



Regulatory Developments Report - Israel

This is the final Regulatory Developments report on Israel as the ESIS project ended in January 2001. This Master Report covers the whole period of the ESIS project surveying the Mediterranean area, March 1999 - January 2001 inclusive.

1. Introduction and Summary

Israel has become an information society.

The proportion to GDP of **national spending on education** amounts to **9.1% compared with 6.1% in the OECD countries**. Israel has the highest proportion of **engineers and scientists** among its population – **135 per 10,000 residents**.

The percentage of **academic graduates** to the total population has risen considerably during recent years, **from 8.6% in 1990 to 12.7% in 1998**.

Israel spends proportionally **more on research and development than all other industrialized countries** except Sweden and Japan. Israel was tied with Finland for third place, with an expenditure of 2.8 percent of GDP in 1997. This compares to 3.7 percent in Sweden and 2.9 percent in Japan. In 1999 national spending on **R & D reached NIS 14.1 billion or 3.5 of the GDP**.

There is an **huge input of risk capital** flowing to Israel – in 1999 it reached a 1,014 million dollars and in the **year 2000 3,106 million dollars**.

A substantial rise of the sales and exports of the **electronics and software industry** can be observed. In the year 2000 they rised by 50% - the export volume reaching 13,000 million dollars and the **total sales 15,000 million dollars**. The most dramatic change was in electronics components sector which rised 150% to 2,700 million dollars. The exports of communications equipment, industrial medical components and software grew by 40-50% from 1999.

The downturn in the shares traded at the NADAQ Stock Exchange began to be felt in Israel at the end of the year 2000. Several start up companies which planned mobilisation of capital have to change their plans or to satisfy themselves with lower level of capitalisation. Some start up companies lost 50 to 70% of their stock exchange value (Haaretz 15.1.2001, C9). The lack of seed capital began to be felt; however plenty of investment funds are available for more mature RTD efforts. The acute demand for in human resources for the hi tech industry was attenuated. In middle 2000 the deficit was estimated at 10 to 20 thousand engineers and technicians. Emergency measures were adopted by the universities and by the government; at the end of year 2,000 the deficit is estimated at 3,000 employees.

There is a **54% penetration of Personal Computers** in Israeli homes. About **32%** of the households and **60%** of businesses use the Internet. There are **about 1.1 million Internet users**, 800,000 dial-up and 5,000 direct-connections customers

Israel is a leader in developing Internet applications and products and Israeli companies operating in the field have marked several international successes.

The process of re-regulation and liberalisation of the telecommunications market reached its climax in 2000 with the **opening of the inland telecommunications market** to competition. The Ministry of Communications published the regulations for awarding general telecommunications licenses in 4.9.2000 thus finally opening this market to competition. The Parliament (Knesset) approved in

the first of the three necessary votes the Amendment 24 of the Telecommunications Act. It will enable cable TV companies to offer advanced multi-channel services that include telephony, data communications and fast Internet access. It will also enable competition for subscribers in the television broadcast market.

A process begun in the eighties is reaching closure. In 1984, the regulatory and operational jurisdictions in Israeli telecommunications were separated, when all government-operated facilities were transferred to a corporation, the Bezeq. A policy of promoting competition and structural changes in 1994 permitted Bezeq to continue offering tightly regulated monopoly services, but in order to participate in other market sectors, Bezeq was required to form subsidiary companies.

Bezeq today retains a general operating license, although legislative changes cancelled its exclusive fixed-service telephony rights in June 1999. Minimum call charges and per second billing replaced the traditional meter pulses in May 2000.

Three cellular operators and three facility-based international long distance service providers currently also compete for traffic, and about 160 special licenses cover value-added services were issued. A **tender for additional 2G and 3G cellular frequencies and for a fourth cellular operator** are scheduled to be issued by January 2001.

In July 2000, a licensed DBS provider (YES) began serving the public. Its digital television broadcasts include a basic package of about 20 channels, as well as supplementary packages and pay-per-view channels. Meeting local content obligations was one of the conditions of receiving the license.

In October 2000, the **Ministry of Communications published tenders for domestic fixed telephony services**, including three fixed wireless (FWA) licenses that will operate in the 3.5 and 26 GHz frequencies. Fixed wireless broadband services will be provided using technologies such as **LMDS** (Local Multipoint Distribution Services) and **WLL** (Wireless Local Loop).

There are three cellular operators in Israel providing countrywide coverage and modern network services. Pele-Phone uses NAMPS and CDMA technology. The second operator, Cellcom uses TDMA while Partner, the third operator, uses GSM technology. Latest data indicate that there are **4,170 million cellular telephone subscribers** in Israel; for a total population of 6,315 million, a **penetration rate of more than 66%** (Haaretz, 8.1.2001, C1). These numbers do not include the business wireless network MIRS which is now seeking a cellular telephony license from the Ministry of Communication.

The Israeli multi-channel subscriber television market comprises three cable television operators, each with a geographic monopoly, as well as a single DBS (Direct Broadcasting Satellite) operator which began operations in July 2000 using Israel's Amos-1 satellite. **Cable TV home-pass extends to 95 percent of households** and more than 72 percent of all households subscribe (**1.15 million cable-connected households**).

There are two national television channels in Israel (one public and one commercial). A second commercial channel will be licensed during 2001 by public tender. These channels are carried by the cable and DBS operators, who also provide packaged access to locally-produced movie, sports and other special interest channels as well as dozens of foreign offerings. Five additional special interest TV channel franchises for distribution by cable and satellite will be licensed. The first tender for an all-news channel will be published within a few months. Cable package tiers are expected to be introduced soon as a response to DBS broadcasts.

The cable operators are preparing for digital transmission, and are replacing their coaxial distribution system with hybrid fiber optic and coaxial lines (HFC). HFC networks improve signal transmission, increase system capacity and

bandwidth, and enable telephony and high-speed Internet access. Terrestrial digital television broadcasting is now undergoing trials.

There are 11 public national AM/FM radio stations and 14 commercial local FM radio stations, licensed by public tender.

Digital audio broadcasting (DAB) services were approved by the Ministry and will be licensed by public tender during 2001.

This introduction includes substantial parts of the publication "Telecommunications in Israel 2001" issued by the Ministry of Communication.

2. Information Society Policy

2. 1 Historical overview and general legislation

In the last five years several government committees have issued policy recommendations in the areas of telecommunications and broadcasting which were translated into governmental decisions.

The inter-ministerial **Wax-Brodet-Lyon** Commission examined the policy in the telecommunications sector and how to open it to competition. It presented its findings in December 1996; they were adopted by the Government decision 1177 of 3.1.1997. The implementation was set up by the **Rosenne Committees** reports of February and September 1998. Tariff reform was set up by the **Gronau Committee** in early 1999.

The **Peled Committee** was established by the Minister of Communications in October 21, 1996. Its mandate was to extend and re-organize the broadcasting system for public radio and television including present and expected broadcasting elements; broadcasting by terrestrial, cables and satellites means. The recommendations were published in June 1997 and adopted by Government decision 2445 of 10.8.1997.

The Wax-Brodet-Lyon Commission Recommendations

The Committee defined the main aims of the policy as follows: (1) To provide a wide variety of modern telecommunications services; (2) To assure quality telecommunications services, in line with other well-developed economies; (3) To achieve reasonable tariff levels (4) To ensure universal service; (5) To create a competitive environment able to promote technological innovation, economic efficiency and ample investments; (6) To safeguard vital national interests; (7) To safeguard national security interests.

Competition was regarded as the primary means for achieving these policy goals. The Wax-Brodet-Lyon committee recommended to open up domestic fixed telecommunications services (infrastructure, transmission, data communications and telephony) to competition no later than January 1999.

Legislative changes to the Telecom Act cancelled the exclusive fixed-service telephony rights of the incumbent operator in June 1999. In September 2000, the Ministry announced the opening of the fixed market to an unlimited number of operators. At the time of this writing (January 2001) the Parliament (Knesset) already approved (in the first of the three regulamentary votes) the addendum 24 to the Telecommunications Act. It will enable cable TV companies to offer advanced multi-channel services that include telephony, data communications and fast Internet access.

The Future Telecommunications Map Envisaged by the Rosenne Committee – September 1998

The Israeli telecommunications sector should undergo major restructuring to be set in motion in June 1999 at which time licenses should be granted to domestic fixed-services operators. The changes should include developments in the following areas:

1. **Fixed-service telecommunications** operators, competing with the historical operator (Bezeq), will provide infrastructure, transmission, data

communications and telephony services. They will provide broadband multimedia services for business and household applications, as well as basic telephony; they will set advanced infrastructure, including broadband switching facilities, broadband optical fiber transmission backbone, and modern access network, implementing technologies such as passive and active optical networks, wireless local loop, local multi-point distribution services and satellite communications.

2. Mobile telecommunications operators will supply quality, feature-rich mobile and personal communication services, supporting a wide variety of portable multimedia devices. New operators will compete with the existing cellular providers: PelePhone, Cellcom and Partner as well by existing operators updating their infrastructure technologies.

3. International long distance facilities-based operators. The exclusivity of the current operators - Barak, Golden Lines and Bezeq International - will expire in 2002 when licenses to new operators may be granted.

In light of the importance of innovation and creativity of SMEs competition in non-infrastructure services will be implemented as much as possible through licenses for value added services in traditional wireless services (paging, two-way radio and trunking) and terminal equipment.

