Best Export Markets For U.S. Computer Software

Best Export Markets for U.S Computer Software was compiled by Ali Onur Turkal, 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 2005 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 Computer Software as a best prospect for U.S. exports, based on near-term growth potential or a large market receptive to additional U.S. suppliers.

The entire report is also available as a Word document, in print or electronically, for \$25.00. To order, contact the El Camino College CITD at: 310-973-3173 or **mkogon@elcamino.edu**.

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I. Export Market Overview

A. Computer Software NAICS-511210

This Market Brief provides an overview of the world market for US Computer Software, based on an analysis of the latest trade statistics and market research.

Export growth: U.S. exports of products in the NAICS–511210 category rose from \$324 million in 2002 to \$509 million in 2004, an increase of 57 % over the three-year period.

Leading Foreign Markets: Canada is by far the leading market for U.S. exports of products in the NAICS–511210 category (\$258million in 2004, or 51% of total). Other top markets (all valued above \$12 million) were: Korea (5.1% of total), Japan (4.2%), Mexico (3.9%), Germany (3.8%), United Kingdom (3.4%), China (3.2%), India (2.6%) and Taiwan (2.5%). Other significant markets (above \$6 million) were: Brazil (2.2%), Hong Kong (1.7%), France (1.5%), Australia (1.3%), Italy (1.2%), and Singapore (1.2%).

Fastest Growing Markets: The large volume markets showing the highest three-year growth rates for U.S. products in the NAICS–511210 category were: Italy (+7481.0%), Germany (+3625.9%), France (+1695.2%), China (+1312.7%), Australia (+1252.5%), Singapore (+1208.8%), United Kingdom (+1183.0%), and Mexico (+1146.4%). Smaller-volume, high-growth markets over the three-year period were: Belgium (+26363.6%), Denmark (+14894.1%), Spain (+11852.9%), Sweden (+7302.1%), Norway (+6752.2%), and Venezuela (+6744.4%).

Declining Markets: The large volume markets showing a declining three-year growth rate for U.S products in the NAICS–511210 category (2002-2004) were: Canada (-1.3%), and Korea (-26.9%).

Best Market Prospects: The markets listed below appear to be particularly promising for U.S. exports of Computer Software over the next two years. Specific U.S. export statistics on NAICS–511210 products are available from the CITD for all countries, including those listed below (Source: U.S. Census Bureau). The CITD also has access to relevant trade contacts, trade opportunities and market research on each country:

- Austria
- Brazil
- Bulgaria
- Canada
- Chile
- China
- Colombia
- Denmark
- Finland
- France
- Germany
- Ireland

- Israel
- Japan
- Netherlands
- Poland
- Portugal
- Russia
- Spain
- Sweden
- Taiwan
- Thailand
- Turkey
- Ukraine

- A. Top 30 U.S. Export Markets for Computer Software (Software Publishers), by Country. These tables show the leading and fastest growing markets for the U.S. products over the past several years. Source: U.S Census Bureau.
- **B.** Top 30 World Exporters of Computer Software (Laser Discs Ex. Audio or Video), by Country. This table shows the U.S. share of total world exports of Laser Discs Ex. Audio or Video, compared with leading competitor countries. Source: Centradex.
- **C. Market Sizes for U.S. Computer Software**, **by Country**, including each country's total imports of Computer Software, and imports from the U.S. Source: U.S. Commercial Staff in each country.

NAIC-511210: SOFTWARE PUBLISHERS							
Country				Percent Change	Percent Change	Percent Share	
	2002	2003	2004	2002-2004	2003 - 2004	2004	
Canada	261,718	303,640	258,353	-1.3%	-14.9%	50.7%	
Korea	35,600	10,653	26,037	-26.9%	144.4%	5.1%	
Japan	6,286	3,012	21,488	241.8%	613.3%	4.2%	
Mexico	1,575	783	19,631	1146.4%	2408.0%	3.9%	
Germany	522	530	19,449	3625.9%	3567.5%	3.8%	
United Kingdom	1,367	2,284	17,538	1183.0%	668.0%	3.4%	
China	1,167	821	16,486	1312.7%	1907.2%	3.2%	
India	1,762	1,142	13,215	650.0%	1057.5%	2.6%	
Taiwan	1,672	2,804	12,640	656.0%	350.8%	2.5%	
Brazil	2,062	1,524	11,208	443.5%	635.4%	2.2%	
Hong Kong	2,653	1,060	8,507	220.7%	702.8%	1.7%	
France	420	352	7,540	1695.2%	2042.6%	1.5%	
Australia	493	228	6,668	1252.5%	2827.4%	1.3%	
Italy	84	138	6,368	7481.0%	4527.3%	1.2%	
Singapore	466	373	6,099	1208.8%	1536.0%	1.2%	
Malaysia	426	376	5,667	1230.3%	1406.0%	1.1%	
Netherlands	513	210	3,852	650.9%	1736.2%	0.8%	
Sweden	47	0	3,479	7302.1%	N/a	0.7%	
Belgium	11	197	2,911	26363.6%	1380.0%	0.6%	
Denmark	17	0	2,549	14894.1%	N/a	0.5%	
Venezuela	36	20	2,464	6744.4%	11936.6%	0.5%	
United Arab Emirates	129	42	2,455	1803.1%	5807.7%	0.5%	
Thailand	471	393	2,402	410.0%	510.6%	0.5%	
Israel	703	200	2,080	195.9%	938.0%	0.4%	
Spain	17	60	2,032	11852.9%	3264.0%	0.4%	
South Africa	203	208	1,933	852.2%	831.5%	0.4%	
Argentina	38	263	1,899	4897.4%	621.6%	0.4%	
Ireland	1,047	602	1,782	70.2%	196.1%	0.3%	
Switzerland	49	4	1,649	3265.3%	43870.4%	0.3%	
Norway	23	18	1,576	6752.2%	8636.4%	0.3%	
Subtotal:	321,575	331,936	489,957	52.4%	47.6%	96.2%	
All Other:	2,397	3,962	19,507	713.8%	392.4%	3.8%	
Total	323,972	335,898	509,464	57.3%	51.7%	100.0%	

II .A. Top 30 U.S. Export Markets 2002–2004 (Values in \$Thousands) NAIC-511210: SOFTWARE PUBLISHERS

Source: U.S Census Bureau

II.B Top 30 World Exporters & U.S. Market Share, 2003 HS 825243100 Laser Discs Ex. Audio or Video

	by Exporting		
Country	Market Share	Market %	
United States	\$1,195,754,470	33.61%	
Ireland	\$525,833,117	14.78%	
Germany	\$367,513,944	10.33%	
Great Britain	\$219,156,428	6.16%	
Netherlands	\$203,858,171	5.73%	
Singapore	\$170,059,695	4.78%	
China	\$103,530,066	2.91%	
France	\$92,145,316	2.59%	
Sweden	\$85,029,848	2.39%	
Canada	\$77,914,379	2.19%	
Japan	\$66,529,630	1.87%	
Switzerland	\$62,260,349	1.75%	
Austria	\$50,875,599	1.43%	
Denmark	\$47,317,865	1.33%	
Israel	\$38,779,303	1.09%	
Hong Kong	\$24,904,140	0.70%	
Belgium	\$23,481,046	0.66%	
Finland	\$19,211,765	0.54%	
Italy	\$18,855,991	0.53%	
Czech Republic	\$18,144,444	0.51%	
Korea	\$17,077,124	0.48%	
Malaysia	\$15,298,257	0.43%	
Luxembourg	\$11,028,976	0.31%	
Australia	\$9,605,882	0.27%	
Spain	\$8,182,789	0.23%	
Turkey	\$8,182,789	0.23%	
Greece	\$6,048,148	0.17%	
Mexico	\$6,048,148	0.17%	
Poland	\$5,336,601	0.15%	
Indonesia	\$4,980,828	0.14%	
Subtotal	\$3,502,945,108	98.46%	
Others	\$54,789,107	1.54%	
Total	\$3,557,734,215 100%		

World Exports by Exporting Country 2003

Source: Centradex

II.C. Market Sizes & U.S. Share, by Country

The best Market matrix (below) provides comparative market size on 18 countries considered "best prospects" for U.S. exports of Computer Software. The countries are listed in alphabetic order, not in rank order. The data on total market, total imports, and imports from the U.S. are based on local sources and reflect best estimates of USCS commercial officers in 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.

