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I srael

Dov Winer
The Jewish Agency for Israel

European neighborhood policy

Negotiations concerning the new EU-Israel action plan continue. The sub-committee on Research, Innovation, Information Society, Education and Culture convened in Jerusalem in November 2005. The Information Society summary includes:

1. the promotion of the use and exchange of ideas on new technologies and electronic means of communications for e-Business, e-Government, e-Health, e-Learning and e-Culture.
2. building on Israel's participation in the MINERVA Plus project and the growing experience gained through its presence at the National Representatives Group for coordination of digitisation policies of the EU Member States.

Relating to Culture and Audio-Visual issues:

1. the Commission will encourage the Anna Lindth Foundation to facilitate Israel's participation in cultural co-operation programmes [... To enhance Israel's participation in the relevant cultural co-operation programmes of the Euro-Mediterranean partnership]
2. to organize an expert meeting with the relevant Commission services to discuss Culture 2007 objectives in the light of Israel's participation in the relevant sections of the programme
3. to develop a dialogue on cultural diversity with UNESCO. The sub-committee has set an agenda for the experts meetings to take place throughout 2006 with the goal of setting specific operational milestones.

A. Users and content

At the end of November 2005 Israel's population numbered 6,976,000 persons; 80.61 Jews and others – 19.4% Arabs. The economy is again growing since the

peak of 2000 with an average annual growth rate of 5% for 2004-2005. The GDP per capita level for 2005 amounted to US\$ 17,800.¹ A Bank of Israel study highlights the importance of education for determining productivity and output, pointing out how an additional year of studies on average for each worker effectively leads to a 7% increase in output and productivity.² The percentage of unemployment currently stands at 8.8% for 2005; the lowest since 2003. The number of employed persons rose in 2005 by 93 thousand and has now reached 2,494 million, an increase of 3.9%.³

IT Market

The IDC estimate that the Information Technologies (IT) market for 2005 in Israel reached the 3.7 billion dollars; this represents a growth of about 8.6% in comparison to 2004. Most of the expenses still go towards hardware (44% - 1.66 billion); while computer services account for about 40% (1.4 billion); and the remaining 16% are spent in software. The market is expected to reach 4 billion dollars in 2006. Laptop sales rose by 40% while desktop computer sales increased by 15%.⁴

Exports

The Association of Electronics and Information Industries reported that exports of high-tech industries reached 16.6 billion dollars. Venture capital funds mobilized 1.5 billion dollars and investors sold companies for 2.14 billion dollars. Start-up companies mobilized 1.4 billion dollars. This development has already begun to have an effect on employment figures: 9,000 new workers were hired while only 1,000 fired; wages in the industry rose by 5% (in comparison to 4.8% in 2004 and 3.5% in 2003).⁵

Demand for high-tech workers

It increased in January 2006 by 26.6% in comparison to the previous year. MIT, a subsidiary of Manpower Israel announced that the period up to January marked eight consecutive month of stability for the demand for

high-tech workers. Software engineers were in most demand (7.9% growth in January 2006) and demand that remained constant since the beginning of 2005 (with the exception of August).⁶

The number Broadband Internet Subscribers continues rising

Israel is one of the leading countries in the world for broadband Internet penetration where 65% of the households already are connected representing some 1.2 million Internet users in Israel.; markedly, this is second only to Korea. Only In May 2005 the Ministry of Communication announced the penetration rate was still f 55%. In addition, there are about 800 thousand users now connected through the ADSL services of the incumbent telecom and another 417 thousand are connected via a cableTV company modem. The growth in 2005 slowed down and the market is expected to reach saturation in 2007. Traditionally the number of Internet subscribers is compared to those who subscribe to multi channel digital TV, and the Ministry of Communications also found an additional potential for growth of about 200 thousand subscribers. The cost of broadband Internet access at a rate of 2 Mega/second dropped by 12% from 80 NIS to 70 NIS a month (less than 13 Euro).⁷

Internet growth

Growth of the Israel Internet Market (per million subscribers)