Competition will be facilities based and each telecom operator which provides infrastructure, transmission, data communications and telephony services will be required to set up its own facilities. (this recommendation was reversed at the implementation stage).

Fixed operators will not be permitted to provide services to non-subscribers and those not connected to their facilities by an independent access network under the operator's control.

The competition rules will not impose unbundling of existing services or sale of facilities to competitors. Except for the obligation of every operator to sell its services to anyone who demands them, including competitors, no operator will be compelled to allow competitors to install facilities on its own premises (co-location).

Every telecom operator, fixed or mobile, incumbent or new, will be obliged to meet the following requirements:

- 1. Interconnection** with other operator's networks, enabling all subscribers of any operator to communicate with every subscriber or every service of other operators.
- 2. Equal access** (dialing parity) to the international service providers, enabling every subscriber to select, at her or his discretion, the use of a service offered by any international operator.
- 3. Number portability**, which will enable every subscriber to switch from one operator to another without having to change her or his address or telephone number.

The following conditions for development of competition must be established:

- 1. Frequency spectrum** - re-allocation of the frequency spectrum will ensure efficient competition in telecommunications services. Frequencies will be allocated for applications of wireless local loop access and local multi-point distribution services. Later on, frequencies will be allocated for personal communications services (PCS) applications.
- 2. Telephone numbers** - a major change in the Israeli numbering plan will ensure the availability of telephone numbers and dialing codes to the new operators; failing this step, no competition will develop.

When decisions regarding implementation were taken the Ministry of Communication decided to give priority to the goal of establishing real competition. It was decided to require unbundling reversing the recommendations of the Rosenne Committee for a facilities based policy.

Without unbundling the Ministry felt that no real competition would evolve due to the strong market presence of the incumbent and the cable TV companies (the immediate prospective new operators).

Granting Licenses to New Operators – Rosenne Committee Recommendations

Competition in fixed telecommunications services will be fostered by granting a license to entities which comply to high preliminary qualifications. Licenses requiring the use of a limited resource, such as spectrum where a license can be given to a limited number of operators will be granted by public tender.

Competition in mobile communications services will be fostered by granting licenses through public tenders since the limitations of the frequency spectrum availability do not allow multi-party competition.

In 2002 licenses for the supply of international services will be granted on demand in accordance to assessment of compliance with criteria based on capability, financial soundness and technical skills.

Limitations involving cross-ownership will ensure competition by means of structural separation among bodies operating at various strata - fixed telecommunications, mobile telecommunications and international telecommunications - as well as limiting the capability of any single entity to hold, control, or direct more than one company in each stratum.

Licensing of new fixed-services operators will be long term; twelve years with the option of extension for an additional ten years. Fixed services operators may possibly receive legal exemptions and easements, such as rights-of-way, similar to those granted to Bezeq.

Universal Access – Rosenne Committee Recommendations

Telecommunications operators will provide services to every subscriber and other licensees under equal conditions and without discrimination.

The new fixed-service operators will be permitted to provide their services throughout the country, but will be obliged to do so in the "expanded demand area"; this will be enforced gradually, and will be fully operational within three years of granting of the license; the expanded area will be defined in advance in the license of each operator, and will include at least twelve "natural regions" based on the administrative division of Israel into 41 such regions by the Central Bureau of Statistics. The expanded area of a cable television concession holder will be a cluster of all his concession regions; Bezeq's expanded demand area will be the entire country.

The contents of the universal access basket provided by Bezeq will be revised every five years. Presently the Committee recommends basing universal access on availability of the following services:

- 1. Fixed telephony:** including basic telephone service, facsimile communication and data communications with a modem, along with a basket of support services including tone dialing, caller identification, call barring, temporary disconnection, repair service, customer support services, telephone directory and directory services, equal access to international communication services, free access to regional and national emergency services, and provision of 16 kHz metering pulse to operate terminal equipment on the customer's premises.
- 2. Public telephony service** - at uniform national tariffs.

If Bezeq is the sole provider of universal access in certain areas the regulating body will consider participation of other fixed services licensees in funding of universal service, by paying a fixed percentage of their total income.

Bezeq - The Historical Operator

Regulating the activities of the historical operator, the Bezeq, in the early stages of competition is of key significance for the advancement of telecommunications liberalisation, as every new operator will have to be linked to Bezeq's network, and Bezeq bears the main burden of providing universal access.

As long as Bezeq remains a monopoly in the fixed market (infrastructure, transmission, data networks and telephony) with revenues of more than 50% of the market in at least one of the primary operational spheres or sectors it must be closely supervised so as to safeguard fair competition, in particular concerning:

1. **Structural separation** - it is necessary to continue the policy of structural separation between Bezeq, the parent company, whose business is monopoly fixed services, and its subsidiaries, which supply services in competitive markets.
2. **Tariff control** - close monitoring and prior approval of Bezeq's tariffs. As a monopoly Bezeq will be allowed only limited flexibility in setting tariff plans for its customers.

The Gronau Committee

The arrangement for the regulation of Bezeq's tariffs set by a committee of experts in 1993 expired at the end of 1998. A new committee of experts, headed by Professor R. Gronau, formulated the regulation determining the level of Bezeq's tariffs and the way those tariffs are updated; it also addressed reduction of cross-subsidies and determined the interconnection tariffs. The committee developed an innovative macroeconomic model that enable it to analyse the structure of the telecom tariffs validating it through traditional analyses carried out in other countries.

The **Gronau Committee** recommendations were accepted by the Minister of Communications and brought by her for approval by the government and the Finances Committee of the Parliament. From 1.4.1999 the tariffs for intra country calls were lowered by 21% .

The Gronau Committee recommended that the tariffs be lowered by a mean rate of 8%; the company estimated that for the household customer the mean lowering of the telephone invoice is about 12% .

The Broadcasting System for Radio and Television

The Peled Committee (June 1997)

The Peled Committee issued recommendations for extending and re-organizing the broadcasting system for public radio and television; reform the overall broadcasting map including present and expected broadcasting elements; broadcasting by terrestrial, cables and satellites means. The recommendations of the committee were published in June 1997 and adopted by the Government in August 1997. They are are the following:

Open Skies

The main recommendation is the pursuing the creation of a free market for electronic communication services based on the principle of "Open Skies". The following steps are necessary:

- (a) Immediate decision for a planned and phased regulation of the electronic communication sector including the necessary legislation.
- (b) The removal of restraining barriers.
- (c) Implementation of an open market under fair and equal conditions ensuring security and freedom of choice for all branches of the electronic media.

The committee suggest the consolidation of the present legislation throughout the Broadcasting Act in Israel; the Creation of a **National Authority for Electronic Communication Services** similar to the FCC that will be the Statutory Regulator. It will deal with planning, licensing and supervision of all broadcasting services; they recommend the inclusion of the telecommunication services within the framework of one Authority.

A **Commission for Public Complaints** will be established and an unified code of ethics for broadcasting and advertising established.

They recommended the transition from Broadcasting Franchises to Broadcasting Licenses preventing future claims of exclusivity or "first rights" which may prevent or limit free competition and technological innovation.

The regulation of the carriers services sector will aim at equal competition offering carrier services to content services license holders.

Regulation of the content services sector will provide for a competitive framework aiming at: (a) Pluralism and variety of broadcasts; (b) Uniform ethical guidelines in broadcasting and advertising; (c) Safeguarding original Israeli productions and support to Israeli producers and artists.

Limitations in ownership in both the carrier and content sectors will be implemented and equal conditions for competition limiting cross ownership.

At the time of publishing their conclusions recommendations for the reform of the Public Broadcasting sector in Israel were being prepared by the **Zuckerman Committee** established by the Prime Minister so the Peled Committee restrained from making recommendations in this area.

One important recommendation was for a planned and phased, transition to digital broadcasting in the television and radio sectors: (a) Three years for digital broadcasts; (b) Five to eight years for all the population to receive digital broadcasts.

The committee recommended that expected development regarding the transmission of video motion and sound through the Internet be followed up as it will change the Web into a global network providing TV and Radio programs.

Policy in the Interim Period – Peled Committee Recommendations

Due to the complexity of the transition period and the abundance of government authorities and statutory bodies involved it was advised to prepare the Broadcasting Act immediately so that the National Authority is established no later than the end of 1999 and the full "Open Skies" policy is arranged in time from 2003 onwards.

The commission recommended the immediate allocation of licenses for direct satellite broadcasting (DBS). Broadcast licenses should be allocated to one-channel and to multi-channel broadcasts coded as Pay TV. DBS licenses uncoded and free of charge should be allocated only if they do not broadcast commercial advertisements, at least until 2004.

Dedicated channels: National dedicated channels which will be allowed to broadcast by cable and satellite should be licensed. And financed by advertising. These will be dedicated to: Arabic Language; Amharic and Russian; Israeli Heritage; Israeli Music and Middle-Eastern Music; News and Information Channel. In addition the establishment of an International Israeli Channel dedicated to Jewish and Israeli communities abroad should be considered.

Cable television: preparations should be immediately started for changes in the current franchises, by consensus and legislation. Cable TV carriers should not hold control of systems that exceed 35% of the cable linked household in the country. They will be not allowed to transmit direct broadcasts via satellite (DBS) or control companies in this sector. The current policy of one service package (Super Basic) will be canceled by 1999. A group of separate services (tiering) will be offered to cable television customers; premium channels should

be provided by content suppliers, in addition to the basic service, with prices determined by the market.

