SEPE news

English edition 2007

STAVROS DIMAS

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DORA BAKOYANNIS

Technology as a means of boosting economic extroversion

GEORGE C. NEWSTROM

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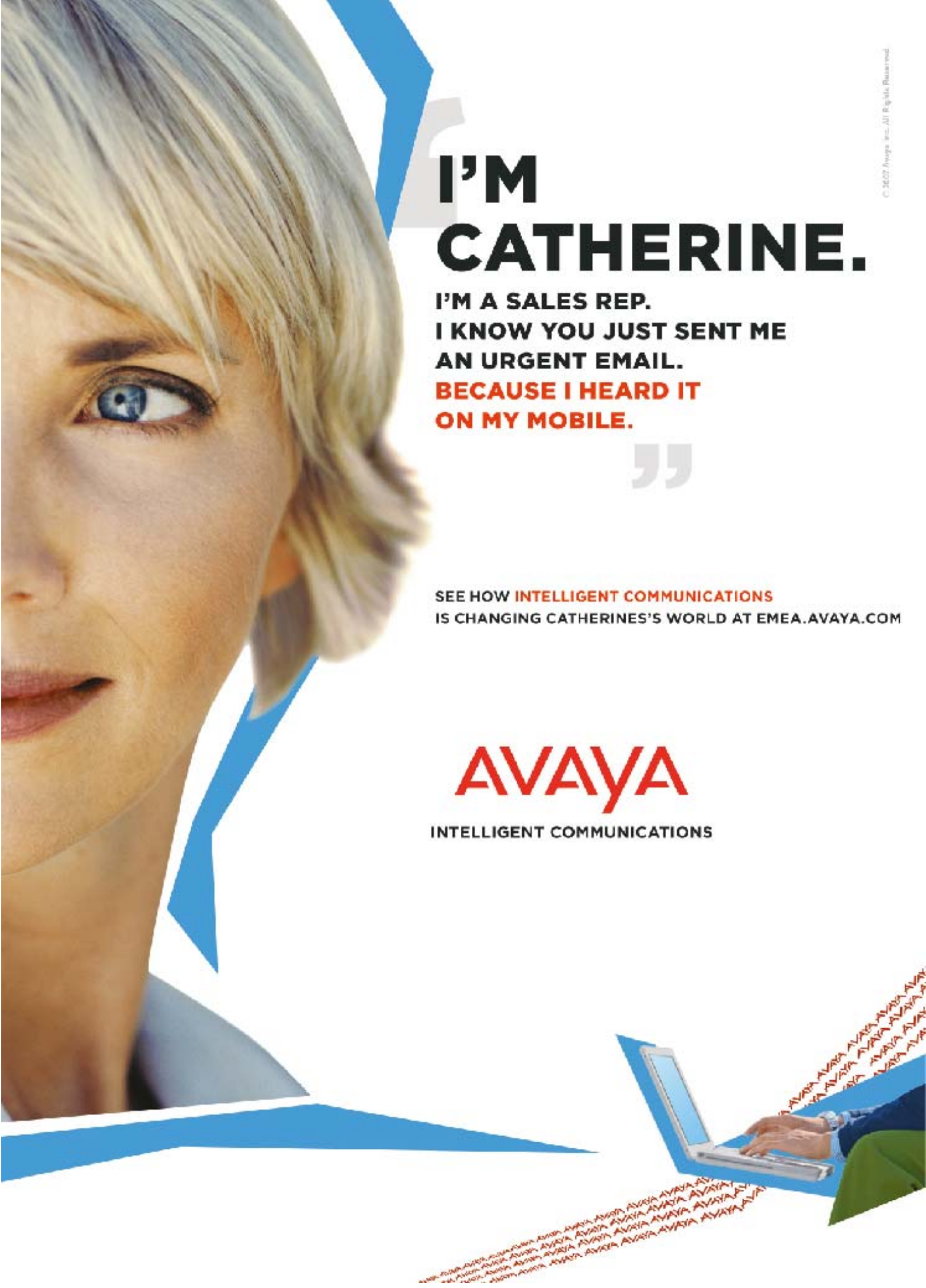
Encouraging signs for the usage of Digital Technology in Greece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SEPE news

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SEPE news
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The role of SEPE in the Greek market

SEPE members represent:

- 95% of the country's turnover in the ICT sector
- 5% of Greek GDP
- 55 global technology leaders
- 100.000 employees

The Federation of Hellenic Information Technology & Communications Enterprises (SEPE) is a non-profit organisation, founded in 1995 by Information Technology companies.

SEPE operates as an institutional interlocutor vis-à-vis the Greek Government, the European Commission and other bodies of influence, by providing valid and accountable advisory feedback, regarding the development of Information and Communications Technologies (ICT) in Greece and by facilitating the development of synergy alliances among its members.

Over 400 companies from all over Greece are currently members of SEPE. They collectively account for more than 95% of the country's turnover in the Information Technology and Telecommunications sector which in turn represents 5% of the GDP.

Our goals

- The rise of public awareness on the importance of ICT and the transition of the Greek society to an information culture for all.
- The modernisation of the Public Sector through the use of Information Technology.
- The development of a high - speed telecommunication network to complement the current Communication Infrastructure.
- The representation of the interests and views of Greek ICT Enterprises to the government, public and private institutions, international organisations, the European Union, the media and society.
- The promotion of close partnerships between ICT enterprises and the public sector as well as the collaboration with all relevant bodies for the development and effective implementation of a National Strategy for Information Society.
- The design and implementation of programs addressing the needs of a broad spectrum of business enterprises, so as to improve their competitiveness in the market.
- The cooperation between the ICT market and the academic community in order to strengthen the link between educational curricula and contemporary market needs.

The power and credibility of SEPE at the service of its members

- Active representation of its members in all relevant private or public bodies in Greece and internationally.
- Effective lobbying and leveraging power resulting from promoting members' matters collectively.
- Constant and consistent flow of information for current developments in the ICT market and promotion of opportunities for investment and growth.
- Advanced legal and advisory services that address issues relevant to the ICT sector.
- Fostering synergies with the largest information and telecommunications companies resulting from the exchange of views and the exploration of business opportunities.
- Access to a variety of research data and conference meetings that shape future market trends.