2002	.21
2003	.64
2004	.99
2005	1.21

Estimate of the Israel Internet Market by the leading providers

Bezeq Beinleumi	32%
Netvision	22%
Internet Zahav	17%
Kavei Zahav	17%
Barak	12% ⁸

Convergence: IP services challenge traditional roles of ISP and Telecoms

Once content services are distributed through the

Internet, ISPs become communication companies, and as such, they need to completely rethink their business model. However, as new services become enabled through emerging technologies, large established telecoms become concerned with the competition and strive to bar them. About 31% of the earnings of Israel's leading telecom Bezeq, come from fixed lines services (1.1 billion NIS in 2005). The competition and potential profits from Voice over Internet Protocol (VOIP) represent competition to legacy services and clashes in the future are expected over regulatory issues. Today there are 1.25 million subscribers, and, in comparison to multi channel TV, the market potential is estimated at an additional 200 thousand households. The revolution in the kind of services provided over the network will require connectivity at broader channels. The 5 MB/S connection is still expensive (300 NIS / month ~ 53 Euro); their goal is to have more subscribers connected at 1.5 MB/s; however, only when the range of content and applications expand they will began to push the 5 MB/s connection without demanding a substantially price increase. In 2006 they will stress the growth of home networks expected to reach tens of percent.

Most companies intend to enter the internal telephony market through wireless technologies and have made extensive tests in this area. The Ministry of Communication still has not defined its policy regarding access to traditional telecom infrastructures and that of the cable networks.

Two emergent scenarios are possible: one scenario presumes that some ISPs will increase their collaboration with content providers and will move to acquire them in 2006; an alternative scenario foresees an increased split between infrastructure access providers from those who focus on their primary services, and from those users who will seek contents elsewhere. To persuade users to connect through increased bandwidth they will need to be convinced that they will be accessing content that justifies the higher connection cost. Video services promise impressive potential and the connection between the Internet and TV. There were some encouraging signs of this potential in 2005 and it is expected that in 2006 many more broadcast channels will be developed. Even though the quality still is still not expected to be the same as in regular TV, a paradigm shift is expected. In 2005 the portals tripled the number of video clips

watched each month representing many millions clips viewed on Websites and shunted across e-mail connections. Although proprietary, fully-integrated IPTV service are still sometime away, the technologies that will determine the long expected convergence of computer and TV console are already on the horizon.⁹

Wireless Home Networks for 238 NIS (less than 43 Euro)

Bezeq, Israel's leading telecom estimates that there is more than one computer in 600 thousand homes in Israel (32% of the total households); while only 200 thousand of them have home networks. So far, Bezeq has been a insignificant player in this market with only 10-15 thousand installations a year. It is now marketing the wireless home network, a solution that includes a router and ADSL model for only 238 NIS (less than 43 Euro). Bezeq's Marketing Director, Ran Guron, explains how they are not subsidizing the sale but selling at cost price; where they see the marketing of the wireless networks as supporting the marketing of broadband Internet services as well as the transfer of subscribers from lines of .75 MB/s to higher speed connections.¹⁰

Television enters Cellular Telephony

Two of the cellular telephony providers in Israel, *Cellcom* and *Pelexphone* announced plans for establishing an infrastructure for the provision of cellular television services. Such infrastructure parallels the 3rd generation networks and requires additional investments. Such services have been launched only in Korea in 2005 and are being studied in most European countries.¹¹

B. Technologies for digitisation

Israeli Participation in the Projects approved in the 5th IST Call: 'Access to and preservation of cultural and scientific resources

Several Israeli partnerships are included among the cluster of projects invited by the Commission for negotiation following the 5th IST Call on Access to and preservation of cultural and scientific resources.¹²

MEMORIES

Israel partner – Technion, Israel Institute of Technology; coordinator - Mist Technologies, France (STREP). The purpose is to develop a generic software library to

facilitate the extraction of high level information from audio signals. It will also propose an information retrieval system that matches archivist needs.

CASPAR

Israel partner – IBM Israel; coordinator - Central Laboratory of the Research Councils, UK (IP). The purpose is to cope with the challenge of preservation of intrinsically fragile digital information. It will build a framework to support the end-to-end preservation lifecycle for scientific, artistic and cultural information based on existing and emerging standards. The guiding principle will be the application of the OAIS Reference Model. It will demonstrate the validity of CASPAR through heterogeneous test beds covering a wide variety of disciplines; building a preservation user community creating consensus and gathering a critical mass of users; implementing a self-sustainable model for the CASPAR process.

