Best Export Markets
For
U.S. Computers and Peripherals, 2008

Best Export Markets for U.S. Computers and Peripherals was compiled by Karl Wienhold, under the supervision of Maurice Kogon, Director of the El Camino College Center for International Trade Development (CITD) in Hawthorne, California. The report is based largely on 2008 Country Commercial Guides (CCGs) prepared by United States Commercial Service (USCS) posts abroad. All CCGs include a standard chapter "Leading Sectors for U.S. Exports." This report drew from those CCGs which specifically recommended **Computers and Peripherals** as a best prospect for U.S. exports.

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Best Export Markets
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[Automatic Data Processing Machines and Units thereof; Magnetic or optical Readers, Machines for Transcribing and Processing coded Data, nesoi (HS 8471)]

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I. Export Market Brief

Automatic Data Processing Machines and Units thereof; Magnetic or optical Readers, Machines for Transcribing and Processing coded Data, nesoi -- HS 8471

This Market Brief provides an overview of the world market for U.S. Computers and Peripherals falling within Harmonized System (HS) code 8471, based on the latest U.S. and international trade statistics and market research. The HS 8471 category covers "Automatic Data Processing Machines and Units thereof; Magnetic or optical Readers, Machines for Transcribing and Processing coded Data, nesoi" – the closest correlation with Computers and Peripherals.

Export growth: U.S. exports of HS 8471 products rose from $23.9 billion in 2004 to $24.3 billion in 2007, an increase of 1.33% over the four-year period.

Leading Export Markets: Canada was by far the leading market for U.S. exports of HS 8471 products in 2007 ($4.9 billion or 20.5% of total), followed by Mexico (9.7%). Other significant markets (above $1 billion) were: Japan (5.8%), Netherlands (5.2%), UK (5.0%), Germany (4.4%), and Brazil (4.2%).

Fastest Growing Export Markets: The leading markets with both high and sustained growth rates for U.S. exports of products in the HS 8471 category over the latest four years (2004-07 and 2006-07) were: Brazil, Chile, Colombia, Argentina, Belgium, and Peru. Other significant growth markets over the 2004-07 period were Paraguay, Venezuela, and Taiwan.

Leading Importing Countries: The top foreign importers of HS 8471 products (all above $20 billion) in 2006 were Germany ($24.9 billion, or 8.2%), and Netherlands (7.8%). Other significant importers (all above $10 billion) were Japan (6.0%), China (6.6%), United Kingdom (5.8%), France (4.1%), and China, Hong Kong (3.4%).

World Market Size & U.S. Share: Total world exports of HS 8471 products by all countries reached $298 billion in 2006, up from $209 billion in 2003 (+42%). The U.S. had an 8.9% share of the total world market in 2006, topped only by China (31.2%). Other world suppliers with significant market shares were Netherlands (7.1%), Germany (6%), Malaysia (5.5%), and Singapore (4.4%).

Best Market Prospects: The markets listed below appear to be particularly promising for U.S. exports of Computers and Peripherals over the next two years, based on recommendations of in-country USCS industry specialists. Specific U.S. export statistics on products in this category are available from the CITD for all countries, including those listed below (Source: U.S. Census Bureau). The CITD also has access to more detailed market research on computers and peripherals for each country:

- **Argentina**
- **Austria**
- **Canada**
- **Columbia**
- **Dominican Republic**
- **Ecuador**
- **Finland**
- **France**
- **Germany**
- **Greece**
- **Honduras**
- **Hong Kong**
- **Iceland**
- **India**
- **Italy**
- **Latvia**
- **Lithuania**
- **Montenegro/Serbia**
- **Nepal**
- **Nicaragua**
- **Niger**
- **Nigeria**
- **Norway**
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- **Peru**
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- **Russia**
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- **Turkey**
- **Turkmenistan**
- **Ukraine**
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- **Venezuela**
- **Vietnam**
- **Zambia**

II. Market Potential Indicators

A. Top 30 U.S. Export Markets for Computers & Peripherals (HS 8471), by Country, 2004-2007 [Automatic Data Processing Machines and Units thereof; Magnetic or optical Readers, Machines for Transcribing and Processing coded Data, nesoi]. This table shows the leading and fastest growing markets for the U.S. over the past several years. Source: U.S. Census Bureau.

B. Top 30 World Importers, 2003-2006 (HS 8471), by Country. This table shows the leading and fastest growing world importers of Computer Equipment. Source: United Nations COMTRADE.

C. Top 30 World Exporters & U.S. Share, 2003-2006 (HS 8471), by Country. This table shows the U.S. and competitor-country shares of total world exports of Computer Equipment. Source: United Nations COMTRADE.

D. Market Sizes & U.S. Share, 2005-2007, by Country. This table shows each "best prospect" country's total market, total imports, imports from the U.S., and the U.S. market share for products in this sector. Source: U.S. Commercial Staff in each country.

II. Market Potential Indicators

II .A. Top 30 U.S. Export Markets, 2004-2007, By Country

HS 8471: Automatic Data Processing Machines and Units thereof; Magnetic or optical Readers, Machines for Transcribing and Processing coded Data, nesoi

Country	2004	2005	2006	2007	% Change 2004-07	% Change 2006-07	% Share 2007
	In 1,000 Dollars						
Canada	5,393,844	6,117,594	6,192,026	4,977,721	-7.7%	-19.6%	20.5%
Mexico	3,999,975	3,645,459	3,218,603	2,352,399	-41.2%	-26.9%	9.7%
Japan	1,567,063	1,514,022	1,518,415	1,402,115	-10.5%	-7.7%	5.8%
Netherlands	1,318,343	1,403,904	1,483,600	1,252,456	-5.0%	-15.6%	5.2%
United Kingdom	1,485,395	1,369,507	1,392,951	1,209,022	-18.6%	-13.2%	5.0%
Germany	1,091,621	1,088,914	1,156,643	1,064,271	-2.5%	-8.0%	4.4%
Brazil	421,148	541,097	601,532	1,017,675	141.6%	69.2%	4.2%
China	779,539	781,102	936,702	954,397	22.4%	1.9%	3.9%
Australia	474,064	524,765	691,320	735,967	55.2%	6.5%	3.0%
Hong Kong	633,767	690,797	792,958	650,459	2.6%	-18.0%	2.7%
France	516,888	513,144	540,364	643,986	24.6%	19.2%	2.6%
Singapore	649,593	614,297	660,725	583,948	-10.1%	-11.6%	2.4%
Korea	502,270	505,239	530,251	469,790	-6.5%	-11.4%	1.9%
Paraguay	123,091	297,620	412,580	395,027	220.9%	-4.3%	1.6%
Chile	236,537	267,605	328,765	394,972	67.0%	20.1%	1.6%
Colombia	189,369	246,734	286,782	394,582	108.4%	37.6%	1.6%
India	311,686	357,621	404,138	390,656	25.3%	-3.3%	1.6%
Venezuela	179,424	232,476	288,828	361,946	101.7%	25.3%	1.5%
Argentina	150,261	209,978	250,082	331,883	120.9%	32.7%	1.4%
Ireland	391,723	415,936	390,607	328,765	-16.1%	-15.8%	1.4%
Belgium	174,471	204,328	248,712	304,260	74.4%	22.3%	1.3%
Malaysia	350,984	382,508	379,320	300,871	-14.3%	-20.7%	1.2%
Israel	225,203	231,642	222,436	268,070	19.0%	20.5%	1.1%
Taiwan	340,030	335,013	310,601	262,619	-22.8%	-15.4%	1.1%
United Arab Em	75,852	116,963	179,531	191,988	153.1%	6.9%	0.8%
Italy	239,779	247,514	228,148	184,585	-23.0%	-19.1%	0.8%
Peru	96,024	104,485	126,969	154,598	61.0%	21.8%	0.6%
Thailand	130,169	148,598	174,948	146,392	12.5%	-16.3%	0.6%
Spain	135,921	146,683	149,915	126,035	-7.3%	-15.9%	0.5%
Hungary	38,977	83,369	132,623	124,411	219.2%	-6.2%	0.5%
Subtotal :	**22,223,008**	**23,338,911**	**24,231,077**	**21,975,868**	**-1.1%**	**-9.3%**	**90.4%**
All Other:	**1,767,360**	**2,032,581**	**2,353,783**	**2,332,704**	**32.0%**	**-0.9%**	**9.6%**
Total	**23,990,368**	**25,371,491**	**26,584,860**	**24,308,572**	**1.3%**	**-8.6%**	**100.0%**

Source: US Census Bureau

II. Market Potential Indicators

II .B Top 30 World Importers, by Country, 2003-06

HS 8471: Computer Equipment

Importing Country	2003	2004	2005	2006	% Change	% Change	% Share
	In US Dollars				2003- 06	2005-06	2006
USA	$52,984,522,425	$60,782,893,718	$64,624,875,342	$68,730,008,781	29.7%	6.4%	22.7%
Germany	$17,772,153,000	$20,392,551,000	$23,658,127,000	$24,986,051,000	40.6%	5.6%	8.2%
Netherlands	$17,062,949,628	$21,922,435,833	$21,234,781,435	$23,699,360,499	38.9%	11.6%	7.8%
Japan	$15,928,690,781	$17,617,446,760	$18,717,090,571	$18,073,739,211	13.5%	-3.4%	6.0%
China	$11,411,206,607	$14,456,089,201	$18,022,981,537	$19,924,550,836	74.6%	10.6%	6.6%
United Kingdom	$15,233,346,022	$17,918,753,507	$17,186,868,084	$17,489,041,365	14.8%	1.8%	5.8%
France	$9,148,857,908	$11,514,736,063	$11,851,889,169	$12,325,224,148	34.7%	4.0%	4.1%
China, Hong Kong	$7,028,636,199	$7,441,557,154	$8,418,695,508	$10,177,095,799	44.8%	20.9%	3.4%
Canada	$6,526,040,559	$7,342,703,688	$8,420,478,942	$9,198,534,939	41.0%	9.2%	3.0%
Italy	$5,351,686,877	$6,300,616,650	$6,677,194,769	$6,504,726,470	21.5%	-2.6%	2.1%
Mexico	$5,235,782,539	$6,240,103,793	$6,261,044,522	$6,513,455,438	24.4%	4.0%	2.1%
Singapore	$4,934,792,407	$5,607,205,555	$5,810,245,372	$6,738,283,346	36.5%	16.0%	2.2%
Spain	$3,789,003,171	$4,676,535,946	$5,626,277,193	$5,870,899,101	54.9%	4.3%	1.9%
Belgium	$4,824,176,532	$5,393,969,803	$5,284,726,640	$4,403,777,988	-8.7%	-16.7%	1.5%
Australia	$3,152,170,240	$4,057,715,521	$4,527,646,832	$4,834,802,170	53.4%	6.8%	1.6%
Ireland	$3,547,592,334	$3,559,466,842	$4,415,231,800	$4,492,333,719	26.6%	1.7%	1.5%
Rep. Of Korea	$3,178,907,353	$3,455,784,534	$4,070,491,201	$4,481,354,092	41.0%	10.1%	1.5%
Sweden	$2,587,592,090	$3,082,538,299	$3,447,982,976	$3,937,609,512	52.2%	14.2%	1.3%
Switzerland	$3,032,179,213	$3,273,340,575	$3,422,192,582	$3,213,908,902	6.0%	-6.1%	1.1%
Malaysia	$1,225,400,744	$2,184,969,878	$2,720,225,250	$2,854,669,915	133.0%	4.9%	0.9%
Czech Rep.	$1,766,046,716	$2,003,695,206	$1,974,917,419	$2,943,031,192	66.6%	49.0%	1.0%
Austria	$1,886,413,032	$2,149,112,189	$2,193,120,768	$1,960,123,534	3.9%	-10.6%	0.6%
Denmark	$1,760,083,231	$2,033,730,265	$2,115,892,161	$2,358,913,847	34.0%	11.5%	0.8%
India	$1,091,973,170	$1,470,812,588	$2,097,180,509	$2,659,902,676	143.6%	26.8%	0.9%
Thailand	$1,763,222,383	$1,493,493,959	$1,854,613,412	$1,920,794,314	8.9%	3.6%	0.6%
Poland	$1,146,866,944	$1,460,261,604	$1,775,438,638	$2,014,676,994	75.7%	13.5%	0.7%
Hungary	$1,031,544,000	$1,310,856,000	$1,749,760,000	$2,026,844,000	96.5%	15.8%	0.7%
Norway	$1,098,273,188	$1,418,275,316	$1,444,593,220	$1,519,173,171	38.3%	5.2%	0.5%
South Africa	$902,931,648	$1,253,140,440	$1,446,777,382	$1,706,059,546	88.9%	17.9%	0.6%
Russian Federation	$609,663,595	$968,758,371	$1,356,215,439	$2,056,099,924	237.3%	51.6%	0.7%
Subtotal :	**207,012,704,536**	**242,783,550,258**	**262,407,555,673**	**279,615,046,429**	**35.1%**	**6.6%**	**92.2%**
All Other:	**17,087,662,687**	**19,673,994,700**	**22,624,995,041**	**23,746,231,414**	**39.0%**	**5.0%**	**7.8%**
Total	**224,100,367,223**	**262,457,544,958**	**285,032,550,714**	**303,361,277,843**	**35.4%**	**6.4%**	**100.0%**

Source: United Nations Comtrade

II. Market Potential Indicators

II .C Top 30 World Exporters & U.S. Market Share, 2003-06

HS 8471: Computer Equipment

Exporting Country	2003	2004	2005	2006	% Change	% Change	% Share
	In U.S. Dollars				2003- 06	2005-06	2006
China	41,017,310,390	59,911,270,603	76,299,334,990	93,017,369,550	126.8%	21.9%	31.2%
USA	21,591,226,071	24,048,267,107	25,371,491,418	26,584,859,653	23.1%	4.8%	8.9%
Netherlands	17,650,233,127	21,180,113,076	21,006,704,524	21,777,024,901	23.4%	3.7%	7.3%
Germany	12,452,865,000	16,819,804,000	17,415,767,000	17,752,646,000	42.6%	1.9%	6.0%
Singapore	15,995,595,801	16,384,101,298	15,558,732,408	12,991,926,302	-18.8%	-16.5%	4.4%
Malaysia	8,421,700,873	11,428,098,765	14,021,253,523	16,321,713,365	93.8%	16.4%	5.5%
Ireland	8,764,703,621	9,563,997,367	12,310,941,804	12,343,695,562	40.8%	0.3%	4.1%
United Kingdom	9,555,576,635	9,486,529,061	9,429,900,254	11,048,491,858	15.6%	17.2%	3.7%
Mexico	10,029,642,224	10,882,592,793	9,240,086,971	9,500,188,970	-5.3%	2.8%	3.2%
Rep. Of Korea	9,345,340,148	10,148,742,560	9,240,535,933	8,511,361,189	-8.9%	-7.9%	2.9%
Hong Kong	6,477,318,371	6,872,034,165	9,025,469,348	11,157,849,457	72.3%	23.6%	3.7%
Thailand	4,498,549,928	5,350,821,142	8,343,424,149	10,849,600,484	141.2%	30.0%	3.6%
Japan	8,344,086,021	8,453,310,615	7,259,388,280	7,055,499,880	-15.4%	-2.8%	2.4%
France	4,372,269,554	5,122,418,824	4,649,541,712	5,314,423,920	21.5%	14.3%	1.8%
Philippines	4,108,360,073	4,238,488,076	4,080,655,049	4,666,076,740	13.6%	14.3%	1.6%
Czech Rep.	2,493,297,461	3,305,219,117	3,922,043,301	5,743,696,645	130.4%	46.4%	1.9%
Belgium	3,507,226,470	3,769,232,609	4,001,507,964	3,026,983,875	-13.7%	-24.4%	1.0%
Hungary	2,456,749,000	3,300,233,000	3,209,204,000	3,871,978,000	57.6%	20.7%	1.3%
Canada	1,541,459,395	1,752,912,916	1,897,620,523	1,968,607,214	27.7%	3.7%	0.7%
Indonesia	858,459,616	1,517,218,560	1,850,386,922	1,785,619,060	108.0%	-3.5%	0.6%
Sweden	659,726,383	938,405,762	1,054,706,209	1,312,367,324	98.9%	24.4%	0.4%
Austria	1,057,621,003	1,261,681,942	1,031,992,123	763,878,180	-27.8%	-26.0%	0.3%
Italy	987,248,390	986,794,119	1,014,267,114	910,565,797	-7.8%	-10.2%	0.3%
Slovakia	209,579,720	561,322,959	835,981,931	798,763,174	281.1%	-4.5%	0.3%
Spain	774,760,875	766,718,054	822,736,719	746,776,732	-3.6%	-9.2%	0.3%
Denmark	497,591,849	505,053,810	571,169,797	520,802,062	4.7%	-8.8%	0.2%
Finland	212,287,344	312,754,537	461,359,664	551,811,413	159.9%	19.6%	0.2%
Australia	380,722,176	395,277,191	498,547,252	458,023,201	20.3%	-8.1%	0.2%
Switzerland	296,054,932	336,325,015	361,493,888	400,845,722	35.4%	10.9%	0.1%
Vietnam	151,459,664	221,638,367	413,412,822	672,948,004	344.3%	62.8%	0.2%
Brazil	185,199,332	238,938,352	330,384,478	319,381,037	72.5%	-3.3%	0.1%
Subtotal:	198,894,221,447	240,060,315,762	265,530,042,070	292,745,775,271	47.2%	10.2%	98.2%
All Other:	10,497,423,185	9,101,162,759	6,206,344,314	5,347,621,983	-49.1%	-13.8%	1.8%
Total:	**209,391,644,632**	**249,161,478,521**	**271,736,386,384**	**298,093,397,254**	**42.4%**	**9.7%**	**100.0%**

Source: United Nations Comtrade

II. Market Potential Indicators

II D. Market Sizes & U.S. Share, 2005-2007, by Country

The Table below provides comparative data on total market, import market, and imports from the U.S. for 30 countries considered "best prospects" for U.S. exports of computers and peripherals. The countries are listed in alphabetic order, not in rank order. The data are based on local sources and reflect best estimates of USCS commercial officers each country. Statistical accuracy and comparability to other sources (e.g., "USDOC Bureau of Census") are affected by a number of factors, including lack of published figures in certain markets, variances in data collection techniques, sources of data, and industry definitions.