	Т	'otal Mar	·ket	Total Imports		Total	US Share			
Country	2002	2004	%Change	2002	2004	%Change	2002	2004	%Change	2004%
Austria*	4,107.80	4,706.50	14.6%	N/a	N/a	N/a	1,978.00	2,310.80	16.8%	N/a
Bulgaria	22	28	27.3%	20	25	25.0%	17	24	41.2%	96.0%
Canada	3,998	5,115	27.9%	3,330	4,270	28.2%	2,544	3,281	29.0%	76.8%
China	4056	5598	38.0%	847	1017	20.1%	195.4	258	32.0%	25.4%
Denmark**	27	32	18.5%	8	8.4	5.0%	N/a	N/a	N/a	N/a
Finland	1045	1065	1.9%	700	700	0.0%	525	525	0.0%	75.0%
France	27,242	40,815	49.8%	7,557	11,320	49.8%	4,015	6,014	49.8%	53.1%
Germany	14,344	19,480	35.8%	9,594	12,980	35.3%	7,675	10,383	35.3%	80.0%
Ireland	695	740	6.5%	391	415	6.1%	170	180	5.9%	43.4%
Israel	1,900	2,120	11.6%	1,800	2,000	11.1%	1,200	1,300	8.3%	65.0%
Japan	20,386	21,603	6.0%	7,943	8,417	6.0%	5,957	6,312	6.0%	75.0%
Netherlands	5,255	5,965	13.5%	3,680	4,175	13.5%	2,390	2,715	13.6%	65.0%
Poland	860	1,060	23.3%	462	540	16.9%	197	255	29.4%	47.2%
Portugal	925	1363	47.4%	789	1225	55.3%	N/a	N/a	N/a	N/a
Spain	1,784	2,600	45.7%	870	1,240	42.5%	183	260	42.1%	21.0%
Sweden	2,531	2,781	9.9%	1,759	1,932	9.8%	1,424	1,563	9.8%	80.9%
Taiwan*	4,134	4,603	11.3%	1,860	1,971	6.0%	1,621	1,599	-1.4%	81.1%
Thailand	298	448.35	50.5%	283.1	403.52	42.5%	254.79	342.99	34.6%	85.0%

Computer Software (Values in \$ Millions)

* Computer Software and Services (CSP)

****Computer Software and Information Technologies (CSF)**

III. Best-Prospect Market Assessments

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

AUSTRIA

In 2003, total packaged software sales reached approximately \$1.24 billion, of which applications software represented \$618.5 million and systems infrastructure software represented \$326.8 million. In the same year, the value of IT Services totaled \$3.17 billon. Of this total, operations management services accounted for \$431.2 million; system implementation accounted for \$1.4 billion; support services were \$816.5 million; IT consulting was \$336.7 million; and training and education was \$182.2 million. In 2004, the software market grew by an estimated 4.6%, and the services market by about 7.1%. The forecast for 2005 is faster growth for software at 6.3% and steady growth for services at 7.2%.

Software is rapidly becoming a determining factor in the development of a country's economic potential. Global business activities by companies require complex, multilingual, multi-functional, disseminated software solutions. The software must be globally integrated and standardized, with interfaces to all possible available packages. Software solutions must consider local regulations and laws governing hardware produced and sold by different manufacturers. European standards will be developed

which will facilitate entry into larger markets for application software. New technologies, together with the larger markets they are introduced into, will stimulate demand for new applications in networks, optical storage, image processing, multimedia services and more. It is critical that software be "userfriendly", whether it is marketed to personal users, business professionals, or executives. It is vital that the software be "bug-free". For the Austrian market it should be written in German. The packaging of the software is important for retail sales and should also be in German

While Linux software stagnated in 2003, it will be competitive in the future with RISC based Unix systems. Hardware suppliers like Dell see good market potential for Linux in the low-end segment. IBM is the largest IT vendor in Austria, selling both equipment and services. There are approximately 50 additional U.S. IT firms selling their products and services in Austria. There is also strong competition from European and Asian suppliers in this market. Service providers in Austria can be expected increasingly to implement offshore services into their business models in order to be competitive. The events of September 11, 2001 have corporations rethinking security in all

aspects. The focus of IT security will shift from authentication, authorization, and administration the (3A's) to business continuity. Physical security and IT security will become part of a single whole. This will provide opportunities for suppliers of IT services and products, while creating challenges for CIOs and IT managers.

Best Products/Services

Demand for information security services and security software is rising significantly. Security technology is an important foundational element for many of the leading growth drivers in the IT market today, including web services and digital identity services.

Opportunities

The best opportunities for sales of U.S. software in Austria appear to be in the Internet systems engineering and applications consultancy, data bank and communications software/office automation, education, CASE, CIM and quality control. The primary end users are industry, financial services, public administration, trade, health, energy, production, distribution and electronic banking.

Resources

Web Resources: www.adv.at ADV – EDP Association www.ocg.at Austrian Computer Society www.arcs.ac.at Austrian Research Center Seibersdorf www.computer-buerosysteme.at Vienna Chamber of Commerce – Dept. ICT www.viw.at Information Industry Association www.austriapro.at Austrian National Competence Center for EDIFACT Development and Promotion www.ispa.at Society of Austrian Internet Service Providers Contact: Ingeborg Doblinger, Commercial Specialist, Commercial Service, Vienna, Austria E-mail: ingeborg.doblinger@mail.doc.gov

BRAZIL

Overview

Brazil has a large and diversified economy that offers US companies many opportunities to export their goods and services. As Brazil's largest single trading partner, the US enjoys a strong reputation in a variety of sectors. The computer software sector offers US companies an excellent opportunity to make money in Brazil.

Brazil Leading in Software Revenues in Latin America. Brazil will drive the market growth for corporate software in Latin America in 2005. In 2004 there was strong market growth in this sector that now paves the way for robust software demand in 2005. Brazilian companies are expected to spend \$22 billion this year on information technology (IT), a 5% increase over 2004. As the largest and most dynamic IT market in Latin America, Brazil offers significant opportunities for US suppliers of IT products and services. Brazilians have a high regard and strong preference for US technologies and will buy from US companies that can offer competitive prices.

Brazilian firms will spend 28% of their IT budgets on hardware, 35% on software and outsourcing, and the remainder on items and services such as voice and data transmission. A notable tendency will be convergence of voice and data networks, such as IP virtual private networks (VPNs), which will require investment in greater bandwidth.

Nearly \$5.5 billion is expected to be used to contract IT services, a 10% increase compared to 2004. IT services will account for the largest share in technological investments, as acquisitions of infrastructure, software, and hardware have to a great extent already been made in the 2000-2003 period. As the trend towards outsourcing technological services continues, Brazil offers the most attractive market in Latin America for multinationals looking to centralize mechanical back office functions into regional service centers. Regionally, in comparison with other Latin America countries, Brazil showed the most signs of improved IT spending in 2004.

Network security will also be a strong component of IT spending this year, but is primarily restricted to installation of firewalls rather than more complex security strategies. Companies are selecting solutions according to price and quality, rather than deciding because of the brand name or because of an existing relationship with a vendor. Brazil's wireless market is another important IT segment and is growing faster than the US market. This segment may emerge as one of the world's most important markets for wireless security technology.

The concept of buying and selling over a cell phone may represent an attractive prospect for US exporters to Brazil. Online shoppers in Brazil spent \$420 million in 2003, up 40% from 2002. The growth was driven by an increase in the average amount of each transaction, which totaled \$110 in 2003 compared to \$80 in 2002.

Open Source Gaining Favor in Brazil. Recently, city, state and federal government procurement offices have been debating in Brazil a possible preference for "open-source" software (known as Software Livre in Brazil). Several bills have been introduced in the Brazilian Congress requiring federal agencies to acquire and use free, unrestricted open-source systems. Some state and local governments in Brazil have either enacted or are debating laws that call for open-source systems. Brazil's software industry is concerned with this direction, noting with some justification that an official government stance against paying for software might prejudice the domestic industry's basic licensing business model. The US Government is following the opensource movement closely, as some US providers of licensed software have expressed concern that the Government of Brazil will effectively apply pressure on its agencies to decide in favor of freeware. At the same time, to the extent that government agencies do adopt opensource solutions, there will be considerable opportunities for US providers to seek service contracts in order to maintain an orderly version development process and support.

US Software Industry is Competitive.

Industry experts predict total software sales in excess of \$9.4 billion in Brazil during 2005. Of this amount, \$7.7 billion will be sales of imported products, of which almost 70% are from the US. The role of the US as the primary source of software for Brazil paves the way for US suppliers to introduce new products to this market, since demand is high and acceptance is well demonstrated.