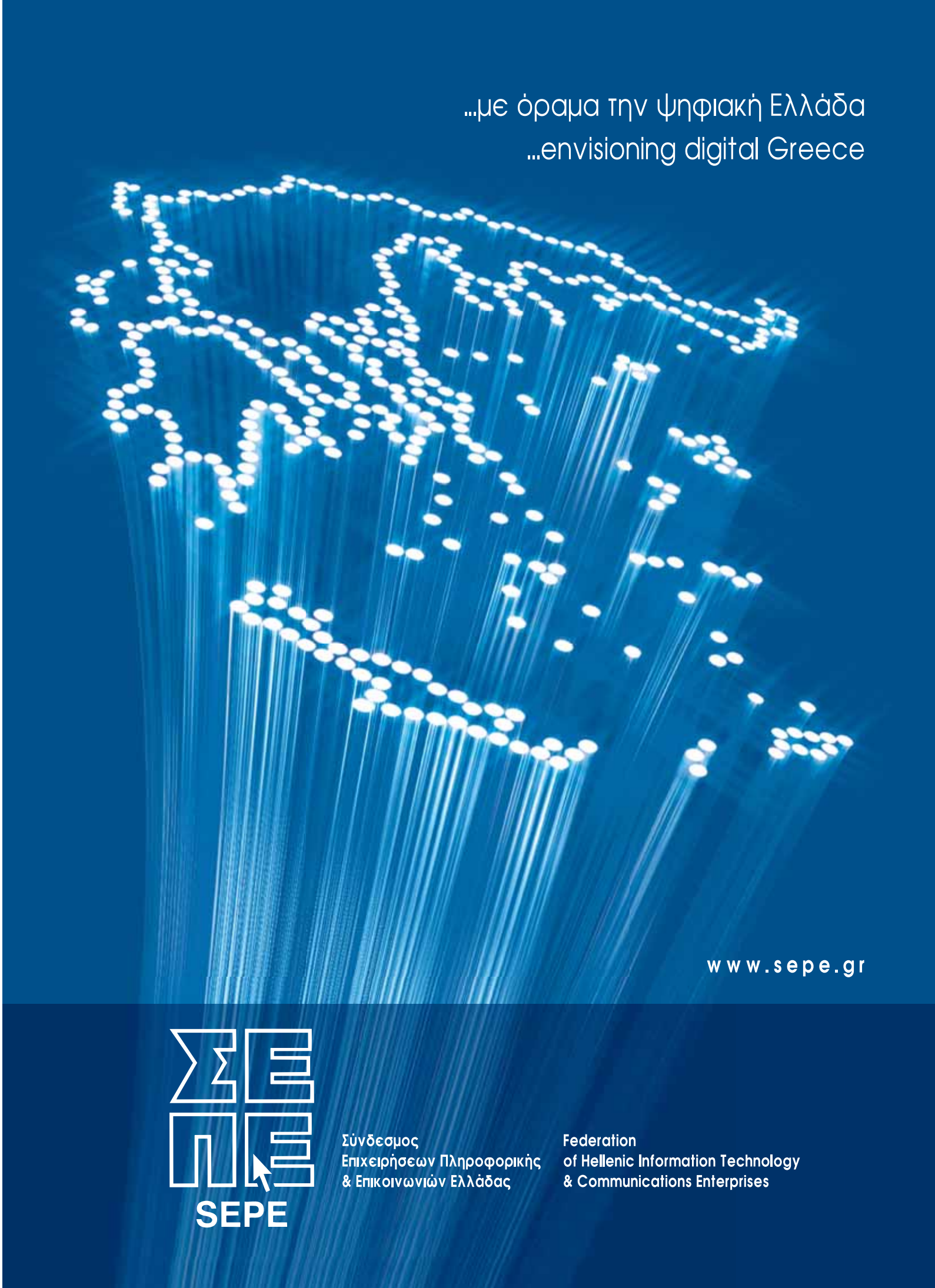
International Presence

SEPE represents its members in the global ICT scene, actively participating in the most prestigious international associations:

- Member of the European Information & Communications Technology Industry Association (EICTA)
- Member of the World Information Technology and Services Alliance (WITSA)
- Member of the International Telecommunications Union (ITU).

...με όραμα την ψηφιακή Ελλάδα

...envisioning digital Greece



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ΣΕΠΕ

SEPE

Σύνδεσμος
Επιχειρήσεων Πληροφορικής
& Επικοινωνιών Ελλάδας

Federation
of Hellenic Information Technology
& Communications Enterprises

EUROPEAN INFORMATION TECHNOLOGY OBSERVATORY

Internet boom spurs the Information and

In the preface of the annual report of European Information Technology Observatory (EITO) for 2007, Mr. Brunno Lamborghini, President of EITO, stresses that the Information and Communications Technologies Industry has entered a new era, as regards the convergence of technologies, the Internet boom and the utilization of the Internet Protocol as a basic architectural infrastructure for telecommunications.

The 2006 count, registered 2.7 billion mobile phone devices, 180 million broadband access lines and 100 million 3G mobile telephony lines. The European Information Technology Observatory anticipates that the European market for the Information and Communications Technologies Industry will reach €700 billion this year and €720 billion in 2008. According to Mr. Lamborghini, the so-called BRIC countries, like Brazil, India and China, play a leading role in the boom of new technologies.

China has turned out to be the world's biggest exporter of digital technology products and the sixth biggest market on an international level. The United States of America are on a stable course and the new Member States of the EU Internet users will amount to 300 million.

Europe and the global market

The improvement of the economic environment and of the entrepreneurial trust in Europe had a positive effect on new technologies as well. The overall value of the European market for the Information and Communications Technologies Industry, for 2006, amounted to ε680 billion, corresponding to 5.7% of the total European gross product. The value of the information technology market reached €324 billion while the telecommunications market amounted to €356 billion. Compared to the European and the American Information technology market, the Japanese market increased by 0.9%, reaching ε286 billion. The international market for the Information and Communications Technologies Industry amounted to €2.032 trillion. According to the European Information Technology Observatory, in the period 2006 - 2008, the information technology market will increase by 4.5% in Europe, 5.8% in the USA, 1.9% in Japan and 10% in the rest of the world. The respective percentages for telecommunications are 1.3% in Europe, 2.4% in the U.S.A., 0.1% in Japan and 5% in the rest of the world (Table 1 & 2).In Europe, the sectors of public administration and health were the pioneers of investment in digital technology. The banking sector and the financial sector followed. At the same time, the telecommunications sector remains and will continue to be one of the heaviest investors.