Computers and Peripherals
(Values in $ Millions)

Country	Total Market			Total Imports			Imports from US			% U.S. Share
	2005	2007	% Change	2005	2007	% Change	2005	2007	% Change	2007
Argentina	928	1426	54%	711	1076	51%	135	123	-9%	11%
Austria*	2,879	3,151	9%	3,442	3,767	9%	233	255	9%	7%
Canada*	15192	15596	3%	11145	11441	3%	6054	6215	3%	54%
Colombia	622	925	49%	622	925	49%	246	350	42%	38%
Dominican Rep	76	91	20%	69	83	20%	45	59	31%	71%
Ecuador	N/A	N/A	N/A	247	281	14%	130	156	20%	56%
Finland*	3575	3730	4%	3425	3590	5%	315	330	5%	9%
France*	18207	17205	-6%	8108	7662	-6%	2913	2752	-6%	36%
Germany*	28000	28500	2%	35500	37000	4%	8700	9185	6%	25%
Greece	3600	4,500	25%	2600	3180	22%	1850	2200	19%	69%
Honduras*	85701	90400	5%	86678	91600	6%	72460	74500	3%	81%
Hong Kong*	2500	2625	5%	36538	31979	-12%	2009	1800	-10%	6%
India	6400	7399	16%	1480	1769	20%	900	972	8%	55%
Italy	6,565	8,290	26%	4,729	6,050	28%	2317	2965	28%	49%
Lithuania	2094	2247	7%	1226	1662	36%	80	80	0%	5%
Montenegro	200	278	39%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nepal*	4	4	0%	N/A	N/A	N/A	0.56	0.72	29%	N/A
Nicaragua	N/A	N/A	N/A	28	31	11%	10	10	0%	32%
Niger	N/A	N/A	N/A	10	15	50%	3	N/A	N/A	N/A
Nigeria*	5806	7742	33%	5664	7582	34%	3702	5032	36%	66%
Norway**	6500	N/A	N/A	5505	7270	32%	1200	N/A	N/A	N/A
Paraguay**	N/A	N/A	N/A	N/A	800	N/A	507	547	8%	68%
Peru	237	269	14%	241	272	13%	160	184	15%	68%
Poland	2217	2702	22%	1775	2297	29%	64	64	0%	3%
Russia	5106	11590	127%	1352	3020	123%	75	170	127%	6%
Singapore*	3700	3770	2%	7200	7060	-2%	512	590	15%	8%
Turkey*	4500	5200	16%	3200	3600	13%	1000	1250	25%	35%
Uruguay	N/A	N/A	N/A	71	78	10%	43	31	-28%	40%
Venezuela	1200	1717	43%	1176	1679	43%	590	905	53%	54%
Vietnam*	730	902	24%	N/A	N/A	N/A	31	40	29%	N/A

* 2003-2005; ** 2001-2003

Source: U.S. Commercial Staff in each country.

IV. Best-Prospect Market Assessments

Following are overviews of "best prospect" markets for Computers and Peripherals, based on observations of U.S. Commercial Service (USCS) posts in each country. The countries appear in alphabetical order. For more detailed market research on Computers and Peripherals in these and other specific markets, see relevant Market Research Reports listed in Chapter VI. For general commercial and economic information on individual countries, see the relevant Country Commercial Guides (CCGs).

ARGENTINA

Overview

Argentina has the third largest population of Internet users in Latin America, with over 17 million users, and Internet use is growing at a 40% annual rate. Broadband access doubled in 2006, and grew 87% in 2007 in terms of subscribers. Since 2004, investment in technology has been soaring after years of low investment. Trends Consulting estimated an average increase of 21% for 2007 for the IT market. In 2007, China led the imports of IT products (35%), followed by the U.S. (14%) and Brazil (12%). Imports from Mexico, Manaus (Brazil Free trade zone) and Japan each account for 5% of the import market.

Argentina's IT market – including hardware, software and services - reached $ 3.2 billion in revenues, a 25% increase from 2006. In 2008, the market is expected to increase 21%. The software and services sectors accounted for the majority of the growth with a 49.3% increase. Hardware sales increased 34% in 2006 and 42.5% in 2007. Prince & Cooke projects that hardware will grow around 40% in 2008, led by PCs and Notebooks. The sale of desktop computers increased 28% in 2007, bringing the market to 8.5 million units installed. The number of PC units sold in 2007 reached 1.6 million and is expected to increase by 30% in 2008. Printer sales also increased 20% in 2007 while other peripherals increased 35% and consumables 8.3%. Likewise, the sale of notebooks grew 50% in 2007 and is expected to increase 50% in 2008, outdoing sales of desktop PCs.

State-of-the-art small computers and communication devices, such as smart phones and PDAs, followed the same two-digit growth trend. Moreover, a direct relationship exists between the purchases of such items and the exponential increases in demand for broadband/Internet access. In 2007, the total revenue for the software market increased by 20%, reaching approximately $480 million. Prince & Cooke projects an increase of 21% in 2008.

Best Products/Services

Branded PCs, notebooks, super-notebooks (with 20 hour batteries, folding mice, etc), wireless PCs (with 26" monitors), printers, servers and multi-user systems are the major source of foreign hardware imports, and are consequently best prospects. In addition, consumer electronics, such as digital cameras, MP3, MP4, PDAs, CD/CD W, DVD players/creators, digital storage devices and Pen Drives are expected to see increased demand for the next two years.

Opportunities
Five main factors will keep demand for IT hardware, software and services high in 2008/2009:
- new investments in the country in a number of industries (e.g. tourism)
- the majority of the systems installed need upgrading
- the growth of Internet access
- the increasing complexity and convergence of technologies
- highly educated and tech-savvy population

In hardware, servers and multi-systems present good opportunities. The Compaq-HP merger opened some additional market share, which was partly taken over by Intel servers. The sale of servers grew 60% in 2006 and in 2007 and the trend is expected to continue throughout 2008. In 2007, the United States was the major exporter of servers with 40% of total imports, followed by Brazil (25%) and Mexico (12%). PC components will also be in high demand since locally assembled PCs (clones) account for over 60% of the PC market. Local assembly targets the residential/SOHO clone PC segment, where the cost of lower cost labor (resulting from devaluation) has a major impact on the final price.

In the corporate segment, the cost benefit from local assembly does not outweigh the guarantee offered from an original vendor. The increased demand for broadband access has also driven the demand for notebooks and mobile devices. According to IDC Argentina, the sale of notebooks for homes in the first semester of 2005 was the highest number registered in the history of Argentina. Other market conditions will foster growth in IT services throughout 2007/2008, including the constant price reduction of IT hardware, local salary increases, and the availability of financing options from retail chains. The increased use of e-banking, electronic commerce and E-Government has increased awareness of Information Technology security needs. Recent investments in software development centers by companies such as Motorola, Intel, EDS and IBM will continue to create good opportunities for U.S. companies. The best clients for U.S. companies will be medium-to-large corporations, manufacturing/industrial companies, as well as exporters.

Resources
For additional information on this industry, visit www.comerciousa.org/argentina_Editable/-SYaber/Computers/Computers_main.asp

AUSTRIA
Overview
The Austrian computer hardware market in 2006 totaled $2.9 billion, an increase of 8.9% over 2005. Hardware accounted for 35.1%of total IT spending in 2006. Industry experts project that the IT market will expand 7.8% annually to reach $8.84 billion in 2007 with the strongest growth to be seen in the hardware segment. Leading drivers will include spending on security solutions, streaming media, digital identity services, server blades, and the wireless rollout. Sales for the entire computer hardware sector are expected to increase by 9.5% in 2007.

Office PC users use network and communications applications including e-mail, fax capabilities, the Internet and Intranets. Notebook computers have

become more important, enabling traveling employees to maintain communications with the home office. Users of office PCs tend to buy from a value-added reseller who offers a tailored "solution" to a particular data processing need, or they purchase their PC desktop or notebook computer online.

Server sales reached $300.1 million in 2006, PC sales including notebooks reached $1.16 billion, and desktops sales amounted to $0.9 billion and storage system sales were $224.6 million. Peripheral sales totaled $807.4 million, and networking equipment sales reached $381.6 million. Hardware accounted for 35.1% of the total IT market in 2006. For 2007 the highest growth rates are forecast for mid-sized systems (8.7%) and smart handheld devices (59.7%). Peripheral sales will increase by approximately 25.7% in 2007.

Driven by aggressive pricing strategies and product positioning, the mobile PC market, including smart handheld devices, remained very competitive, with all vendors aiming at gaining share in a market that still presents a potential for growth. The adjustment to 64-bit computing will slowly proceed. While companies like Hewlett Packard move forward with the application development for 64-bit, it is expected that users will move to 32-bit alternatives with 64-bit expansion possibilities if these options will be available. Full 64-bit use for commercial applications is expected for the second half of this decade.

The Austrian disk storage systems market is highly competitive with a relatively low volume of annual array sales. At $212.0 million in end-user spending, Austria accounted for just 2.9% of 2006 disk storage systems spending in Western Europe. The $212.0 million in disk systems revenue represented a 2.6% growth over the previous year. New shipments of disk storage systems grew at a healthy pace of 47.3% in 2006. Austria's growth in this sub-sector contributed roughly 2.6% of total incremental shipments of storage systems throughout Western Europe. Storage spending was also driven by projects intended to increase data resiliency and to reduce data recovery and restore times. Such trends would certainly support the shift towards networked storage, which when appropriately designed and implemented, provides end users with a much more resilient and efficient storage ecosystem. A large portion of recent storage spending was in the financial services, telecom services, government, and healthcare industries.

HP was the largest supplier of disk systems and accounted for 41.5% of total 2006 sales. IBM ranked second with a share of 22.5%. EMC ranked third with 11.5% of supplier revenue, while HDS ranked fourth with a share of 7.5%, and Fujitsu-Siemens dropped to a 5.1% share of the Austrian disk storage systems market. The top three suppliers accounted for 57.5% of total 2006 array sales, and the top ten suppliers exceed 80% of total market value. The United States is the main source of imports, followed by Germany. Overall, sales for the entire computer hardware sector are expected to increase by 9.5% in 2007.

Best Products/Services

The best opportunities of sales for U.S. manufactured IT hardware products are

disk storage systems, midrange systems, servers (32 and 64 bit), peripherals, networking equipment, smart handheld devices and notebooks with special features.

Resources

- http://www.adv.at ADV – EDP Association
- http://www.ocg.at Austrian Computer Society
- http://www.computer-buerosysteme.at Vienna Chamber of Commerce – Dept. ICT
- http://www.arcs.ac.at Austrian Research Center Seibersdorf
- http://www.viw.at Information Industry Association

Contact:
Ingeborg Doblinger, Commercial Specialist, Commercial Service, Vienna, Austria
Email:
ingeborg.doblinger@mail.doc.gov

CANADA

Overview

The total Canadian IT market was valued at $40 billion in 2007. The computer hardware sector accounts for about 38% of the IT market, with a total market size of $15.5 billion in 2007. According to the Information and Communications Technology Council, growth in the computer hardware sector slowed to 2.6% during 2007, from a growth rate of 6.4% in 2006, due to intense pricing pressure. Growth in this sector is expected to rebound and continue at a compound annual growth rate of 3.5% throughout the next three years and to reach a spending of over $16.9 billion by 2010. The primary market drivers of growth in this sector will be new software applications and hardware replacement cycles.

The personal computer (PC) market is the largest sub-sector in the Canadian computer hardware sector and represents 43% of hardware spending. This sub-sector was valued at $6.6 billion in 2006 and is expected to post an annual growth rate of 2.5% over the next three years to reach a total spending of $7.1 billion by 2010.

The second largest sub-sector in the hardware market is 'other hardware' category that includes printers, handhelds, and other hardware-related items. This sector accounts for 35% of the hardware market. The spending in this sector was $5.2 billion in 2006 and is expected to have an annual growth rate of 4.9% over the next three years. By 2010, estimated spending to be reached is $6 billion.

Canadian companies have a strong preference for vendors with a local presence either directly or through a partner. Selling through value added resellers, systems integrators or partnering with a Canadian-based IT company is a quick and cost-effective way to reach a large customer base. Alternatively, U.S. vendors may choose to have a direct presence in the Canadian market. Recently the Federal Government of Canada updated the procurement process for IT infrastructure.

The multi-user hardware (server) market captures 13% of the total hardware spending with expenditures of $1.9 billion in 2006. This sector is projected to grow at an annual rate of 3.6% with an estimated $2.2 billion of spending by 2010. Spending in the volume server category (multiple units) will be the

main driver for the growth of this sector, whereas growth in the sales of the mid-range servers will remain flat.

Finally, the smallest sub-sector in the hardware segment is storage hardware, accounting for only 8.9% of total hardware spending. This sector was valued at $1.35 billion during 2006. It is estimated this sector will post an annual growth rate of 2.1% for the next three years with spending of $1.4 billion by 2010. The main reason for the slowdown in this sector is the decline in the demand for direct attached storage and tape storage. However, the market for network attached storage and storage area networks is growing at a greater pace under this category.

Best Products/Services
The PC market is the largest sub-sector for the hardware sector and it will maintain its position in the overall hardware market. Of this segment, notebooks will have the largest share in the total spending while the sales of desktops will decline. Concerning the multi-user hardware or server market, the volume server spending will be the key growth under this category. In the storage area, the network attached storage and storage area networks will be the main growth areas.

Opportunities
Overall, the hardware sector has many opportunities in the "Green IT" boom, especially in power conserving technologies such as heat and lighting sensors, video conferencing devices and global positioning systems.

The federal government is particularly interested in "Green IT" such as recycling initiatives, power-management strategies and virtualized work environments.

Resources
More details on this sector can be found at:

- Canadian Advance Technology Alliance
- Greater Toronto Marketing Alliance (GTMA)
- IDC Canada
- Information and Communications Technology Council (ICTC) www.ictc-ctic.ca
- Canadian Information Technology Spending Forecast
- Industry Canada
- Information Technology Association of Canada

If you would like further information, please contact Viktoria.Palfi@mail.doc.gov the CS Canada National Information and Communication Technology Specialist.

COLOMBIA

Overview
Colombia offers significant opportunities for U.S. suppliers of computers and components, and of related services. Since 2004, imports of computers and components from the U.S. have grown dramatically. In 2005, imports increased by 30.29% ($246 million), in 2006 by 16.23% ($286 million), and the projection for 2007 is expected to reach 37% (approximately $350 million), making this the highest year of growth during the past ten years.

Best Products/Services
Colombian industry is seeking to improve its efficiency and competitiveness to survive in the global marketplace. The IDB recently approved

a $300 million US loan to help Colombia achieve these types of improvements. Innovative software developments have been identified as one of the key drivers for the improvement of Colombian industries. Furthermore, local and foreign software companies are focused mainly on financial, billing, business resource planning, inventory, and human resources applications. Colombia has a well-developed communications and banking system in urban areas but there is still plenty of room to implement new software development in most rural areas.