Although Brazil's domestic software industry is well developed, particularly in the financial services segment, most Brazilian software companies have not had success exporting their products. In part this may be due to the fact that the Brazilian market is relatively large, and protected to a certain extent by import tariffs and duties. In any event, the Government of Brazil has an ambitious plan to increase software exports ten fold, to \$2 billion annually. This goal assumes the world demand for software will triple over the next 5 years, to \$900 billion annually. Certification is another concern. The Brazilian subsidiary of USbased EDS is the only company that has earned the CMM. Level 4 certification in Brazil. Three other companies have earned Level 3 certification, but they are all US subsidiaries (Motorola, IBM, and Xerox). Twelve Brazilian companies have earned Level 2 certification. Brazil's performance stands in stark contrast to India's, where two thirds of the world's Level 5 companies are based.

As a result, Brazil's software market is in an unusual position. With revenues of over \$5 billion, it is the world's 7th largest producer of software – but since only 4% of those revenues are earned through exports, it is not seen as globally competitive. US companies with higher levels of certification and proven export sales to other countries may thus be able to argue that they are more reliable suppliers for Brazilian companies who themselves are seeking to become more globally competitive.

But Software Piracy is Widespread.

US software manufacturers should be aware of the fact that severe software piracy problems exist in Brazil. Illegal copies of software from Southeast Asia enter Brazil through Paraguay or are made domestically, and are widely and publicly available in practically every large city. The Business Software Alliance estimated recently that 55% of all software used in Brazil is pirated, with an estimated \$519 million in resulting losses for software suppliers in 2003. The Government of Brazil has recently publicized stricter penalties, but the industry has called attention to lack of enforcement and judicial delays in sentencing for violations of laws already on the books

Resources

For more information about export opportunities in this sector contact US Commercial Service Industry Specialist Genard Burity at: genard.burity@mail.doc.gov
Business Software Alliance: www.bsa.org/

BULGARIA

Overview

U.S. software products are extremely well accepted for their high quality and innovative solutions. The products of major U.S. suppliers such as Microsoft, Oracle, Informix, Novell, and Sun Microsystems are well established and are extremely competitive. Several of the large banks have increased their software spending as well as the mobile operators. The development of the Bulgarian software market largely depends on government action (legislation and enforcement) with regard to the protection of intellectual

property. Bulgaria offers good market conditions for U.S. software products. However, a major inhibitor for software companies is software piracy. In Bulgaria, there is a good legal basis for protecting intellectual property, but enforcement of IPR law needs improvement. There are no market barriers on the import of U.S. software products and there are no customs duties on the import of software. A Value-Added Tax (VAT) of 20% is applied on all goods sold in Bulgaria, both produced domestically or imported. There is no requirement that the end-user manuals of software products must be printed in Bulgarian. The most important competitive factors in the Bulgarian computer software market are quality, price and financing terms. Having a good local partner for marketing of products is another critical competitive factor. U.S. software firms are beginning to invest in training of their customers and local partner in order to encourage quicker adoption of their products.

Best Products/Services

Promising sub-sectors include application software, networking software, electronic design automation, CAD/CAM, computer aided engineering (CAE), Internet software, software products which support Wireless Application Protocol (WAP), e-business management solutions, enterprise planning, software for web-design and banking software.

Opportunities

Opportunities for providing software in the following industries: education; egovernment; construction; entertainment; finance; banking; freight forwarding; healthcare; insurance; pharmaceuticals; telecommunications and tourism.

Resources

Bulgarian Association of Information Technologies www.bait.bg BASSCOM www.basscom.org CS contact: Stanislava.Dimitrova@mail.doc.gov

CANADA

Overview

The Canadian computer software market is estimated to be worth \$5.1 billion in 2004, growing at an average annual real rate of 1.3% over 2003. Growth in this segment is not huge, but is solid, and is driven by pent-up demand. Canada's software market is largely satisfied by imports, 76% of which originate in the United States. The software market in Canada is an important segment of Canada's ICT sector, and will grow as new platforms emerge in a transitional market. Shrinking margins, technical parity among vendors, and growing interest in open source are factors driving vendors to deeper partnerships with each other. U.S. companies continue to be the dominant suppliers of computer software to Canada. However, Canada's indigenous computer software industry, benefiting from the lowest manufacturing costs in the G-7, has developed strong companies that have achieved international recognition as market leaders in their respective product niches, including: data and document management; network management; customer relationship management (CRM); digital media; and middleware.

Canadian organizations are still spending on software applications that show a

tangible ROI and that are essential to the core operational competencies. Those who are buying are looking to maintain what is installed and are looking at integrated and managed solutions. Software applications that integrate front and back office functions to merge the value-creation side of the business with the value-counting side of the business are in demand, as are programs that align operations with customers' buying habits. Specifically, applications such as CRM, enterprise resource planning, content management, website development, and maintenance applications that help reduce costs have good sales prospects. Financial services, healthcare and life sciences, the consumer products industry and the SMB (small-to-medium-sized business) are going to offer the greatest opportunities for U.S. suppliers. 3/15/2005

Best Products/Services

852431-99- Software on recorded media

Resources

www.itac.ca www.cata.ca www.cio.gov.on.ca/scripts/index_.asp For more information, please contact viktoria.palfi@mail.doc.gov

CHILE

Overview

The purchase of computer software is rising along with the overall growth in the economy. Small enterprises are important potential customers since they account for some 40% of software purchases done in the country.

Best Products/Services

There are good opportunities for software products aimed at small and medium-sized companies. The most common programs purchased by such companies are data processing programs, navigators, and email systems. IT and software application services, especially development and implementation of solutions for industrial production processes.

Resources

Chilean Association of Information Technology Companies: www.acti.cl Chilean Software Distribution Association: www.ads.cl For more information, contact Patricia Jaramillo of the U.S. Commercial Service Santiago at patricia.jaramillo@mail.doc.gov.

CHINA

Best Products/Services

China's software industry, with the considerable aid of government incentive programs, has entered into period of steady growth after more than 10 years of slow development. In 2004, sales of all types of software and software systems reached \$25.4 billion, an increase of 28%. Software and system integration sales revenue reached \$19.7 billion while exports reached \$251 million. Although China has many software enterprises, Chinese software firms only account for 2.6% of the global software market. Within China, foreign software still dominates the Chinese market and should continue to realize strong sales potential, especially in the high-end software market.

Further investment of IT infrastructure in finance, telecommunication, banking,

education, medical, construction, media, communication, and traditional manufacturing entities will provide market opportunities for foreign and domestic software companies. Application software and customized software are the best prospects in this field. High-end products such as database management systems, systems management software, networking security software, and industry application software are the fasted growing prospects for foreign firms selling into the China market.

Competition in China's software market is fierce. Foreign vendors accounted for 65% of China's total software market. The top four foreign software companies are Microsoft, IBM, Oracle, and Sybase, while the top three domestic software companies are China National Software Service Corporation, China Neusoft, and China Ufsoft.

China's accession to the WTO is also driving growth in the IT and software market. Starting from 2003, software import tariffs were eliminated. The Chinese government issued a number of policies ranging from export incentives to value-added tax rebates to financial assistance to companies; it also addressed intellectual property rights protection. One major development was the promulgation of the Chinese Government Procurement Law, which mandates that all Chinese government entities (not including State-Owned Enterprises) procure domestically produced products whenever commercially available. With respect to software, these regulations are still under draft: of particular ambiguity is what constitutes "domestic" product.

Resources

U.S. Commercial Service Contact Information in China **Beijing Office:** Tel: (86-10)8529-6655 Fax: (86-10)8529-6558/9 Cameron Werker Xi Xianmin Cao Shujuan Wang Jianhhong **Shanghai Office:** Tel: (86-21)6279-7930x: (86-21)6279-7639 Darrel Ching Lisa Tang Chen Yuchien **Guangzhou Office:** Tel: (86-20)8667-4011 Fax: (86-20)8666-6409 Kent Guo Sophie Xiao **Chengdu Office:** Tel: (86-28)8558-3992 Fax: (86-28)8558-3991 Lin Liping **Shenyang Office:** Tel: (86-24)2322-1198x8142 Fax: (86-24)2322-2206 Liu Yang

COLOMBIA

Overview

The Colombian imported software market is estimated to have an annual value of \$260 million. Despite the fact that piracy is one of the biggest problems that Colombian software industry faces, the National Office of Authors' Copyrights has reinforced its efforts to prevent it. These actions are based on Colombian legislation, which demands that companies present the software licenses that they use in their accounting reports.