Content provision by cable carrier companies will be allowed only through separate subsidiary companies operating under conditions of equal competition. The process of transition to tiering should be accelerated through the provision of a license for DBS providing a competitive alternative to cable TV.

In the 1999 it was decided that Cable TV companies will not be entitled to offer tiering packages until the new DBS company reach an adequate number of subscribers that will enable it to compete in the market (250,000).

Second commercial Television Channel : A tender should be published for a single corporate holder to establish an additional commercial channel available to all. If it proves impossible to operate the new channel through terrestrial carriers (like the Second Channel) broadcasting freely by air and operating license will be given to the additional channel via cable (free of charge - Must Carry), via direct satellite broadcast, and will be uncoded. The new channel will enjoy full equality with the existing Second Channel with free and fair competition between the two channels as broadcasters of commercial advertisement.

The law establishing the Channel 3, commercial television channel was approved by the Parliament in March 2000 and the new channel is expected to start broadcasts at the beginning of 2001 with two concession holders.

Commercial broadcasts in the interim period: franchises should be replaced by licenses and license holders will be considered content providers to the public. With the establishment of the National Authority or at the end of the first franchise of the Second Channel the statutory authority will not be involved in production or broadcasting but act exclusively as a regulatory body.

The Second Channel at the end of the franchise period will broadcast seven days a week; the franchise of Educational Television in the Second Channel will be canceled.

Opening Radio Stations to Competition: free competition will be established with the completion of the transition to digital radio broadcasts. Franchises provided to local radio stations will be transformed into licenses allowing the move to national broadcast. As long as the broadcast range remain a "scarce resource" local station which wish may become part of a national network via the broadcast network of the Second Authority. The 13 local stations will be permitted to create consortia for marketing advertisements; they will be allowed to broadcast news and current events programs (national and international).

The Commission recommends allocating frequency and licenses to national radio stations religious or heritage related; licenses should be allocated through a competitive tender. Broadcasts licenses should be allocated to community radio stations with a radius that does not exceed 5 km for the use of universities, schools, small neighborhoods or villages.

Radio broadcast to other countries should be established as a separate and independent framework budgeted and financed accordingly outside the framework of the Broadcasting Authority.

Whoever has been convicted of operating an illegal radio station (pirate) will not be permitted to receive a legal license.

A committee to implement the recommendations and to enable participation of the general public in all-inclusive regulation of broadcasting should be established as an Executive Board for Regulation in the Ministry of Communications. Adv. Dorit Inbar now heads this unit at the Ministry.

The Vardi Report on the Broadcasting Authority

Prime Minister Ehud Barak nominated last October 1999 Raphael Vardi to check the Broadcasting Authority; its recommendations were presented at the end of February 2000. The Authority, has a budget of 750 million NIS. The main

findings presented by Mr. Vardi are that: the Authority is not properly managed; most of the budget is applied in wages and only 20% in program production; the employment agreements are archaic and inefficient; there is no investments in technology; decision making is politically motivated. The main recommendations include: (1) To replace the Chairman, the Director General, the Directors of the TV Public Channel 1; the Kol Yisrael radio and the members of the Authority Council. (2) To establish a public council composed by only 15 members (with a mandate of four years) appointed by a Judge from the Supreme Court and not by politicians (3) To dismiss or enable the retirement of hundreds of employees (4) To restrict the wages budget (4) The annual broadcasting tax will not be abolished (5) To consider the inclusion of limited commercial publicity in the public TV channel.

The implementation of the report demands special legislation; a special budget for the retirement of hundreds of employees and the substitution of the management. In the interim period the report proposes that a director general be nominated directly subordinated to the Prime Minister.

2.2 Umbrella Policies and national IS strategy

There is no umbrella, Information Society policy in Israel. We are able to identify IS policies in specific areas. These policies include opening the telecommunications market to competition and privatisation; intensive support for basic research and RTD technological business applications; the development of national infrastructures; policies for the intensive expansion of the use of ICT in Education; the development of Broadcasting leading to digital TV, additional channels and channels for specific target populations and the development of regional radio; the Freedom of Information Act granting citizens access to information at all levels of government and establishing the necessary tools and procedures.

Lately a new parliamentary sub-committee for the Internet and Information Technologies was established with M.K. Michael (Miky) Eitan as chair. This committee established (March 2000) working groups headed by experts which should prepare policy papers in the following areas: Regulation; Internet II; Communications and ISPs; Personal Identification; Hi-Tech Development; Educational (k12) Networking; Teachers Education and Training; Life Long Learning; The Digital Divide; Electronic Commerce; Legislation; Information Protection; Freedom of Information; On-line Democracy; Online Government Access; The Arab sector in the Internet. The WGs will use an advanced Web site and groupware. The initiative is backed by the Parliament chairman, Avraham Burg.

The main effort to establish an umbrella policy for the Information Society in Israel was lead by M.P. Michael (Miky) Eitan. At the end of 1996 he established and headed a parliamentary sub-committee "The Preparation of Israel for the Information Age". In the following years he has become Minister of Science and then vice-minister at the Prime-Minister Office in charge of the program HILA (Preparation of Israel for the Information Age).

The recommendations of the committee in April 1997 were prepared by professional task forces working in collaboration with the National Committee for Information Technologies Infrastructure (headed by Prof. Danny Dolev). More than 80 consultants worked voluntarily in the diverse task forces.

The task forces dealt with the following issues: (a) Governmental readiness; (b) Accessibility to the government for the citizen; (c) Legislation; (d) Telecommunications infrastructures and regulation; (e) Education; (f) Electronic Commerce; (g) Databases; (h) Data security and protection; (i) Hebrew and standards; (j) Israel and its economy in the Information Age; (k) The Jewish People in the Diaspora. Among its recommendations:

Governmental Readiness

(a) The government should adopt an IS master plan and allocate the necessary resources for its phased implementation. (b) At the P.M. Office a team of officers should initiate, coordinate, train personnel and follow up the implementation of this plan at the different ministries. (c) A National Council for Information Technologies should be established. (d) A Committee of Ministers responsible for Government Accessibility to the Citizen should be set (e) In every governmental unit the general director will nominate one of the members of the unit's management board as the Chief Information Officer.

Government's Accessibility to the Citizen

(a) Every governmental unit should establish Web sites, regularly updated; (b) The user interface should follow uniform standards ensuring easy and comfortable access . (c) All governmental units should use electronic mail between themselves and between them and the citizens. (d) Information kiosks should be established for access to government information (e) The Information Technologies unit at the P.M. Office will establish a Portal for access to government information (f) Citizens willing to do so will receive an electronic identity device that will enable him to access to governmental services that demand identification using advanced technologies.

Legislation

(a) To complete the legislation of the Law of Freedom of Information (b) To enforcement the Protection of Privacy Law through the enactment of directives concerning the maintaining and safeguard of information and establishing a unit supervising databases use (c) To set up the obligatory legal framework for the use of electronic identification and their verification (d) To establish electronic documents and files as evidence acceptable according to the judiciary evidence rules, for tax purposes, register etc. (e) Complementary legislation regarding copyright rights and intellectual property and organisation of the legislation concerning electronic commerce (f) Detailed analysis of the criminal responsibility resulting from infractions carried out through information technologies and preparation of adequate legislation.

Communications Infrastructures and Regulation

The gist of the recommendations regarding the communication infrastructures is on privatisation and competition. They recommend the implementation of the Brodet, Vax, Leon report for opening the market to competition. The establishment of regional networks; privatisation as the main means of increasing the available connections with abroad and opening the internal market for data communications to every provider able to reach the consumer home including resale. Enlarging the spectrum available for civil applications and the provision of licenses for wireless data transmission.

Education

The rational emphasizes the need to educate a new generation skilled in the use of IT. The recommendations focuses in the implementation of the Tomorrow '98 program for suitable provision of computers and communications infrastructures to the schools and the adequate training of teachers. Other recommendations address the English language teaching; basic skills training for every age level, for teacher trainees and in-service teachers; inclusion of IT among the baccalaureate examinations; preference to be given to vocational training for adults that include IT elements; the provision of free access to the contents and the databases developed in the framework of the educational system.

Electronic Commerce

Conditions should be created to ease the efficient meeting of buyers and sellers through the national network. Recommend to establish an Authority for the identification of the sides to electronic commercial transactions (Trusted Third Party). They addressed the need to update the Israeli legislation so as to enable the electronic register of contracts and transaction at a Cybernotary. The committee demanded the liberalisation of encryption technologies in concert of the concerned authorities.

Databases

(a) The Government will establish, maintain and update databases accessible at the national network where the citizen will be able to get free basic information while the government renounce its copyrights; fees based additional information should also be made available to the public. (b) Databases developed through government grants should be offered free to the public. (c) A National Steering Committee for Databases should establish principles and standards for databases management (d) Every public authority will nominate an officer responsible for setting information for the public and to fill requests for information resulting from the Freedom of Information Act. (e) The government should establish a National Digital Library; the Press Act should be amended so that the present obligation to provide a printed copy of the publications also the obligation to provide a digital copy. (f) The government will enforce the precepts of the Protection of Privacy Law regarding the full registration of public databases in Israel.