The computer and components industry in Colombia is extremely competitive. However, good opportunities may exist by targeting key accounts with government bids and the big local companies. American companies hold the lead in the provision of software products, especially Microsoft, which enjoys an excellent reputation in Colombia.

Opportunities

The Colombian computer market offers a diverse range of opportunities for U.S. exporters. Computing devices and applications are used in a great number of industries as well as households. Also there is continual interest in keeping up-to-date with technical developments. CS Bogotá actively encourages American companies to participate in government procurement programs, which are announced on the website: www.contratos.gov.co/puc/

For the Colombian business community, CS Bogotá recommends to local company representatives that they attend the various trade shows staged in the U.S., in order to learn more about U.S. computer products and services in this sector. A list of these and other trade shows are available at www.buyusa.gov/colombia/en

The most dynamic sectors for U.S. exports in recent years have been:

- Computers (desk tops, laptops, and hand-held computers)
- Data processing machines
- Components and accessories for the above

Information technology products, which include computers and components, account for over 15% of total U.S. industrial exports to Colombia. Virtually all products within this grouping would become duty free under the proposed U.S.-Colombia Free Trade Agreement, thus stimulating U.S. exports to Colombia. Currently tariffs average over 8% and range up to 15%. Colombia would also be obliged to eliminate its prohibition on the importation of remanufactured Information Technology (IT) goods, on entry into force of the Agreement. Colombia would be committed to eliminating tariffs on most remanufactured IT goods immediately and would have to phase out tariffs on a small number of remanufactured goods over ten years.

The U.S. - CTPA would also favor U.S. products over Chinese exports to Colombia, as import duties for Chinese products would remain in force, while those for U.S. products would be eliminated. Colombia has also agreed to join the multilateral Information Technology Agreement (ITA) by December 31, 2007. U.S. exporters of information technology products will all benefit from this provision.

Resources

- CS Bogotá contact: Gabriel Ramjas, Commercial Specialist (gabriel.ramjas@mail.doc.gov)
- Colombian Software Federation (FEDESOFT): www.fedesoft.org
- Colombian Engineers Association (ACIEM): www.aciem.org

DOMINICAN REPUBLIC

Overview

The Dominican market for computers and peripherals increased from $75.9 million in 2005 to $83.3 million in 2006 and is expected to reach $90.5 million in 2007. The Fernandez government considers it very important for the Dominican Republic to try to close the technology gap and is taking steps to increase the use of computers in the country. The government has also reactivated the Instituto Tecnologico de las Americas, or ITLA (Technological Institute of The Americas), which is a government-sponsored technological school specializing in information technologies. The Presidential Office for the Information and Communication Technologies (Oficina Presidencial de Tecnologias de la Informacion y Comunicacion), also plays an active role in the promotion of these technologies in the country.

The Dominican Republic market for computers and peripherals is heavily dependent on imports. There are no duties on the importation of computer and peripherals products into the country, and the market is very receptive to U.S. products. The Dominican Republic imports computers and peripherals mainly from the United States.

Best Products/Services

The most promising hardware subsectors for U.S. exporters are PCs, notebooks, PDAs, and peripherals such as printers, scanners and data-show projectors.

Opportunities

The Dominican government has decided to organize annually two trade fairs to promote the use of PC's in the country. One of the trade fairs is oriented to Dominican teachers and the other is oriented to government employees. The trade fairs provide to their target clients a RD$5,000.00 subsidy (approximately $150) to be used towards the purchase of a complete set of equipment that includes a PC and a printer, as well as a free one-year subscription to the Internet. The offer also includes a five-year financial package in which the clients do not have to provide any down payment.

Resources

- Trade Specialist who handles Computers and Peripherals: Isolda Frias de Gottschalk: isolda.frias@mail.doc.gov
- Oficina Presidencial de Tecnologias de la Informacion y Comunicacion: www.optic.gov.do
- Instituto Tecnologico de las Americas: www.itla.edu.do
- Secretaria de Estado de Educacion, Ciencia y Tecnologia: www.seescyt.gov.do

ECUADOR

Overview

The computer market in Ecuador has experienced continued growth over the last few years. Total market for computers, peripherals and computer parts in 2007 is estimated at $280 million. The industry has experienced

54% growth overall since 2004. The U.S. dominates the import market with estimated sales of $210 million.

Industry sources estimate that around 25% of the computers in Ecuador are assembled locally with parts imported from the U.S. and Asia. These computer clones are mainly used in the home and by smaller companies. Medium-sized and large companies usually purchase brand name computers. Leading U.S. brands include Hewlett-Packard, Dell, and Apple.

Best Products/Services - Opportunities
Best prospects include laptops, hard drives, computer memory, and flat panel monitors (LCDs).

Resources
- **Ecuadorian Software Association** www.aesoft.com.ec
- **Central Bank of Ecuador (Statistics)** www.bce.fin.ec

FINLAND
Overview
Finland's 5.3 million population comprises a highly sophisticated market for computer hardware and software. This is illustrated by the fact that Finland has one of the highest numbers of computers per capita connected to the Internet. Presently, a majority of Finnish homes have computers as well as access to the Internet either at home, at work, or through a local institution, such as a library.
The United States is Finland's leading external source of computers and peripherals. There are about 4,200 local computer-related companies in Finland. About 3,700 companies have less than five employees, and the five largest companies cover about 60% of the industry sector's sales volume.

The computer market in Finland has continued its growth. For the third quarter of 2007, IDC estimates the growth of the Finnish PC-market at 8.2%. Global brands are gaining market share, at the expense of smaller local brands. From 2006, the share of local brands has declined from 15.5% to 9.7% of the market in 2007. Following the global growth trends, HP is the largest brand with a market share of 31.8%. Acer is ranked number two, increasing its market share from 16.3% to 21.5%. Fujitsu Siemens ranks third with an 11.9% share of the market.

Laptop sales are on the increase, with about 25% growth in the second quarter of 2007, with more than 77,000 laptops sold in the quarter to private consumers, while the sales of desktops for consumers was about 30,000 units. In the third quarter, about 70,000 laptops and 55,000 desktops were sold to companies.

Finland's import climate is very open and receptive to U.S. products. Because Finland is a member of the European Union (EU), products manufactured in the EU are not subject to import duty if manufactured within the common market. However, since the beginning of 1999, computer hardware imported to Finland from third countries, such as the United States, has also entered Finland duty-free. Regardless of the origin of production, Finland applies a value-added tax of 22% to all imported goods.

Best Products/Services
Products on the cutting edge of technology dominate the Finnish

hardware market. Currently, the highest demand products include portable computers, digital television sets and receivers, digital cameras, and LCD and plasma television sets. Future prospects are likely to come from new innovation and advances in existing technology.

Resources

- Helsinki Fair Center www.finnexpo.fi
- Ministry of Transport and Communications www.mintc.fi
- Finnish Federation for Communications and Teleinformatics www.ficom.fi
- tarja.kunnas@mail.doc.gov (local contact)

FRANCE

Overview

Estimated at $139 billion in 2007, the French market for information and communication technologies - which includes computer hardware/software, telecommunications and electronic components – is growing at a rate of 5% per year. One third of this market is related to telecommunication services, and two thirds from computer hardware as well as software and related services.

The computer & peripherals market has grown by 8% in 2007. The market is driven by the sale of consumer electronics, including smart phones, I-mode, 3G and PDAs. The level of penetration in individual homes exceeds 50%.

The French public sector has greatly contributed to the boost in IT sales, as it currently represents 6% of total IT investments. The French government continues increasing its use of the Internet as a medium of communication with the public; this continues its effort in maximizing use of the Internet in order to improve the quality of public services while generating savings. Launched in January 1998, the Government Action Program for an Information Society (PAGSI) is investing billions of dollars in the automation of VAT declaration, customs declaration, and the filing of social contributions by employees. As a result, over 2.3 million French taxpayers – or 4% of the overall population - filled out their income tax return on the Internet.

Internet Connections and High-Speed Connections

According to market consulting firm Mediametrie, over 30 million French people or 57% of the French population are connected to the Internet, including 23 million or 44% of the population through a high-speed connection.

On the business level, 98% of French SMEs use a PC; 80% are connected to the Internet, and over 50% have websites. SMEs (49%) have websites to provide services to their clients and suppliers, while French corporations (79%) use their website in order to promote their image. Seventeen% of these organizations engage in E-commerce.

Servers

The five top server manufacturers are IBM (29.8%); hp (28.2%); Dell (11.2%); and Sun (10.3%) and Fujitsu Siemens (5.4%). Estimated at $687 million, the server market has grown by 4% in 2006. French corporations continue decreasing expenditures related to maintenance and platform administration and supervision while increasing expenditures related to

information system's availability, security and quality of service.

Personal Computers
According to estimates from market research firm IDC, the French PC market has grown by 13.8% in volume and by 4% in value. It is primarily pulled upwards by the sale of notebooks to consumers, which grew 35%, including 16% for professional applications and 51% for consumers. About 53% of the PCs being sold are now notebooks rather than desktops. The PC market is dominated by HP (18%); Dell (14.8%); Acer + Gateway + Packard Bell (9.4%); Lenovo (7.9%); Acer (7.1%); and Toshiba (3.9%).

Printers
The French printer market is dominated by HP, with 42% of this market, followed by Canon (16.2%), Epson (12.3%), Lexmark (9.9%) and Brother (5.7%). This market is estimated at $1.6 billion. The average price for a printer has reached $288. The market for Inkjet printers has dropped by a third since 2002. This market is estimated at $238 million. The sale of laser printers grew in volume by 10%. Multifunction printers represent a $686 million market.

Flat vs. CRT Monitors
While only 20% of panel displays – 576,000 out of total of 3.3 million - were LCDs four years ago, this rate has gone up to 90% now, with over 5 million units being sold. Meanwhile, average pricing for LCDs has decreased threefold to reach $287. This dramatic drop in pricing has affected manufacturers' revenue, which dropped in 2005 and 2006 while volumes kept rising. While market value for LCDs went from $748 million to $4.01 billion from 2002 to 2004, it dropped down to $1.4 million in 2006.

Consumer electronics
According to market research firm Gfk, the market for consumer electronics grew by 7% from 2006 with flat TV screens representing 75% of total TV sales. LCD screens represent 85% of these sales. 78% of the panels are HD-ready, 8% are full-HD, while the sale of hard disk recorders turned to be lower than expected. The market for digital Walkman increased in volume by less than 6% against 25% in 2006. On the other hand, the market for Walkman is significant enough to favor the sale of car radios and MP3 docking stations. Also, 2.3 million GPS units have been sold against 1.2 million in 2006.

Best Products/Services
- Portable devices (laptops, palmtops, smart phones, etc.)
- Wireless solutions
- I-mode related products
- Portable storage devices (USB keys, hard-drives, etc.)

Opportunities
The ATAWAD (i.e. "any time, anywhere, any device") era causes the French to increasingly seek portable solutions that provide them with permanent access to data across the Internet, whether personal or professional. The market for devices such as laptops, palmtops, and blackberries is therefore growing very rapidly. Great opportunities are also available for wireless solutions both for the home and the office, especially with the advent of 3G high-speed mobile Internet bandwidth.

Resources

- International Data Corporation (IDC) [http://www.idc.fr/]
- Pierre Audoin Consultants (PAC) [http://www.pac-online.fr]
- BIPE (leading European provider of forward-looking economic analyses and consulting services) [http://www.bipe.fr]
- European Information technology observatory (EITO) [http://www.eito.com]
- Embassy U.S. Commercial Service Trade Specialist: [Charles.Defranchi@mail.doc.gov] Phone: 33-1 43 12 71 63 - Website: [http://www.buyusa.gov/france/en]

GERMANY

Overview

U.S. computer products are generally viewed as innovative, with superior quality and leading edge technology. Germany accounts for approximately one quarter of the EU's total IT market. Assisted by the very weak dollar, the United States is expected to retain its 2007 import share of approximately 25% at least until the end of 2008. Exports exceed production due to considerable amounts of imported equipment being directly resold abroad or included as value-added equipment in locally manufactured products that are exported.

Best Products/Services

Leading edge ICT products, servers, laptops, printers, W-LAN equipment, memory and networking products.

Resources

Government: Federal Statistical Office: http://www.destatis.de/

Associations:

- Association of German Electro-technical Manufacturers: www.zvei.de
- Association of German Information Technology Manufacturers: www.bitkom.de

Major trade journals:

- www.computerwoche.de
- www.informationweek.de
- www.computerpartner.de
- www.crn.de

Commercial Service Contact:

john.lumborg@mail.doc.gov

GREECE

Overview

Greece's Information Technology (IT) market is growing at an annual rate of 8-12%, almost twice as much as the expected 6.7%. However, imports make up over 70% of the computer hardware and peripherals market and over 65% of that market is dominated by U.S. suppliers who ship directly from the United States or their European subsidiaries. The European company Bull and the Greek assembly companies Altec, Pouliades and Quest are U.S. companies' main competitors in the IT sector.

Hardware-wise a preference is exhibited towards laptops among professional technology users. The value of this particular market amounted to around $400 million in 2007, and an increase in sales is expected for 2008 and 2009, due to the spread of broadband services.

Best Products/Services

One of the most promising segments of the IT market is the public sector, which will begin large purchases of computer equipment and software. The GOG has begun a program to build large, national

IT network in sectors of crucial importance such as healthcare. 51% of pathologists use a personal computer in their private consulting room, out of which only 25% keep electronic format records of their patients. However, 83% of them quote that Information and Communications technologies are helpful at their work. The GoG program will be a valuable tool in promoting greater IT usage in a clinical setting.

During the period 2003-2008, it is estimated that over $2 billion will be spent in Greece on IT projects through the "Information Society" program included in the 3rd Community Support Framework. Further, it is estimated that imports from the U.S. will grow at an annual average rate of 5-6% between 2005 and 2010.

In November 2005, the project "Digital Self-Government" was launched with a budget of 60 million Euros (approx. $87,286,896) for the development of digital services throughout Greece. Additionally, the "Syzefxis" project, budgeted at approximately 90 million Euros, will interconnect almost 1,800 government points (offices/agencies) with an additional capacity for 700 more interconnection points.

As Greece is a services-oriented market, IT applications in the areas of tourism, transportation and telecommunications are in heavy demand. Greece was ranked 5th by Google & Search.travel among the Mediterranean countries that utilize Information Technologies to promote local tourism opportunities. Greek hotels and tourism-related businesses that use IT applications experience a profit margin of 8.7%, in comparison to the 5% of non-users and the former enjoy a 3.7% higher occupancy throughout the year with at least 50% less cost compared to alternatively promoted businesses.

Opportunities

Emphasis is primarily on PCs and peripherals, but also on services, software and the expansion of the Internet. This creates numerous business opportunities for U.S. firms. American businesspeople should know that Greece has well trained IT engineers and professionals with a high level of expertise, as well as EU funding for IT projects.

Resources

- http://www.ebusinessforum.gr
- http://www.ktpae.gr
- http://www.grnet.gr
- http://www.infosoc.gr
- http://www.gsrt.gr
- http://www.sepe.gr

HONDURAS

Overview

Although most Honduran imports of Computers and Peripherals are from the U.S., not all of this equipment is made in the United States. Many Asian countries have large distribution centers in Miami; therefore, trans-shipment data is not reflected in local import statistics.

The market for computers and peripherals in Honduras is still growing. Demand is intensifying with the growing use of computers in most sectors of the economy, especially personal computers and software/multimedia. Increased IT modernization needs, the introduction of new and faster products, E-Government initiatives, and the increasing interest in Internet access have all helped fuel demand for computer equipment in

Honduras. Government deregulation efforts are also contributing to the sector's continuous growth. Small businesses, medium-sized enterprises, and households are emerging as important customers for computer equipment suppliers as a result of Internet popularity and expansion. Although still low compared to other Latin American countries, with a penetration of 0.32% per 100 inhabitants, average annual growth rate for internet coverage is 41.3%. Among the leading computer brands are Dell, Compaq, Hewlett-Packard, and IBM. Honduras does not apply any import duties to computer equipment and most software. The estimated average growth rate is 12% for the period 2007-2009. Honduras is the fourth largest market for computer equipment in the CAFTA-DR region.