The growth of PC software has been boosted by the constant growth of microcomputer sales, which can be used as an indicator to project the market for PC software applications. The price of software for medium and large machines also includes high service costs. As a result, it is difficult to separate services from software, since the same software publishers sell the software, the installation, set up and equipment integration, and the customizing of the product. An important characteristic of the computer sector in Colombia is the continuous change in market share (in units and dollars) within the computer, peripherals, and software categories. The Colombian market is composed mainly of PCs, networks, laptops and handheld computers. Although microcomputer sales represented only 10% of the market a few years ago, they now represent more than 32%, followed by peripherals at 25% and software at 20%. Related hardware (including servers) represented 10%; networking products, 8%; and maintenance services, 5%. By the end of 2004, it is estimated that the number of computers in use in Colombia will exceed 3.5 million units.

Best Products/Services

The software packages that will continue to be in the highest demand in Colombia are those for customer relationship management (CRM), supply chain management (SCM), business intelligence (BI), database management, electronic document management (EDM), and enterprise resources planning (ERP). Both public and private sectors have engaged in a large number of ongoing modernization programs with a great need for software applications and computers to interconnect servers as well as to integrate front and back offices. Currently, the major markets for software applications are telecommunications, energy, transportation, agribusiness, education, financial services, industry, and healthcare.

Opportunities

The Colombian software and computer industry is a strong market for U.S. firms because of its importance to the Colombian economy, the large number of industries the sector can serve, the interest in these sectors to keep up-todate with the technical developments in the sector, and the significant number of executives that attend the most important international software and computer events. As the fourth most dynamic information technology (IT) market in Latin America, Colombia offers significant opportunities for U.S. suppliers of software and computer products and services.

Resources

CS Bogotá contact: Adriana Ariza, Commercial Assistant (adriana.ariza@mail.doc.gov)

DENMARK

Overview

Denmark is a highly computerized society with a large and steady demand for state-of the art software and IT products. The total market reached \$30 billion in 2003, and the market is estimated to increase slowly during 2004 and 2005. Local software producers are quite successful, but are often lacking the resources necessary for continued growth on their own. They are, therefore, increasingly entering into strategic alliances with foreign system vendors, most often from the United States. A recent example is the Danishbased software manufacturer Navision, which in May 2002 was purchased by Microsoft for almost \$1.75 billion. Thus, neither local production nor third country suppliers appear likely to threaten the dominant position that U.S.brand software has in this market.

Both the import and export of IT products have only increased slightly over the last year, but over a five-year period, there has been a steep increase. More IT products have continually been imported than exported. The import of IT products rose from \$4.5 billion in 1996 to \$8.2 billion in 2003. corresponding to an increase of more than 80%. The total export of IT products was less extensive than imports: in 1996, \$3.0 billion of IT products were exported, rising to \$ 6.4 billion in 2003. New-to-market companies will face serious competition from long-established U.S. companies. In a market with few independent importing agents and distributors, newto-market companies should be prepared to establish a wholly owned subsidiary or sales office in-country.

Best Products/Services

The Danish ICT sector is structured towards a service market rather than a production market. The worldwide downturn in the ICT market is now leveling off for Danish companies and since September 2003, there has been a positive development in the market. A new market analysis of the IT sector by the Danish IT Trade Association predicts even better times ahead with increased orders, growing production and new jobs as a final proof that the industry is coming out of its slump.

Opportunities

Outsourcing of IT functions and software development in the public and private sector is a big growth area. The Danish market for IT outsourcing is DKK 6.7 billion in 2003 and is expected to grow to DKK 7.6 billion in 2004. According to a recent survey, more than 50% of the existing IT outsourcing agreements in the public and private sector are due for renegotiation during the coming years. The contracts are expected to be worth \$500 million, although the majority is expected to keep their existing suppliers.

Resources

The Danish IT Association - www.itb.dk More information, please contact Bjarke Frederiksen, Senior Commercial Specialist

FINLAND

Overview

The software industry is one of Finland's most prominent industry sectors. The industry - along with software entrepreneurship - has grown rapidly since the early 1990s. Presently, there are more than 3,000 software companies in Finland, the majority of which are start-ups or in early growth stages. Their business ranges from infrastructure software and data security solutions to various Internet and wireless applications, with strong technology forming the basis for innovative products. An increasing number of Finnish software companies seek to expand their operations to global markets and welcome contacts from U.S. companies. The United States is the number one supplier of standard, noncustomized application software.

Competition for new-to-market computer software companies is strong and comes from previously established U.S. companies, such as Microsoft, Novell etc.

The Finnish software industry is characterized by the following trends: *Expanding focus and application areas beyond traditional ICT software market (convergence) *Fast-growing number of new start-up software companies *Increasing role of Web-related software *Fast-growing role of embedded software *Increase in software exports *Consolidation of the software industry (mergers, acquisitions) *Increase of mobile software More than two out of three Finnish software companies develop and produce traditional ICT software. The international software vendors have, however, rapidly increased their shares in the Finnish market. This trend is expected to continue in the next five vears.

In addition, Finnish companies have increased their activities in system and tools software segments. Examples of these kinds of products are Web-related infrastructure software packages and security software. Growth in these sectors is fueled by exports. It is estimated that there are about 1,100 companies providing their own software products in Finland and another 100 with products in development or pilot phase.

Best Products/Services

The security sector is growing and although competitive, the market offers opportunities for high quality products. The Finnish market is small, and large companies are few in number - and they tend to have established software systems. Therefore, the software market opportunities for U.S. companies are mostly within the SME market. Finland has expertise in developing computer software products and is looking for U.S. partners who can provide funding.

Opportunities

Please see the Supplement to the European Union Official Journal http://ted.publications.eu.int/official/ www.e-finland.fi (E-business projects) Due to changes in recent years in Russia and the Baltic countries, Finland also serves as an excellent gateway to these emerging markets

Resources

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

FRANCE

Overview

After two years of recession, the French market for software and services, expressed in euro currency, marked a recovery in 2004, which translated into a modest growth of 3% in euro currency, while in \$ it shows significant growth due to depreciation of \$ vis-à-vis the Euro. This trend is expected to continue throughout 2005, with a surge in demand for consulting and systems integration (+2%) but especially with a significant anticipated growth in facilities management and third-party maintenance of applications (TMA). Estimated at \$50 billion, the French IT market ranks third in Europe after Germany and the United Kingdom, with 17% of Europe's overall IT market.

France is also the leading European nation in IT software and services, with \$36 billion in sales in 2003. Over 6,000 French firms specialize in software services, 2,000 of which count 10 employees or more. Key activities in this market are engineering and integration (23%); software development and technical assistance (22%); packaged software (21%); facilities management and on-line services (20%); consulting services (8%); training services (3%); and third-party maintenance (3%). The 10 largest software services firms in France are: IBM (\$2.81 billion); Capgemini (\$1.62 billion); Atos Origin (\$1.60 billion); Microsoft (\$1.39 billion); HP (\$889 million); Accenture (\$796 million); Altran (\$736 million); Sun (\$647 million); Econocom (\$581 million); and EDS (\$565 million).

Packaged software is sought by organizations as a cheaper alternative to customized solutions. The French packaged software market is valued at \$7.9 billion. It is anticipated to grow at a rate of 5% until 2007. The 10 largest packaged software firms in France are: Microsoft (\$1.078 billion); IBM Software Group (\$600 million); Oracle (\$262 million); SAP (\$234 million); Alcatel Services (\$155 million); Sage (\$115 million); Computer Associates (85.6 million); Dassault Systèmes (80.3 million); CCMX (\$68.7 million); and GFI Informatique (\$65.5 million).

Best Products/Services

Sectors for which an increase in demand can be anticipated include:

Management consulting in IT systems (+2%) Engineering services (+2%) Facilities management and Third-Party Maintenance of Applications (TMA) (+8%) Packaged software (+5%) especially Integrated Management Software and PLM solutions, expected to grow respectively by 5.7% and 7.5% each year until 2008.

Opportunities

The year 2004 has triggered a new cycle of investments that support innovating projects. Further, increased accessibility to high Internet bandwidth and wireless solutions should further the need for systems integration, especially in the field of E-commerce, which is anticipated to grow by 50.2% each year until 2007. Promising opportunities are therefore available to American firms seeking to export to France, especially for those that provide packaged software as U.S. firms already control 70% of this market.