Information Security

(a) To update the ordinance concerning encoding devices to adapt it to the new economic and business environment (b) To establish a National Authority for Data Protection or to enlarge the scope of action of the present Unit for Data Protection at the P.M. Office to protect the Governmental Information System and provide information to citizens. (c) To budget the necessary standardisation activities necessary for data protection and in particular the Israeli Standards: 4283 (Data Protection in Communication Infrastructures) and parts 4,6,7 of Standard 1495 (Data Security in Computerized Systems) (d) To establish and budget an overall governmental body similar to the CERT for reaction against menaces to the national information system. (e) Training of adequate manpower for data security.

Hebrew and Standards

(a) The government should adopt the relevant standards for supporting Hebrew (RFC2070, Israeli Standard 1753 and directionality Unicode 2.0) and guarantee that every contract with IT providers demand the support of these standards (b) Develop open and general routines for Hebrew support to be included in the different IT products with Hebrew fonts (c) Budget through the National Committee for IT Infrastructures initiatives for the development of basic software and presentation for the implementation of IT in Hebrew; these tools including sources should be freely available to the public .

The Jewish People in the Diaspora

The new information technologies enable the development of new relationships with the people in the Diaspora. (a) Establishment of a Virtual Jewish University (b) The teaching of the Hebrew Language using the new communications technologies (c) The provision of information for potential tourists and immigrants (d) Joint activities mediated by IT in areas like culture, economy and

business (e) The development of personal relationships between youth in Israel and the Diaspora.

2.3 IS Application Areas

IS applications are extensively reviewed in the accompanying Q7 Promotional Activities report and in other sections of the present report.

2.4 Government and administration (national, regional, local)

The Ministry of Finances established the project TEHILA (acronym for Governmental Infrastructure for the Internet Age) following the Eitan Committee recommendations. This is a joint initiative of Mr. Yitzhak Klein, head of the Government Internet Committee and vice General Accountant in the Ministry of Finances and Mr. Yitzhak Cohen, senior vice General Accountant and head of the Information Systems in the Ministry. Among the initiatives of the project: (a) Establishment of an high security Server's Farm for hosting governmental Web sites (b) Training for Government Officers for preparing a cadre of Webmasters and Information Specialists (c) Publication of general documents and instructions for the ministries on matters like establishing sites; IT; preparations for the year 2000; Outsourcing; data protection; legal documents and counseling (d) Establishing the IT Policy site (e) Tenders were published for Hebrew supported email systems; for a search engine supporting Hebrew; for support in the establishment of governmental sites (f) Establishment of the Government Portal (g) Encouragement of government units to propose special exemplar Internet projects for budgeting (h) Developing the awareness of data security demands among government officers (I) Survey of users in cooperation with the Central Bureau of Statistics.

Among other issues being dealt by the IT Policy group: Standards, Problems of Ethics, Government Accessibility, Domain Name registration under gov.il Secondary Level Domains.

The Local Government Union has established Web sites for 254 among the 260 local authorities in Israel. The sites include comprehensive information and are open to the inclusion of additional links related to the specific local authority (see: <http://www.ladpc.gov.il/shilton/eng/open.htm>).

Some expressions of increased government access have taken place in this last quarter:

Tax Reform Site: The recommendations of the Ben Bassat Committee for reform of the tax system in Israel were published at the site of the Ministry of Finance. Tens of thousands of users downloaded the recommendations. They also sent their questions to the support team through the site. The site includes a calculator so that the users can enter their present wages, pension funds allocation and training allowance and calculate their net wages after the enactment of the tax reform. (see <http://www.mof.gov.il>). (Haaretz, A4, 5.5.2000).

The Police established his site and followed it up by a publicity campaign inviting the citizens to make their acquaintance with its services. This act is well integrated into the community policing approach developed by the recent administration (see <http://www.police.gov.il>).

The Land Authority for Israel is adopting a complete transparency policy. All its decisions and land registries are now accessible in its site. In a second phase certificates could be obtained directly from the Authorities site and paid through credit cards (see: <http://www.mmi.gov.il>).

2.5 Telecommunications and Internet

The historical operator began to provide ADSL services in middle 1999. The cable TV companies are ready to start providing fast Internet access. This will happen when the main legislation necessary to award such licenses is

completed. Tenders were published in October 2000 for domestic fixed telephony services including three fixed wireless licenses that will operate in the 3.5 and 26 GHz frequencies. Fixed wireless broadband services will use LMDS and WLL. The restructuring of the content market through mergers and acquisitions of the main Internet Portals in Israel was observed in the latest months.

The Ministry of Communication after a RFI published a document establishing its policy for licensing Internet services with a stress in self regulation. The provision of information through Cellular telephony has advanced although the initial high expectatives in this area have meanwhile cooled down.

Broadband Fast Internet Services

To create effective competition policy makers attempted to provide licenses at the same time both to the Bezeq and to the cable TV companies. This proved not to be feasible the Attorney General to the government he insisted on the need of main legislation for licensing additional services to the cable TV companies.

The Ministry of Communications allowed the historical operator to start providing ADSL services. However, the Ministry reversed the original recommendations of the Rosenne Committee and the regulations issued in September 2000 included measures for the enforcement of unbundling thus allowing additional players to provide access services over the infrastructures of the Bezeq and the Cable TV companies. This may be implemented before the implantation of the new wireless LMDS technologies which should also provide last mile access to the customers.

Tender for Third Generation Cellular Telephony Provision

The tender for for the frequencies for third generation cellular telephony are expected soon. There is much interest due to the new applications that will become possible: broadband Internet, video conferencing, video clips and music, advanced ecommerce. The cellular companies are pressing the Ministry of Communication so that the tender be of the "beauty contest" kind , like in Sweden (based on the technology capacity, financial strenght, business plans and expertise in communications). It seems that there is agreement between the Ministry of Finance and of Communications that the tender will be for the highest financial offer for the frequencies; this will guarantee an efficient use of the frequencies and develop sophisticated applications. The Economics Committee of the Parliament (Knesset) expressed its preference for the Swedish model.

All three cellular companies expressed their preference that for the third generation telephony the European standard be adopted. The liberation of the frequencies now used by the army, the police and other institutions will require investments of the order of US \$ 25 million dollars for the acquisition of broadcasters in alternative frequencies. The cellular companies are not in a hurry for the tender; in addition to the heavy payments they will be required for acquiring the frequencies additional, large, investments will be needed for upgrading their infrastructures. Haaretz, 24.9.2000, C2, Hadar Horesh.

Preparations for the LMDS Frequencies Tender

With the opening of the telecommunications market several groups are getting ready to participate in the expected tender for frequencies allocation for services using the LMDS technologies providing last mile home wireless access .

Ofek is carrying out an international tender to choose the equipment provider for its telephony and data network. The contract is expected to be of the order of US \$ 400 Million. In the last stage of the tender are participating the companies Nortel, Cisco and Alcatel. It seems that the preferred company is Nortel.

Barak, another contender for the inland telephony provision is also carrying a tender for equipment provision among 15 providers.

Cellcom belongs to the same group as Ofek (ADB) may not participate as an independent company in the tender for LMDS frequencies. The Ministry of

Communications decided not to allow two companies from the same group to participate in the tender. Eurocom (the parent company of Ofek) and Cellcom entered a request with the Anti-Trust Commissioner to have permission to cooperate and establish a joint company that will participate. Haaretz, 21.9.2000, C1.

The Cellular Companies

There are 4,170 million cellular telephone subscribers in Israel; for a total population of 6,315 million this indicates a penetration rate of more than 66% (Haaretz, 8.1.2001, C1). The distribution among the three providers is the following: Partner: 20% Pelephone: 36% Cellcom: 44%. The income growth for the cellular companies for the period of January to September 2000 is the following:

Partner 234 million NIS (52%); Pelephone 115 million NIS (25%); Cellcom 103 million NIS (23%). (Haaretz, 8.1.2001, C1).

Cellular telephony development in Israel can be described through the quarterly reports of the cellular telephony companies:

	Cellcom	Pelephone	Partner
Income (millions of NIS) 1 NIS =~ 3.5 Euro	1,083	856.7	479.4
Number of Customers at the end of June 2000 (thousands)	1,641	1,291	504
Increase in number of customers in the second quarter (thousands)	107	120	78
Mean income per subscriber (NIS)	208.6	221	317
Expenses for sales and marketing (millions NIS)	147.6	113.6	69.2
Operational profit (millions NIS)	188.8	(34.0)	(141.4)
Net profit (million NIS)	113.9	(37.0)	(169.5)
Capital (million NIS)	824.8	1,951	968.8

Internet Services Licensing

The Ministry of Communication published (December 2000) its policy for licensing Internet services. It makes the distinction between access provision, switching services and content providers. Customers should be connected to the Internet only through general public licensed telecommunications networks. Owner of special license to provide access services should not bypass the public licensed network through wireless, satellite or optic devices.

A guiding principle in the policy document is the duty of all owners of licenses to provide services to everyone, equal access in equal terms and without bias.

An owner of a general license who wishes to provide access services will need to ask for a special license for this purpose. In this case separation between its general telecom activities and Internet access will be maintained, either through accounting (following the rules to be established by the Ministry) or structurally (by establishing a subsidiary).