Best Products/Services

- Storage devices and digitizers
- Hard disks
- Keyboard units
- Computer monitors
- Server Systems
- Modems
- CD-Rom Drives
- Single and Multifunction Printer Units; Memory modules and parts for printers
- PCs Generic and brand names
- Digital Cameras/multimedia projectors/other LCD devices
- Computer Software/Multimedia:
- Specialized software applications (accounting, financial)
- General Business Application solutions for Windows
- Systems supporting software
- Software development/programming tools
- Entertainment; software games

Opportunities

One of the local government's IT priorities, announced for the period 2006-2010, is provision of computer equipment for the country's public educational network. Development of digital libraries and virtual laboratories are also important initiatives currently underway between the Honduras National University and private colleges, aimed at improving the country's educational and university research levels. At the regional level under the Plan Puebla Panama initiative, the Central American countries have agreed to develop a "Mesoamerican Information Society" and strengthen IT cooperation efforts for the establishment of Internet "telecenters" throughout rural areas. The clone equipment market assembled with Asian, U.S., European and Latin American parts is also well established locally due to competitive prices. Imported clone components include motherboards, keyboards, mouses and cases, among others. Asian parts and components used to build a clone generally comprise 60-75% of the finished product. Between 25 and 40% of U.S. parts are used in the process of computer clone manufacturing -- for example: hard drives (Seagate) and microprocessors (Intel and AMD). CAFTA-DR provides greater levels of intellectual property protection for the IT industry in general. Under CAFTA, U.S. exporters also benefit from total elimination of tariffs on software products.

Resources

- IT Governmental Committee http://www.it.gob.hn

- Government Procurement http://www.honducompras.gob.hn
- Honduran Science and Technology Council http://www.cohcit.gob.hn
- Ministry of Education http://www.se.gob.hn
- Honduras Trade Portal http://www.hondurastradeportal.com
- CAFTA-DR Website http://www.export.gov/cafta
- Regional Trade Statistics http://www.sieca.org.gt
- National Statistics Institute http://www.ine-hn.org
- International Data Corporation http://www.idc.com
- Honduran Customs Directorate http://www.dei.gob.hn

Hong Kong

Overview

Hong Kong's IT equipment (computer and parts) imports in 2007 reached $31.9 billion. The value of U.S. IT equipment exports to Hong Kong was $1.8 billion, representing 5.6% of Hong Kong's total IT imports. The U.S. is the 4th largest IT equipment supplier to Hong Kong.

Best Products/Services

Along with the importance of IT and sustained popularity of the Internet, the demand for IT products and solutions continues to grow in Hong Kong, particularly in the following areas: Wireless/Mobile Applications; Multi-Media Products; Digital Entertainment; Logistics/Supply Chain Management; Customer Relationship Management; Business Intelligent Application; E-Commerce, Data Storage, and IT Security.

Opportunities

The Digital 21 Strategy was first published in 1998 by the Government of the Hong Kong Special Administrative Region to set out the Government's vision of developing Hong Kong into a leading digital city. The strategy was revised in 2001 and 2004 to take into account the evolving needs of the community and technological advancements. Moving ahead, the Government announced on 21 December 2007 the fourth edition of the Digital 21 Strategy. The vision of the 2008 Digital 21 Strategy is "Advancing Hong Kong's achievements and seizing new opportunities: building on Hong Kong's position as a world digital city."

Five key action areas are identified for implementation between 2008 and 2010. These key action areas include:
1. Facilitating a digital economy - Government continues to play a significant role as a user, supporter and facilitator of ICT and its applications.
2. Promoting advanced technology and innovation - Maintain Hong Kong's edge as a world digital city for technology adoption and innovation.
3. Developing Hong Kong as a hub for technological cooperation and trade harnesses Hong Kong's role as the two-way platform for Mainland enterprises to bring in foreign investment and participate in the global economy; foster a vibrant ICT industry with a knowledgeable and versatile workforce; and ensure the continued presence of an environment that is conducive to technological business.
4. Enabling the next generation of public services - Use ICT to re-engineer process to improve public service delivery.
5. Building an inclusive, knowledge-based society - Ensure that the benefits of ICT adoption are widely available to

different segments of the community, including disadvantaged groups.
The Government is one of the major driving forces behind IT development and usage in Hong Kong. Estimated Government IT spending for fiscal year 2007/2008 is $690 million. Although Hong Kong is a relatively small market for U.S. IT exports, U.S. companies should consider Hong Kong as a gateway into the Mainland China market. A substantial amount of IT products imported to Hong Kong is re-exported to China. In 2007, about 60% of Hong Kong's total exports of IT equipment went to China, totaling approximately $20 billion.

Resources
Associations:

- Information and Software Industry Association
  Ms. Satti Wong
  Tel: (852) 2622-2867
  Fax: (852) 2622-2731
  Email: info@isia.org.hk
  Website: www.isia.org.hk
- Hong Kong Information Technology Federation Ltd.
  Daniel Ng, President
  Tel: (852) 2287-8001
  Fax: (852) 2287-8038
  Email: daniel.ng@hkitf.org.hk
  Website: www.hkitf.org
- Hong Kong Wireless Technology Industry Association Ltd.
  John Chiu, Chairman
  Michael Kan, Executive Director
  Phone: (852) 2370-3130
  2/15/2008
  Fax: (852) 8208-8782
  Email: contact@hkwtia.org
  Website: http://www.hkwtia.org
- Hong Kong Internet Service Providers Association
  York Mok, Chairman
  Phone: (852) 2803-2669
  Fax: (852) 2803-2671
  Email: york@hkispa.org.hk
  Website: www.hkispa.org.hk

For more information about this industry sector, please contact U.S. Commercial Service:
Fanny Chau, Commercial Service
Email: fanny.chau@mail.doc.gov
Tel: (852) 2521-3721; Fax: (852) 2845-9800

ICELAND
Overview
Iceland is probably one of the most computer-savvy countries in the world, and demand for the latest computer hardware and off-the-shelf software reflects this. According to the Global Information Technology Report for 2006-2007 Iceland ranked number 8 of 122 economies in terms of network readiness. In addition to a strong consumer demand and the growing number of biomedical research and IT companies in the country, Iceland has abundant energy and a cool climate that make it attractive for high-capacity, high-speed data storage and processing equipment.

Resources

- Invest in Iceland Agency: www.invest.is
- Apple: www.apple.is Nyherji/
- IBM: www.nyherji.is Opin Kerfi ehf./
- HP: www.opinkerfi.is
- Microsoft Iceland: www.microsoft.com/iceland/msdk/ EJS/
- Dell: www.ejs.is
- Skyrr/Oracle: www.skyrr.is
- World Economic Forum;

- The Global Information Technology Report http://www.weforum.org/en/initiatives/gcp/Global%20Information%20Technology%20Report/index.htm

INDIA

Overview

The Indian computer and peripherals market is expected to continue to expand to meet local demands. High growth areas like telecommunication, banking and financial services, manufacturing, retail, and Business Process Outsourcing (BPO)/IT-enabled services are the major consumers of computers and peripherals. The price-sensitive computer hardware market has responded positively to a drop in prices, especially at the entry-level. Private sector firms, government offices, small and medium-sized enterprises (SMEs), and small office home office (SOHO) users also continued to computerize their operations, contributing to the growth of the computer hardware market. With a rapidly expanding usage of internet, the Indian Information Technology industry is expected to continue its high growth rates in the coming five years catering to both domestic and export markets.

Domestic Market

There are about 150 small, medium and large firms manufacturing computers in India. Many multi-national companies (MNCs) such as HP, IBM, Siemens, Dell, and ACER already have a strong manufacturing presence in India. Lesser-known companies also locally assemble PCs which compete domestically with MNC products. PCs, desktops, notebooks, and servers continued to lead Indian computer hardware spending across vertical markets. Networking equipment, peripherals and storage also witnessed a strong demand.

The server market in India recorded an average growth of 30%. The overall PC market witnessed an average growth of about 22%. Notebook sales registered a record growth of over 75% over the previous year. The high growth is attributed to the steep drop in the notebook prices, as the prices are now even comparable to many desktops in certain cases. The laser printer market also grew 128% (320,000) and dot matrix printers by 18%.

The gray market, an unofficial market in which new hardware is bought and sold before it becomes legally available, is a significant threat to the legitimate Indian computer hardware industry. The gray market in India has seen significant expansion in recent years. According to the Manufacturers Association of Information Technology (MAIT), gray market operations as a proportion of the total PC market in India are likely to be the highest in the world. Though statistics on this issue are currently not scientific, the immense size of the gray market the PC market is likely mirrored in most tech industries in the country.

India has recently seen the emergence of mature channels of distribution and support for products such as computer hardware, software, and peripherals, ranging from commodity products to high-end IT equipment. The typical distribution structure has been two-tiered with a distributor (for the entire country) servicing dealers and retailers.

Best Products/Services

The promising sub-sectors with the estimated market size for the year 2007

are: Source: estimates based on discussions with industry and published data. Significant opportunities exist for U.S. companies to supply high-end computers, servers, and peripherals to India. U.S. companies such as HP, Dell, Cisco, GE, Lucent Technologies, Hughes, and Motorola are already in India selling computers and peripherals. Major Indian and U.S. software and services companies such as Microsoft, Cisco, Cognizant Technologies, IBM, GE, Oracle, Infosys, Wipro, and Texas Instruments import and use high performance computer systems for their development projects. In addition, opportunities exist in major Indian and international banks, insurance companies, the Indian stock markets, railways, and airlines where high performance computers, including mainframes and mid-sized computers are used.

Resources

For more information about export opportunities in this sector contact

- US Commercial Service Industry Specialist Leonard Roberts at: Leonard.Roberts@mail.doc.gov

Useful Links Include:

- Manufacturers Association of Information Technology (MAIT), http://www.mait.com
- National Association of Software and Service Companies (NASSCOM), http://www.nasscom.org
- India Infoline, http://www.indiainfoline.com
- India Brand equity Foundation, http://www.ibef.org

ITALY

Overview

The positive trends observed in Italy's market for computers and peripherals in 2006 continued in 2007. Preliminary figures show the market reached $8.29 billion in 2007, a 4.5% increase over 2006 in euro currency, especially thanks to the excellent performances of personal computer sales. However, price pressure continued to be strong in 2007 and often created a considerable divergence between the impressive increase in shipments and the more modest rise in market value.

The Italian market is far from being mature and the potential is high. The sector is forecast to remain one of the best prospects for U.S. imports in the next three years, especially in certain market segments.

In 2007, larger companies kept consolidating and rationalizing their existing infrastructure, paying more attention to Return on Investment (ROI) and Total Cost of Ownership (TCO), while medium and small-sized companies took advantage of decreasing prices to replace their computer hardware. Families played a key role in the purchase of sophisticated PCs, supplied with multimedia, entertainment and communication devices. Consumers are increasingly becoming tech-savvy and are expanding their technology purchases, often replacing their PCs even more frequently than businesses do.

According to ASSINFORM, the major Italian Association of Information and Communications Technology companies, in the first semester of 2007 sales in units grew 19.4% for Personal Computers and PC servers. 2,528,000

units were sold, with enterprises purchasing 1,977,000 units (+ 17.7%) while families purchased 438,000 units (+25.8%, representing 22% of the total PC market).

Over the past few years, portable notebook PCs have been gaining increasing market share over desktops and servers. In the first semester of 2007, with 1,458,000 units sold, portables registered an exceptional growth of 38.2%, accounting for 60.3% of the total PC market. PC servers also performed well, with sales of 109,000 units and a growth rate of 11.2%, especially in the high-end sector. Business clients favor them over Unix-based or proprietary systems, thanks to greater virtualization potential and ease of use. On the other hand, the number of desktops sold decreased 0.4%, registering sales of 961,000 units.

The mainframe segment continued to record growth, especially in the banking sector, confirming the trend of larger enterprises choosing to invest in the rationalization and better management of their information systems. The storage segment and the printer segment are performing well and are expected to continue growing.

Best Products/Services
As Italian economic conditions improve, demand is expected to rise further. In particular, sales of notebooks, mainframes, PC servers, and higher performance midrange servers are projected to perform well. Demand from families is forecast to continue growing for the next several years, thanks to a new generation of consumers raised with the Internet.

Prospects for innovative storage solutions and computer security solutions are excellent in view of the implementation of Italian legislation calling for more stringent data protection, data archiving, business continuity and disaster recovery procedures.

Opportunities
The Italian Government is committed to modernizing the country through the development of policies for accelerating widespread acceptance and use of new information and communication technologies, both in the public and private sectors. A deep reform of the Italian public administration, based on cost-effectiveness, decentralization, transparency and simplification, is taking place, and large investments are being made at the local government level. At the same time, at the central government level, the public administration is cutting IT expenditures in order to contain general budget costs. These measures may be withdrawn if and when the economy grows and the fiscal accounts situation improves.

Most purchases by the Italian Public Administration are made by public tenders open to both domestic and foreign companies. Announcements of tenders on public procurements are monitored by the U.S. Mission to the European Union and can be accessed through the web page: http://www.buyusa.gov/europeanunion

U.S. technology and standards are highly regarded and the best opportunities for success will be for those American companies offering innovative and sophisticated products. However, it is important that U.S. companies team up

with well-established Italian firms for distribution or joint venture agreements in order to handle the burdensome bureaucratic procedure of public procurement.

Resources

- Nicoletta Postiglione, Commercial Specialist, ICT Sector
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  Via Principe Amedeo 2
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  Tel. +39/02/62688-522 (direct phone number)
  Fax +39/02/6596561
  Nicoletta.Postiglione@mail.doc.gov
  http://www.buyusa.gov/italy/en/
- Ministry for Reforms and Innovation in Public Administration - Department of Innovation and Technologies
  http://www.innovazione.gov.it/dit/
  (in Italian only)
- CNIPA – National Center for ICT in Public Administration
  http://www.cnipa.gov.it/site/it-IT/Il_Centro_Nazionale/Chi_siamo/
  (in Italian only)
- CONSIP – Company for the development and management of public e-procurement
  http://www.consip.it/on-line/Home/Englishversion.html
- Summary of Italy's Data Protection Code
  http://www.garanteprivacy.it/garante/doc.jsp?ID=1030925
- Confindustria Servizi Innovativi - Italian Federation of companies and associations in thetelecommunication, broadcasting and information technology industries
  http://www.confindustriasi.it/_nuovositov1.0/index_.php
- Assinform - Italian ICT companies Association (part of the Italian Industrialists Association)
  http://www.assinform.it/english_version/_profilo_eng.htm
- Assintel - Italian Software and Services companies Association
  http://www.assintel.it/

LATVIA

Overview

Information technology is one of the most dynamic and most rapidly developing industries in Latvia. Developing a Western-style information society was a vital part of Latvia's strategy prior to joining the EU. The computer hardware sector covers approximately 50% of the Latvian IT market.

Sales were accelerated by implementation of the Latvian Education Information System (LIIS). This program ensured that every school had specialized computer classes with access to the Internet, and provided one computer per 10 students in grades 10-12, one computer per 25 students in grades 5-9, and one computer per 10 teachers (for all grades). Now this program has been closed and a new one is being currently implemented: Education System Informatization Program "Information and Communication Technologies for Education Quality" Program for the years 2007-2013.

Best Products/Services

The best prospects for U.S. computer hardware exports to Latvia are for new personal computers with the latest versions of processors, small and medium multi-processor servers, multimedia equipment, LAN accessories

and relevant computer parts, and internet protocol related equipment. Second-hand and overstock personal computers represent a new and growing market niche. The principal consumers of these products in Latvia are private individuals who obtain computers for home use.

Opportunities

Principal opportunities are for retail home use. There are also good opportunities for companies that want to use Latvia as a logistical center for distribution in Northern Europe and nearby Russia. Considering the relatively low cost of production and well educated workforce, computer companies could also consider placing production lines in Latvia. Success of such enterprises as ELKO grupa (the largest IT wholesale company), Hanza Elektronika, and Mikrotik show the benefits of such schemes.

Resources

- Latvian Electrical Engineering and Electronics Association: http://www.letera.lv/index.html?l=3
- Latvian Information Technology Telecommunication Association: http://www.litta.lv/en/

LITHUANIA

Overview

The Lithuanian IT market is small but developing rapidly. Both public and private sectors cite IT infrastructure development as strategic priorities. The public sector has an IT infrastructure development plan. Businesses increasingly install corporate LANs. A growing number of private consumers are purchasing computers and peripherals. The computer and peripherals market in Lithuania is well developed and all major hardware and software suppliers, including Microsoft, IBM, HP, and Compaq, have a market presence. There are about 500 computer companies in Lithuania, of which approximately 20 dominate the market. American-branded equipment and accessories account for 80% of the total annual imports in this sector. The sale of personal computers started to grow rapidly from 2005, primarily because of new tax incentives that provide personal income tax deductions for PC purchases. The Communications Regulatory Authority forecasts rapid expansion of internet penetration.