EASIER

Israel partner – NICE; coordinator – Queen Mary, University of London, UK (STREP). Digital sound archives suffer of problems concerning access. They cannot be easily listened or browsed and there is no way to search content. EASIER will provide multiple methods of retrieval, integration with other media archives, content enrichment and enhance access tools. It offers methods for searching content based on audio features, musical features or speech content. System designed with libraries, museums, broadcast archives and music schools and archives in mind.

MOSAICA

Israel partners - Jewish Agency for Israel; IDEA Information Systems; Technion, Haifa – Israel's Institute of Technology; coordinator – ORT, France (STREP). MOSAICA will develop a toolbox of generic technologies for intelligent presentation, knowledge based discovery, and interactive and creative educational experience for a broad variety of diversified cultural heritages. European Jewish Cultural Heritage will serve as a use case. The cutting edge technologies introduced are: the Semantic Web and ontology engineering enabling the conceptualisation and the semantics driven integration of the complexity of the cultural objects; the distributed content management allowing seamless aggregation of highly distributed and diversified content.

New technologies for Mobile Television - Siano

There is now some confusion in the cellular industry. Substantial investments in the 3rd generation are not showing returns; the growth of added value services is slower than expected. Meanwhile a new parallel technology for reception of television broadcasts in cellular and mobile devices is entering the market. The service, first inaugurated in Korea in December 2005, has already begun to enter the market. The chips developed by Siano enable the inclusion of the converter into the cellular phone and the reception of tens of channels in real time. However, the present TV broadcasts are not adequate for mobile devices for three reasons:

- They do not support mobility so the quality declines sharply when moving
- The electricity consume is very high so batteries empty very soon
- They require a large antenna that is inadequate for a mobile device.

To cope with these problems new methods for broadcasting TV to mobile devices were developed. This technology overcomes the limitations of the 3rd generation; these are able to supply a single channel, of low quality, and serving a limited number of subscribers at any given time. There are several standards that have been developed under political and geographical constraints. The main players in this technology are Philips and TI as well as several start-ups. Siano's advantage reside in the very low electricity consume; it services several formats and frequencies ranges; provision of a key turn solution.¹³

Hi-Tech Incubator for new media markets

The Chief Scientist Office at the Ministry of Trade and Industry is the main source of RTD investments in Israel. The office began a process of privatization of the highly successful hi-tech incubators program. One of such private incubators is JVP STUDIO home to exceptional seed stage companies that focus on the new media markets. JVP STUDIO's mission is to provide a suite of critical services including seed financing, management guidance, infrastructure and strategic direction to entrepreneurs. Headed by Erel Margalit it manages 4 venture capital funds with 660 million dollars. One of the first start-ups coming from

this incubator is Double Fusion which is developing new technologies for publicity in computer games.

<<http://www.jvpstudio.com/>>

C. Sustainability and content

Who will control the content?

The Israel Export Institute with the Israel venture Association organized a seminar on IP Communications vs. Traditional Broadcasting with a panel on the future of Digital Content in 2006. It was convened by Dr. Yossi Vardi, principal of International Technologies Ventures. Participants included Jeff Pulver expert on VOIP; senior directors of AOL, Amit Shafir and Jules Polonski; Daniel Shertok, director of business intelligence at Time Warner Cable; Mayo Stanch owner of the Pilot Group investment. Shertok stressed the transformation of the telephony, cable and Internet companies into content providers. Cable TV provides telephony; telecoms provide Internet and TV programs. The services become personalized; where interactive TV parents can send SMS messages to the TV and guide their children. He suggested that Israeli start-up companies should seek to provide solutions for satellite TV companies that may be hurt with these developments; they are seeking solutions that perhaps will be found in Wi-Max services or Internet through the electricity grid. Jeff Pulver stated that TV, Radio and Video are not services but applications that can be transmitted through the IP network. The fusion between eBay and Skype is the first time that a software company acquires a telecom company; eBay will become a broker's agency – they have everything needed for a clearing system; a voice communication system, a public auction system. Several speakers in the seminar stressed that the consumer is now at the center and he seeks simplicity and comfort and does not want to be enmeshed in making complex decisions or too many choices.¹⁴