Resources

International Data Corporation (IDC) [http://www.idc.fr] Pierre Audoin Consultants (PAC) [http://www.pac-online.fr]

GERMANY

The German market for software is the largest in Europe and ranks second in the world, after the United States. Due to lingering economic weakness, which had a negative impact on software spending, the software market decreased slightly by 0.3% (in EUR figures). It is anticipated however, that the market will pick up again in 2004 and 2005, with expected growth of about 3-5%. The economic recovery as well as the

backlog in IT modernization are seen as the driving factors to prompt companies and institutions to invest again into software solutions. Analysts estimate that approximately 80% of software products sold in Germany are imported, mainly from the United States (the majority of the large U.S. software developers have subsidiaries in Germany.)

There are no trade barriers obstructing sales of U.S. software. Industry- specific and niche products will continue to find good sales opportunities in Germany. However, as the European Union continues to expand as a single market, U.S. vendors will also meet growing competition from other European software vendors in the German software market.

Best Products/Services

IT-security, Integrated Enterprise Applications to streamline back- and front-office operations; increasing investments in e-business applications and other enterprise applications such as Customer Relationship Management (CRM) technologies, Supply Chain Management Software; as well as Document Management Software (even though the ERP/DMS market is dominated by local vendors.) As companies focus on efficient business processes, there is a higher willingness to invest in cost reducing equipment such as DMS.

Opportunities

The following industries are expected to undertake major investments for software products (due to the need to standardize and optimize business processes as well as to implement ITsecurity features): the public sector, the banking and insurance sector and the medical sector, although these areas are difficult to penetrate by new to market companies. Public tenders: www.bundesausschreibungsblatt.de, www.subreport.de

Resources

German Government Agencies: BSI (Federal Agency for IT Security): www.bsi.de **Trade Fairs:** CeBIT: www.CeBIT.de Systems: www.systems.de **Trade Associations:** www.bitkom.org www.eito.com **Trade Publications:** www.computerwoche.de www.informationweek.de www.computerpartner.de www.crn-online.de **Commercial Service Contact:** doris.groot@mail.doc.gov

IRELAND

Overview

The Irish software market is one of Ireland's fastest growing business sectors with annual growth rates of 10% in recent years. Overall, the market is more fragmented than the computer hardware sector, and the applications software segment is very fragmented. The Irish software industry is comprised of 840 firms employing over 30,000 people. It is an exported-oriented industry with over 90% of domestic production sold abroad. While Ireland is ranked as one of the largest exporters of software worldwide, some 60% of Irish software exports actually originate from U.S. subsidiaries.

Best Products/Services

The 140 multinational software companies located in Ireland employ 15,000 people and use their operations to carry out a broad range of activities including core software development, eLearning, product customization, software testing, and fulfillment. Software development has a range of applications in mobile communications, electronics, engineering, enterprise resource planning, database management, B2B solutions, banking, insurance solutions and Internet security systems. The top 10 independent software companies in the world have significant operations in Ireland. U.S. firms account for much of this investment, and more than 30 U.S. software companies have operations in Ireland. Consultancy services and systems integration companies use Ireland as a base to support international business clients in design, development, customization and implementation of total-business systems and products. An increasing number of companies are also providing technical support to customers worldwide via toll-free support centers located in Ireland.

Opportunities

The indigenous software sector (700 firms) is largely concentrated around the following niche segments: (1) telecom/internet software, (2) financial/training/healthcare software, and (3) digital media and eLearning. The success of these companies is based on the following common characteristics. First, the companies build their business around a product offering rather than services. Second, export markets are a priority as Ireland is a small market. Third, the market targeted is typically a niche (or vertical) market free from the major multinational players. Fourth, there is an emphasis on quality processes and products, and a significant percentage of Irish companies have quality certification. Finally, attention is paid to the management of the business. The combination of these characteristics has played a major part in the emergence of an indigenous software industry and a number of companies are leading their markets with innovative middleware and Internet solutions.

U.S. software SME's seeking to penetrate the lucrative European software market should consider entering into joint venture/licensing agreements with Irish firms who have the experience of exporting to EU markets. Local software firms engaging in exporting are interested in matching up with U.S. software firms.

Resources

http://www.ictireland.ie/ http://www.ibec.ie/ibec/internet.nsf/Loo kupPageLink/ISAWebsite

ISRAEL

Overview

Israel has been known as the second Silicon Valley, and for good reason. The Israeli high-tech industry has been developing and reaching new peaks each year, both in technological achievements and in sales. The global hi-tech crisis has had a negative influence on local production and development of existing start-ups in this industry. Still, software ingenuity has ranked Israel second in the world after the United States in the number of technological start-ups. Israel is rated as the second foreign country with the most listings on the NASDAQ stock exchange market in New York (after Canada). A high percentage of imports come from the United States, still, local production is well developed and technologically advanced, U.S. companies face serious competition by domestic firms. Much of local production is for export.

Israel attracted a great deal of attention from global tech leaders, companies including HP, IBM, Microsoft and Oracle have established operations and manufacturing centers in the country. U.S.- made software is well accepted in Israel and is able to hold multi-million dollar deals between U.S. and Israeli software companies. The country's hightech market includes some 3,000 software houses, an estimated 1,000 start-ups, and more than 200 projects under development in government funded incubators. After the United States, Israel has the largest number of start-up companies (relative to population) in the world.

Best Products/Services

Israeli software companies develop and manufacture a wide variety of software solutions; communications, security and Internet lead the local market. One entry chance to the Israeli market is through a joint venture with an Israeli company. Funding for such projects is available from the Bi-national Industrial Research and Development Foundation (BIRD). The U.S. and Israel established BIRD in 1977 to fund joint U.S.- Israeli nondefense technological development from which both the Israeli and American companies can benefit.

Opportunities

Significant opportunities exist in network security such as identification/authentication,

authorization, privacy and anti-virus solutions. Also in Internet, multimedia, financial and data processing software. The U.S. Commercial Service offices in Egypt, Israel, Jordan, Lebanon, Morocco, Turkey and West Bank/Gaza offer U.S. companies The Access Eastern Mediterranean (AEM) Program, an innovative regional export promotion program that provides easier access to these markets of 180 million buyers. By taking advantage of this program, U.S. exporters enjoy the opportunity to explore market opportunities in all AEM markets via a single, unified service. Visit the AEM website for Country Market Briefs, program features, past AEM programs and highlights, and online registration

Resources

Government Offices Foreign Trade Administration Industry Cooperation Authority (ICA) Investment Promotion Center The Israeli Investment Center (IIC) The Office of the Chief Scientist (OCS) National Institutes Israel Export & International Cooperation Institute. Professional Organizations Israel Science and Technology Homepage Manufacturer's Association of Israel The Israel Association of Software Houses

JAPAN

Overview

Japan's software business has been growing steadily as Japan's investment in IT has shifted from hardware and network infrastructure to software and services. By industry sector, manufacturing, finance, information services, and government procurement are currently the major buying segments. In fact, these four segments together currently account for over 60% of total market revenue. The Japanese software market is heavily dependent on imports and the majority of imported software in Japan is of U.S. origin. Some non-Japanese software companies, including major U.S. so software companies, have established the de facto standards for Japan in certain software categories, such as Microsoft's OS and Oracle's database.

Best Products/Services

Enterprise Resource Planning (ERP), Data Warehouse (DWH), System Management, Supply Chain Management (SCM), and security software and other software products that utilize improved hardware and network infrastructure.

Opportunities

For U.S. exporters, the Japanese software market is attractive in terms of the size and demand for quality software imports. This trend should continue as the Japanese software industry historically struggles with increasing development costs and a lack of skilled engineers. There are three key elements to launching software products into the Japanese market: (1) localization localization includes Japanese translation, testing, and customization. Software suppliers are required to provide not only translations but to consider Japanese business customs and culture to meet local client needs; (2) support capability – Japanese language support is mandatory; and (3) product quality — quality control is one of the most important considerations for Japanese users.