In the last few years, the internet penetration rate in Lithuania has grown to 35.9% (EU-25 average is 51.3%). The number of internet users has risen 11-fold in the past three years, to 1.3 million subscribers. One in five internet subscribers enjoys broadband internet access. Lithuanians have access to the cheapest broadband internet in the EU, with prices for the most popular fast (1Mb/s) internet connection averaging 14 Euros per month, half of what users pay in most other EU member states. The focus of the Lithuanian IT sector in recent years has been on creating the necessary infrastructure to meet the demands of an information society.

Opportunities

The best prospects for U.S. IT exports are powerful multi-media processors, networking equipment, and internet and e-commerce application software. Supporting networks -- including LANs and WANs -- and internet applications are in demand. IT goods and services exports comprise only about 0.3% of Lithuania's total exports at present, leaving substantial room for growth. Demand for IT services is growing in

countries neighboring Lithuania, creating lucrative export opportunities for Lithuanian companies, and the demand for computer equipment is forecasted to grow.

Resources

- Infobalt: www.infobalt.lt

MONTENEGRO/SERBIA

Overview

In 2007, the IT market, including services, in Serbia reached a value of around $400 million. Hardware comprised 70% of the total market, while software constituted 16.5% and IT services the remaining 13.5% share. Independent experts expect IT spending in Serbia to rise 17.2% year-on-year in 2008, and at a compound annual growth rate (CAGR) of 11.6% over the next five-year period. In 2010, the value of the IT market is estimated to rise to $703 million. The current IT consumption per capita of $50 in Serbia is much lower than in neighboring countries in the region and the IT market in Serbia is still in the process of reconstructing itself along with the entire economy.

Major attention is still focused on the development of basic infrastructure with hardware purchases at the core. Once these infrastructures improvements are in place and have a chance to function for some time, attention will begin to shift to IT services and software solutions aimed at maximizing initial investment. As most companies do not have defined IT budgets, cash flow problems and a sluggish economy make IT one of the first areas cut from investment plans.

The emerging, but still immature, (in terms of market penetration) PC market of Serbia offers great growth potential in the long term. Businesses and the public administration will continue to improve their basic infrastructure as their IT requirements increase. Moreover, households will seek greater internet access. In 2001, the value of the hardware market in Serbia was $120 million and has grown to $278 million (estimated) in 2007. The top 10 suppliers dominate a market of about 200 companies. Competition is intense. During the previous decade, computer hardware was imported from Asia. Some of that hardware was of poor quality, and many users desired better quality, even at a higher price. In 2004, the government fostered the computer market by abolishing the 20% sales tax. Despite introduction of VAT of 18% on January 1, 2005, growth of around 20% was achieved in this sector in 2006 and continued in 2007 at rate of 16%.

Statistical data are not yet reliable for analysis, but experts estimate that U.S. companies had a significant percentage of the total market in 2007 (rough estimate up to 30%). Hewlett-Packard, IBM, Compaq, Dell, Gateway, Xerox and Cisco continue to be among the market leaders in Serbia. Toshiba, Siemens and Acer are the main competitors to U.S. equipment suppliers on the SAM computer market, while the main competitors to U.S. companies for peripherals sales are Canon, Epson, Minolta and Brother. The government, state enterprises, large and small commercial enterprises, and commercial banks are highly receptive to U.S. computer technology. The total number of computers in Serbia is estimated to be 300,000, representing a remarkably low 3.75 penetration rate. A conservative 10% annual growth is expected over the

next couple of years. Growth is expected to come from new market segments like small and medium-sized enterprises, home users, as well as from continuing needs for computers and peripherals for commercial banks, big infrastructure projects, and further information technology needs of the Government administration. The three most important competitive factors in the Serbia's computer hardware and peripherals market are price, quality, and after sales support.

Best Products/Services
Best prospects include data communications and network equipment. Best product sub-sectors for U.S. suppliers include personal computers, servers, laptops, modems, printers and scanners.

Opportunities
The government and many domestic companies are in the process of introducing computer technology in their operations. Significant funds will be invested in equipment by such firms. Serbia has free trade agreements with most of neighboring countries in the Balkans and with Russia. Some local experts predict strong spending in the IT security and data protection segments. Spending on IT security is expected to double in the coming three years.

Resources
- http://www.export.gov/marketresearch.html Chamber of Commerce and Industry of Serbia Association of ICT Director, Aca Aleksic Terazije 23, 11000 Belgrade Phone: (381 11) 3304 558;
  Fax: (381 11) 3304 556 e-mail: aca.aleksic@pks.co.yu
- Ministry of Telecommunications and Information Society Ms. Aleksandra Smiljanic, Minister Mr. Nebojsa Vasiljevic, Deputy Minister for IT Address: Nemanjina 22 11000 Belgrade Tel: +381 11 3616 273 Fax: +381 11 3616 273 E-mail: nebojsa@mtid.sr.gov.yu Web site: http://www.mtid.sr.gov.yu/
- Serbian Agency for Telecommunications RATEL Mr. Jovan Radunovic, President of Managing Board
  Address: Visnjiceva 8 11000 Belgrade Tel: +381 11 241 786 Fax: +381 11 241 805 E-mail: ratel@ratel.org.yu
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  Association of ICT -- JISA 11000
- Belgrade, Zmaj Jovina 4/VI
  Tel:+381 11 3281 727
  E-mail: jisa@jisa.org.yu
  Web: www.jisa.org.yu
- Information Society of Serbia 11000 Belgrade, Kneza Milosa 9 Mr. Nikola Markovic, President
  E-mail:
  nimar@afrodita.rcub.bg.ac.yu
- For more information on market entry strategies contact:
  E-mail:
  zorica.mihajlovic@mail.doc.gov

NEPAL
Overview
Imported U.S. manufactured computer hardware and other peripheral equipment are mostly transshipped through Hong Kong and Singapore, and therefore are not reflected in the figures of direct U.S. Exports to Nepal. Average Exchange Rate (Selling Rate of Central Bank) for $1 was NRs. 72.69 in 2006, NRs. 70.64 in 2007, and NRs. 64.07 through December 2007. (Value in $millions)

U.S. computers and peripheral equipment remain highly competitive in the local market. U.S. brands enjoy strong preference and loyalty from buyers. Over the years, the visibility of U.S. products has significantly increased. Leading U.S. companies in this sector are represented through their authorized distributors and representatives in Nepal. In view of market size, volatility of sales, and legal restrictions in opening a sales outlet, U.S. companies are advised to hire a distributor/representative.

Best Products/Services
Computer components, hardware, monitors, and uninterrupted power sources.

Opportunities
Total annual imports of computer hardware are estimated at around $25-35 million, generally involving goods transshipped through Hong Kong or Singapore. Customs statistics understate the U.S. market share because American equipment is often imported via distributors in intermediate ports such as Hong Kong or Singapore and therefore not captured in official statistics. Since the market size is extremely small and opportunities for regional re-export are negligible, investment opportunity in this sector is not available.

Resources
- The Computer Association of Nepal (CAN) organizes an annual trade event entitled CAN Info-Tech. It is an event for showcasing IT innovations, products and services. A record number of 415,645 visited the show held from January 29 to February 3, 2008. For further information, businesses may wish to contact: The Computer Association of Nepal at: info@can.org.np, or visit their website at www.can.org.np.
- Information pertaining to GON policies and regulations can be obtained from the High Level Commission for Information Technology, E-mail: info@hlcit.gov.np or via its website at www.hlcit.gov.np.
- Commercial Specialist of U.S. Embassy Kathmandu, Mr. Tapas Gupta, at: GuptaTK@state.gov.

NICARAGUA

Overview
Over the last five years, Nicaragua has experienced an increased demand for computers and peripherals. Continued investment in telecommunications infrastructure has contributed to the growth of the market, reflecting the need of many businesses to acquire up-to-date information technology. There is no significant local production of this type of equipment for direct local consumption.

Best Products/Services
Sales of finished computers are growing, but sales of parts and accessories are growing at an even faster pace. Sales over the Internet of competitively priced information technology are likely to expand in the near future, particularly for the personal user segment, provided that reliable local after-sales dealer support is available for consumers. Demand for specialized hardware and accessories are gradually increasing in the professional services sector. The use of wireless computer networks is also increasing.

Opportunities
The computer and peripheral equipment industry is expected to continue growing. Nicaragua's import tariff policy favors growth of this "strategic" industry sector. Computers and peripheral equipment are not subject to import taxes. Internal taxes such as sales taxes do apply. CAFTA-DR will bring more competition to the information technology market. Good sales opportunities continue to be projected for virtually all categories of products in this sector.

Resources
- Nicaraguan Council of Science and Technology: www.conicyt.gob.ni
- Nicaraguan Internet Association: www.enicaragua.org.ni
- Nicaraguan Association of Telecommunication and Information Technology's Specialists: www.aneti.org.ni

NIGER
Overview
Best Products/Services
Many imported U.S.-manufactured hardware and software products are sold on the local market. There is room for further growth in this sector.

Opportunities
All major U.S. brand names - via their European branches - are well represented by local distributors and/or agents. Consequently, 2004 statistics indicate that France is the largest exporter of computers, with 47% of the market, although a good portion of that consists of U.S. brands. Direct imports from the United States accounted for 7% of the market in 2004.

Resources
http://www.stat-niger.org/

NIGERIA
Overview
Nigeria sees the United States as a role model on technology matters, especially leveraging technology for development. However, an increasing number of Nigerian technology leaders see Indian technology parks as preferred prototypes for adoption and replication in Nigeria.

The Director General, National Information Technology Development Agency (NITDA), Professor Cleopas Angaye, said that there are a number of initiatives to facilitate information technology diffusion in Nigeria over the next 2-5 years. The three most prominent initiatives are:
1) Technology Park by Federal Ministry of Science and Technology to spur research and development at state levels;
2) IT Park by NITDA to encourage software development especially targeting schools, young school leavers and university/college graduates;
3) Abuja Technology Village meant to attract multinationals and local industry leaders to localize at the capital city of Abuja.

The NITDA IT Park is a proposal to partner with state governments to develop and build IT Parks for software and human capital development. According to Professor Angaye, implementation of the proposal may require technical partnership with and inputs from foreign experts and there are no restrictions on which country may participate. Another initiative of the agency is Rural Internet Access launched in 2007 to promote egovernance and universal access. Under

this program, 20 internet centers were built and enabled by VSAT technology in different rural areas in Northern and Southern Nigeria in 2007. About 40 Internet centers are proposed in the 2008 budget. For more information about NITDA, visit http://www.nitda.gov.ng/

Another significant factor in Nigeria's computers, software and peripherals market is the "Computer for All Nigerians Initiative (CANi)". CANi is a government-assisted program designed to diffuse information technology to local communities and to make PCs available to all Nigerians. Two U.S. firms, Microsoft and Intel, are providing technical support to the program through their operating systems and processors respectively, while about four Nigerian PC assemblers are supplying the hardware. CANi was launched July 6, 2005, but its impact was not felt until 2006. According to the Project Management Office (PMO), over 17,000 personal computers have been supplied to various end-users under the program.

In a press briefing Professor Cleopas Angaye, Director General of NITDA, disclosed that the idea of CANi was aimed at finding a way to produce and supply a customized PC that would serve the need of ordinary Nigerian end-users at a delivery cost far below current market prices. Since 2007, there have been allegations of defaults and breach of original agreements by some participating members. Despite the allegations and controversies, the program seems to be on course and is generating a lot of interest among potential users.

The zeal with which the Abuja Technology Park was launched seems to have died down due to a change in leadership in the Federal Capital Authority in 2007. A national committee set up to prepare preliminary guidelines is already operational, but concrete actions have yet to be taken toward project implementation, particularly infrastructure development at the site. The park is estimated to cost about $400 million. The government of Nigeria promised to provide about $34 million as seed money for the project, while the private sector is expected to raise the balance. Already, some leading software firms, including Microsoft and Hewlett Packard, and two Chinese firms – Huawei Technology and ZTE -- have expressed an interest in the project. Nigeria hopes to generate more than $4 billion in export sales when the technology village is completed in about 3-4 years.

In May 2007, Afrihub Nigeria, representing Afrihub Inc, received an approval from Federal Ministry of Education to build and manage Technology Parks in all the Federal Universities in Nigeria. Afrihub in partnership with a leading local computer hardware/peripheral supplier, Zinox Technologies Limited, and with the support of the Nigerian Universities Commission (NUC), is building information technology parks in federal universities in Nigeria starting from University of Nigeria, Nsukka commissioned in 2006. Each of the parks operates about 200 workstations and trains over 1000 students every month. Annually, Nigeria produces about 150,000 graduates but less than 30% of the graduates have basic information and communications technology skills.

Technology diffusion to Nigerian schools and colleges may receive a boost if the "one laptop per child project" and several similar intervention schemes succeed in the country. Nigeria is one of the developing countries selected for a pilot program, which has taken off successfully in some community schools at the capital city of Abuja. One Laptop's founder, Nicholas Negroponte, at a forum organized to discuss emerging market opportunities at the International Consumer Electronics Show in Las Vegas in January 2008, praised Nigeria's efforts. He assured that the project would revolutionze the way young people live, relate and enjoy life in all of Africa, and raise the quality of future leaders on the continent. All the projects have provisions for computer technology appreciation courses for teachers, students and project facilitators.

Over the past two years, Nigeria has made significant progress in creating awareness about the importance of information technology in education and human capital development, particularly as the world increasingly globalizes. Consequently, the country is receiving increasing technical and financial support from multilateral agencies such as the world bank, and is signing various public-private partnership (PPP) agreements with foreign firms such as Cisco Sysyems (about 22 Cisco Academies in the country with over 1400 students), Microsoft (support for local software development and Intellectual Property protection/enforcement), and HP (SME enterprise support http://nigeria.smetoolkit.org/nigeria

According to Jidaw Systems Ltd, a local industry leader, it is in recognition of the importance of software that Government of Nigeria (GON) in conjunction with Nigerian software practitioners developed the Nigerian Software Development Initiative (NSDI). NSDI website states, "The Nigeria Software Development Initiative (NSDI) is a presidential initiative on the development of the Nigerian software industry which is born out of the realization that the nation has abundant intellectual capital whose genius and creativity in software development could help jump-start Nigeria's participation in the booming global software industry".

The Nigerian financial services sector is experiencing major changes on several fronts, especially computerization of critical functions, processes, and decision centers such as customer interfaces. According to market intelligence, Indian exports and resident nationals dominate banking applications in Nigeria. The United States is the lead in front-end posts and infrastructure (Microsoft), data bases (Oracle), servers (IBM), work stations (HP) and networking (Cisco). Nigerian commercial centers are awash with ATMs as banks compete for customer attention and patronage. All the banks advertise that their mobile banking capabilities and service delivery options are available 24/7.

Recent market intelligence indicates that Nigeria is entering into an emerging consumer market era, which is fueling a rising demand for computers, software and peripherals. In 2006, an industry report published by several local papers estimated that over $35 million is required to upgrade old ICT infrastructure and install new systems, including software to facilitate service

delivery and business-process integration. Current market conditions validate that forecast.

Best Products/Services

Computer peripherals and power-support systems remain the best prospects for this market. Handheld devices such as PDAs and other wireless portables are in great demand in Nigeria due to expansion of the cellular telecommunications infrastructure and services across the country. Micro-and mini-computers and state-of-the-art printers represent some of the best sales opportunities and will account for the bulk of imports from the United States in this sector over the short and medium term.

More and more local firms prefer to buy locally assembled PCs, which are priced much cheaper than branded ones. Currently, several Nigerian ICT firms are expanding to neighboring countries such as Ghana, Gambia, and Liberia. This market expansion, industry analysts say, will fuel import growth and local assembly. The falling prices of IT products, the ongoing campaign to bridge the so-called digital divide and the push by regulatory agencies in Nigeria to achieve universal access according to the International Telecommunications Union (ITU), are factors helping to spur auxiliary services such as business centers, value-added services, and marketing of communications equipment, including computer hardware. These auxiliary services are creating opportunities for localization of small enterprises that need information and communications technologies to focus on niche markets and specialties. Even in unusual places, such as rural villages close to cell sites, micro businesses are springing up from the multiplier effects of the GSM networks.

Software for bank consolidation, integration, security management and business continuity offer great growth opportunities in Nigeria. Opportunity abound for certificate courses targeting young school leavers, especially graduates interested in professional advancement, mid-level managers eager to grow and prosper in their careers, teachers and lecturers, who are responsible for computer education and knowledge management at various levels. Two franchise firms, NIIT and Aptech, both originating from India, currently dominate this sub-sector. They have training centers in all the six geo-political zones of Nigeria.