> EITO anticipates that the European market for the Information and Communications Technologies Industry will reach €700 billion this year and €720 billion in 2008

Greece

The Greek market for the Information and Communications Technologies Industry will have higher rates of development compared to the European average. More specifically, EITO estimates that, in 2007, the value of the Greek ICT market will reach €8,647 billion, marking an increase of 3.4%, compared to 2006's €8,359 billion (Figure1).The Information and Communications Technologies market growth rate for the new Member States of the EU, like Latvia, Poland, Romania, Slovakia and Slovenia, will keep being impressive, at least until 2008 (Table 3).

The Greek information technology market, though smaller, will mark an increase of 6.7%, which is a higher percentage compared to the telecommunications growth (Figure 2). According to the study, software and services will be the main factors driving high growth rate. Hardware - wise, an increase in laptop sales is expected. In telecommunications, the growth rate is expected to be much lower and reach 2.3% in 2007 and just 1.1% in 2008.

One of the most interesting facts resulting from the European Information Technology Observatory's survey is that Greece

	2006	2005%	2006%	2007*%
Europe	680	33.9	33.4	33.1
USE	574	28.1	28.3	28.4
Japan	286	14.5	14.1	13.7
Rest of World	492	23.5	24.2	24.8
Total	**2,032**	**100**	**100**	**100**

Table 1. Global ICT Market, in € b., *estimation

	2006	2005%	2006%	2007*%
Europe	324	35.5	35.0	34.6
USE	347	37.1	37.5	37.7
Japan	129	14.5	13.9	13.5
Rest of World	126	12.9	13.6	14.2
Total	**927**	**100**	**100**	**100**

Table 2. Global IT Market, in € b., *estimation

Communications Technologies Industry

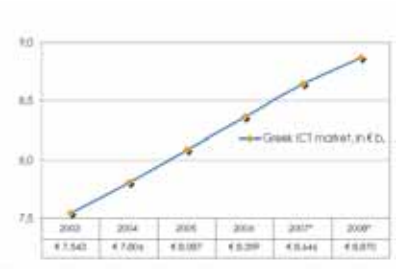


Figure 1. The Greek ICT market, in € b., *estimation

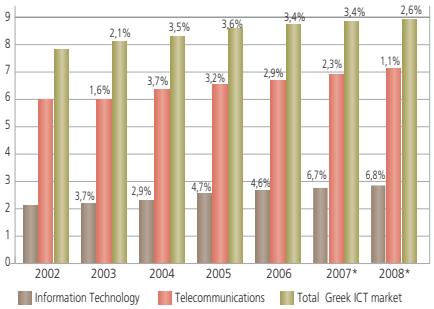


Figure 2. The Greek ICT market, in € b., *estimation

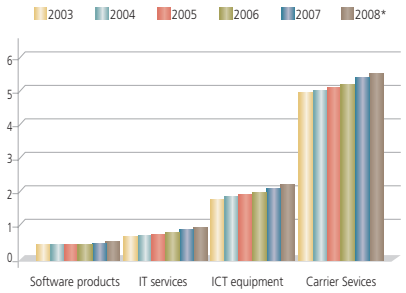


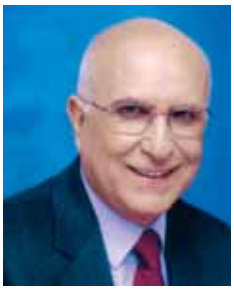
Figure 3. Analysis of the Greek ICT market, in € b., *estimation

presents a significant shortfall in expenses for information technology and communications products and services per capital. In 2006, the expenses per capita amounted to €783 per annum, with the average being ἑ1,374 for Europe and €1,597 for EU-15. The respective numbers for the USA and Japan are €1,943 and €2,238. The Greek people spend only 4.29% of their gross national product for computers and telecommunications. Low expenses constitute an opportunity, given the fact that there is space for development. Nevertheless, immediate action is required by both the public and the private sector, in addition to a more extensive use of computers and the Internet, which remains low compared to the rest of Europe. If the analysts' estimations are confirmed, 2007 will be a milestone for the domestic information technology market. Experts already expect an improvement of the growth rate in all partial sectors of information technology in 2007. The turnover of the information technology market is expected to be the highest in recent years while the overall turnover of the software market is expected to amount to €406 million.

Europe	2004	2005	2006	2007*	2008*	2005 /04%	2006 /05%	2007* /06%	2008* /07%
Austria	14,101	14,551	14,908	15,333	15,814	3.2	2.5	2.9	3.1
Belgium/ Luxembourg	17,714	18,159	18,496	19,071	19,691	2.5	1.9	3.1	3.3
Denmark	12,540	13,009	13,290	13,455	13,678	3.7	2.2	1.2	1.7
Finland	9,521	9,811	10,057	10,247	10,491	3.0	2.5	1.9	2.4
France	90,918	94,524	96,688	99,900	103,173	4.0	2.3	3.3	3.3
Germany	128,615	131,839	133,802	135,997	138,657	2.5	1.5	1.6	2.0
Greece	**7,807**	**8,087**	**8,359**	**8,647**	**8,870**	**3.6**	**3.4**	**3.4**	**2.6**
Ireland	6,183	6,406	6,624	6,801	6,972	3.6	3.4	2.7	2.5
Italy	67,297	69,092	70,389	71,786	73,215	2.7	1.9	2.0	2.0
Netherlands	31,391	32,517	33,667	34,758	35,869	3.6	3.5	3.2	3.2
Portugal	8,727	9,107	9,317	9,597	9,811	4.3	2.3	3.0	2.2
Spain	40,158	43,003	44,989	46,371	47,616	7.1	4.6	3.1	2.7
Sweden	20,900	21,541	22,089	22,566	23,195	3.1	2.5	2.2	2.8
United Kingdom	114,947	119,953	123,658	127,297	130,814	4.4	3.1	2.9	2.8
Bulgaria	1,619	1,843	1,994	2,176	2,314	13.8	8.2	9.1	6.3
Czech Republic	5,630	6,332	6,914	7,494	7,970	12.5	9.2	8.4	6.4
Estonia	709	794	852	899	936	11.9	7.3	5.5	4.1
Hungary	5,460	5,775	6,084	6,390	6,669	5.8	5.4	5.0	4.4
Latvia	863	1,002	1,102	1,197	1,278	16.0	10.0	8.6	6.8
Lithuania	1,088	1,203	1,314	1,371	1,423	10.6	9.2	4.4	3.8
Poland	12,507	14,376	15,858	17,078	18,273	14.9	10.3	7.7	7.0
Romania	3,390	4,122	4,767	5,274	5,763	21.6	15.6	10.6	9.3
Slovakia	2,051	2,248	2,442	2,641	2,823	9.6	8.6	8.2	6.9
Slovenia	1,370	1,519	1,607	1,701	1,784	10.9	5.7	5.9	4.9
E.U.	**605,506**	**630,813**	**649,267**	**668,047**	**687,099**	**4.2**	**2.9**	**2.9**	**2.9**
E.U. 15	**570,819**	**591,599**	**606,333**	**621,826**	**637,866**	**3.6**	**2.5**	**2.6**	**2.6**
Norway	9,744	10,078	10,329	10,534	10,854	3.4	2.5	2.0	3.0
Switzerland	19,437	19,978	20,359	20,945	21,576	2.8	1.9	2.9	3.0
EU15 + Norway & Switzerland	600,000	621,655	637,021	653,305	670,296	3.6	2.5	2.6	2.6
Total Europe	**634,687**	**660,868**	**679,954**	**699,526**	**719,529**	**4.1**	**2.9**	**2.9**	**2.9**

