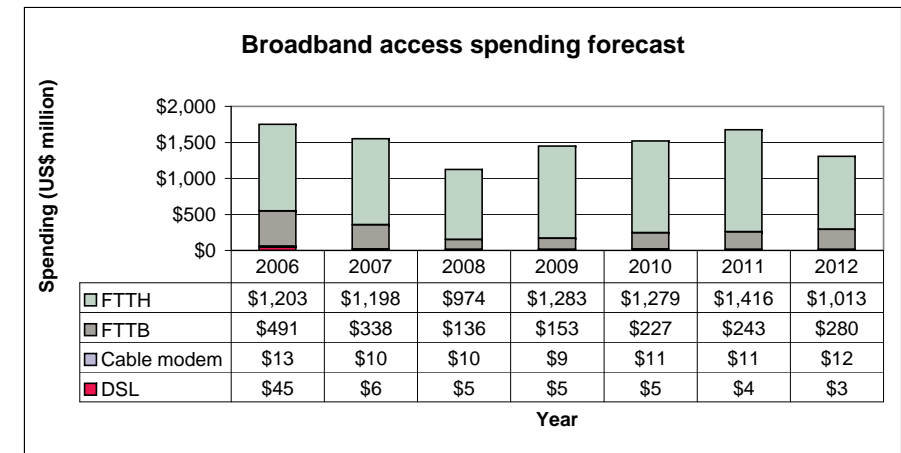


Japan

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	16697	16847	16129	14831	13311	11752	10256
Cable modem	3567	3828	4066	4296	4569	4854	5151
FTTB	3395	4523	4976	5486	6243	7054	7987
FTTH	4605	6601	8225	10363	12495	14855	16543
Wireless/Other		0	0	0	0	0	0
Total	28264	31799	33396	34976	36618	38515	39937



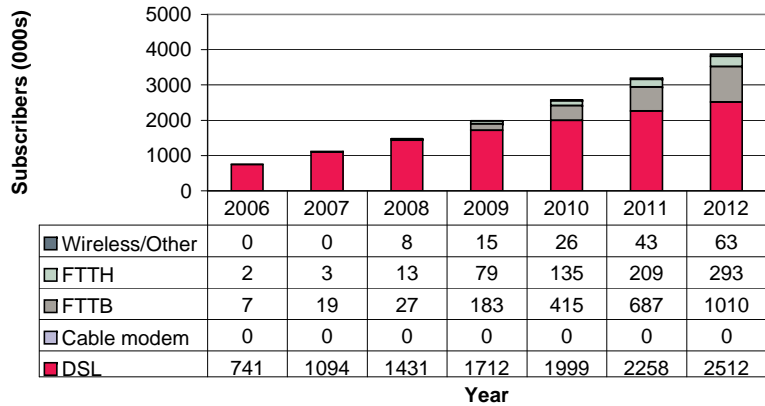
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$45	\$6	\$5	\$5	\$5	\$4	\$3
Cable modem	\$13	\$10	\$10	\$9	\$11	\$11	\$12
FTTB	\$491	\$338	\$136	\$153	\$227	\$243	\$280
FTTH	\$1,203	\$1,198	\$974	\$1,283	\$1,279	\$1,416	\$1,013
Total	\$1,751	\$1,552	\$1,125	\$1,450	\$1,522	\$1,675	\$1,308



Malaysia

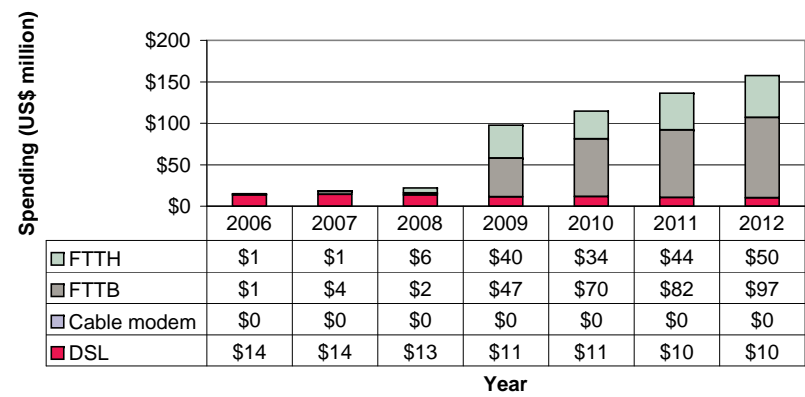
Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	741	1094	1431	1712	1999	2258	2512
Cable modem	0	0	0	0	0	0	0
FTTB	7	19	27	183	415	687	1010
FTTH	2	3	13	79	135	209	293
Wireless/Other	0	0	8	15	26	43	63
Total	750	1116	1479	1990	2575	3196	3878