Currently, China is the strongest and most aggressive threat to U.S. market share in this industry sector. Chinese firms offer a combination of incentives including 90-day credit sales, sponsored training programs, participation in local trade shows, frequent visits to Nigeria to monitor market trends and partnership/joint ventures for market development. U.S. suppliers will continue to face aggressive competition from European and Asian companies that now export computer parts and peripherals for local assembly of PCs in Nigeria, but U.S.-origin equipment is generally considered superior. End-users, however, prefer suppliers who, in addition to prompt delivery of products, are able to provide timely after-sales support, including spare parts at competitive prices. Experts predict that this trend will likely continue for the foreseeable future.

Other Opportunities in the Education Sub-Sector

Although the application of ICT in Nigerian education is nascent, however, this is a fast– growing sector, with software and teacher professional development in high demand. With the current national ICT in education policy at all levels of education, participation of local firms in increasing access to computers for schools, unprecedented opportunities are opening up for educational software, support for teacher training and cheaper, easier–to–use technology. Statistics show that there are about 210 colleges and universities in Nigeria and many of them have an average student population of 20,000 with a computer ratio of 200 students to 1 computer, or worse for most state-owned institutions. The demand for skilled manpower to train teachers and technical staff in schools and administration offices through outsourced technical support of private organizations is soaring. In July 2006, the World Bank announced a $150 million budget assistance in support of Nigeria's science and technical education at the national symposium on "Nigerian Universities and Competitiveness of the National Economy." According to the World Bank's recent Country Director, Dr. Hafez Ghanem, the focus of the project is to target selected science and technology institutions with the objective to "inculcate a culture of quality and competitiveness within tertiary institutions – a necessary first step to producing the right type of graduates to lead Nigeria's transition into a competitive economy"

In April 2007, the World Bank also approved a $65 million International Development Association's (IDA) credit to the federal government of Nigeria for the state education sector project. The bank's project "will focus on school development through school grants; quality improvements through teacher development, provision of learning materials, expansion, rehabilitation and upgrading of basic education facilities in targeted local government areas."

U.S. based hardware/software companies have been involved in a public private partnership (PPP) agreement with the federal government in the Computer for All Nigerians Initiative (CANi). Microsoft is also an active participant in a partnership with British American Tobacco and USAID in a $1.3 million project at the University of Lagos to supply software to enhance computer access and help adapt school curricula to private sector skill demand.

Another U.S. firm that has continued to explore this evolving market is AFRIHUB. They have achieved this through partnership with select federal universities to finance, implement and operate ICT "parks" at host institutions, while the schools provide the facility and basic utilities, and grant AfriHub the exclusive right to provide and manage ICT services on campus for a minimum of 5 years. Each "park" includes a state-of-the- art student and faculty cyber center and fully equipped training classrooms, with more than 200-networked computers powered by Zinox Technologies via its Computerize Nigeria project. Through its blended curriculum, hands-on technical training by expert instructors supplemented by custom-courseware and online sessions, high-speed broadband internet access,

AfriHub Universal Mandatory Information Technology Training (UMITT) is currently providing training to 1,300 students per month on ICT at the Nnamdi Azikiwe University, Awka, Anambra State; 1,000 students per month at the University of Nigeria, Nsukka, Enugu State; and 980 students per month at the University of Nigeria, Enugu campus, Enugu State. In the mid to long term, AfriHub proposes to extend this partnership to more universities and polytechnics in Nigeria.

Web Resources

- http://www.widernet.org/nigeriaconsult/nuc.htm
- www.nitda.gov.ng
- www.ncc.gov.ng
- http://www.jidaw.com/softwareproviders.html
- www.ispon.org/

For further information, e-mail Anayo Agu, Senior Commercial Specialist, U.S. Commercial Service, Lagos, Nigeria anayo.agu@mail.doc.gov

For Opportunities in the education sub-sector, email Joseph Umoetteh, Commercial Specialist, U.S. Commercial Service, Lagos, Nigeria at: Joseph.Umoetteh@mail.doc.gov

NORWAY

Overview

Enterprises in the computer and related activities industry group had a turnover of $10 billion in 2006, an increase of 12.1% compared with 2005. In 2006, imports value of ICT goods, including telecom equipment amounted to $7.2 billion, according to Statistics Norway. This is an increase of 31% compared to the year before. A weakening of the dollar in the same period explains some of the significant increase in imports. Between 2004 and 2005, imports and exports of ICT goods increased by 6.4%. This progress was lower than trade with traditional goods.

Best Products/Services

Imports of computers and related equipment amounted to $2.3 billion or 41.8% of total imports of ICT goods. The profit margins are slim due to tough competition in the computer hardware market and prices have decreased significantly since 2005. For example, the price of consumer laptop computers fell by 12% from 2005 to 2006. About 700,000 units were sold, in addition to 400,000 desktops (by a population of 4.6 million). HP has been the laptop and desktop market leader over the last few years, followed by Dell, and Acer.

Another trend is that Internet purchases of both hardware and software are taking a greater market share, at least within small and medium-sized companies, reducing the need for distributors/dealers of ICT equipment. The largest online retailer sold computers and related equipment worth $408 million in 2007, with $282 million coming from the Norwegian market.

Based on per capita Internet access, Norway still ranks among the highest in the world and leads Europe in many vertical market segments. The most urban/central municipalities have the highest number of broadband subscriptions relative to the number of households. In 2007, about two-thirds of the households had access to broadband Internet. Cisco has pointed out that 20 Norwegian random households soon will consume bandwidth equivalent to the entire Internet traffic combined in 1995.

In the business sector - server consolidation (larger and fewer servers) is expected to continue. The next generation of computing in Norway will see companies building systems based on a smaller number of large-capacity components as the price paid for capacity declines. A rapid need for capacity and sophisticated storage solutions with differentiated accessibility to data is driving sales in this sector.

Opportunities

With a weakening global economy, Norway and the Nordic region may be good market opportunities for export companies. A wealthy public sector, a dominant energy sector, a stable banking system and among the highest GDP per capita in the world makes Norway well prepared for a financial downturn.

The strongest present and future growth area in hardware will be in the data-storage sector as banks, e-businesses and transaction applications as service providers are required to store more and more of their clients' data. On the consumer side, Norwegians are often innovators of new concepts and ideas and are able and willing to pay a premium for new high end products. For example, the iPhone is expected to sell in high numbers when introduced in the spring of 2008. Purchasing power is high, despite uncertainty in the world markets.

The consumer electronics market is expected to continue to grow in 2008 with faster and cheaper broadband, lower cost LCD and plasma televisions, new cell phone models and hybrid devices, gaming devices, 3G content and hardware, HD DVD recorders and combinations of applications. With more than two-thirds of Norway's 4.7 million population making online purchases on a frequent basis, an increasing share of consumer electronics products purchased online is expected, according to the market research firm MMI. When spending less than $36 on any delivered package, the 25% VAT is exempted on online purchases.

Resources

- The Ministry of Government Administration and Reform http://www.regjeringen.no/en/ministries/fad.html?id=339
- The Ministry of Transport and Communications http://www.regjeringen.no/en/ministries/sd.html?id=791
- ICT Norway (Norway's largest IT-organization with over 320 members) www.ikt-norge.no
- Abelia (Association of Norwegian ICT- and knowledge based enterprises, associated with the Confederation of Norwegian Enterprise) www.abelia.no
- EE Branch of Trade http://www.elektronikkbransjen.no/

PARAGUAY

Overview

The publicly available Paraguayan official trade data is rather broadly aggregated, making it difficult to disaggregate the data into specific sectors. Official statistics probably underestimate imports by as much as 60%. The great difference in the U.S. Census Bureau and Paraguayan statistics is due to (1) under invoicing, and non-registered imports (contraband), and (2) U.S. data includes goods in transit through the free zones as U.S. exports,

whereas Paraguay registers them under the country of origin.

A special regime for "re-export" goods, including computers, accessories, parts, and components, effective November 2005, is aimed at formalizing and making competitive trade in those products. While imports of computers and accessories have shifted somewhat towards inexpensive items from Asia (including counterfeit goods), buyers from the region coming to Paraguay are still drawn to shop for quality goods imported from the United States at lower prices than in their home countries. It is estimated that at least half of Paraguay's imports are re-exported. High excise taxes and value added taxes in Brazil and Argentina, which are unaffected by Mercosur common tariffs, could continue to provide incentives to the import/re-export activities of Paraguayan merchants.

Given the informal nature of the re-export trade, there are no reliable estimates of the real size of the market. The figures in the table above were provided by the local agent of a U.S. manufacturer and are estimates of the local market, excluding the re-export trade.

Best Products/Services
Computers and computer accessories are by far the major export items from the United States to Paraguay, and have been so for many years. It is believed that the demand for U.S. quality goods will continue.

Opportunities
Senior government officials have stated publicly their intention to upgrade the public sector information systems, some of which has already occurred. As purchases are required by public offices, tenders will be published in the government contracting office's website.

Web Resources
- Paraguayan public contracting office: http://www.contratacionesparaguay.gov.py
- Paraguayan importers trade association: http://www.cip.org.py
- Paraguayan Central Bank trade statistics: http://www.bcp.gov.py/gee/comerc.htm
- Paraguayan-American Chamber of Commerce: http://www.pamcham.com.py
- U.S. Embassy Asuncion commercial assistant: mailto:schaererb@state.gov

PERU
Overview
Internet related activities constitute the principal driver of demand for information and communication technology. The development of this market is the consequence of increasing preferences for fast speed and greater data transmission capabilities.

Best Products/Services
The figures below represent each product's share of Peru's total imports in this sector. HS Code Description
- 8471300000, Portable digital automatic data processing machines weighing not more than 10 kg., consisting of at least a central processing unit. 29.4
- 8471500000 Digital processing units other than those of subheading 8471.41 or 25847149, whether or not containing in the same housing one

or two of the following type of units: storage units, input units, output units. 25.8
- 8471700000 Storage units 22.1
- 8471609000 Other card key and magnetic media entry devices 6.4
- 8471490000 Digital processing units entered in the form of systems 5.3
- 8471602000 Keyboards 3.3

Peru's Internet market has grown rapidly in the last several years and according to the Supervising Agency for Private Investment in Telecommunications (OSIPTEL) there were 1,028,755 Internet subscribers by the end 2006, an increase of 23.5% from 2005. The number of installed broadband connections is expected to surpass 535,000 connections by the end of 2007, which would represent an annual growth rate of 11%. The major providers of Internet service in Peru include the following firm's: ADSL: Telefonica of Peru (with a near monopoly and 90% market share). Dial Up Access: Telefonica Companies, Americatel Peru, Terra, Qnet. Cable/MODEM: Telefonica Multimedia, Global Star com. Dedicated lines: Nextel, Telefonica Companies, Telmex Peru, RCP Infoductos. Wíreless Access: Telefonica Moviles, Nextel, Global Star.

Peru's PC market is dominated by machines utilizing the Windows NT operating system, which account for about 72% of the market. Approximately 40% of computers in use in Peru are locally assembled from components by computer technicians. It is estimated that 90% of the software utilized in the country is "pirated".

Opportunities

A number of Government programs to enhance public access to the Internet should aid in bolstering demand for computers and equipment. These include the "One Laptop per Child" (OLPC) program being jointly implement by the Government of Peru and nongovernmental organizations. The plan intents to give three million portable computers of low cost to developing countries. Implementation of this program began in Peru in September 2007, when 50 students in the rural area of Arahuay were provided with Internet access.

During 2008, Peru's Private Investment Promotion Agency (PROINVERSION), by means of public bid, will select the operators to implement a number of different communications development programs. Program "Internet Rural" will offer Internet access to 1,050 localities, benefiting 498 districts with an approximate investment of $9 million made available from the resources of the Ministry of Transport and Communications. The "Rural Broadband at National Level" program, whose objective is to offer services communications to more than 2 million persons distributed across 23 departments, will invest approximately $17 million. The selected operator will be required to provide connectivity for three services (access to Internet, public telephone service and residential telephone service).

Resources

- Customs: http://www.aduanet.gob.pe
- Huascarán Project: http://www.huascaran.edu.pe
- Ministry of Education: http:// www.minedu.gob.pe

- http://www.perueduca.edu.pe/web/visitante/comunidad/articulos2007/proyectos
- Ministry of Transport and Communications: http://www.mtc.gob.pe
- Private Investment Promotion Agency (Proinversión): http://www.proinversion.gob.pe
- Red Cientifica Peruana: http://www.rcp.com
- Supervising Agency for Private Investment in Telecommunications (Osiptel): http://www.osiptel.gob.pe
- Veritrade: http://www.veritrade.info

POLAND

Overview

Most hardware is imported from China ($767 million), Korea ($205m), (Germany $205m) and Ireland ($171m). At the end of 2006, the value of the Polish information technology (IT) sector reached $7.5 billion. With 2007 growth estimated at 14%, the IT market is expected to reach $8.5 billion. The computer hardware market, including components and peripherals, in 2007 totaled $3.8 billion, approximately 45% of the total IT market. In 2007, the demand for laptops increased by 28%, much faster than for desktop computers. Polish manufacturers dominate the PC market, with small assemblers slowly decreasing. Foreign suppliers dominate the notebook and high-end computer market segments.

The competitive situation is expected to substantially change as the new Dell manufacturing plant in Lodz, Poland begins full production in early 2008. In addition, the new Lenovo PC facility will open later in 2008, with full manufacturing output by 2010. The strong local currency and an overall decrease of prices for high tech products has increased demand for foreign products and creates additional opportunities for U.S. companies.

Although Poland spends only 2.2% of its GDP on IT investments, prospects for this sector are good thanks to additional funds available through EU programs and the generally favorable economic situation in the country. The Polish IT market is the fastest growing market in the Central and Eastern Europe region. Public sector investments are driven by the development of e-government services required by the European Union.

Best Products/Services

Computer parts and components
Peripherals
Networking equipment and components
Computer accessories

Opportunities

Demand for IT equipment is expected to increase due to the availability of EU funds, which can be used for regional development projects and by companies investing in equipment for greater productivity. All projects financed from public funds are subject to public procurement tendering rules. Individual users and small and medium size companies have become major purchasers of computer equipment, with emphasis on low-end equipment.

Resources

- CS Warsaw recommends European regional shows in lieu of local events.
- IDG Polska publishes Polish editions of Computer World, PC World Komputer, Net World, and IT sector

rankings. IDG also offers marketing services. http://www.idg.com.pl/informacje.html

- Migut Media publishes several ITC publications, including TeleInfo and IT Reseller as well as IT rankings and reports. These publications are appropriate for advertising within the industry. The company also offers marketing services. http://www.migutmedia.pl/
- Commercial Specialist at the U.S. Commercial Service Warsaw, Poland: Maria.Kowalska@mail.doc.gov

RUSSIA

Overview

Russia represents a growing and dynamic market for IT industry suppliers. The Ministry of Information Technology and Telecommunications estimated that the overall Russian IT market was worth $13.6 billion in 2006 with real growth of 17% from 2005. In 2007, the IT market was expected to reach $17.3 billion, rising 24% in real terms over 2006. These significant increases are due to the favorable economic situation in general, the strong ruble, and high demand for IT market services in both the government and corporate sectors. The latter include the oil and gas, metallurgy, financial services, telecommunications and retail industries. Many major U.S. companies are already present in the market and their products are available either directly or through representative offices or distributors.

At the end of 2006, the number of computers in Russia exceeded 23 million (with the number of regular Internet users totaling 25 million) and total units are forecast to reach 35-40 million in the next five years, an average annual growth of 10%.

Core IT market segments include hardware (67%), software (11%), and services (22%). As in previous years, the hardware segment is key to the market's structure. In terms of growth laptops have the best prospects in the hardware segment (71% share in the first quarter of 2007). The leading manufacturers on the Russian PC market in 2006 included Acer, HP, DEPO Computers, Asus, and Kraftway. Although the hardware segment dominates, it is expected that services will become the fastest growing segment of the IT market following a 23.2% increase in 2006.