Table 1. The European ICT market/ country, in € m. * estimation

Laptop sales are expected to exceed desktop sales owing to the international drop in laptop prices, domestic competition and the turn of preference of gamers, who used to prefer desktops. Furthermore, professional technology users show an obvious preference for laptops, as their spread is connected to the spread of broadband services. The value of this particular market reached €386 million in 2006 and will amount to €406 million in 2007. Fixed telephony services amounted to €1,922 million in 2006, marking a decrease by 0.9%. On the contrary, mobile telephony services thrive and thus reached €2,514 million in 2006, which is a 3.2% increase. However, in 2008, the mobile telephony services sector is expected to show signs of stagnation, with an estimated 0.3% growth rate.



STAVROS DIMAS

Eco-innovation is the key to over

The environment is the basis of life and of the economic activities that make human development and prosperity possible. That is why we must protect it. As we look back over our record in this, the 50th anniversary year of the European Union's foundation, it is clear that the EU and its member states have made major advances in environmental terms.

The air we breathe and the water in our rivers and lakes are now much cleaner than they were. Europe has put in place the world's most comprehensive body of legislation and other initiatives to protect the environment, addressing issues ranging from waste management and energy efficiency to the protection of migratory birds, and products from cars and trucks to detergents.

Yet the fact is that we – and the rest of the globe – still face serious environmental challenges today.

Some of these pose vital threats to mankind's future economic prosperity and social stability. Climate change threatens to change the face of our planet and force huge population shifts away from areas that will become uninhabitable. The global loss of biological diversity is reducing ecosystems' ability to provide the vital services, such as the purification of air and water, on which our lives and our economies depend. Our unsustainable patterns of consumption and production threaten to exhaust key natural resources.

As individuals there is much that we can – and must - do to reduce our own 'environmental footprint.' Small gestures, like recycling our waste and walking to the local shops instead of driving, make a big difference when thousands of people act in concert.

But to tackle these environmental challenges effectively it is clear that we also need massive eco-innovation – innovation in a wide range of new technologies that will protect the environment by using fewer resources and creating less pollution.

With the global population forecast to exceed nine billion people by 2050, our economies have to become far more efficient in their use of non-renewable resources or there may be too little left for future generations. And to prevent climate change from reaching catastrophic levels we will need deep reductions in worldwide emissions of carbon dioxide and other greenhouse gases. This will require nothing short of a new industrial revolution to invent the resource-efficient, low-carbon economy of the future.

These challenges are huge – but so are the business opportunities for those who develop the best technological solutions and succeed in bringing them to market first.

The good news is that, driven by a combination of legislation and entrepreneurship, eco-innovation is gaining momentum, in Europe and elsewhere.

These challenges are huge – but so are the business opportunities for those who develop the best technological solutions and succeed in bringing them to market first

Environmental industries – including areas such as air pollution control, wastewater management and recycling industries, for instance – are already an important sector of the European economy. Their turnover is equivalent to 2.2% of the EU's GDP and they employ some 3.4 million people. The global market for environmental technologies is now worth 1,000 billion euros a year and Europe holds one-third of that. We are the world leader in wind power technology, for instance.

All this is very encouraging. But the scale of the challenges we face means that we must expand the market for environmental technologies much further.

That is why in 2004 the European Commission launched the Environmental Technologies Action Plan (ETAP). ETAP is promoting eco-innovation and the take-up of environmental technologies through actions to support research and development, mobilise funding, increase demand and remove market barriers. It is helping to sharpen the EU's competitiveness and to meet all three goals of the Lisbon strategy: increasing economic growth, creating new jobs and improving the environment.

Now Europe is preparing to go further. As climate change has raced up the political agenda over the past year, so political awareness of the crucial importance of eco-innovation for our future has also greatly increased. I am grateful to Germany, and in particular to Sigmar Gabriel, the environment minister, for making eco-innovation an important theme of its presidency of the Council of the EU during the first half of this year.

The result of these discussions is that the Commission will be coming forward with major new initiatives in the near future aiming to push towards achieving sustainable consumption and production

coming today's environmental challenges

and to help industry benefit from the emergence of new markets in environmental technologies. We intend to have these initiatives ready by the end of this year or in early 2008. An internet-based public consultation to gather input from the widest possible range of stakeholders will run during this summer. Information and communication technologies (ICT) is a sector that naturally combines business, technology and innovation. ICT's rapid growth has spawned an array of innovations that are helping to protect the environment today.