Cumulative Broadband subscriber forecast



Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$14	\$14	\$13	\$11	\$11	\$10	\$10
Cable modem	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTTB	\$1	\$4	\$2	\$47	\$70	\$82	\$97
FTTH	\$1	\$1	\$6	\$40	\$34	\$44	\$50
Total	\$15	\$18	\$22	\$98	\$115	\$136	\$157

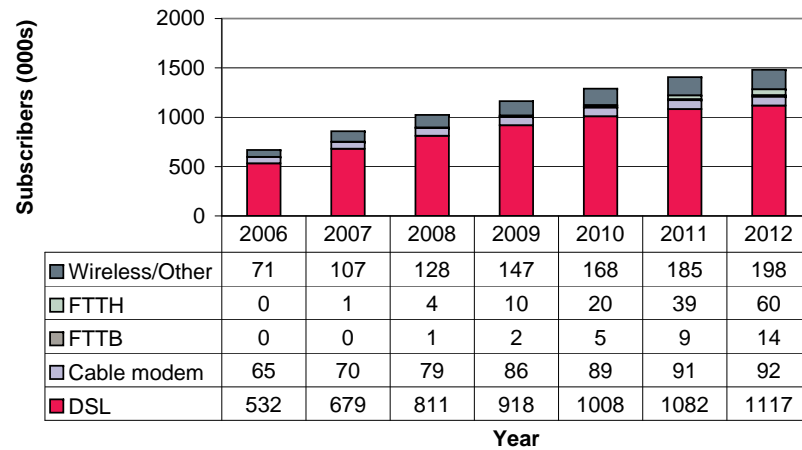
Broadband access spending forecast



New Zealand

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	532	679	811	918	1008	1082	1117
Cable modem	65	70	79	86	89	91	92
FTTB	0	0	1	2	5	9	14
FTTH	0	1	4	10	20	39	60
Wireless/Other	71	107	128	147	168	185	198
Total	668	858	1023	1163	1290	1406	1481

Cumulative Broadband subscriber forecast



Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$8	\$6	\$5	\$4	\$4	\$3	\$1
Cable modem	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTTB	\$0	\$0	\$0	\$0	\$1	\$1	\$2
FTTH	\$0	\$1	\$2	\$3	\$6	\$12	\$12
Total	\$9	\$7	\$7	\$8	\$10	\$16	\$15

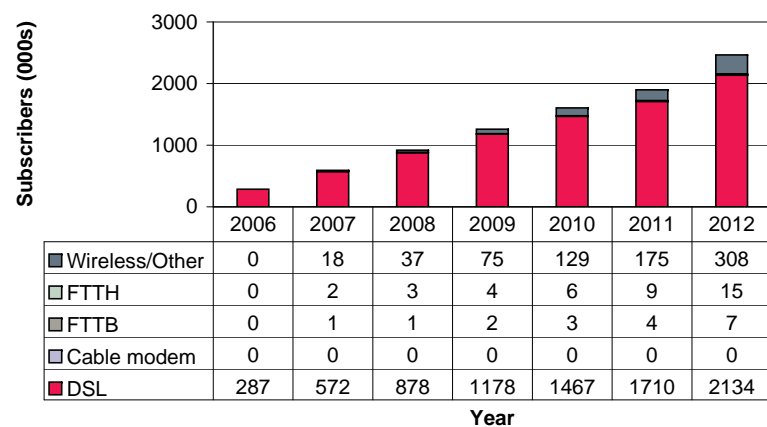
Broadband access spending forecast



Philippines

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	287	572	878	1178	1467	1710	2134
Cable modem	0	0	0	0	0	0	0
FTTB	0	1	1	2	3	4	7
FTTH	0	2	3	4	6	9	15
Wireless/Other	0	18	37	75	129	175	308
Total	287	593	919	1259	1605	1898	2464