Digital Radio

The terrestrial infrastructure for digital radio will be established within one year. A tender was issued, with the cost expected at about 15 million dollars. In addition, this year it will be possible to broadcast digital radio through satellite services, most probably through the Afristar with whom the Ministry of Communications is currently holding negotiations. It is expected that

within a year there will be about 50 digital radio stations – 40 terrestrial and 10 satellite-based stations. There are currently two official bodies broadcasting through 9 national channels and another 14 commercial regional stations. The digital radio revolution is expected to have the highest impact on the map of the regional broadcasters. The policy will have the following elements: stimulating the passage from analogue to digital broadcasting; marketing of the new receivers by the broadcasters; subsidies through tax benefits; cooperation with car importers who will offer the new radio in the vehicles they market; deadline for closing the analogue broadcasting.¹⁵

Business models: TGI estimate that Israelis hear about 117 minutes of radio a day, one of the largest amounts worldwide. The publicity market for radio in Israel is estimated at 60 million dollar representing 7% of the total publicity investments. Regional radio currently receives about 25 million dollars (14 channels today). The expected 40 digital radio channels will compete for their share; through a mix of subscription and advertising needed to maintain the service.¹⁶

Digital multi-channel television

The cable TV *Hot* network ended 2005 with 913 thousand subscribers in comparison to 951 thousand at the end of 2004. The digital satellite network *YES* ended the year with 522 thousand subscribers, an increase of about 57 thousand in comparison to 2004. The *Hot* cable network began offering Video on Demand (VOD) services and *Yes* asked the Ministry of Communication for a license to offer this services; both networks launched recording converters.¹⁷

D. Digital preservation

Collaboration between The Israel State Archives (ISA) and the National State Archives of Sweden

The two archives have held a joint workshop in Jerusalem in December 2005 focused on Advanced Technologies for Archives in the presence of the Israel State Archivist, Dr. Yehoshua Freundlich. The event focused on the ways that advanced technologies can support long term preservation. The particular challenges for digital preservation were well expressed by the keynote speaker, Borje Justrell, director for IT in the National State Archives of Sweden under the metaphor

of the digital black hole. Staff from ISA and several technology providers presented several approaches. See: <http://www.minnervaisrael.org.il/archives.html>

Israel Antiques Authority (IAA)

The Israel Antiques Authority (IAA) is engaged in a dynamic IT program with several components:

- The digital images archive established two years ago is expanding and archives the images from excavations and storing of artifacts. The database includes a catalogue with metadata maintained to international standards and an integrated search engine.
- A survey GIS based system enables the land surveyor to collect data directly to the GPS. He is able to enter metadata and free text concerning the surveyed area. The data is then easily retrieved by the users.
- The IAA Internet project includes:
 1. A corporate Website
 2. An online journal, «Hadashot Archeologist», including preliminary and short final reports. <http://www.hadashot-esi.org.il>
 3. The conservation Website that draws in the public in these online discussions. <http://www.iaa-conservation.org.il>

Collaborative Digitisation – The CZO and the Harvard College Judaica Library

The Harvard College Judaica Library, headed by Prof. Charles Berlin and the Head of the Israel documentation program, Violet Gilboa, have substantially advanced the cooperation between the Central Zionist Archives (CZO) for the digitisation of their assets. The latest program enabled the digitisation of 75,000 photographs; 20,000 Posters; 15,000 maps. There have been some experiments with the digitisation of audio materials which pose special technological challenges; meanwhile 1,500 exemplars of such materials have been catalogued and described. See: <http://www.zionistarchives.org.il>

E. Monitoring

Intellectual Property Rights Developments

New Copyright Law

The Copyright Law enforced in Israel still is based in British Empire Copyright Law from 1911; and the British

Mandate Copyright Ordinance of 1924; several amendments have been made to these documents to meet obligations under international treaties and keep with modern needs. The Ministry of Justice has recently prepared a comprehensive Copyright Law Draft (2005) to be presented for discussion and approval at the Parliament (Knesset). The draft has been widely published and discussed. The Center for Law and Technology of the University of Haifa reviewed the draft regarding the exceptions under the "fair use" clause. The clause 19:

- states that fair use of is permitted for purposes like self study, research, critic, review, journalistic summary, citation, or teaching and examinations at educational institutions;
- the use will be considered as fair considering among others the following factors:
 1. The purpose of the use and its character
 2. The character of the creation that is used
 3. The scope of use, quantitative and qualitative, regarding the whole of the protected creation
 4. The consequences of the use on the value of the creations or to its potential market.