Resources

CS Japan Contact: Toshihiro Matsuda (Tokyo) Toshihiro.Matsuda@mail.doc.gov

NETHERLANDS

Overview

The software market, estimated at about \$5.6 billion in 2003 continued to be the fastest growing sector within the Information Technology sector. Approximately 65-70% of software products available in the Netherlands are imported. U.S. companies are the largest suppliers (e.g. Microsoft and other multinational software producers) followed by European software producers in Germany, the United Kingdom and France. Windows is the standard in the business market, although government and business are starting to use Linux as well. While UNIX is still the most commonly used operating system for servers, Linux's market share is estimated at 15-20% and has now started to grow in importance. The Dutch government has announced a special program to promote the use of Open Standards and Open Source Software within the government. The government and financial sectors traditionally have been major end-users of all types of software products. The business market, with an increasing need to streamline business processes, has also been a significant user. More recently the SME market has begun to emerge as an attractive new market for ICT suppliers, while the consumer market has also grown rapidly in recent years due to increasing use of the Internet, games and online gaming.

Best Products/Services

All types of standard software applications, Internet and Intra- and Extranet software, networking software and network security products, development tools, storage management software, CRM and ERP products, application management and content management products, and game software for the consumer market.

Opportunities

The U.S. Mission to the European Union regularly reports major procurement opportunities in the ICT sector that are open to U.S. companies: http://www.buyusa.gov/europeanunion/e u tenders.html

Resources

The main ICT trade events in the Netherlands are held at either the RAI Exhibition Halls in Amsterdam, or in the Royal Netherlands Jaarbeurs in Utrecht. Tradeshows held at these exhibition sites are listed on their websites: www.rai.nl and www.jaarbeurs.nl.

Email address of local commercial specialist:

Carlanda.Hassoldt@mail.doc.gov Website U.S. Commercial Service, the Netherlands: www.BuyUSA.nl

POLAND

Overview.

In 2004, the Polish software market exceeded \$1 billion in size. It has picked up after two years of minimal growth and is expected to show two-digit growth for the next several years. Growth of computer software sales is directly related to increased investments in computer systems, especially growth in computer networking and enhanced functionality. Polish companies provide

approximately 60% of software sold, while U.S. companies hold over 25% of the total software market. The most popular business application software includes Enterprise Resource Planning (ERP), warehousing, document and content management and e-commerce. Poland has many skilled, well-educated software engineers and offers good investment incentives, thus becoming a popular location for placing offshore software development. Motorola, Philips, Oracle and, most recently, Hewlett-Packard have already decided to place their software development investments in Poland.

Best Products/Services

Software for networking and tools Security software Specialized business application software

Opportunities

The demand for IT products, including computer software, 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 and software for greater productivity. All projects financed from public funds are subject to public procurement tendering rules. 2/14/2005

Resources

Migut Media, the publisher of 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/ The Ministry of Science and Information Technology is in charge of setting standards for IT projects in the public sector http://www.mnii.gov.pl/ **Commercial Specialist** at the U.S. Commercial Service Warsaw, Poland: Maria.Kowalska@mail.doc.gov

PORTUGAL

Overview

Portuguese demand for computer software should present positive longterm prospects with the introduction of the latest generation of microcomputers, the development of telecommunications, the interconnection of heterogeneous systems and the creation of valuedadded networks. In 2004 the U.S. import share was 38%, but the estimated real market share for U.S. trademarks, some of which are bought from U.S. companies with branch offices in Portugal or imported from European subsidiaries, is about 75%. Five U.S. companies are among the 20 largest computer software companies in Portugal.

Best Products/Services

The most promising sub sectors within the sector, along with an estimated total market size of each sub sector at \$2 million is the following: - Business Software (applications for financial institutions, especially integrated financial systems) - Operative Software (manufacturing applications, CAD/CAM, production control and software for main frames) - Home Games and other Software

Opportunities

Portuguese demand for computer software, \$925 million in 2002, should continue to experience a high growth rate reaching a 21% annual average over the next three years. Some 79% of Portuguese demand is met by imports.

Resources

SPA -Software Publishers Association, BSA - Business Software Alliance, and the Portuguese Software Association (ASSOFT) provided import and export statistics for 2004. All other statistics are unofficial estimates.

RUSSIA

Overview

Russia represents a growing and dynamic market for IT industry suppliers. Industry sources estimated the IT market at \$5.8-7.1 billion in 2004. The rate of growth is strong, with recent figures showing an increase of 25% for 2004. This growth is due to a favorable economic situation and high demand in the government and corporate sector including oil and gas, metallurgy, finance and insurance, telecommunications and retail. Many major U.S. companies are already present in the market; and their products are available either directly or through representatives or distributors. The total number of computers in Russia exceeded 13 million in January 2004 with a penetration rate of 9%. It is estimated that by 2004 the number of Internet users will reach 15 million and in the following 7 years will grow to more than 35-40 million. The software market was estimated at \$1 billion in 2003 and is growing at an annual rate of 40%. The market is estimated at \$1.4 billion for 2004. The true demand for software, though, is difficult to determine due to the high level of pirated software. Industry sources estimate that up to 85% of all software is pirated. Russian law enforcement is beginning to become

more engaged in copyright enforcement, but this has not yet had a noticeable impact on the availability of pirate CDs, DVDs or computer software. In 2004 the market for outsourcing software services was estimated up to \$475 million. This market sector is maturing and new entrants will likely face serious competition from long established companies.

Best Products/Services

The main trends in 2004 were a sizable increase in government purchases, expansion to Russia's regions and strong growth in mobile office sales. Imports account for 13% of Russia's personal computer market, while peripherals, networking and larger system hardware are dominated by imports. 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.

Opportunities

The computer market is driven mainly by new investments by the federal government and its new IT concept adopted at the end of 2004. Computer hardware, personal peripherals, software and IT services are growing steadily and play an important role in the Russian-U.S. services trade because most hightech equipment is imported. Growth is expected to continue due to a favorable economic situation and high demand in the corporate and government sectors.

Resources

The Ministry of Information Technologies and Communications of the RF: http://english.minsvyaz.ru/enter.shtml

SLOVENIA

Overview

There are no concrete statistics or market data for the Information Technology sector in Slovenia. Information is based on the permanent work of the IT sector and estimates of IT businesspeople. The software market in Slovenia is estimated at \$70 million. The vast majority represents legal sales of major world software vendors. One fifth of the sum goes for applications software.

Copyright legislation is sufficient, but the critical issue is its slow enforcement. So-called gray imports of top PC software vendors infringe on the sales of legitimate vendors in the market. Imports and exports of hardware are very liberal. No customs duties are imposed on imports. The distribution pattern follows the usual model of distribution in the developed world and is left to the discretion of individual vendors. 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, many major IT contracts attract are won by American companies or their distributors.

SPAIN

Overview

The total market in Spain for Information Technology (IT) includes hardware, software and services, and represents 5% of the total European market and nearly 2% of the Spanish GDP. The Spanish IT market including software, hardware and services, has an estimated value of \$14.7 billion for 2004 and is now going through a period of lower growth rates and even negative figures in some of the sub sectors. Although overall IT sector growth was nearly flat in 2002, estimated levels for 2003 and 2004 again show positive growth trends (2.8% and 5% respectively).

The Spanish IT industry still maintains its strength, potential and significant opportunities for U.S. companies. The Spanish computer software market accounts for 18% of the Spanish IT market; this segment is expected to reach \$2.6 billion in 2004, an increase of 5.4% over 2003. The positive growth trend is expected to continue into 2005, with a projected increase of 7.3% over 2004. Systems software represents 60% of the Spanish IT market while applications software accounts for 40%. The software segment of IT offers opportunities for U.S. firms, specifically for those specializing in software for business integration and communications. Prospects for system software are found in software for databases, while prospects for applications software are found in multimedia software and vertical applications. Spain has a relatively high level of software piracy although enforcement is improving.

The software market in Spain is very closely connected to services, especially in software development and customtailored installations. Of the total IT market in Spain, the specific sector for computer services represents 37% of that respective market. The size of the computer services industry in Spain is expected to grow 9% between 2005 and 2004. The large increase in the computer services market in Spain results mainly from the increased sales of development and support services, consulting services, particularly in the areas of IT consulting, (10% growth between 2004 and 2005), and operations management (12.7% growth between 2004 and 2005).

Although the IT services market offers good potential, local firms or foreign subsidiaries in the local marketplace, provide most of the services. Industry estimates indicate that foreign firms (import of services) directly provided only 7% of the IT services. Official statistics indicate that 80% of IT products and services come from other European countries and only 7% from the U.S. Although most imports in the IT sector are of hardware, imported software represents 48% of total software sold in Spain. The software imported from the U.S. enters Spain through two different sources, either directly from the U.S., or through the European subsidiary of the U.S. firm. As of January 1, 2000, under the Information Technology Agreement, to which the EU is a signatory, there is no tariff on computer equipment and software sourced from the U.S. However, under the U.S.-Spain double taxation treaty, an 8% withholding tax applies to deliveries of U.S. software.