Cumulative Broadband subscriber forecast



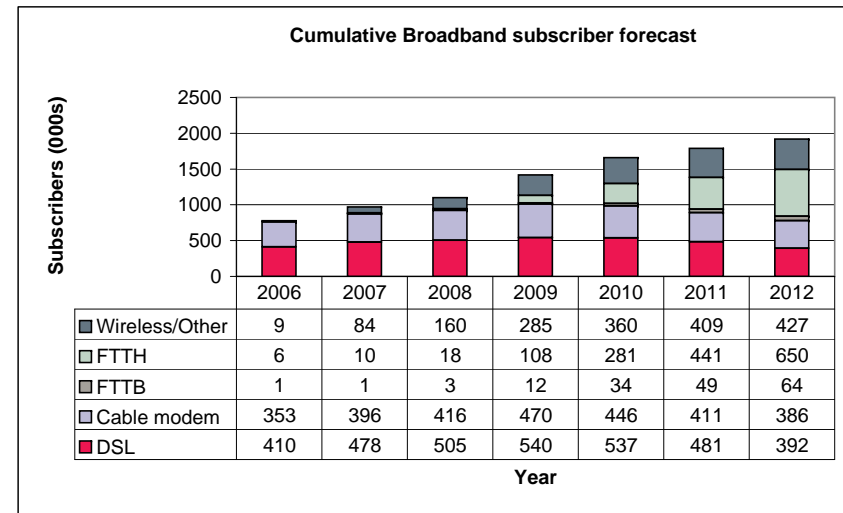
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$10	\$11	\$12	\$12	\$12	\$10	\$17
Cable modem	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTTB	\$0	\$0	\$0	\$0	\$0	\$0	\$1
FTTH	\$0	\$1	\$1	\$1	\$1	\$2	\$4
Total	\$10	\$13	\$13	\$13	\$13	\$12	\$22

Broadband access spending forecast

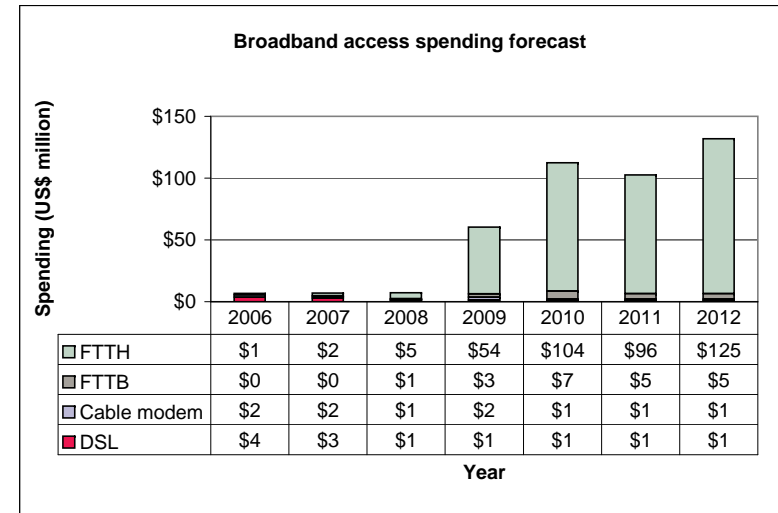


Singapore

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	410	478	505	540	537	481	392
Cable modem	353	396	416	470	446	411	386
FTTB	1	1	3	12	34	49	64
FTTH	6	10	18	108	281	441	650
Wireless/Other	9	84	160	285	360	409	427
Total	778	969	1102	1416	1658	1791	1919