For example, teleworking can reduce the need for travel, thus cutting transport emissions. The creation of digital equivalents is enabling products to be 'de-materialised.' And 'intelligent' optimisation technologies are making it possible to reduce energy consumption. Technologies such as these will be crucial for meeting the EU's objective – as part of our wider commitment to tackling climate change and increasing energy security - of improving energy efficiency 20% by 2020. I believe eco-innovation has untapped potential to contribute a great deal more and towards sustainable development. Big rewards await the companies that will lead the way.

ICT's rapid growth has spawned an array of innovations that are helping to protect the environment today.

Through our current and forthcoming actions, the European Commission will do all it can to create the most favourable conditions for progress. Ultimately it is the choice of each of us, as policy-makers, producers and consumers, that will make a difference and prepare a more sustainable future.

Mr. Stavros Dimas is the European Commissioner for the Enviroment

DORA BAKOYANNIS

Technology as a means of boosting

Diffusion of knowledge, exploitation of information, investment in new technologies, innovation, as well as promotion of business extroversion constitute the most vital factors in the restructuring of the economy and the adjustment of Greek businesses to the contemporary international economic environment. The formation of the potential product of a national economy affects employment, income, cohesion, education as well as the general developmental prospective of a country.

The ability of an economy to allocate resources to research and technology renders it more effective and competitive, leading it at the same time towards the economy of knowledge and the necessary entrepreneurial extroversion, which constitutes the objective of the new era. Technology and innovation configure new conditions for businesses and the entire society. Nowadays, information society touches the daily life of citizens, affecting at the same time their transactions with the State and the private sector. The digital era opens up horizons and prospects unimaginable, until recently.

E-Government, e-commerce and electronic transactions, as well as numberless Information and Communications Technologies applications, change long-established habits and behaviors.

The European Union has long now appreciated the benefits and the value of investing in new technologies in transforming the European economies into economies of knowledge and innovation.

Through the Lisbon Strategy and i2010, Europe tries to create the appropriate conditions so that Member States can adjust to and take advantage of the rapid developments in information technology, telecommu-nications, transport, as well as the internationalization of markets and businesses. It anticipates to reinforce employment and the development prospects of Member States through innovation and technology.

It is true that the growth of a country's capital potential is not in itself adequate to magnify an economy. Growth by itself is not enough; a constant enhancement of the country's capabilities, as well as the integration of technological advancements and entrepreneurial innovations to the production process is required. Our reflexes as members of the European family should also become activated by the fact that the distance separating Europe from USA in the fields of research, development and technology is getting longer instead of being shorter. Unfortunately, we have lost ground as regards many state-of-the-art technologies. We should really be concerned about the mediocre

Nowadays, information society touches the daily life of citizens, affecting at the same time their transactions with the State and the private sector

economic extroversion

adjustment of Member States to the objectives of the Lisbon Strategy. We should overcome disfunctions, enhance actions and redesign, if necessary, our policy in this specific field.

On a national level, the technological weaknesses and insufficiencies are more or less well known. There is a clear shortfall of Greek society in terms of its adjustment to the digital era. Innovation, technological adaptation, development of research and business extroversion constitute the great challenges that our government is going to face in the next few years. Challenges which should become the central priorities of a long term national development strategy. The current government has hammered a well designed plan for the enhancement of competitiveness and innovation, as well as for the promotion of research and technology in our country. At the Ministry of Foreign Affairs, we place great emphasis on economic diplomacy and developmental cooperation in an attempt to create a favorable framework for Greek companies abroad, thereby enhancing the extroversion and the developmental prospects of the Greek economy and Greek businesses.

In collaboration with the Ministry of Economy & Finance and the Ministry of Development, we make the most of our leading position in the Balkans opening up new horizons and new markets. We promoted the idea of a free trade zone throughout the Balkans, a particularly important area for the interests of Greek businesses. We are turning Greece into an energy hub of Southeastern Europe. We are enhancing the entrepreneurial collaboration between Greece and Turkey. At the same time, we are refreshing our bonds with the Arab countries and we are opening up to Asian markets (China, Japan and South Korea). Our next step is to promote economic diplomacy and, subsequently, the openness of the Greek economy to the American continent, mainly Central and South America.

This government promotes reform in education and research. We became fully aware of the fact that there is no sustainable development without technology and innovation. That is why we encourage the dissemination and the use of new technologies in the productive spectrum, from tourism and rural economy to financial markets, public administration and social services. Our target is the production of innovative, technologically advanced high added-value products.

Nevertheless, in order for the aforementioned policies and actions to be successful, we must improve digital literacy and turn the economy towards a technologically advanced pattern of development. The adjustment of the productive sectors of the economy to the new era is not an easy task. It requires a change of mentality and private investments in technology and computers. It demands time and a change of orientation, support by the public administration and institutional change.

We encourage the dissemination and the use of new technologies in the productive spectrum, from tourism and rural economy to financial markets, public administration and social services

The role of the National Regulatory Authority needs to be enhanced, along with the institutional role of the Fair Trading Commission. The General Secretariat for Research and Technology should assume a leading role in that effort. Programs like "Information Society" or "Taxis Net" are not enough on their own if we do not provide motivation for the production of know-how, if we do not ensure resources for research, if we do not focus on innovation in new technologies. Our strategic pursuit should be the technological convergence of our country with the other technologically advanced countries of Europe. That is the only way we can guarantee our country's progress, as well as the conditions for a better tomorrow.

Ms. Dora Bakoyannis is the Foreign Minister of Greece

GEORGE C. NEWSTROM

The information and communication and robust industry

Which are the sectors where WITSA will focus its activities until WCIT 2008?

The information and communication technology (ICT) industry is an important and robust industry. In fact, it is one of the most dynamic creators of jobs and income in the world. Perhaps that is why total global ICT spending has added $1 trillion in five years, from $2.1 trillion in 2001 to $3.1 trillion in 2006. If the marketplace remains on course, the forecast stipulated by the World Information Technology and Services Alliance's (WITSA) benchmark study, Digital Planet 2006, is that this growth in spending will reach $3.9 trillion by 2009. ICT represents 6.8 percent of global GDP over the period 2001 - 2005.

Keeping the global ICT marketplace on course is the mission of WITSA. WITSA is dedicated to advocating policies that advance the industry's growth and development; facilitating international trade and investment in IT products and services; and strengthening national ICT industry associations through the sharing of knowledge, experience, and critical information.