Accurate figures for software are difficult to determine due to the high level of pirated products available on the market. Currently, industry sources estimate that up to 84% of all software is pirated. However, Russian law enforcement has become more engaged in stopping copyright infringement. According to the Russian Ministry of Interior 6,432 criminal piracy cases were initiated in the first 10 months of 2006 (with 3,082 individuals sentenced), twice the number for the whole of 2005. However, the impact of these efforts on the availability of pirated computer software has been minimal. Included in the recent U.S. – Russia Bilateral Market Access Agreement are requests for actions to address piracy and counterfeiting and improve protection and enforcement of intellectual property rights before Russia completes its accession to the WTO. This binding Agreement also requests that Russia establish a much more transparent system for the import of electronic goods

with encryption, a major U.S. export. For additional information on the Agreement and IPR in particular see the side letter at: http://www.ustr.gov/assets/World_Regions/Europe_Middle_East/Russia_the_NIS/asset_upload_file148_10011.pdf

Best Products/Services
In 2006, the market for IT services was the fastest growing segment, including IT consulting (50% growth), development and customization (29%), education and training (25%), outsourcing (24%), deployment and support (23%), and integration (21%).

Software in conjunction with services is also showing positive dynamics. According to 2005-2006 sales results, the best prospects in the software segment are specialized productivity products (60% growth), ERP (54%), business intelligence (45%), and security (40%).

Continuing growth in the number and purchasing power of small and medium-sized private enterprises is driving demand for legally imported operating systems, software application packages and enterprise management software. The notebook computer market grew by 84% in 2005, and sold a record of 1.2 million units. According to industry specialists, the notebook computer market accounted for 19% of the IT hardware market in 2005. In the first part of 2006 notebook computers accounted for 23% of the personal computer market.

The best opportunities for sales of U.S. manufactured hardware are: Data storage systems, data center solutions, servers, networking equipment, communicators/PDAs and Internet mobile technology.

The growth of operating systems and software applications has been stimulated by growing public awareness of IPR issues and by producers' efforts to provide product support to legal users only.

Opportunities
Computer hardware, peripherals, software and IT services are growing steadily and play an important role in the Russian-U.S. services trade because most high tech equipment is imported. Growth is expected to continue due to a favorable economic situation and high demand in the corporate and government sectors.

Resources

Organizations
- Ministry of Information Technologies and Communications of the Russian Federation http://english.minsvyaz.ru/enter.shtml
- The Federal Agency for Technical Regulations and Metrology http://www.gost.ru/
- Russian Center for Tests and Certification (Rostest) http://www.rostest.ru
- Russian Standard, general representative of ROSTEST for North America http://www.rosstandard.com

SINGAPORE
Overview
Singapore is a mature and sophisticated market for IT products and services. According to the 2006 survey carried out by the Infocomm Development

Authority (IDA) of Singapore, 77% of Singaporean households owned at least one home computer and almost 9 in 10 households with school-going children had access to a home computer. Seventy-one% of households had home Internet access and in these homes, almost all (97%) used computers as the mode of access while 9% used Internet-enabled cell phones. Usage of computers was 100% in businesses with more than 250 employees but the usage level declined to 62% for companies with fewer than 10 employees. Usage of infocomm network technologies was similarly higher for larger companies. Details on infocomm usage in households and by individuals as well as businesses can be found at http://www.ida.gov.sg/Publications/20061205092557.aspx

Singapore's domestic market for computer hardware and software amounted to $3.7 billion in 2006, according to the IDA's Annual Survey on the Infocomm Industry for 2006. Details of the survey can be found at http://www.ida.gov.sg/doc/Publications/Publications_Level2/20061205092557/ASInfocommIndustry06.pdf

Best Products/Services

Best prospects include application software, security solutions, and government projects. The Singapore market is very dependent on imports and multinational corporations located on the island to provide for its IT requirements. U.S. products are traditionally well received in Singapore as the United States is seen as the source for state-of-the-art technologies. Singapore also acts as a major distribution center for companies interested in selling to the region as reflected by re-export data. More than two-thirds of computer hardware and software imported into Singapore are re-exported to third countries in Asia.

Opportunities

Singapore presents a lucrative and expanding market for U.S. companies that would like to provide IT goods and services to the public sector. The government continues to aggressively implement and adopt infocomm technology while it has already won significant recognition for its e-governance, topping Accenture's annual e-government survey in 2007. In FY2007 (April 2007 – March 2008), the Singapore government expects to issue $730 million ($480 million) worth of new IT tenders. As in previous years, it is expected to spend more than the estimated budget.

A major program under iGov2010 (http://www.igov.gov.sg/) is a government-wide Standard ICT Operating Environment (SOE) to be implemented by the 4th quarter of FY2010 across 60,000 seats and 87 different agencies. It will comprise a standard desktop operating environment, a standard messaging and collaboration environment, and a standard network environment. On June 21, 2007, four pre-qualified consortia submitted bids for the SOE, all of which include one or more U.S.-based companies. The final contract, estimated to be worth S$1.5 billion ($1 billion) over eight years, is expected to be awarded in 2008. More information on SOE program can be found at http://www.igov.gov.sg/NR/rdonlyres/FE46DD55-92C7-4A72-B9D2-1D11A7055539/0/SOE_Factsheet_12July07.pdf Call for collaborations (CFC)

were launched to spur IT initiatives in certain sectors of the Singapore economy.

In healthcare, a CFC - the second for the sector - was launched to identify solutions that will improve the quality of healthcare delivery and efficiency in Singapore's public and private healthcare institutions.

Within the transport sector, a CFC was launched to bring together the seaport community and solution providers to develop and launch innovative content and applications on WISEPORT. WISEPORT (Wireless-broadband-access at SEaPORT) is a project to deploy a WiMAX network that will cover Singapore's port waters and surrounding coastal areas.

In the digital media and entertainment arena, the IDA invited industry players to submit information and concept proposals for a program to harness Virtual Worlds technologies to realize the iN2015 Digital Media and Entertainment vision.

In education, the IDA is working with the Ministry of Education (MOE) to transform the educational experience through the FutureSchools@Singapore project. The FutureSchools are a group of schools that will leverage on state-of-the-art technologies and innovative school designs to develop innovative curriculum, pedagogies and assessment programs.

In the tourism sector, the Digital Concierge initiative launched in June 2007 leveraged Singapore's new anytime-anywhere Internet Wi-Fi access or the available cellular network, to offer personalized and location-based services such as recommendations on where to go, where to eat and what to do.

According to the latest study by New York-based Access Market International (AMI) Partners Inc., small and medium-sized businesses (SMBs) in Singapore are on track to spend as much as $2 billion on information technology in 2008. The bulk of IT spending will come from three key sectors - professional services, retail/wholesale and manufacturing - which will account for over 60 % of overall IT spend in 2008. Since 2004, Singapore-based SMBs have been investing heavily in wireless connectivity solutions including wireless LAN (local area networks), VPN (virtual private networks) and WAN (wide area networks), according to AMI. Coupled with aggressive branch office plans, Singapore SMBs are looking to implement solutions that will enable them to keep in contact with remote locations while simplifying the management of inter-office moves and facilitating smooth employee relocations.

Las Vegas Sands and Malaysian conglomerate Genting are currently building two mega-billion integrated resorts in Singapore and information technology is a critical part of these two projects. There are therefore excellent opportunities for U.S. IT companies to participate in the two initiatives. Las Vegas Sands' integrated resort includes a casino, hotels, restaurants, retail outlets, trade exhibition and convention space. Genting is building an integrated resort including a casino, hotels, restaurants, retail outlets and a Universal Studios theme park. The two resorts are

expected to start operations in 2009 and 2010 respectively.

Resources

- www.ida.gov.sg
- http://www.sitf.org.sg/marketplace/bizopp.aspx
- http://www.export.gov/market_research/index.asp

U.S. Commercial Service, Singapore Contact Ms. CHIA Swee Hoon, Senior Commercial Specialist. Email: SweeHoon.Chia@mail.doc.gov

SLOVENIA

Overview

Imports and exports of hardware in Slovenia are very liberal. Top vendors have strong subsidiaries in Slovenia or have built good relations with existing domestic computer companies. Because of the strength of the U.S. IT industry, American companies or their distributors win many major IT contracts. The Slovenian market for computers and peripherals is approximately $380 million per year, with U.S.-based multinationals controlling more than 70% of the market share. Demand is expected to continue to grow at a steady pace in the coming years.

TURKEY

Overview

Turkey's Information Technology (IT) market size is estimated to have reached $5.2 billion in 2007 and the total ITC industry (including telecommunications) is estimated at $23.80 billion (ref. Interpro). The ICT market increase is estimated at 15% for 2008. The break down of the ICT market gross revenue is as follows: 68% carrier services (GSM operators), 11% hardware sales, 10% telecomm equipment, 7% services (maintenance, set up, network security etc.), 3% software, 1% consumer goods. With over 7 million personal computers in Turkey and 16.5 million internet users (according to TNS Piar), pc sales are still the main driver for gross IT sales.

The introduction of ADSL (Asymmetric Digital Subscriber Line) by Turkish Telecom is providing internet speeds up to 50 times faster than the normal dial up speeds used frequently by small businesses and households and has boosted e-commerce transactions. Presently, there are 4.0 million ADSL broadband subscribers and this has brought new opportunities for hardware and software sales (including PC and notebook sales, along with accessories such as speakers, wi-fi modems, Bluetooth USB sticks, digital music archives, storage and many more 'gadgets.).

The Turkish information technologies market is dominated by hardware sales. The market has experienced double-digit growth over the past five and the hardware market for Turkey and is estimated at $2.64 billion for 2007. An estimated 2.6 million PC's were sold in 2007, half in notebooks. Notebook sales are expected to increase as hotspots and wireless networks and applications become more available.

U.S. IT hardware and software manufacturers will find that due to time commitment, cost, and complexity of the regulatory and commercial environment, it is essential to have local representation. Although many people in the larger urban commercial centers understand English language may be a serious barrier in rural areas. It is therefore imperative that marketing

information and user guides be written to the consumers' own language. To win over the local customer, a Turkish language web site would be extremely useful.

For companies seeking to gauge market receptivity, exhibitions and conferences are excellent product launch vehicles. Reconfiguring the user interface and software would not be necessary in the initial market fact finding stages and that once market interest is determined and confirmed can the U.S. company and its local partner look at packaging the hardware and software to meet the needs of the Turkish consumer. Software translations may not be needed for professionals, however software products for the general consumer are necessary.

Best Products/Services

- Audio Visual Equipment
- Audio Visual Broadcast Equipment
- Consumer Electronics
- Wireless equipment / services
- Notebook PC's

The audiovisual and the consumer electronics market is also seen as a future prospect as smart homes, LCD/plasma TV's, digital cameras, removable data storage and PDA's are in demand. As was the case with the immense growth rate of mobile phones now reaching 43 million users.

According to the Carmel Group estimates, there will be 30 million subscribers for the digital satellite market in 2008. Market research shows that 97% of Turkish families see television as their prime source for entertainment and news. Consumer trends indicate that large screen LCD's and Plasma TV sales are on a roll as well as free satellite receivers. Recently, local provider Digiturk began offering HDTV and this expected to spur increased sales of LCD and Plasma TVs.

According to a study made by Hannover-Messe Istanbul, all Turkish television channels are expected to invest at least $30 million in new transmitting systems, $10 million in electricity generating groups and another $10 million in studio modifications in the next few years. The total estimated investment for the AV industry to move into digital broadcasting, new studios, and transmitters will be approximately $5 billion over the next 10 years.

The industry consensus is that the next big market opportunity for ICT firms in Turkey is wireless broadband, audiovisual products and accessories. Hot spots in airports, café's and other public locations are in the rise. Wireless connectivity devices such as PCMIA cards, Bluetooth hardware, edge technology, gprs, gps, internet via satellite are also increasing in popularity and sales. Wireless connectivity is also boosting notebook pc sales as people seek mobility and connectivity at the same time.

The nation has 14 million TV homes, 1 million cable TV subscribers, 1 million ADSL broadband Internet subscribers, 15.5 million internet users with a total of 7 million pc's and 1.250 million notebooks in country. Digital broadcasting is projected to reach 3.5 million homes by 2008.

Vestel (www.vestel.com.tr), Beko (www.beko.com.tr) and Arcelik (www.arcelik.com.tr) are the main

producers in Turkey. Almost all-multinational competitors such as Sony, Toshiba, Philips, Samsung, and Creative are competing for market share. Turkey is the only country in Europe to produce notebooks with Vestel. The overwhelming portion of consumer electronics equipment is imported to the market.

Standards and Import Regulations - CE mark is an issue. Since Turkey has adapted full acceptance of the regulations due to its European Union Customs Union membership, IT products need to meet the European Union directives on low voltage and electro magnetic compatibility. IT products need a CE mark to be able to imported into Turkey. European Union (EU) Waste from Electrical and Electronic Equipment Directive (WEEE) and Restriction of Hazardous Substances Directive (RoHS) is also an issue. Language barriers do pose a challenge for U.S. companies, hence a Turkish partner, distributor and/or agent is strongly advised. U.S. partners and products perceived well and favorably amongst business circles and consumers.

Apart from electro-mechanical standards, IT producers must ensure that all electronics be compatible with the radio-frequency levels of the Turkish national standards on frequencies. Products manufactured prior to 1 January 2000 cannot be imported. This is an outstanding regulation attributed to hinder problems related to the Y2K bug. No secondhand IT equipment is allowed into Turkey "unless the equipment is an integral part of a machine used in manufacturing".

TURKMENISTAN

Overview

Integrating information technology into all segments of society is one of Turkmenistan's top priorities. The government is emphasizing computerizing classrooms and is introducing high-end educational software, particularly in universities and secondary schools.

One of Turkmenistan's key projects in 2007 was providing and expanding Internet access. Currently 18 public Internet centers exist in the country. However, the number and capacity of Internet access points will increase in the near future. The Russian company, TechnoServ, won a $1.5 million contract to install 14 dial-up servers (four in Ashgabat and ten in the provinces), providing up to 20,000 accounts. In addition, dedicated high-speed lines for up to 1,100 subscribers will be installed.

Best Products/Services

Computer hardware
Computer software
Basic computer skills training

Opportunities

Many sectors and industries of Turkmenistan, including education institutions, the health, textile, and manufacturing sectors, continue to function using paper-based systems and need computer hardware and software. In addition, there is a need for basic computer training for children and adults.

UKRAINE

Overview

The exact size and structure of the Ukrainian computer hardware market is difficult to measure, since local

assembly and shadow imports of components remain among the key factors that determine the structure of the market. Sales estimates for 2006 vary from 1.54 million units to 1.3 million or $650-550 million in monetary terms.

Preliminary results of 2007 sales show a strong decline in growth rates for desktop PCs: from 32% in 2006 to 10% in 2007 versus 116% sales growth rate for notebooks. According to IDC, the total number of PCs sold in Ukraine in 2007 reached 2.2 million units including 1.4 million desktop PCs and 0.5 million laptops. 53% of the market belongs to PCs priced below $400, 37% to PCs priced at $400-600. Although desktop PCs assembled in Ukraine currently account for more than two-thirds of the market, their share is steadily declining. Several major local assembly centers have downsized or closed. Import duties and customs fees are no longer a barrier and leading international brands are slowly conquering the market. Some industry experts anticipate that there will be 2.86 million PCs (including 0.725 million laptops) sold in Ukraine in 2008.

The market of servers follows the same trend. Local manufacturers accounted for 49% of the market for x86-servers in 2006. In the first half of 2007 their market share went down to 40%. The share of imported x86-servers grew accordingly. In 2006 sales of x86-servers accounted for 69% of the local market (in monetary terms). The share of RISC servers was 26%, while EPIC servers claimed 5% of the market. The share of CISC servers was 0.5%.

One important change occurred in the retail trade of computers and peripherals: supermarkets of consumer electronics sold more computers than specialized computer stores. This factor may totally reshuffle distribution channels and motivate local computer companies to restructure and get rid of their retail divisions.

Best Products/Services

- Operating systems, office applications, accounting programs, multimedia
- Security solutions
- Computer software services

Opportunities

- High quality software development.
- Private and corporate procurement tenders: http://uatender.com/category/03
- Government procurement tenders: http://www.zakupivli.com/control/en/publish/article?showHidden=1&art_id=575386

Resources

- Association IT Ukraine: http://www.itukraine.org.ua
- Euroindex, leading organizer of IT trade shows in Ukraine: http://www.euroindex.com.ua/index.php?m=1&lng=e
- Leading IT publications and catalogs: http://www.itcpublishing.com/ua/?lang=en
- http://www.pcweek.com.ua/
- Association of computer clubs: http://www.uacc.org.ua/en

URUGUAY

Overview

Government and private sector initiatives to develop technological parks, a growing and strong software sector, combined with increasing Internet usage in Uruguay, have maintained hardware imports at high

levels. Although total imports in 2007 declined over 2006, projections show an increase for 2008-2010. There is no local production of hardware. At the end of 2004, a company launched the first local brand but it just assembles equipment with imported parts. It is important to highlight that until 2002, the U.S. accounted for approximately 70% of total hardware imports. It still maintains first place but its share continues to drop due to imports from China and Mexico amongst others. In 2006, the U.S. market share stood at 48%, but dropped to 40% in 2007, while China came in as second in both years but went from a 30% share in 2006 to 37% in 2007.