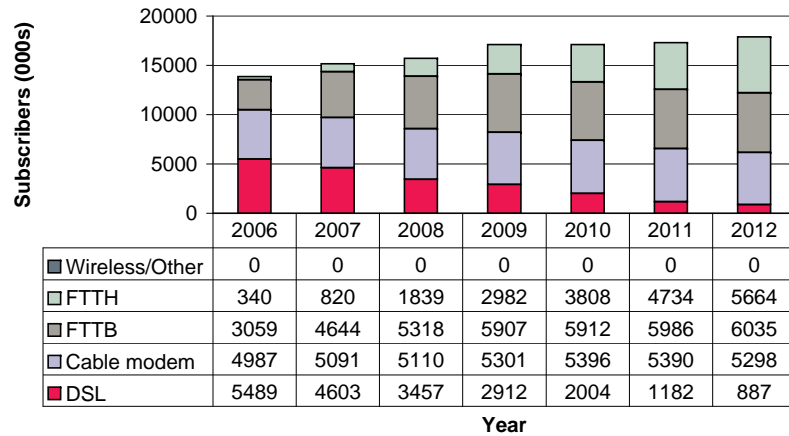
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$4	\$3	\$1	\$1	\$1	\$1	\$1
Cable modem	\$2	\$2	\$1	\$2	\$1	\$1	\$1
FTTB	\$0	\$0	\$1	\$3	\$7	\$5	\$5
FTTH	\$1	\$2	\$5	\$54	\$104	\$96	\$125
Total	\$7	\$7	\$7	\$60	\$112	\$102	\$132



South Korea

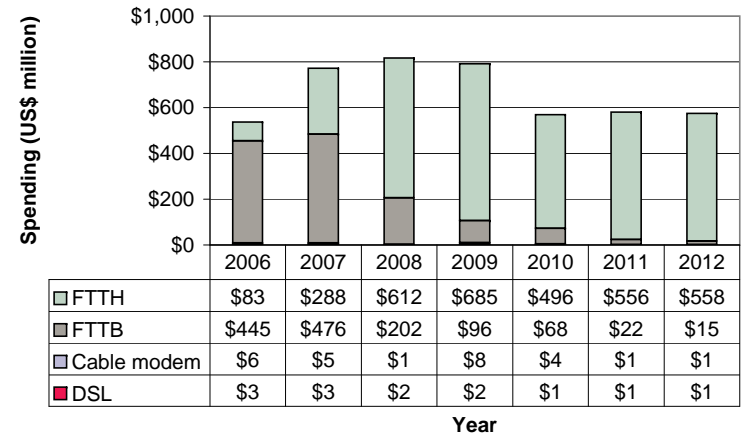
Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	5489	4603	3457	2912	2004	1182	887
Cable modem	4987	5091	5110	5301	5396	5390	5298
FTTB	3059	4644	5318	5907	5912	5986	6035
FTTH	340	820	1839	2982	3808	4734	5664
Wireless/Other	0	0	0	0	0	0	0
Total	13875	15158	15725	17101	17120	17292	17884

Cumulative Broadband subscriber forecast



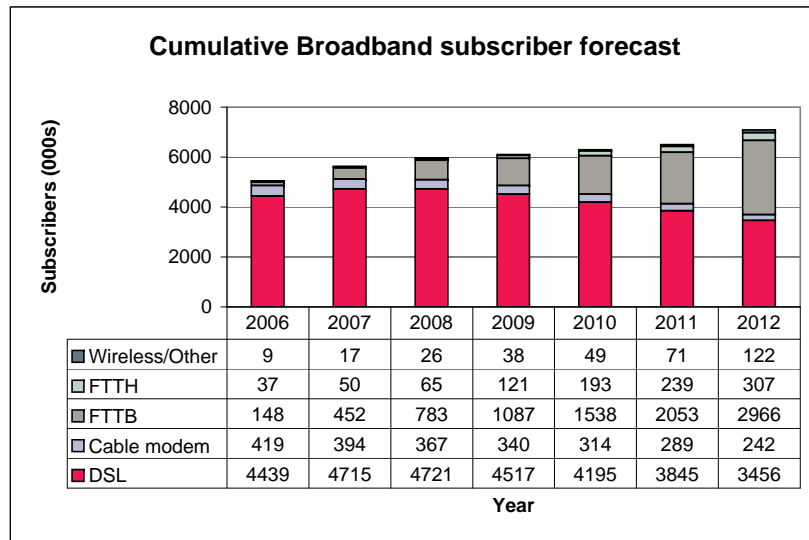
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$3	\$3	\$2	\$2	\$1	\$1	\$1
Cable modem	\$6	\$5	\$1	\$8	\$4	\$1	\$1
FTTB	\$445	\$476	\$202	\$96	\$68	\$22	\$15
FTTH	\$83	\$288	\$612	\$685	\$496	\$556	\$558
Total	\$537	\$771	\$817	\$791	\$569	\$580	\$575