WITSA has a real impact on the global ICT public policy environment. It strengthens the industry at large by promoting a consistent legal and regulatory environment. WITSA voices the concerns of the global ICT industry at an international level with such organizations as the World Trade Organization (WTO), the Organization for Economic Cooperation and Development (OECD), the World Bank, the Asia Pacific Economic Cooperation (APEC), the international Telecommunications Union (ITU), and other international forums where public policies affecting industry interests are discussed, developed, or implemented.

The current priority public policy areas of WITSA are:

- WTO Doha Negotiations - in particular the need to address in the global trading rules Internet Services and electronic commerce matters
- Internet Governance Issues, in particular Internet access, as a follow-up to the World Summit on the Information Society/IGF
- Health Information Technology - how the use of IT can better deliver healthcare and save lives
- Information Security and Privacy - still must address these matters and engage other to promote security and cooperation to protect online transactions and data
- Next Generation Networks, the business and policy implications for an all-IP network, including the Next Generation Internet
- E-Government - the use of ICT for government services
- ICT for Economic Development - how appropriate public policies to facilitate the use of ICT can have a positive effect on the growth of business, jobs, and economic development.

Which are the technology trends that will determine the enterprises strategy of our sector internationally?

As stipulated in WITSA's flagship study, Digital Planet 2006, worldwide spending on ICTs will surpass $3 trillion by the end of 2006 and reach $3.9 trillion by 2009.

Market forces and technology innovations will continue to shape the industry outlook. These are largely evolutionary

technology industry is an important

in nature, playing out over the course of years; however, public policy decisions also have an immediate impact. Key issues are security, privacy, spam, competition policy, spectrum availability, interoperability, standards, end-to-end quality of service, access to emergency services, and what role (if any) of Universal Service in IP based environments. How these challenges are dealt with will greatly impact business strategies internationally, and whether industry is able to reach its fullest possible potential. Most companies today, even mid-sized firms, are launching operations outside of their headquarter country. The desire to have commonality and consistency across the organization is increasing in importance. As a result, global reach is one of the factors contributing to recent vendor success in HR services and BPO in particular.

Underlying these phenomena is the fundamental shift in the nature of networks, the transition to Internet Protocol. This change has been growing over time, as services riding over current existing networks, such as circuit-switched telephony communications, shift to packet-based systems.

The ripple effect of IP-enabled devices is nothing short of astonishing. The future holds the promise of exponential growth not only in addressable computers but also automotive vehicles and handheld devices, machinery, sensors, home appliances, pallets and cases and other consumer items linked to the Internet. IDC anticipates that by 2009, over 30 million U.S. wireless subscribers will be consuming commercial video/TV content and services over wireless devices.

Convergence is blurring the distinctions between wireline voice, cellular, cable and data networks. In this new environment, if information can be digitized it can be delivered - when and where it's needed. Next Generation Networks will deliver voice calls, video streams, website visits and more through the same device on a transparent network.

I would like to list five trends that are going to be increasingly fundamental to enterprises that want to operate successfully in the global market place.

- Greater delegation of control from the center to the edge of the network: Perhaps the most fundamental consequence between the business model of the 20th century and future strategy is the delegation of centralized control to service providers and consumers at the edge.
- The proliferation of multi-access, multi-use devices
- Always-on, anywhere, ubiquitous communications
- The rise of Internet Protocol (IP) networks - further decoupling of what type of data gets transmitted from how this happens
- Future challenges and public policy issues

Anticipating which new services will flourish over the next few years is a challenge - and a business opportunity. The array of potential new applications and services stretches the imagination. Three general characteristics seem to tie many of them together. First, applications that once required distinct devices can be incorporated into multi-access, multi-use devices. The combination of functionality will depend more individual consumer preference than technological limitations.

Second the change reflects a "new "paradigm of location" which reflects the ability of users to exchange information in real time in a manner once only possible

If the marketplace remains on course, the forecast stipulated by the WITSA benchmark study, Digital Planet 2006, is that this growth in spending will reach $3.9 trillion by 2009

through face-to-face communications. This raises the potential that interpersonal interactions requiring people to be physically in the same location can alternatively be performed at a distance. This could lead to sweeping changes in the way many services are performed in the future in fields such as education and healthcare.

A third a category of potential services involves using networks to automate functions that currently require more active human involvement. For example retailers using RFID chips linked to networks detect inventory status to trigger product reordering.

Health care information networks linked to the home monitors and used as an "early warning" system to alert professionals that a chronically ill patient requires special attention.

GEORGE C. NEWSTROM

The information and communication technology industry

Technology trends are also transforming the future of outsourcing practices, which has traditionally been portrayed by some as a method for hiring software engineers, computer help staff, and credit-card bill collectors to exploit the low wages of poor nations - often resulting in big layoffs at home. But a more enlightened, strategic view of global sourcing is starting to emerge as managers get a better fix on its potential. Often dubbed "transformational outsourcing," executives are discovering outsourcing is really about making profits as well as making better use of skilled domestic talent, and even job creation in the home markets, not just cheap wages abroad. Labor savings from global sourcing is peanuts compared to the huge potential increase in efficiency, productivity, quality, and revenues made possible by fully leveraging offshore resources. Increasingly, outsourcers will seek to create radical business models that can give them competitive advantages.

Convergence is blurring the distinctions between wireline voice, cellular, cable and data networks. In this new environment, if information can be digitized it can be delivered - when and where it's needed

Well established multinationals will more and more see offshoring as a catalyst for a broader plan to overhaul outdated office operations and to build new competitive strategies. While some businesses no doubt will want to downsize, others are more interested in liberating expensive analysts, engineers, and salesmen from routine tasks so they can spend more time innovating and dealing with customers.

Which is the role of the emerging markets in the International ICT Market and does WITSA plan to take initiatives towards this particular direction?

Business has been working hard through independent projects to provide assistance to disadvantaged economic groups, localities, regions or countries, aimed at transforming the digital divide into a digital opportunity. Almost any sizeable company today has taken up some local or regional responsibility in bridging the digital divide. Developing countries can reap these benefits resulting from the technological innovations that have led to the commercialization of the Internet; they can leapfrog technologies and become active participants in the online global economy. However, these assistance programs will become a digital opportunity only if governments adopt a policy framework that ensures that access to digital information and communication networks is a viable option for the citizenry at large.