Self regulation: The Ministry of Communications expect that licenses owners for provision of Internet services and the Israel Internet community develop through an adequate forum, with public participation, activities for the self regulation of the Internet services. Among the activities to be self regulated insofar that they do not fall in the regulation range of of the Telecommunication Act: (1) Management of the ccTLD IL (2) Coordination of the Internet switching services (3) Advancement of standards for the implementation of the Hebrew language in the Internet services and diverse applications (4) Setting ethical rules regarding

contents and applications (5) Providing for consumer concerns regarding the provision of contents and applications (6) Publishing statistical information on the Internet in Israel.

The Israel Internet Association, which manages the ccTLD IL domain name registration services and the IIX (Israel Internet eXchange) began the first initial steps towards the establishment of the Forum suggested by the policy paper of the Ministry of Communication (<http://www.isoc.org.il>).

2.6 Electronic Commerce

Electronic Commerce in Israel continue to grow

A survey carried out in October 2000 by the The Marketing Information Institute and ordered by the Globes newspaper indicate a significant rise in the number of people connected to the Internet (40%), a 4% rise vis a vis the data from the previous month. Among the Internet users the rate of those who buy products through the network continue to grow continuously. Almost a fifth of them (19.2%) of said they have bough something in the previous month compared to 16.3% a month ago. Some may have answered this way due to a social acceptance factor due to the high exposure of the Internet in the media. It should also be stressed that the error margin of the survey is 4.5% so that the rise in the number of Internet users is a bit less dramatic that these data indicate.

An interesting change happened regarding the kind of products being bought in the network. Books still are in the first place (42.4%) but its dominance diminished on the account of the rising rate of electrical appliances and home products. Two categories popular in the US and Europe, tourism and software have very small rates.

Changes were also observed in the reports regarding obstacles for an electronic acquisition in the last month. The users still do not see the Internet as a secure medium for carrying out transactions. 18.4% among them are not ready to leave the number of their credit card against 10.8% in August; 17.6% indicated that "They do not trust the Internet". Roi Doron, Globes, 16.10.2000 See:

<http://www.globes.co.il/serve/globes/DocView.asp?did=445230&fid=599>

Digital Signature Law

The Ministry of Justice proposal for the Digital Signature law was approved in the first instance by the Parliament in August 2000. Two additional votes have to be taken by the plenary after it is revised by a joint committee (headed by M.K. Michael Eitan) of the Constitutional Committee and the Science Committee of the Parliament . Simple signatures added through a text editor to a message are recognises but not attributed legal binding. Only secure signatures that may be proved to have been given by its owner will be legally binding. Reference is also made to those cases in which high standards of validity are needed – v.g. for tax reports or companies stock exchange statements. A certificate from trusted third parties will be required in these cases. The proposal also define situations in which an electronic signature cannot be used; those are cases in which the present law demand joint signatures at the same place and at the same time – for example, in the signature of wills. The signatory will be held responsible to adopt all the required measures to avoid undue use of its signature; he may use for this purpose a range of technologies like intelligent cards and biometric validation mechanisms. This contrasts with credit cards use where companies secure the users against undue use of their cards. This may restrict the future use of digital signatures. (Haaretz, 10.1.2001, C3)

Limitations on Cellular Mediated E-Commerce

Telephone based information and entertainment services were prone in the past to fakery and consumer explotation. The Ministry of Communication prepared a draft for regulations regarding the provision of these services through the

cellular telephone whose purpose is the protection of consumers. Service providers will need to receive the express consent of the consumer to acquire the service through the use of a password. A customer belonging to one company will not be able to receive services from another; fixed based telephony users will not be able to access mobile based services. The maximum amount of a given transaction should not be more than the price for three minutes of air time (about .5 Euro). Cellular companies will be bound by rules of transparency regarding services and prices; the monthly invoice for the content services should be separate from the invoice for cellular services.

Cellular companies are carrying now experiments regarding payment for parking services and acquisition of light beverages from machines. Problems collecting payments have so far retarded the massive introduction of these services. Information services based on the cellular Internet are more popular. (Haaretz, 30.11.2000, C1). (Haaretz, 24.12.2000, C6).

Internet Publicity Bench Marking

The Internet Marketing Committee of the Israeli Association of Advertisers said that the association is considering the establishment of a system to evaluate statistics regarding "viewing" Internet similar to the parameters available regarding the television. No survey is now available in Israel for the classification of Internet sites similar to the "People Meter" available for TV programs. Yair Feldman, director of the association stated that the system will establish a database with bench mark data facilitating the planning of publicity campaigns. (Haaretz, 9.11.2000, C7).

Electronic Banking: Approval for Funds Transfers Allocated to Two Banks

Yitzhak Tal, The Supervisor over the Banks provided licenses for two banks for services of payments and funds transfer over the Internet (27.3.2000). The clients may transfer funds in two ways: (1) Unlimited transfer to previously nominated accounts (v.g. payments of electricity, water, telephony invoices) (2) Limited transfers of funds to accounts not pre-nominated. Private customers will be able to transfer in this way amount of up to 6,000 NIS and corporations up to 12,000 NIS. The transfers will not be completed online but will need the approval of a bank officer which will be provided within one day of the transfer. The two banks which received the licenses are Bank HaPoalim and Bank Investec.

WebTrust: The Israel CPA Chamber is considering the establishment of a training program for its members as providers of Web Trust certificates for electronic commerce. The board analysed the suggestion in all its operative aspects and it intends to adopt it so as to become the leading professional body in this area in Israel. The certificate is intended to increase the trust among customers carrying out commercial operations through the Internet. The chairman of the board, Alex Hilman said that the Chamber will consider leading the Web Trust program exactly like it has been carried out by the CPA Chambers in the US and Canada. (Haaretz, C4, 7.5.2000)

Three new Ecommerce services inaugurated: Although only 4% of the Israelis actually have bought a product in the Internet (IDC survey) three new ecommerce services have been inaugurated. Net Coupon (<http://www.netcoupon.co.il>) seeks and compares the products offered in other five Israeli ecommerce sites. The user can also print coupons that provide a discount in 200 stores. Vi-Shop (<http://www.vshop.co.il>) enables searches in four categories: books, CDs, TV sets and Video. The third service is Start at <http://www.start.co.il>. (Haaretz, C3, 11.5.2000).

Hed Artzi, the main music publishing company in Israel signed an agreement with the EverAd startup. Internet users may download songs from the network

without payment. The technology called PlayJ enable composers and disk companies to earn from the publicity that appears in the screen during the execution of the downloaded song files (Haaretz, C4, 30.6.2000)

Publicity through cellular telephony: the manager of the publicity company Go-Interactive says that the cellular telephony enable publicity planners to provide needed information, at the right moment and place to the chosen person. The possibility to broadcast messages to the cellular screen will soon be used and questions related to privacy concerns and other ethical questions should be addressed and solved. He expects that the cellular operators, Cellcom, Pelephone and Partner will get their customer agreement to receive only those specific messages which they themselves choose to be exposed. Haaretz, 3.8.2000, C7.

Netvision, one of the main ISPs in Israel, signed a **credit card settlement** agreement with Leumi Card, a credit card corporation which will honour the Visa card for transactions carried out through Netvision. Haaretz, 17.8.2000, C5.

Internet Zahav, one of the main ISPs in Israel will enable its customers to complete commercial transactions in the Internet **without using a credit card**. They will pay through their monthly invoices following an agreement with the IPIN company. Initially the arrangement will apply for acquisitions up to \$75 for electronic content: games, software updates, finance information; later the sum is expected to be higher. IPIN is a universal payment platform that enable the customers to make transactions using a secret code without using their credit cards. Netvision announced that it soon will offer a similar service to its customers. Yedioth Aharonot, 18.9.2000, Economy 4.

E-Commerce in Israel: \$55 million in 1999

An I.D.C. survey in Israel found that the volume of e-commerce in Israel was \$55 million. The business to business share was \$35 million and the remaining \$20 million by private consumers. The volume is expected to rise quickly in view of huge investments being applied in this sector. (Globes, 18-19.1.2000, p.64)

2.7 Education and research

Budget 2001. The planned budget for 2001 includes an additional sum of NIS 1 billion for education. Two-thirds will cover natural growth of the student population or increases in the teachers wages. From the remaining increase NIS 170 million are for the addition of children 3-4 years old in kindergartens in development towns and the northern frontier; to increase the number of students in integral schools (full day) in towns with an high rate of unemployment; and for special education. The remaining NIS 130 million will fund an experiment for extending the presence of teachers in the afternoons at school being carried out in cooperation with the High Schools Teachers Association (25,000 students in deprived towns). Haaretz, 17.9.2000, A5.

Use of Computers by Students

Dr Uzi Melamed, the coordinator of the National Program for ICT in Education carried out a survey among 2,234 students of the 9th grade in 32 settlements. He found that 85% of the students have at their homes a Pentium PC computer. They use it each week for the mean time of 11.85 hours; boys using it for double the time (16 weekly hours) than girls (7.3 weekly hours). Most of the students use the computer as a text processor (29%) but also as a game player (24%). 17% use it to seek information in the Internet but only 5% send and receive email. Dr Melamed says that he expects disparities between students which have and those which do not have access to computer to become larger in the coming years; the Ministry of Education should take steps to avoid or at least mitigate this digital gap. (Haaretz, A7, 29.6.2000)

Use of Computers by Teachers

The Ministry of Education and the National Lottery invested in the program for computerisation of the educational system more than 500 million NIS in the last six years. Surveys carried out by the Ministry among 10 thousand teachers show that many of them are afraid of the computer and this is a substantial obstacle to its integration in the curriculum. Only 16% of teachers at Junior High School who teach Mathematics and Humanities are making current use of the computer in their classrooms. Only 1 among every 10 English teachers are able to use the Internet in their classrooms.