Broadband access spending forecast

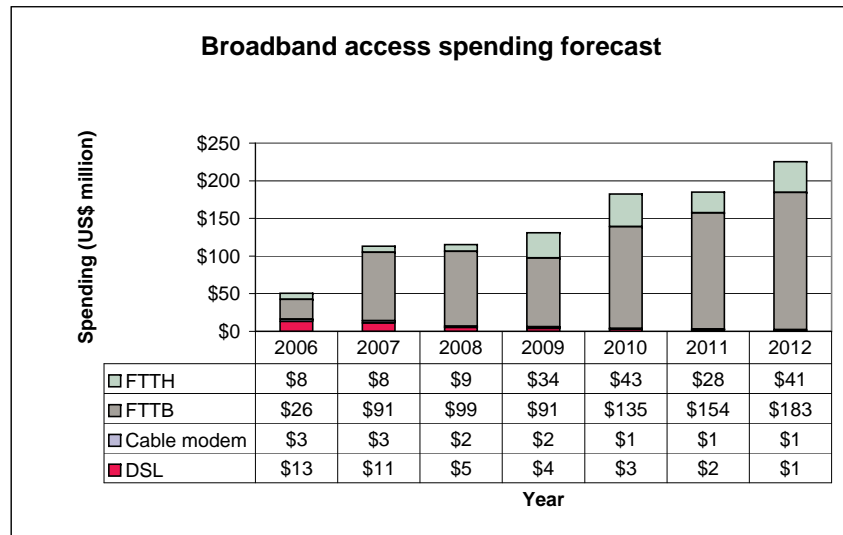


Taiwan

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	4439	4715	4721	4517	4195	3845	3456
Cable modem	419	394	367	340	314	289	242
FTTB	148	452	783	1087	1538	2053	2966
FTTH	37	50	65	121	193	239	307
Wireless/Other	9	17	26	38	49	71	122
Total	5052	5628	5962	6103	6290	6497	7093

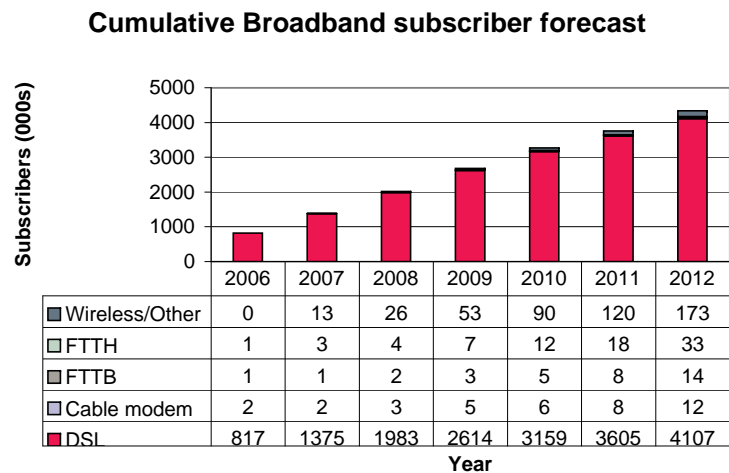


Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$13	\$11	\$5	\$4	\$3	\$2	\$1
Cable modem	\$3	\$3	\$2	\$2	\$1	\$1	\$1
FTTB	\$26	\$91	\$99	\$91	\$135	\$154	\$183
FTTH	\$8	\$8	\$9	\$34	\$43	\$28	\$41
Total	\$51	\$113	\$115	\$131	\$183	\$185	\$225