Currently, public policy discussions which are carried out under the catch word of "digital divide" seem overly focused on the divide, as a result rather than a risk, and do not stress sufficiently either the opportunity aspect or an understanding of the conditions under which inadequate endowment turns into a trap. In order to reduce the risk that discussions on the "digital divide" become a self-fulfilling prophecy, discussion needs to focus on developing greater understanding of how to advance digital opportunities.

The global business community is committed to speeding the development of a truly worldwide information society that can foster economic growth and social well-being for all. It recognizes that capabilities based on information and communications technologies (ICTs) can serve as vital tools for sustainable economic development, knowledge sharing, societal interaction and freedom of expression, particularly in the world's least developed countries. Only if business and governments work together with other partners can people everywhere be assured of access to ICT tools and the knowledge and empowerment they deliver.

WITSA members are committed to building upon existing public-private ICT partnerships and to the creation of enabling environments. This will stimulate private investment in the infrastructure necessary to support the sustainable development of the Information Society. Business can thus fulfill its role through a comprehensive approach that incorporates both short-term and long-term strategies.

WITSA believes that many emerging economies need to pay particular attention to the following three important issues:

- The role of government in introducing competition and providing a favorable regulatory environment to enable the development and deployment of an underlying Information and Communications Technology (ICT) infrastructure
- Education, both basic and in the use of information technology products and applications
- Benefits of applications to improve the

is an important and robust industry

lives of citizens, specifically e-government, e-health and e-learning

Over a number of years, WITSA has been fortunate to take a leadership role in many programs dealing with the impact of ICT on industry and society. Over the past three years, WITSA and ITAA have been jointly participating in an initiative with the US Agency for International Development entitled "IT mentors Alliance" (ITMA), designed to develop sustainable ICT associations in developing countries. The program, which designated more than $1 million over three years, provided educational experiences and opportunities to attend global meetings, policy workshops and agenda setting initiatives to executives of IT associations in developing countries throughout Africa, the Middle East, and Asia. The program also provided training in association organization and management, in developing effective association programs, in public policy development and other specific topics of general interest to the industry.

To date the program has resulted in increased outreach to IT groups in the developing world. Fourteen countries were active participating in the program (Algeria, Bangladesh, Cambodia, Kenya, Mongolia, Morocco, Nepal, Philippines, Rwanda, Senegal, Sri Lanka, Tanzania, Tunisia, and Uganda). Five new ICT associations were formed in Cambodia, Rwanda, Senegal, Tanzania and Uganda. In addition, WITSA was instrumental in the creation of an Arab regional ICT association ("IJMA3), and an African federation of ICT associations (AFICTA).

A very successful activity of WITSA has been its workforce survey projects. Piloted initially in the Philippines, the project assists the associations to conduct a survey of the current ICT workforce skills and those that are expected to be needed in the future. Working with the government and education communities in their country, the association is able to help plan for the future and make recommendations to improve workforce skills.

Do you believe the EU i2010 strategy moves towards the right direction to cover the digital gap between USA and EU?

Over the last ten years the impact of ICT on productivity in the EU has been consistently half of the impact in the US. Businesses and governments seem to make better use of WITSA members' products and services in the US than in the EU. European policy makers recognise the problem; the challenge is to identify the priorities and then encourage action in Brussels and in the member states.

WITSA recognises that i2010 serves one particularly important purpose - it keeps the issue of better use of ICT on the European political agenda. But in our opinion many EU members don't "walk the talk". Many of the National Reform Programmes fail to give priority and impetus to information society policies or include important elements like digital convergence or ICT R&D. One Finnish MEP (Finland currently holds the Presidency of the EU) remarked at the recent i2010 annual conference that if you looked at where the money is spent, Europe is investing more in becoming a "potato economy" than a "knowledge economy".

A recent report by ex Finnish Prime Minister, Esko Aho, identified a number of radical actions that the commission and member states needed to undertake in order to create an innovation-friendly market throughout Europe. The report identifies actions necessary in the following areas to help achieve such a market:

- harmonised regulation
- ambitious use of standards
- driving demand through public procurement
- a competitive intellectual property rights regime
- fostering a culture which celebrates innovation.

WITSA agrees, and believes that a less fragmented, more innovation-friendly European market would help our members work more effectively throughout Europe to help close the "digital gap".

Mr. George C. Newstrom is the Chairman of the World Information Technology and Services Alliance - WITSA and President and COO of Lee Technologies.

Encouraging signs for the usage of Digital

According to the Observatory for the Greek Information Society (OGIS), the results of the annual comprehensive measurement for initiative indices e-Europe and i2010 show a significant increase of Internet access by Greek households and a reinforcement of broadband services penetration to citizens and businesses. The overall PC and Internet usage to businesses (10+ employees) remains at a high level.

Increase of Internet use by Greek households

Internet use by Greek households amounts to 27.4% in 2006, compared to last year's 24.2% (Figure 1). At the same time, the change rate of Internet access in Greece is significantly higher compared to the average rate in the EU countries. The increase rate for Greece in 2005 - 2006 is equal to 13.2%, compared to EU-15's 6.25% and EU-25's 1.89%.

The percentage of broadband connections in Greece amounts to 6%, while, at the same time, there was an obvious decrease of dial-up and ISDN connections in favour of DSL. The price reduction, due to the intense competition, is the reason why broadband services recorded a significant increase in 2006. It is also worth stating that an ADSL connection at 768 Kbps, for more than 20 hours of use per month, costs less than a PSTN connection.

Stable use by businesses, shortfall in e-Government

The Internet usage to the Greek business seems stable. 39% of businesses employing 1-9 persons and 92.5% of businesses with 10+ employees have access to the Internet.The aforementioned results are considered to be satisfying and reach the respective results for EU-15 and EU-25. Nevertheless, this study showed that e-commerce activities remained stationary for 2006. When it comes to citizens, the overwhelming majority of users (81%) take advantage of the Internet to search for information concerning products and/ or services. An important fact is that only 40% percent of the services offered by the Public Sector are fully available online and close to the European average. However, only 8% of Greek citizens use the public services online. The services concerned include collecting information on web sites (7%), downloading official forms (4%) and uploading completed forms (3%). Contrary to citizens, the respective percentage of businesses using public services online remains high and is estimated to be 71%.