The authors of the review consider that this approach is closer to the US model rather than the European model. It has many advantages and it is better adapted to change both for potential technological as well as social developments. It leaves interpretation to the courts which enable them to cope with situations that could not have been foreseen during the legislative process. On the other hand this approach creates some uncertainty that may have a calcifying effect on possible users who cannot anticipate the exact judicial interpretation. They suggest that efforts should be made to overcome this problem in the legislative process which are expected to continue soon after the upcoming general elections.

Creative Commons Israeli Version Issued

An event inaugurating the translation and localization of version 1.0 of the Creative Commons license took place at the Center for Law and Technology of Haifa University. The Center hosts the Creative Commons center in Israel. The event included an exhibition of Israeli artists that distribute their creations under the CC license. Prof. Larry Lessig, chairman of the international

Creative Commons initiative took part through a live video conference. The draft of the Hebrew version of CC licenses 2.5 has already been published and is being discussed. For more information contact project leader Elad Wieder elad@creativecommons.org.il or visit the site at <http://creativecommons.org.il>. The licenses available include: Attribution Non-commercial; No Derivatives; Share Alike. Attribution No Derivatives; Attribution Share Alike; Attribution as well as other licenses. See: <http://creativecommons.org/about/licenses/meet-the-licenses>

Israel National Library

The operational steps towards establishing the Israel National Library have begun. The library is now incorporated as an independent public corporation owned by the Hebrew University. The library is now managed by an independent board chaired by David Bloomberg and with an outstanding membership; its sub-committees are carrying out the steps that will lead to its transformation into a National Library. The present Jewish National and University Library was established in 1892 and called *Midrash Abarbanel Library*. The Seventh Zionist Congress in 1905 decided to found a National Library based on its collections. In 1920 the library was transferred to the World Zionist Organisation (WZO) and following the opening of the Hebrew University it was consequently transferred to the Hebrew University in 1925. The library became an organic part of the Hebrew University, however, its status was never formally defined by law. It has since consecutively functioned as the central library of the Hebrew University, the State of Israel and the Jewish People, albeit without a commensurate status and budget that is commensurable with these compound functions.

The present change will be implemented in two stages. The first, and current stage recognizes how the Jewish National University Library (JNUL) will become a subsidiary owned by the Hebrew University. During this transitional stage, the library managed by an independent Board of Directors will ready it for the establishment of the National Library in the year 2007. One essential condition will be the enactment of a National Library Law that will recognize its new status as well as an assured state budget appropriate to an institution of its caliber. The JNUL will be a public-service corporation, functioning under the joint ownership of the State (50%), the Hebrew University (25%) and other

public institutions. Other higher education institutions and the Jewish Agency will be offered a share of the ownership on conditions to be agreed upon (25%) with the recognition that the library will also function as the National Library of the Jewish People.

This operational step follows the recommendations:

- of an international committee (1966) headed by Prof. Michael Feldman (the Weizmann Institute, Rehovot) and Dr. James Billington, Chief Librarian of the US Congress;
- in addition representatives of a committee, headed by Supreme Court Justice Itzhak Zamir. The Zamir Committee took on the challenges of establishing an independent national library in Israel that will serve its citizens through the cutting edge technologies, and will sponsor cultural programs, exhibitions of the library's rare treasures and be active in promoting educational programs through the schools. For more details see: <<http://www.jnul.huji.ac.il/eng/messages.html>>.

Forum for the Preservation of Israel Audio-Visual Heritage

The Forum was established as a joint initiative of the Producers Association and the Forum of the Documentary Creators and professionals in the areas of photography; cinema and television. They seek to ensure the long term preservation and cataloguing of thousands of television and radio programs; residing as film and photography collections that have been assembled across a number of public and private archives. The investigation on the state of the audio-visual archives:

- The photographic resources are dispersed in a wide variety of archives and there is no central catalogue; nor any single institution in charge of overseeing the state of the archives and providing the necessary support.
- Due to budget constraints many archives do not have the resources for long term preservation and valuable documents are therefore endangered.
- Thousands of films have not been catalogued or have been only partially catalogued. There are cases where whole archives were destroyed, for example the experimental broadcasts of Channel 2. The Forum's program of action includes:
 1. Promoting legislation to regulate the deposit, recovery, preservation, recovery or transfer into formats that are accessible and can be preserved in

the long term, maintaining their cataloguing and assuring accessibility to the public