The program of Neemani Mehashev (Computer Trustees) is seeking to establish students as computer tutors for their teachers with very good results (Haaretz, A7, 29.6.2000).

ICT in Education International Conference

The Directorate for Science and Technology of the Ministry of Education, headed by Yaffa Vigodsky organised with the Israel Association for Computers in Education an International Conference on ICT in Education –Towards the New Millennium. More than 1,700 participants registered for the conference that has taken place June, 26-28, 2000. The proceedings and the exhibits, commercial and that for the ICT educational initiatives expressed the strength of the multimedia industry in Israel and the ongoing computerisation program of the educational system. A significant presence of leading people involved in applications of ICT in education could be noticed, specially those associated with the EUN – European Schoolnet, the network of networks established by the Ministries of Education of the EU. (see: <http://www.congress.co.il/education>)

Encouraging candidates to the matriculation examinations. The Ministry of Education decided to stimulate students and teachers from weak settlements to rise the number of those that get through the matriculation examinations. Such examinations are required for post-secondary studies in Israel. Students participating in the program would be able to choose money prizes of value of 800-1,200 dollars. Teachers may get an annual addition to their wages of up to NIS 38,000. The experimental program carried out in the last academic year was a result of the initiative of Prof. Michel Abutbul, head of the Pedagogic Secretary will be extended –the students may choose the prize according to the area close to their interests: with \$800 they may choose to buy a personal computer or books; \$1,000 for a study tour; and \$1,200 to be applied in their post-secondary studies.

Teachers of Mathematics, English and Hebrew in schools where the number of students getting a matriculation diploma does not reach 45% may receive an addition to their wages. The addition will be proportional to the additional number of students that succeed in the matriculation. This is an initiative of the director of the Division for Human Resources in Teaching from the Ministry, Shimeon Harel. Haaretz, 25.9.2000, A9.

The **Ministry of Science** hosts the **National Committee for IT Infrastructures**. The committee developed a program for demonstration projects in the Super Highway of Information, some of them having had a strong impact and demonstrated the feasibility and problems that should be circumvented when offering free information for citizens. Other projects injected funds into initiatives of community networking, distance education, GIS and statistical information, digital libraries, developing harvesting and search engines in Hebrew and more. New calls are being issued by the Ministry with special attention put into **Hebrew** support issues and the **Internet II / New Generation Internet** projects. Other RTD support programs are reviewed in the Q7 Promotional Activities report.

2.8 Transport

A comprehensive service related to transport services has been inaugurated by the Ministry of Transport. It is called the Transport Portal and was made

available at <http://portal.mot.gov.il> it provides information on the following matters:

Telephone interactive services; Ways of contacting the Ministry regarding transport matters and filling complaints; The procedures for getting driving and vehicle licenses; The National Authority for Road Security; The National Authority for Harbors and Navigation; Announcements related to navigation and sailing; The National Authority for Civil Aviation including detailed information of the airport services; the Division for Ground Transport Planning: roads, railroads, security, public transport. Other services include the Meteorological Services and forecasting; lists of authorised car workshops and other services related to transport in Israel.

These services add to the rich information services concerning Tourism that have been developed by Local Authorities, the Ministry of Tourism and many companies. See: <http://www.israel-mfa.gov.il/mfa/go.asp?MFAH00kj0#tour>

2.9 Health care

Ministry of Health: The Ministry of Health expanded considerably the services available through its Web site. The site allow transparency to the protocols and decisions of the Ministry and access to reports on Health in Israel; access to the Drugs Database and health statistics. Several services aimed to the general public are now available: The Bill of Rights of the Patient; Healthy Way of Life; The health of the mother and the child; How to avoid smoking; How to avoid infectious diseases; Dietetics and food; Mental Health, information guide. See: <http://www.health.gov.il> (Hebrew).

2. 10 Labour

There was a large demand for Human Resources for the hi tech industry in Israel through the year 2000. The accepted estimate was that 10,000 additional workers were needed; the estimate of the director of the Human Resources Planning Authority of the Ministry of Labour and Welfare was for 20 to 30 thousand workers.

Emergency measures were discussed and relevant decisions were taken by the government and the universities. At the end of the year, the demand contracted to about 3,000 workers due to the slow down in start up companies activities.

The Israel Manufacturer's Association: 1,000 dismissed workers absorbed in the software industry

Amiram Shor, head of the Software Houses Association said tha the five leading companies in Israel in the export of software are Amdocs, Check Point, Mercury, Magic and Forsoft. The sales in 2000 reached 3.7 billion dollars, a growth of 25% vis a vis 1999. Exports reached 2.6 billion dollars, a growth of 30%. The infrastructure is based on 400 software houses, 300 exporters and 14,500 workers.

Shor said that a moderation in the demand for human resources can be observed. The demand now in 2 to 3,000 workers. In the latest months 500 high level software experts were absorbed by the industry. The start up companies free about a thousand workers which were absorbed by software houses. He added that the maturation of the program for training of hi tech workers and the entry in the market of seniors who completed these courses.

The reduction in the Demand for Hi Tech Workers occurs only in Start Up Companies

Paul Tzucker, director of Nicha, an human resources corporation said that the drop in the demand for human resources in the Hi Tech industry is felt only among start ups. For established companies there no change; Motorola is leading an intensive recruiting campaign; Mercury needs 300 additional workers

and Comvers continue to seek many workers. Two to three years ago companies sought only university majors; the trend changed in 99-2000 and the companies accept those who finished professional courses. The demand for development engineers in software and electronics in the level of team leaders and beginners will continue to be stable. The slow down make its mark in the process or recruitment which take now more time and the companies are more selective. Yair Feldman, director of the MIT company said that the trend for higher wages in the hi tech industry will slow down; directors in the industry now receive 20 to 40 thousand NIS (1 Euro ~ 3.50 NIS) besides benefits like a car, options and bonuses. At the lower levels the wages vary between 6,500 Nis to 18,000 NIS. (Haaretz, 10.1.2001 E3).

Foreign Labour for the Hi-Tech Industry in Israel: The demand for additional workers in the Hi Tech industry in Israel is growing. The Ministry of Trade and Industry presented an experimental program to the government for the employment of 1,000 foreign Hi Tech workers for three years. This program is proposed in the wake of the demand by the Electronics Industries Association presented by its chairman Ami Arel (President, Elrom), Danny Goldstein (Formula) and the Association director Uri Har. They ask for permits for the employment of 10,000 foreign technicians and engineers for two years. They suggest that the industry pay 50,000 NIS for each foreign worker license so that a fund be established for the development of professional and technological education in Israel.

Due to the lack of qualified workers Israeli companies are emigrating and employing outside the country. AMDPCS employs 1,000 employees in Cyprus; Formula 300 workers in India and Elron 100 workers in Rumania. The turnover of workers in the industry reaches 15% to 20% and workers that bring an additional worker receive 20,000 NIS as a premium.

Strong objections to this program are expected in the discussion to be held in the government. There is preference for an alternative program for re training of engineers, specially new immigrants for hi tech occupations. This is in line of the government program for investments in human capital and combating unemployment. (Haaretz, C1, 29.6.2000).

The Demand for Human Resources in the Hi Tech Industry:The director of the Human Resources Planning Authority, Beny Feferman, said that 30,000 additional workers are needed for the hi-tech industry in Israel in addition to the present 105 thousand employees. He suggested that 10,000 licenses for foreign workers be issued immediately. This would enhance the competitiveness of the Israeli hi-tech industry and will contain wages. Haaretz, 22.8.2000, C3.

70% of the employees in hi-tech industries plan to change their present work place said Yair Perlman, director of MIT an human resources company in the area of information systems and hi-tech. The rate of changing work places is at highest in the 33-34 y.o. age bracket and reaches 65% .He added that the average wage in the hi-tech industry is higher by 15% in August 2000 compared to August 1999. Haaretz, 21.8.2000, C4 .

The Prime Minister Ehud Barak approved a two year plan for the **re training of 4,000 workers for the hi-tech industry**. He stressed the recommendation of the Ministry of Trade and Industry to integrate the training with absorption at the work place so as do adapt it to the actual needs of the companies. The inter ministerial plan was presented by Yossi Kuchik the director of the prime minister office and should cost 80 million NIS (20 million dollars). The program provide also for doubling the number of hi-tech university seniors (engineering and computer sciences) from the present 2,800 to 5,000-6,000 in three years. Haaretz, 9.8.2000, C7.