Best Products/Services

Best opportunities are found in the business/industry segment, primarily in software business applications, database software and sectorial packages. In the household market, there is also good potential for software associated with increased use of Internet and multimedia PCs.

Opportunities

Some opportunities may arise in the development of E-Government and in upgrading IT equipment in the different

levels of government (local, regional and national). Additionally, some regional governments are giving more opportunities to open source solutions and increasing the presence of this type of solution.

Web Resources

Commercial Service Spain: www.buyuysa.gov/spain ICT Trade Specialist for hardware and software: Emilio Arranz, emilio.arranz@mail.doc.gov Spanish Ministry of Industry and IT Society: www.min.es Spanish ICT Association: www.aetic.org Trade event: SIMO, the largest ICT Show in Spain: www.simo.ifema.es Data Protection Agency: www.agpd.es

SWEDEN

Overview

The Swedish software market is sophisticated with skilled domestic software development companies. Sales are around \$3.3 billion and are expected to see healthy growth in the next year, around 4.7%. The Swedish software market consists of global software development companies and small, innovative niche-oriented companies. There are around 700 software companies in Sweden, many of which specialize in systems software for communications, business systems (tax and accounting packages with local applications), and applications software for telecommunications. Security software is also a dominant segment among Swedish software developers. In the software segment, systems software had the strongest growth in 2003 with an estimated growth of almost 7% while application software grew by around 6%. It is forecast that systems

software will continue to grow stronger with applications software a close second.

The market for business support systems is dominated by SAP in large, private corporations. Swedish Hogia is the dominant supplier among small companies, and in the public sector Agresso has been the dominant supplier. Sales cycles are long, around 10 years, which makes it somewhat difficult for new players to enter this market. Companies in Sweden put rather a high priority on maintaining existing information technology systems and also investing for future needs in order to save money. They are eager to consider non-orthodox cost effective ways of purchasing software, e.g. downloading from the Internet or using freeware. U.S. products are well received in the Swedish market. As much as 70% of imported packaged software is of U.S. origin.

Best Products/Services

Network security applications CRM products SCM products 2/17/2005 Storage management applications Applications for e-procurement, e invoicing and self-billing Internet/Intranet products

Resources

Ministry of Industry, Employment and Communication http://www.industry.ministry.se Invest in Sweden Agency (ISA) http://www.isa.se ITSweden Information site on the Swedish ICT sector. http://www.itsweden.se U.S. Mission to the European Union, Foreign Commercial Service http://www.buyusa.gov/europeanunion/ Local Commercial Specialist: Gunilla LaRoche, gunilla.laroche@mail.doc.gov

TAIWAN

Overview

Taiwan's market relies heavily on imported software. U.S. computer service providers and software vendors have a strong reputation for performance and advanced functions with integrated solution capabilities. Success in Taiwan depends largely upon product localization into Chinese, business practice customization, and flexible pricing policies. U.S. market domination is expected to continue in the foreseeable future, despite increased competition from local and third-country suppliers.

Best Products/Services

Business application software, information security solutions, storage solutions, information system integration solutions, on-line learning/entertainment products/services, digital home and business intelligence-related applications are best products/services for 2005.

Opportunities

U.S. software manufacturers have the capability and experience for large scale and mission-critical utilization or applications such as ERP, SCM and CRM, especially in the high-tech manufacturing, banking and finance sectors. The demand for business application software by small-medium enterprises is increasing. Information security issues reinforce the demand for security-related software on the island. Demand for software data storage and business intelligence software is also increasing.

Mushrooming broadband utilization and the popularity of on-line games, on-line shopping, on-line learning and on-line music have stimulated demand for networking services. This will continue to grow, especially in the segments involving on-line business models. service structure and platforms, and solutions. The officially sponsored "Digital Taiwan" Project and mergers of financial holding companies require 3/11/2005 19 considerable integration for existing information systems, and this has stimulated the demand for related software and information services

Resources

Institute for Information Industry (III): http://www.iii.org.tw Industry Technology Research Institute (IRTI): http://www.itri.org.tw U.S. firms wishing to learn more about the CSV/CSF market are also encouraged to contact CS Taiwan, Jacy Huang, Commercial Specialist, at jacy.huang@mail.doc.gov or visit the website http://www.buyusa.gov/taiwan/en.

THAILAND

Overview

The outlook for the IT service market presented here is based on trade estimated and the Association of Thai Computer Industry's estimates. Continued growth in spending on package software and related maintenance and upgrades was seen throughout 2004, with the total market reaching \$448.35 million.

In 2004, application solutions remained the largest proportion of the software market with \$240 million, followed by application tools at \$128.6 million. Systems software/utilities accounted for the smallest portion with spending of \$8 million. In addition, software market investment was driven in all market segments by positive macro economic factors. This can be witnessed by a strong 33% growth rate for software revenue in 2004 over the 2003 level. The total value of the software market is projected to reach \$2.5 billion by 2009, with another \$1.5 billion in sales from animation, multimedia and mobile software.

Best Products/Services

As Thai enterprises and the government promote using IT heavily in order to increase capacity and efficiency, this will generate demand for software solutions in Thailand. Best prospects include:

- CRM Applications

- ERM Applications
- Security software
- System software
- Storage software

In addition, the Board of Investment (BoI) plans to extend tax incentives to manufacturers that modernize their operations to increase the output. These include modernization of equipment, hiring of consultants, human-resource development, software upgrades and improving internal linkage. This scheme will be submitted to the new cabinet for approval after the election in February 2005.

Business Software Alliance (BSA), an international organization promoting a safe and legal digital world, stated that in 2003 the software piracy rate in Thailand stood at 80% - meaning 80% of computers in the country use pirated software. According to this research, Thailand was ranked 13th among countries with the most piracy worldwide.

In 1994, Thailand's overall piracy level was 87%, however, the country has since made some progress and has succeeded in reducing the piracy rate to 80% in 2003. The government has and is continuing to work towards this goal with its efforts, including a number of raids on pirated software sellers and campaigns to educate the public on the importance of intellectual property rights.

Opportunities

In 2005, Thailand represents significant opportunities for U.S. software companies as there are many new banks emerging while many large enterprises, including telecommunications, retail, and airline firms are expanding their businesses. In addition, small-to medium sized enterprises are expected to be one of the key drivers in the rise of the software segment.

Resources

Internet:

www.reedtradex.co.th/bangkokictexpo/ Ministry of Information and Communication Technology Contact Person: Suwit Khunkitti Title: Minister of Information and Communication Technology TOT Corporation Public Company Limited Bld. 9 89/2 Moo 3 Chaengwatthana Road, Laksi Bangkok 10210 Tel: 662-568-2568 Fax: 662-568-2500

E-mail: pr@mict.go.th Website: www.mict.go.th Software Industry Promotion Agency (Public Organization) Contact person: Manoo Ordeedolchest Title: President Ministry of Information and Communication Technology TOT Corporation Public Company Limited Bld. 9, 11th Floor 89/2 Moo 3 Chaengwatthana Road, Laksi Bangkok 10210 Tel: 662-554-0400 Fax: 662-554-0403 E-mail: manoo or@sipa.or.th, manoo@inet.co.th Website: www.sipa.or.th Association of Thai Software Industry (ATSI) Contact person: Anukul Tamprasirt

Title: President 99/30 Moo4, 5th Floor, Software Park Building, Chaengwattana Rd., Pakred Nontaburi, 11120, Thailand Tel. 662-962-1348 Fax. 662-962-1349 E-mail: atsi9930@hotmail.com Website: www.atsi.or.th

TURKEY

Overview

Turkey's Information Technology market (IT) size is \$4.0 billion in 2004. This figure is expected to reach nearly \$4.850 billion by the end of 2005. With over 6 million personal computers in Turkey, pc sales still the main driver for gross sales. Total ICT (including telecom) market is estimated at \$12.5 billion.

E-signature applications are expected to be the next step in Turkish IT circles. The law had passed in 2003 and firms are just catching up with the implementations of e-signature. The usage is extremely low and the general public does not have a basic understanding of the issue. Estimates are that e-signature users will reach 8 million in five years. Implementations of e-signature range widely from selling and buying property, signing leases and contracts using e-signature. 2005 is expected to be a launch year for the public awareness of the e-signature. US firms who have specialized in esignature applications may wish to enter the market in 2005.