2. Public mobilization through a variety of means like setting up an umbrella organization; an annual conference; awards competition for productions that make creative use of archives materials and more. The coordinator of the forum is the documentary director and producer Anat Zelcer. The following two events took place in 2005:

The Founding Conference of the Forum took place in the Framework of the Jerusalem Film Festival 2005: the event, involved leading personalities from the broadcasting industry and the public life in Israel. The full-day meeting was accompanied by short edited presentations of documentaries that touchingly expressed the history, culture and conflicts that characterizes Israel and its 57 years of existence. Presenters from abroad included Emmanuel Hoog, chair of the FIAT/IFTA International Association of Broadcasting Archives and director of INA/ France; Joelle Borgata from MEMORIAV, Switzerland; Amanda Nevill from the British Film Institute;

Digitising Broadcasting Archives workshop at the 2005 EVA/MINERVA Jerusalem Conference on Digitisation of Cultural Heritage

The NRG/Minerva Plus enabled the ongoing relationship with the Presto Space project which organized the first workshop in 2004. In its wake, Billy Segal, Head of the IBA Film Archive, one of the leaders of the Forum, organized a special workshop, wholly dedicated to advanced technologies for the digitisation and management of broadcasting archives. the workshop dealt with ingest solutions for telecom operators; tapeless workflow; cellular, VOD, TIVO, PSP – preserving contents in new media; phonetic search and more. See: <<http://www.minervaisrael.org.il/wednesday.html>>.

Collections Management System for Israel's Museums

The Ministry of Education, Culture and Sports has just concluded the tender process for instituting a collections management system for its recognized Israeli museums. Museums in Israel fall in four categories:

- The Israel Museum, Jerusalem; the internationally renown encyclopedic museum and Israel's leading cultural institution:

- 5 National Museums
- 8 Regional Museums
- 39 Local Museums.

These Museums specialize in specific areas: Arts, History, Ethnography, Science, Nature and Archeology. Most of the collections have been registered and catalogued but some of them still are managed as hand-written and typed cards while other museums are using disparate kinds of software - most of them obsolete. The Ministry has chosen the ALD Corporation integrating existing software packages and will be adapting them for Museums under the auspices of the Ministry of Education, Culture and Sports. The system will operate as a central Web system; access will be provided either from external end points or through the LAN's of the museums. Management will be centralized; and is expected to facilitate the transfer of information among the Museums for research, loaning of exhibits, production of joint exhibitions and more. The first phase will incorporate two large museums and subsequently the other museums will be integrated into the national system. In the future it is expected that exemplars chosen from the collections will be displayed as information for the general public.

World Summit of Information Society (WSIS) – November 2005, Tunisia

In preparation for Israel's participation in WSIS, a series of intensive consultations was conducted between government ministries, NGO's, academic and commercial institutions and civil society representatives. Specific recommendations for Internet Governance were proposed and formulated. A substantial Israeli professional delegation represented Israel in Tunis, both at the Israel pavilion at the ICT4All Exhibition, entitled e-Futures and at the three main seminars that were held on the subjects of: e-Inclusion; education and e-culture (children as bridges); and issues related to e-Government and e-Health.

World Summit Award

The World Summit Award (WSA), a global contest for selection and promotion of the World's best e-content and applications were held in the framework of WSIS. Dr Susan Hazan, the WSA National Expert for Israel coordinated the eight National WSA contests. See the detailed review of the contest and of e-Content issues in Israel:

<http://www.digital-heritage.org.il/WSA_REPORT_2005.html>

National contests were held in each one of the WSA categories. See: <<http://www.wsis-award.org/index.php?folder=206>>. The national contest for the e-Culture, convened by Dov Winer <<http://minerva.unitedapps.com/wsa.html>> brought the largest number of applications - some 32 entries. First place in the e-culture category was awarded to *Ancient Maps of Jerusalem* <<http://jnul.huji.ac.il/dl/maps/jer/>> an impressive Web-based project by The Jewish National and University Library, (Shapell Family Digitization Project, Eran Laor Cartographic Collection) and The Hebrew University of Jerusalem, Department of Geography, Historic Cities Project.