Emergency measures have been adopted by the Council of Higher Education to **stop the flow of lecturers to the hi-tech industry**. The universities will allow full time academic staff, lecturers and researchers, to work 1-2 days a week in hi-tech industries and receive the wages and labour conditions in the industry

including share options. The number of seniors in the high technology areas (Computers Science and Electronic Engineering) increased lately: in 1998 they number was 2,000 and they were expected to reach in 2002-2003 5,000. In 1999-2000 5,865 were registered in the first year of these courses. Still there is a deficit for senior academic staff. The Planning and Budgeting Committee of the Council recommends to the universities: (1) To absorb industry workers with appropriate qualifications who will receive full academic wages in addition to their industrial salaries. (2) To provide to these industry lecturers Associate academic titles, from lecturers to full professors. (3) The experience from Israel and the US shows that such arrangements integrating partial work in the industry are possible. (4) Stimulation measures to keep research students to complete their third degree title in hi-tech areas: 50,000 NIS a year (\$ 12,500) will be provided for students to the second degree (M.Sc.) and 60,000 NIS a year (\$15,000) a year for the third degree (Ph.D.). Haaretz, 7.9.2000, C1. The scholarships will be provided by the Higher Education Council in case the universities provide parallel scholarships on the same amounts. (Haaretz,22.11.2000, C7)

2.11 Competition

The Telecommunications Market was Opened to Competition

The Ministry of Communications, Benyamin Ben Eliezer (Fuad) signed the regulations opening the telecommunications market to competition in September 4. The basic demands for an inland telecommunications provider to get a license are: (1) That he be incorporated in Israel. (2) That 20% of the company should be held by Israeli citizens resident in Israel. (3) The general manager and most of the directors should be Israelis. (4) Should have knowledge and experience in establishing and managing telecommunications systems. (5) Should have experience in managing a servicing system in Israel with at least 50,000 customers. (6) Should have capital of at least 60 million dollars. (7) Should be able to start providing services 12 months from the date the license is issued. (Haaretz, 5.9.2000, C1).

The actual opening of the inland telecom market take place October 4. The companies expected to ask for a license are: Barak; Ofek, a subsidiary of Eurocom; Cellcom (cellular operator); Tevel Telecom, a subsidiary of the cable TV company Tevel; Pelephone (cellular operator); ITN directed by Dov Tadmor. Cable TV companies will be able to get a temporary license in case the Attorney General approves or the Telecom Act is ammended by the Parliament. Some of the companies will participate in the LMDS frequencies tender and others will rent infrastructures from the Bezeq or the Cable TV companies (unbundling). Haaretz, 4.10.2000, C1.

Unbundling has been included as a possible action in the regulations that opened the market. Without unbundling there is the danger that no effective competition evolve due to the delay in the deployment of LMDS technologies that may provide an alternative, last mile, access to the homes. This is in contrast with the policy announced in the Rosenne Report that established that the competition should be facility based; the facility based policy was intended to stimulate the development of additional infrastructures to that of the Bezeq and the cable TV.

Critics of the Rosenne Report argues that if an unbundling policy has been adopted in the early planning phase Bezeq could have been split into two companies, one for Infrastructures and another for Communication Services. Each of such companies would have welcomed additional players, the Infrastructure company welcoming additional corporations in the Communications Services area and the Services company welcoming additional Infrastructure corporations (Haaretz, 10.9.2000, C2).

The Ministry of Communications demands from Bezeq equal access to broadband Internet infrastructure (ADSL) for all Internet providers: The Ministry intends to establish in this way competition in the area of broadband Internet even in case that the offer of cable modem Internet access is delayed. The Ministry expect to be able to get lower prices for the subscribers to the new service. Daniel Rosenne, the Director General of the Ministry proposes that the ISP be allowed to set ADSL systems at the Bezeq exchanges and transmit fast Internet over the copper line that connects the user to the Bezeq. In the present experiment carried out by Bezeq the user can choose the provider from an opening screen; the Ministry demands that direct connections be allowed. The Bezeq expects to get 100 NIS for a monthly subscription to the new service (about 27 Euros). (Haaretz, C1, 17.5.2000).

Avoiding cross ownerships: The Anti-Trust Commissioner, David Tadmor, imposed on the businessman Eliezer Fishman, transferring his shares in the Internet Service Provider Netvision to the companies Elron and Tevel. In 1999 Aureq and Fishman bought 33% of the Netvision's shares for \$ 17 million. It was then expected that the Anti Trust Commissioner will object to the transaction due to the interests of Aureq and Fishman in other telecommunications companies, like Barak (International calls and Internet), one of the main competitors to Netvision. The parties agreed that in case the transaction is not approved they should sell their shares to Elron and Tevel at a previously agreed price. (Haaretz, C1 page 1, 7.4.2000)

Rating Committee as Monopoly: The Anti Trust Commissioner may establish that the Rating Committee for Broadcasts and the Tel-Gal companys are a monopoly. Since March '98 the Committee through Tel-Gal operates the People-Meter to collect rating data. Tel-Gal is jointly owned by Gallup and Teleseker. The Committee is composed by the Broadcasting Authority; the Second Authority for Television and Radio; the three concessionnaires for the Second TV Channel – Reshet, Keshet and Telad; the Educational Television; the Israel Association for Publicity (companies that use publicity); the Association of Publicity Workers. The Anti Trust action is the result of complaints from other independent media planning companies – Pro-Media; Media-Planet; and Select-Media. Haaretz, page C4, 7.4.2000.

2.12 Access for all

Internet Licensing Policy

One main feature of the policy regarding the Internet published by the Ministry of Communication (see above in item 2.5) is that access to telecommunication facilities should be provided to all access and content providers without bias and on equal standing.

Digital Divide

The Tapuah Foundations was established by the I.D.B. Group will invest 45 million NIS in the next three years establishing computer and Internet centers in 30 towns in Israel. Leon Recanatti the chairmand of I.D.B. and the Tapuah Foundation. Forty companies are part of the Tapuah Foundation and the centers will be established by the Ministry of Science, Culture and Sports, the Ministry of Education and the Ministry of Trade and Industry.

The Foundation was established in January 2000 in view of coping with the Digital Divide problem by training 400,000 children and adults in Israel in the use of the Internet specially in disadvantaged neighborhoods, development towns and minority settlements. Recanatti said that 14 Tapuah centers are already active and 16 more will be opened soon. (Haaretz, 27.12.2000, C7).

2.13 Copyright, intellectual property rights

The Ministry of Education in cooperation with Microsoft Israel is running a campaign in schools against the use of unlawful software. The campaign is lead by Roni Dayan the Ministry National Inspector for Computer Applications in Education. It offers students who write essays regarding the need to respect intellectual property rights free copies of the Word 2000 software package.

2.14 Public access to data

Freedom of Information Law: The Freedom of Information Law entered in force a year ago. The Law demands that all governmental institutions and local authorities publish an annual report on the process of implementation. The Law guarantees access to all citizens to governmental information (exceptions restricted to security related files). The citizen needs not justify his request for information; in case of refusal he can appeal to a court. The Government Publications office is leading the process for adequate Web solutions informing the public on the available archives and the ways to request the information.

The Freedom of Information Congress has taken place in November for the officers which have taken charge in the Ministries and Local Authorities for implementing the Freedom of Information Act (Hilton, Tel Aviv, 8-9, November). The use of the Internet for receiving information requests and the provision of the information, specially the mandatory annual report, were discussed. Problems related to chronic requesters and low number of requests observed in certain cases were also discussed in the Congress.

2.15 Privacy, data protection, consumer protection

The Council for Privacy Protection which cooperates with the Ministry of Justice expressed its worry regarding the distribution, in electronic media, of the voters book for the next elections. The book is provided to the parties and candidates and may reach illegally to private hands. This may result in invasion of privacy and even endanger the security of the State. Manipulation of this database with cross tabulation of some fields may supply important intelligence information. The Council suggest that some security measures be adopted like the requirement that the original CD be returned to the Ministry of Interior; the inclusion of a one way digital signature in each copy so as to enable tracking from which original copies have been made; and more.

The Council for Privacy Protection is a public body with representatives from the public and officers like the Registrar of Databases, Adv. Yosefa Tfairi, a representative of the Police, Rachel Adelsberg. The chairman of the Council is the General Director of the Israel Lawyers Chamber, Adv. Chaim Klugman, former director general of the Ministry of Justice.

Digital Signature: A subcommittee of the Economics Committee of the Parliament (Knesset) chaired by M.K. Michael Eitan has carried out marathon hearings during the month of September towards the preparation of the Digital Signatures Law. For the first time the hearings are broadcast online through the Knesset Web Site (<http://www.knesset.gov.il>).

See Item 2.6 above for further information regarding consumer protection in cellular telephony information and entertainment services.

2.16 Security

A meeting towards the establishment of a CERT like office in Israel has taken place in May at the initiative of the Israel Internet Association (<http://www.isoc.org.il>). The meeting followed several months of contacts with

the Israeli ISPs and the main institutions involved in the protection of the networks. A slow process of confidence building among the possible partners may culminate in the establishment of this service.

National Data Security Authority to be established following the proposal by the National Security Council. The proposal presented to the government is intended to coordinate the efforts for the protection of the civil economy against computer terrorism threats. There are presently several data security institutions but they deal with military/defense data and not with the civil aspects of the problem. The proposed Authority is to be established as part of the General Security Service should develop the appropriate tools and will guide the protected institutions. Among these the Ministries, the Courts, the Bank of Israel, the Police, the General Security Service, the Electricity Company, the Bezeq, Zim, Mekorot and more. Haaretz, 25.9.2000, A1. A parallel, civil society initiative, has been developing in recent months based on the voluntary cooperation between possible threatened institutions in the line of the American CERT; if successful the voluntary cooperation and building of trust among the participants has better chances to succeed in getting the necessary sharing of delicate information.