Various multinationals consider Uruguay as a hub for their data and call centers. Colgate-Palmolive International, Sabre, and Ta-Ta Consultancy Services, for example, are already using Uruguay's centers in direct network with their head offices. The number of call centers is increasing rapidly.

There are no tariffs for items of MERCOSUR origin; for third countries, the Common External Tariff (CET) ranges from 0 to 16%. However, Information Technologies and Telecommunications fall under a special regime. Items under HS codes 84.71 have a 2% tariff and under 84.73 are exempt of import tariffs.

The current administration has made the One Laptop Per Child (OLPC) program a top priority. Hence, sector specialists estimate that imports of hardware will increase since the need for a computer will be considered a basic necessity. Local IT businesses are confident that the demands for equipment and qualified workers will rise over the next few years. In order to achieve the goal set by the Uruguayan IT Chamber (CUTI) of exporting software for $500 million by the year 2010, the industry will need to hire 2,500 employees each year and there will definitely be an increasing demand for equipment.

Best Products/Services

Hardware equipment and accessories have been the number one import from the U.S.. Items under HS code 8471 such as CPUs, monitors, magnetic discs, printers, ATM equipment, hubs, network and digital equipment are key imports. The U.S. remains in first position with a 40% market share, yet imports from China, Mexico, Japan and Taiwan continue to be on the rise. Due to low cost imports from third markets, U.S. exporters must be able to offer competitive prices. The drop is also a consequence of U.S. multinationals shipping from Asia.

Opportunities

Demand for hardware and accessories will increase due to educational programs, increased Internet access, and continuing modernization of both the private and public sectors. Products need to have competitive prices due to the rise of imports from countries like China, Mexico, Taiwan and Singapore.

Resources

- Embassy Contact: Lilian Amy, Sector Specialist – lilian.amy@mail.doc.gov
  http://www.buyusa.gov/Uruguay/en
- Uruguayan IT Chamber:
  http://www.cuti.org.uy

VENEZUELA

Overview

There are no solid, official numbers for this sector. However, according to Global Trade Information (GTI) figures, Venezuelan imports of U.S. computers and components increased by 57% from 2004 to 2005 in a market of 38% overall growth. These trends changed from 2005 to 2006: while the IT market grew 44%, U.S. imports rose only 36%. However, the trend reversed again in the 2007 first quarter, when U.S. exports grew over 30% and the overall market fell 7%. The declining tendency of the U.S. market share still favors third-country competitors, mainly China, Brazil and Argentina. In addition, no data exist about U.S.-branded equipment being sourced from neighboring countries.

The major factor slowing imports is the Foreign Exchange Commission (CADIVI). According to recent data published by the Venezuelan government, CADIVI approved a total of $879 million for the IT sector in 2007. This amount represents 2.1% of all foreign currency assigned in 2007.

IT investment was mainly centralized on hardware replacement by the financial sector, commercial sectors, and telecommunication companies. Venezuela's traditional investor has always been the government, but last year no major new projects were announced.

Regarding presidential Decree 3390, which requires all Venezuelan government and government-appointed entities (including PDVSA) to "use free software developed with Open Source standards on their systems, projects, and IT services," implementation was not completed as planned in 2007. Instead, the Government did acquire licensed software for database development and ERP from Genexus, a Uruguayan company. It should be noted that the rate of IT software piracy in Venezuela is one of the highest in the world. Estimates are that about 75% of all software is pirated.

Best Products/Services

Open source-based software and hardware, convergence technology applications, mobile solutions, security and ITIL infrastructure.

Resources

The Commercial Service office in Caracas closely monitors developments and opportunities in Venezuela's IT sector. For more detailed information on this sector, including Market Data, Best Prospects, Opportunities, and Contacts within the sector, U.S. exporters can contact

- Commercial Specialist Ms. Dalia Dorta at dalia.dorta@mail.doc.gov or our office at caracas.office.box@mail.doc.gov.

VIETNAM

Overview

The information technology (IT) industry represents one of Vietnam's fastest growing sectors. Surveys conducted by international firms and local industry associations show Vietnam's IT sector growing from 20 to 25% annually in the coming years. The Government of Vietnam has articulated its commitment to boosting the development of the IT industry, particularly in software production, Internet infrastructure, IT education promotion, and other forms of human capital development.

Vietnam's IT industry recorded sales of $1.74 billion in 2006, and is estimated to reach $2.26 billion in 2007, with rapid growth continuing through 2008 and beyond. Vietnam's imports of computer hardware and peripherals totaled $1.412 million in 2006, and exports $1.233 million. The market is still concentrated in two major cities: Ho Chi Minh City (HCMC) and surrounding provinces and cities, which accounts for approximately 60% of all sales; and Hanoi, which accounts for about 30% of the market. Sales have been dominated by hardware, which has accounted for approximately 80% of total IT spending during the past five years. This focus on hardware reflects, in large part, the widespread piracy of software and lack of effective protection of intellectual property.

In 2007, Vietnam's hardware imports totaled $1.412 billion (13.9% increased over 2006) and exports reached $1.233 billion (18.3% increased than that of 2006). Vietnam's computer software imports increased from $18 million in 2006 to $30 million in 2007. The U.S. export of computer hardware products to Vietnam was ranked 6th in the list of top exporters to Vietnam in 2007 with the value of $41 million. (Note: data on enterprise software are not available.)

Although its base was small, the software and services sub-sectors' growth rate was 32%, due mostly to the development of digital content and software outsourcing. IT training turnover reached $15 million, while turnover in the digital content sub-sector was $65 million. It should be noted with regards to software and hardware that inadequate intellectual property rights protection causes serious challenges for legitimate exporters to Vietnam. At present, although the piracy rate has been coming down, Vietnam is still among the world's worst 20 countries for IPR violations. According to Business Software Association (BSA)'s Piracy Study Report conducted in May 2007, Vietnam's software infringement rates in 2004, 2005, and 2006 were 92%, 90%, and 88% respectively. Government enforcement of newly passed IPR laws remains woefully insufficient, though the GVN is focused on improving its track record, especially in regards to enforcement.

Internet related service providers represent another fast-growing industry sector for IT equipment, software, and service suppliers, as the Internet market has also developed rapidly in recent years. Internet usage has increased as evidenced by the entry of many Internet service providers (ISPs) into the market. Broadband market demand has increased so rapidly that the current market supply does not meet demand. (See Telecommunications Equipment and Services section.) In short, large market demand from Vietnam's computer software and hardware service sectors (as well as from other sub-sectors) presents great potential for U.S. exports this year and in the coming years.

Best Products/Services

U.S. exporters will find Vietnam an attractive market for many IT hardware products, such as networking equipment and Internet related equipment. Many American ICT giants have marketing operations in Vietnam such as Microsoft, Oracle, Intel, Dell, HP, and Cisco Systems, to name a few, though mid to small-sized technology providers have also found success.

Software and services are also among best prospects for U.S. IT exporters, especially enterprise applications such as Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) software, as Vietnam's new membership in the World Trade Organization (WTO) furthers its integration into the global economy.

Opportunities

American ICT companies will also find growing opportunities for doing business in Vietnam, particularly in sectors associated with Internet development. Continued implementation of the 2006 "e-transaction" law, and the associated building out of the country's Internet infrastructure, is driving demand for e-commerce and other value-added applications and services. The GVN has prioritized its initiatives into major areas such as e-Government, e-commerce, e-training, and e-healthcare to ensure that the entire population will have ready access to community information and services such as fire and rescue, health emergency, public order, and natural disaster response. The ICT industry offers opportunities for training service providers as well. The Government has drawn up an ambitious plan for the domestic industry that aims at reaching annual sales of $3 billion by 2020. The plan consists of three major programs: the development of IT human resources; the development of a software export sector; and the development of a hardware-manufacturing base. Currently, Vietnam does not have the capability to execute the Government's plan in any of these areas. In order to do so, significant investment in training and technology transfer must occur – a need that could offer significant export opportunities for American ICT hardware and service suppliers.

Vietnam will continue to import a significant number of PCs and peripherals. The primary customers for imported equipment are multi-national corporations, large state owned-enterprises and the Government. The computer services market has evolved into a two-tier market, whereby foreign computer firms serve foreign businesses operating in Vietnam and local firms cater largely to Vietnamese clients. For the most part, foreign companies seeking computer services use foreign invested service providers, while Vietnamese companies rely on local computer retailers who offer a limited package of services.

Resources

For more information, please contact the following addresses or visit the following websites:

- **Nguyen Dzung, Commercial Specialist**
  U.S. Embassy in Hanoi
  E-mail:
  nguyen.dzung@mail.doc.gov
- **Huynh Triet, Commercial Specialist**
  U.S. Consulate General in Ho Chi Minh City
  E-mail: triet.huynh@mail.doc.gov
- Vietnam's Ministry of Information and Communications (MIC)
  http://www.mic.gov.vn
- Vietnam's Ministry of Industry and Trade (MOIT)
  http://www.moit.gov.vn
- Ministry of Science and Technology (MOST)
  http://www.most.gov.vn

- Ministry of Planning and Investment (MPI)
  http://www.mpi.gov.vn
- Vietnam Internet Network Information Center (VNNIC)
  http://www.vnnic.net.vn
- Vietnam Post & Telecommunications Group (VNPT)
  http://www.vnpt.com.vn
- HCMC Computer Association
  http://www.hca.org.vn

ZAMBIA

Overview

The computer market in Zambia is limited but growing steadily. Many corporations are introducing computer applications in their operations to enhance efficiency and productivity. The gradual expansion of Internet connectivity is also spurring demand. The Zambia Telecommunications Company (Zamtel) has embarked on the installation of a fiber optic network to all provincial centers. The expansion of rural telecommunications will enhance communication through internet between the Zambia and the rest of the world.

Opportunities

There is a shortage of skilled repair facilities and software experts. Zambia has significant requirements for infrastructure rehabilitation, and a growing demand for computers and computer consumables. In 2006, customs duty on computer parts was reduced to 0%. U.S. companies can participate in exports of computer parts and software.

V. Trade Events

Trade events, such as trade shows, trade missions and catalog shows, offer excellent opportunities for face-to-face interaction with foreign buyers and distributors. Of the many U.S. and international events held throughout the year, some are vertical (single industry theme) and some horizontal (many industries represented). The events organized or approved by the U.S. Department of Commerce can be especially useful for first-time or infrequent participants – they require less lead time to register and typically involve more handholding.

The Trade-Event Scheduling Web sites listed below allow selective searches for upcoming events by industry, location, type and date. They typically provide the event organizer, event descriptions and costs, and people to contact for more information.
To find upcoming events for U.S. Computers and Peripherals, use industry search terms relating to Computer(s), Hardware, or Information Technology.

Schedules for U.S. Government Organized or Sponsored Events

Domestic USDOC Events: http://www.export.gov/comm_svc/us_event_search.html
International USDOC Events: http://www.export.gov/comm_svc/us_event_search.html
USDA (Food & agriculture) Events:
http://www.fas.usda.gov/scripts/agexport/EventQuery.asp

Schedules for Commercially Organized Events

TSNN (http://www.tsnn.com/)
ExpoWorldNet (http://www.expoworld.net/)
Exhibition Center - Foreign Trade Online (http://www.foreign-trade.com/exhibit.htm)

VI. Available Market Research

Computers and Peripherals

The reports listed below provide more detailed information about the market for the Computers and Peripherals in the listed countries, such as demand trends, the competition, business practices, distribution channels, promotional opportunities, and trade barriers. These market research reports are written by resident U.S. commercial staff in each country.

All the reports are accessible on line, at no cost, from
http://www.buyusainfo.net/adsearch.cfm?loadnav=no

IT Hardware- Market Overview	Argentina	6/30/2008
ICT Bulletin Winter 2008	Australia	2/19/2008
Computer Market Share	Brazil	3/6/2008
Notebook Sales Increase	Brazil	3/6/2008
Growth in PC Market	Brazil	2/19/2008
IT Clusters	Brazil	2/1/2008
Computers and Peripherals	Dominican Republic	3/30/2007
Convergence of ICT & Broadcasting	Egypt	3/29/2007
Notebook Market	Germany	4/9/2008
Information Technologies	Greece	2/14/2007
Trends in IT Market	Hungary	10/31/2007
Hardware for IT Industry	India	8/25/2006
Communications Technologies & Equipment	Jamaica	5/25/2006
Info on ICT Sector	Jordan	7/31/2007
ICT Market Overview	Kazakhstan	3/2/2006
Notebooks Increasing Popularity	Netherlands	6/15/2007
Trends in the ICT Market	Norway	2/2/2008
Trends in the ICT Market	Norway	1/23/2008
Overview of ICT Market	Poland	2/20/2007
Data Storage Software and Equipment	Poland	9/29/2006
Computer Hardware Peripherals	Poland	8/4/2006
IT Overview Sector	Romania	2/25/2008
Desktop Outsourcing Market	Switzerland	3/2/2007
IT Overview: Hardware and Accessories	Uruguay	5/15/2008

APPENDIX

Products in Computers and Peripherals, by Schedule B Code
HS 8471: 64 Items

Schedule B code	Description
847130	Card key and magnetic media entry devices for adp machines
847130	Cathode ray tube (crt) display units, automatic data processing
847130	Computer, hand-held
847130	Computer, laptop
847130	Digital adp machines, weight 10 kg or less, having at least a central processing unit, a keyboard and a display
847130	Display units (crt) for automatic data processing machines
847130	Display units, graphic, for automatic data processing machines
847130	Drums, storage, automatic data processing machine (adp)
847130	Graphic display units for automatic data processing machines
847130	Hand-held computers
847130	Keyboard units, automatic data processing (adp)
847130	Laptop computers
847130	Magnetic strip device (optical) automatic data processing (adp)
847130	Optical character recognition equipment, (adp)
847130	Paper tape output punches, (adp)
847130	Pocket computers
847130	Portable, digital adp machines, 10 kg or less, having at least a central processing unit, keyboard, & display
847130	Terminals, automatic data processing (adp)
847130	Terminals, crt display, automatic data processing (adp)
847130	Video display terminals, automatic data processing machine

847130	Automatic data processing machines, analog, hybrid and digital computers
847130	Computers, electronic, analog, hybrid or digital
847130	Data processing machines, analog, hybrid and digital computers
847141	Digital computers, with cpu and input/output unit in single housing, whether or not combined
847149	Adp related machines for preparing tape or punched cards
847149	Batch terminals, automatic data processing (adp)
847149	Card punching machines
847149	Collators for punched cards
847149	Converters for automatic data processing machines
847149	Converters, magnetic tape to punched cards
847149	Converters, punched card to magnetic tape
847149	Data processing units entered in the form of systems
847149	Digital processing units entered in the form of systems
847149	Interpreting machines, computer tape or punched cards
847149	Key punch machines, automatic data processing (adp)
847149	Mouse, computer
847149	Punching machines, card or tape
847149	Reproducing machines, computer tape or punched card
847149	Sorting machines, punched cards
847149	Verifying machines, tape or punched card
847150	Digital central processing units (cpu), unhoused
847160	Card readers, input devices for automatic data processing machines
847160	Computer mouse
847160	Input units, except point of sale terminals, automatic data processing machine
847160	Magnetic card readers, optical, automatic data processing (adp)

847160	Magnetic ink recognition devices for adp machines
847160	Output units, automatic data processing machines, n.e.s.o.i.
847160	Plotters, automatic data processing (adp)
847160	Readers, input devices, automatic data processing (adp)
847160	Scanners, optical input, automatic data processing (adp)
847170	Auxiliary storage units, random access, adp
847170	Disk drive units, storage devices for automatic data processing machines
847170	Floppy disk drive units, for automatic data processing machines
847170	Hard disk drive units, for automatic data processing machines
847170	Magnetic disk drive units, for automatic data processing machines
847170	Random access auxiliary storage units, automatic data processing (adp)
847170	Sequential access storage units, automatic data processing (adp)
847170	Serial access storage units, automatic data processing (adp)
847170	Storage units, automatic data processing (adp)
847170	Tape drive units, automatic data processing (adp)
847180	Network servers
847190	Key-to-tape machines, automatic data processing (adp)
847190	Tape punching machines
847190	Tape transports, automatic data processing (adp)