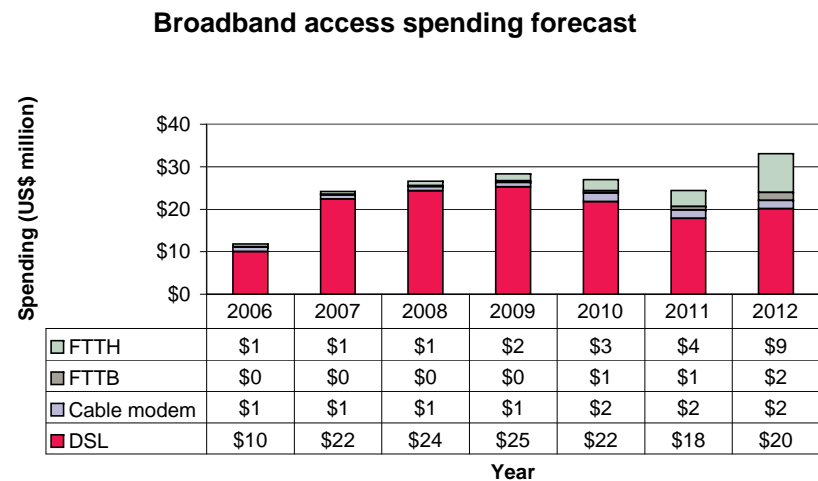


Thailand

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	817	1375	1983	2614	3159	3605	4107
Cable modem	2	2	3	5	6	8	12
FTTB	1	1	2	3	5	8	14
FTTH	1	3	4	7	12	18	33
Wireless/Other	0	13	26	53	90	120	173
Total	821	1394	2018	2682	3271	3759	4339



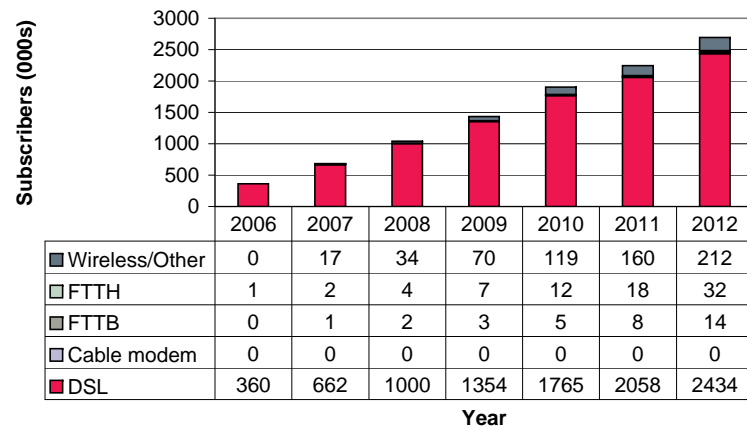
Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$10	\$22	\$24	\$25	\$22	\$18	\$20
Cable modem	\$1	\$1	\$1	\$1	\$2	\$2	\$2
FTTB	\$0	\$0	\$0	\$0	\$1	\$1	\$2
FTTH	\$1	\$1	\$1	\$2	\$3	\$4	\$9
Total	\$12	\$24	\$27	\$28	\$27	\$24	\$33



Vietnam

Cumulative Broadband subscriber forecast (000s)							
	2006	2007	2008	2009	2010	2011	2012
DSL	360	662	1000	1354	1765	2058	2434
Cable modem	0	0	0	0	0	0	0
FTTB	0	1	2	3	5	8	14
FTTH	1	2	4	7	12	18	32
Wireless/Other	0	17	34	70	119	160	212
Total	361	682	1041	1434	1901	2243	2692

Cumulative Broadband subscriber forecast



Broadband access spending forecast (US\$ million)							
	2006	2007	2008	2009	2010	2011	2012
DSL	\$4	\$12	\$14	\$14	\$16	\$12	\$15
Cable modem	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTTB	\$0	\$0	\$0	\$0	\$1	\$1	\$2
FTTH	\$0	\$1	\$1	\$2	\$3	\$4	\$8
Total	\$4	\$13	\$15	\$16	\$20	\$16	\$25

Broadband access spending forecast