In the field of e-health, just 5% of the population uses the Internet to search for health-related information. As for pathologists, 51% of them use a PC at their private consulting room. Also, almost 1 out of 4 pathologists (27%) use a PC to keep a record of their patients. At the same time, 83% of them quote that Information and Communication Technologies are helpful in their work.

Education - schools

Virtually all schools in the country have computer facilities (99%), in the same levels as in 2005. Computers are mainly used for educational purposes (80%), for administrative staff use (53%), but also for use among teachers/ professors (47%). The

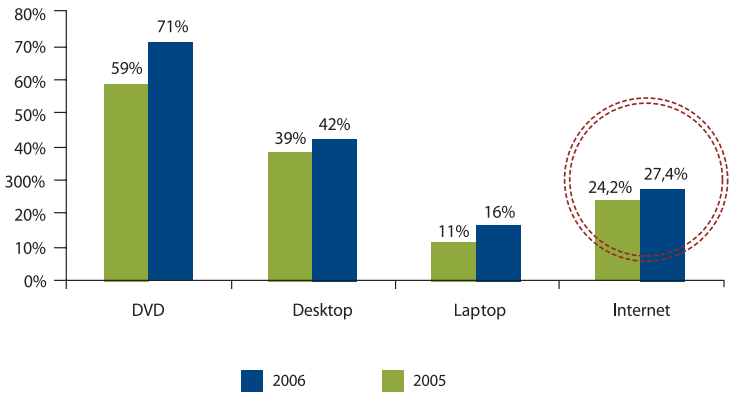


Figure 1. Usage of technology at home, source: OGIS 2007

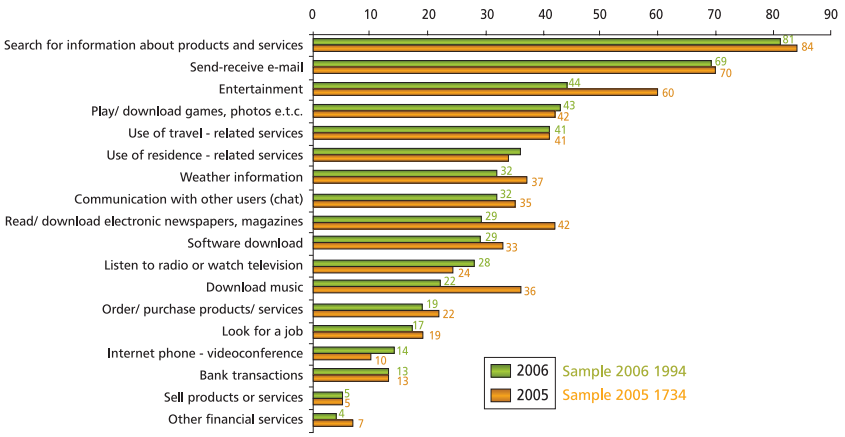


Figure 2. Internet Usage, source: OGIS 2007

Technology in Greece

The overwhelming majority of users (81%) take advantage of the Internet to search for information concerning products and/or services

Internet penetration in the schools with computers is almost universal (97%), something that was also to be found in the 2005 measurement. Regarding the type of connection with the Internet, ISDN remains the most widespread this year. There is also an increase in the broadband connection type, especially in the Lyceums, where there is a parallel decrease of ISDN type.

User's profile

In 2006, PC and Internet usage, such as daily Internet usage, have shown a significant increase compared to 2005.

As far as the place of access is concerned, regardless the gender, age, educational level and living place, the main places of Internet access are home and workplace. Users' preferences in this respect have shifted away from Internet cafés, friends' houses and educational institutions. The most popular online activities seem to be e-mail exchanging, entertainment, games, travel information, the weather forecast and reading newspapers/ magazines. Mobile phone usage is quite high for the majority of Internet users; regardless the gender, age, educational level and living place. Widespread use of mobile phone has been recorded for both genders; women seem to use it slightly more than men (97.2% against 96.4%). For second consecutive year, the rates of males that use pc and Internet are higher than the rates of female users. As far as the place of Internet access is concerned, it is worth mentioning that University is the preferred place for females compared to males. The main reasons males use Internet are online orders, purchases of products or services, e-banking and software downloading. Internet usage for job hunting and CV submission is more common for females rather than male population. In addition, women that live in Athens and rural areas show preference for travel and accommodation related services provided by the Internet.

In 2006, the highest rates of PC and Internet usage are noted among people in the age group 16-24 (80.6% and 58.6% respectively). As far as the place of access is concerned, users have access to the Internet at home (71.4%); Internet Cafés (28.4%), educational institutions (17.4%), workplace (10.1%), school (15.3%) and friends' houses (11.8%).

The rates of PC usage by people of university education is very high, while PC usage by primary and high school graduates remains low and about 1 in 2 senior high school graduates use a PC. There is a great increase in computer usage by senior high school graduates (at about 4.5%). It is very interesting that there is a remarkable increase in Internet usage by senior high school graduates and university graduates (about 7% - 8%).

University graduates and postgraduates have shown significant increase in Internet usage, while high school and senior high school graduates use mostly the Internet for downloading or playing games. The Greek prefectures that have shown significant increase in PC usage are Attica (46.7%), the Northern Aegean (36.2%), the Peloponnese (34.4%) and Western Greece (32.5%). There is also a remarkable increase in Internet access in Greek prefectures, such as in Northern Aegean (23.4%), Peloponnese (22.5%), Western Greece (24.5%), Crete (25.1%) and Central Greece (20.4%).

Finally, use of mobile phone is extremely high in the whole country and especially in Peloponnese, Northern and Southern Aegean, while regions like Ionian Islands and Western Macedonia show lower rates of use.

Predictions

According to the OGIS, Greece has a long way to go before becoming digitally literate. The encouraging thing is that Greece belongs to the countries that are on an intense development course concerning the broadband Internet integration; it would be more preferable if the country belonged to the club of rising leaders in technology matters. The goals of initiative i2010, in which Greece is also to participate, include the implementation of a common European information area, innovation and investments in research, social inclusion and improved public services.

According to the Observatory, there should be an implementation study of specific actions in order to accomplish the objective such as dealing with institutional and legislative matters, creating a framework for digital television transmission, achieving the use of triple play by 35% of the population and the visibility of its benefits by 80% of the population.

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