Best Products/Services

Wireless equipment ADSL modems small home / business routers Network security appliances Professional custom tailored software Digital cameras, accessories Portable data storage Cell Phone accessories

Opportunities

The Government of Turkey (GOT) will be looking to continue developing Epublic administration hardware and software systems, which would include the Prime Ministry's goal of increasing WAN/LAN networks to local and regional government offices and facilities in rural Turkey, upgrading computers in schools, and significantly increasing the IT infrastructure used by the federal, regional and local governments. Some estimates put Egovernment in the range of \$6 to \$8 billion in needed investment.

Resources Turkish Data-Processing Industrialists' Association www.tubisad.org.tr

UKRAINE

Overview

A more legitimate and transparent market for computer software is slowly taking shape in Ukraine. Enforcement of IPR legislation as well as steady growth of the Ukrainian economy in 2000-2004, and resurrection of local manufacturing industries have generated a substantial increase in demand for computer software for industrial and business needs.

The exact size of the Ukrainian computer software market is difficult to measure, because both major sub sectors of the computer software market: imported software and software development feel a severe impact of the shadow economy. Imported software dominates on the office software market and on the market of software solutions for government, businesses and industry. Market research conducted by GfKUSM Company shows that operating systems, office applications, archives, anti virus packages, and accounting programs are the sales leaders.

Windows and Microsoft's Office programs are currently the most widely used office software in Ukraine. This software is installed on approximately 98% of all PCs operating in the country. Some industry experts estimate that up to 90% of the office software is illegal. Illegal imports of pirated office software, illegal use of software licenses and domestic pirate industry production have a severe impact on the size of the legitimate software market. However, most U.S. and international suppliers of software reported strong sales growth (24-53%) in 2004. It is especially significant that there is a very strong and growing demand for U.S. made sophisticated security software. These successes of software suppliers would be even more impressive if not for obstacles created by complicated and controversial Ukrainian licensing procedures and customs regulations.

Computer software services also play an increasingly important role. According to GfKUSM data 24.8% of computerized entities outsource automation solutions and 38.2% of entities use technical support services.

Ukraine is slowly emerging as a low cost site for high quality software development. Unofficial estimates indicate that this industry employs 25,000 certified programmers and many more specialists of different backgrounds and qualifications. Industry experts believe that computer software development accounts for 10-30% of IT market revenues. This means \$150-300 million in monetary terms. Industry insiders disagree on the ratio between software development for domestic needs and for exports (including outsourcing). Some experts believe that this ratio is 70/30%. The others feel that 40/60% is more realistic. However, all experts agree that software exports grow better than the domestic market. Experts believe that export sales of software are between \$70 million and \$200 million. Average annual export sales for forty leading software-developing firms vary from \$315,000 to \$6 million per company. The total number of software developing firms is 1,030. Almost 300 companies specialize in offshore outsourcing development projects. Company staff varies from 10 to 380 employees.

2/8/2005

Best Products/Services

Operating systems, office applications, archives, anti virus packages, accounting programs

Resources

Association IT Ukraine
 www.itukraine.org.ua
 Ukrainian Association of Software
 Developers www.uaswd.org.ua

3. Euroindex, leading organizer of IT trade shows in Ukraine -

http://www.euroindex.com.ua/index.php ?m=1&lng=e

4. Leading IT publications and catalogs - http://www.itcpublishing.com/ua/?lang= en

5. Association of Computer Clubs - http://www.uacc.org.ua/en

IV. 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. Computer Software, use industry search terms relating to Computer, Software, Information technologies and the like.

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)

V. Available Market Research

Computer Software

The reports listed below provide more detailed information about the market for the **Computer Software** 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, or can be obtained in print or on disk for \$25.00 from:

CENTER FOR INTERNATIONAL TRADE DEVELOPMENT

13430 Hawthorne Blvd, Hawthorne, California 90250 USA Phone: (310) 973-3173 Fax: (310) 973-3132 E-mail: **mkogon@elcamino.edu**

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Storage/Back-up Market Overview - 2005	Argentina	9/7/2005
Promotion of the Software Industry	Argentina	6/1/2005
Brazilian IT sales to rise 9% in 2005	Brazil	9/20/2005
State of Sao Paulo to Spend \$8million to Digitalize Documents	Brazil	9/16/2005
Software Application for the Telecommunication Industry	Brazil	5/18/2005
Software Application for the Distance Learning Industry	Brazil	5/18/2005
Software Application for the Healthcare Industry	Brazil	5/18/2005
Brazilian Government Expanding GESAC Program	Brazil	3/18/2005
Brazil attempting to be the leading software producer in the world	Brazil	10/1/2004
Business Intelligent Tools	Canada	8/12/2005
An Analysis of the Canadian IT Market	Canada	7/21/2005
IT in Canadian Financial Services	Canada	7/20/2005
Call Center Hardware and Software Demand Growing	Canada	3/22/2005
IT Market Opportunities in Canada	Canada	3/10/2005
Knowledge Management Tools	Canada	4/6/2004
Computer Hardware, Software and Services Industry	Chile	9/30/2005
Radio Frequency Identification (RFID) in China	China	7/25/2005
Software Industry 2003	China	2/5/2004
IT Distribution in China	China;Hong Kong	6/22/2005
Telecommunications and IT services market in Croatia	Croatia	5/17/2005
Computer Software in Ecuador	Ecuador	9/30/2005
Document Management Software	Germany	8/17/2005
Security Software	Germany	1/27/2005
Information Security Solutions	Hong Kong	5/26/2003
Networked Storage Systems	Hong Kong	5/26/2003

ICT Sector Report Hungary	Hungary	8/9/2005
Computer Software (Packaged)	India	6/30/2005
An Overview of the ICT Market in Ireland	Ireland	2/9/2005
The Israeli Market for Information and Communications Technologies	Israel	2/14/2005
Digitization of Medical Services in Japan	Japan	7/5/2005
IT Sector Market Research	Jordan	5/3/2005
Information and Communication Technologies (ICT) Overview in Kazakhstan	Kazakhstan	6/17/2005
Software: Retention and Double Taxation	Mexico	8/2/2005
Mediterranean Market for Information and Communications Technologies	Middle East*	3/17/2005
The Netherlands Computer Software Market	Netherlands	7/15/2005
Trends in the ICT Market	Norway	9/30/2005
Enterprise Resource Planning (ERP) Software in Russia	Russia	7/28/2005
Update Of Computer Software Market In Russia	Russia	5/28/2005
Update of Outsourcing Software Market in Russia	Russia	5/17/2005
Russian IT market	Russia	3/16/2005
Competition on the Russian Market for Telecommunications Software	Russia	1/11/2005
Korean Radio Frequency Identification (RFID) Market Overview	South Korea	6/24/2005
Software Solutions	South Korea	7/3/2003
Business Opportunities in the Spanish Market for Electronics and IT	Spain	8/26/2005
Software for Professional Applications in Spain: Integrated Business Software	Spain	6/28/2005
CAD/CAM/CAE	Spain	7/18/2003
Internet Security Market Switzerland	Switzerland	8/31/2005
The Market for Software and Information Services 2005	Taiwan	9/19/2005
Information Security Solutions	Taiwan	1/30/2005
Animation market in Thailand	Thailand	9/1/2005
Computer software market in Ukraine	Ukraine	1/26/2005
Setting examples and benefits for the lawful user of software	Uruguay	12/30/2004

*Israel; Jordan; West Bank; Egypt; Lebanon; Morocco; Turkey

VI. APPENDIX

Products in Computer Software, by NAICS and SIC Codes NAICS-511210: 14 Items

NAICS	SIC	Corresponding Index Entries			
511210	7372	Applications software, computer, packaged			
511210	7372	Computer software publishers, packaged			
511210	7372	Computer software publishing and reproduction			
511210	7372	Computer software publishing incl design and development, packaged			
511210	7372	Games, computer software, publishing			
511210	7372	Operating systems software, computer, packaged			
511210	7372	Packaged computer software publishers			
511210	7372	Packaged computer software publishing (i.e., establishments known as publishers)			
511210	7372	Programming language and compiler software publishers, packaged			
511210	7372	Publishers, packaged computer software			
511210	7372	Software computer, packaged, publishers			
511210	7372	Software publishers			
511210	7372	Software publishers, packaged			
511210	7372	Utility software, computer, packaged			