The finalists included:

Invitation to "Piyut" <<http://www.piyut.org.il>>. An Invitation to the World of Jewish Music by Piyut and Snunit Center for the Advancement of Web Based Learning; Mikragesher <<http://www.mikragesher.org.il>>. Bible e-Learning site in Hebrew for middle school students by Gesher; Online Treasury of Talmudic Manuscripts, <<http://jnul.huji.ac.il/dl/talmud>> by The Jewish National and University Library. World Zionist Organization <<http://www.zi-oni-starchi-ves.org.il/>>. The Central Zionist Archives. See: <<http://www.isoc.org.il/wsa/selected.html#eculture>>

A gala ceremony, celebrating the winners in the eight different categories was held at the conclusion of the EVA/MINERVA Jerusalem Conference on Digitisation of Cultural Heritage (see: <<http://www.minervaisrael.org.il/wednesday.html>> and the eight national prize winners were showcased at the WSIS seminar in Tunisia.

Israel establishes a National Committee for Information for All Programme

The committee, established within the Israel National Commission for UNESCO includes experts from the academia, public and private sector and civil society. The IFAP provides a platform for international policy discussions and guidelines for action on preservation of information and universal access to it. Prof. Niv Ahituv from the Tel Aviv University chairs the Israel National Committee. (9.11.2005)

EUROPRIX Top Talent Award 2005

The EUROPRIX Top Talent Award <<http://www.toptalent.europrix.org/tta05/index.htm>> is Europe's contest for students and young professionals who work on innovative projects in the field of e-contents and design - using whatever multimedia channel or platform. The TTA winning projects are the best of young multimedia contents and design in Europe. They show that the new developments are not isolated, but that from the Baltic to the Mediterranean, young media designers have taken charge of the technologies to create new applications and contents that work in the real world. Several Israel projects have been chosen as nominees for the final selection and invited to Vienna for the Top Talent Festival takes place March 4, 2006. The Israel NCP for the TTA is MAKASH <<http://www.makash.org.il>>. The Israeli finalist in the Cross Media category: Jumping Rope by Orna Portugaly, Daphna Talithman and Sharon Younger from the Camera Obscura School of Art. The EUROPRIX Top Talent Quality Seal is awarded to projects with clear innovative features and creative ingenuity. The Israel awardees are: Heartbeats - Orna Portugaly, Daphna Talithman and Sharon Younger from the Camera Obscura School of Art. Come2Play - by Erez Naveh from Come2Us.

Digital Design Theories and Research

The Faculty of Architecture of the Technion, Israel Institute of Technology has established a research programs in *Digital Design Theories and Research*. Subjects currently explored are: the formulation of a theoretical basis for digital architecture, digital technologies and their employment in design, designing virtual worlds, employment of VR technology in design for tasks such as pre-evaluation of built environments, digital archiving systems etc. These themes are also the subject of study in the framework of experimental design studios at the Technion. A group of undergraduate, graduate students and researches in this field is currently headed by Prof. Rivka Oxman. <<http://www.technion.ac.il/~rivkao/>>

- 1 «Leumi Economic Weekly», January 4, 2006, <<http://english.leumi.co.il/Home/>>.
- 2 Arie Bergman – Arie Marom, *The Contribution of Human Capital to Growth and Productivity in Israel's Business Sector, 1970 Through 1999*, Bank of Israel, December 2005.
- 3 Haaretz, March 1, 2006 (page 5) from the Central Bureau of Statistics.
- 4 Haaretz, «The Marker High-tech», December 11, 2005.
- 5 Haaretz, «The Marker High-tech», January 1, 2006.
- 6 Haaretz, «The Marker, HiTech and Communication», February 6, 2006.
- 7 Haaretz, «The Marker, HiTech and Communication», January 3, 2006.
- 8 Haaretz, «The Marker, Communication», December 18, 2005.
- 9 Haaretz, «The Marker, Communication», December 25, 2005.
- 10 Haaretz, «The Marker, High-tech», February 22, 2006.
- 11 Haaretz, «The Marker, Communication», February 16, 2006.
- 12 ISERD Israel Europe RTD Directorate, <<http://www.iserd.org.il>>.
- 13 Haaretz, «The Marker», February 1, 2006.
- 14 Haaretz, «The Marker High-tech», January 1, 2006.
- 15 Haaretz, «The Marker, January», 8, 2006.
- 16 Haaretz, «The Marker, Publicity, Marketing and Media», March 1, 2006.
- 17 Haaretz, «The Marker», February 21, 2006.