2.17 Freedom of expression and information as far as the distribution via electronic networks is concerned

A test case regarding the freedom of expression in the Internet will soon to be brought at a court in Israel. "Dalia and Amir" published in April 2000 strong criticism regarding the restaurant Mazti in an Internet interactive Forum available at the site <http://rest.co.il>; other visitors to the forum added similar expressions to the original one. Three months later some customers of the restaurant called the restaurant owner attention to this information. He decided to sue the site asking for indemnities of 150 thousand NIS. This case will enable the clarification of several questions: does the owner of a site have the same status like an editor, advertiser or distributor of printed information? What is his responsibility regarding materials published by a third party like the opinions of participants in an interactive forum? Is it possible to have a suit against a site owner due to opinions expressed by an anonymous surfer?

Israel still does not have jurisprudence regarding this question so the sides are using examples from the USA. The sides however derive completely contradictory conclusions from the same cases. Haaretz, 31.12.2000, C7.

2.18 Others

Bezeq – The Internet takes 22% of the local calls minutes The Bezeq financial report for the first quarter shows that the operational profit of the company is down by 30% in comparison to the first quarter of 1999. The price regime imposed to the company by the Grunau Report caused a decline in profits although there was a marked increase in the use of the lines. The income is down by 4% in comparison to the first quarter of 1999. The main cause is the decline by 20% of the income for inland calls. This decline is very salient due to the rise by 10% in the number of minutes of calls. The share of the Internet in the calls is a mean of 22% for the first quarter compared to 13% for the first quarter of 1999 and 19% for the last quarter of 1999. (Haaretz, C12, 25.5.2000)

DBS (Satellite Multi Channel TV) vs Cable TV

The DBS YES satellite multichannel TV Company started operations in July. A conflict immediately developed between the company and cable TV providers. The argument was that YES technicians were causing damages to cable TV

infrastructures when disconnecting cable subscribers and connecting them to the new service.

At the end an agreement was reached under the sponsorship of the Anti Trust Commissioner, David Tadmor (Haaretz, 3.8.2000, C1). The final agreement was signed September 13th and was to be approved by the Tel Aviv Regional Court and the Anti Trust Commissioner. A procedure was set for transferring customers from one company to another in the same day thus avoiding interruption of service. The contractor will be chosen from the Bern-David Engineering Group; sub contractors of the YES company will need to be approved by the cable TV companies. In addition it was agreed that when fast broadband Internet can be provided in the same infrastructure as TV the two companies will use the same cable at the customer's house so he may be able to get services from both companies at the same time (v.g. TV from one and broadband Internet from the another). A technical solution for installing a common cable for both services should be provided in 60 days; if no such agreement is reached the director of the Ministry of Communications will serve as arbiter and determine the solution.

Tender for the additional commercial TV channel (Third Channel) will be carried out

The Supreme Court of Justice rejected the appeal of the concessionaires of the commercial TV channel (Second Channel) against the tender for the licensing of the third channel. They appealed following the disbandment, by the Supreme Court, of the Second Broadcasting Authority Council due to the political considerations that impinged in the nomination of its members. The Second Broadcasting Authority is the supervisor for the Third Channel tender.

The Minister of Communications stated that the monopoly of the Second Channel concessionaires over TV publicity cause damage to the growth of the economy. An inquiry ordered by the Ministry of Finance show that the monopoly causes unusually high prices for publicity that in the end are paid by the consumer. He added that the tender for new concessionnaires for the Second Channel will be published not later than the end of 2001; Third Channel concessionnaires will not be allowed to participate. The small number of players in the Israel communications market rises continuous anxiety regarding preservation of freedom of speech. Haaretz, 29.9.2000, C5.

3. Institutions and organisations in charge of IS regulation

The regulator in the area of telecommunications is the Ministry of Communications. For IS purposes we include among the bodies having a regulatory function the Israel Broadcasting Authority (in the Prime Minister's Office); the Second Authority for Television and Radio (in the Ministry of Education); the Anti-Trust Authority in the Ministry of Industry and Commerce; the Supervisor of the Banks in the Bank Israel (in matters related to electronic banking).

The disagreement (in mid 2000) between the Ministry of Finance and the Ministry of Communication regarding the conditions for provision of a license for cable TV companies to provide telephony and fast Internet brought in the scene the Attorney General to the Government as an additional regulatory authority. He was asked by the prime minister to intervene and provide a solution for allocating temporary licenses to the cable TV. This issue being related to almost all other aspects of opening the market to competition the regulatory tasks of the Attorney General has been much expanded. The Attorney General did not find such solution and decided that main legislation by the Parliament (Knesset).

3.1 Ministries

Ministry of Communications

Historically, the Ministry of Communications was a division within the Ministry of Transportation, whose responsibilities included post delivery, and telephone and telegraph facilities which had existed since the Mandate period. The Postal division became the Ministry of Posts in 1952, and the Ministry of Communications was established in 1971. In 1984 the regulatory and operational jurisdictions in Israeli telecommunications were separated, when all government-operated facilities were transferred to a corporation, the Bezeq.

Areas of Responsibility

The Ministry of Communications encompasses a wide and diversified range of activities. Its responsibilities include: formulating telecommunications policies, developing telecommunications infrastructures, supervising Bezeq and other telecommunications service providers, supervising the Postal Authority, setting & auditing Bezeq and Postal Tariffs, managing spectrum allocations, regulating and supervising cable television services and tariffs, approving usage of telecommunications equipment.

Organisational Structure

Office of the Minister - **Mr. Benjamin Ben-Eliezer** - Telephone: 972-2-6706301

Office of Director General - **Mr. Daniel Rosenne** - Telephone: 972-2-6706310

Deputy Director General - **Adv. Menachem Ohaly** - Telephone: 972-2-6702250

Office of the Spokesperson and Media Advisor to the Minister - **Ms. Tamy Shenkman** Telephone: 972-2-6706323

Deals with the public presentation of the office, and handles public comments, complaints and requests.

Engineering and Licensing Division - **Adv. Haim Giron** Telephone: +972-3-5198230

Participates in planning, designing, licensing of communications services and type approvals for Bezeq telecommunications equipment.

Telecommunications Equipment Department- **Mr. Haim Sakharovich** Telephone: +972-3-5198145

Integrated Licensing, Engineering and Licensing division - **Ms. Ruth Cohen**
- Telephone: +972-3-5198216

Spectrum Management Division - **Mr. Moshe Galili** Telephone: +972-3-5198281

Managing of the spectrum in Israel and granting broadcasting licenses including planning, allocation, licensing, supervising and monitoring.

Wireless Equipment Licensing Department - **Mr. Alon Bar-Sela** -
Telephone: +972-3-5198277

Telecommunications & Post Supervision and Control Division - **Mr. Haim Habib** Telephone: +972-3-5198214

Safeguards and supports licensees license terms, ensuring fair competition and a high quality of service.

Supervision of Consumer Services offered by Telecommunications Operators - **Mr. Zeev Keidar** - Telephone: +972-3-5198231

Supervises quality of services offered to the public by the licensees- Bezeq, Bezeq International, Golden Lines, Barak, Pelephone, Cellcom, and Partner..

Posts Supervision - **Mr. Igal Levy**.- Telephone: +972-3-5198115

Supervises the quality of services offered by the Postal Authority

Legal Division - **Adv. Yizhar Tal**- Telephone: +972-2-6706333

Legal advice and representation of the Ministry in litigations and other legal matters .

Economics & Planning Division - **Mr. Alex Weissman**- Telephone: +972-2-7606340

Deals with economic related issues pertaining to the Ministry, handles the office budget .

External Affairs Division - **Ms. Naama Henig**- Telephone: +972-3-5198215

Responsible for establishing, developing, and strengthening telecommunications ties with different countries, administrations, regulatory bodies, international organisations, foreign and global telecommunications companies. The department also serves as a link with the Ministry of Foreign Affairs, Israeli Embassies around the world, and Foreign Embassies in Israel.

Council for Cable and Satellite Broadcasting - **Adv. Dorit Inbar** - Telephone: +972-2-6702210 +972-3-5198122

Sets quality standards for types of broadcasting, ensures community targeted programs, and encourages original productions.

Cable Television Service Division - **Mr. Zeev Raz**- Telephone: +972-2-6702210

Supervises the activities of the licensees for cable television, ensuring their adherence to regulations and license terms .

The Broadcasting Regulatory Administration - **Adv. Dorit Inbar**- Telephone: +972-2-6702210 +972-3-5198122

Implements the Minister of Communications recommendations to the government, as formulated in the Peled Report, concerning the expansion and reorganisation of broadcasting choice. The office acts as a promoter, planner and organizer in the areas of primary and secondary legislature, and prepares the groundwork for tenders and licenses. It also functions as an Inter-Ministerial coordinator, led by an Inter-Ministerial steering committee where relevant government offices are represented. This administration is responsible to the Minister of Communications in accordance with Government Decision No. 2444 dated August 10, 1997.

Office of the Chief Scientist - **Mr. Rafi Hoyda** - Telephone: +972-3-5198251

Monitors innovative telecommunication technologies; promotes R&D programs and cooperative initiatives in the area of Telecommunications. Represent the Ministry in standardisation bodies and international conventions agreements -

3.2 National regulatory authorities

The main national regulatory authority in the area of telecommunications is the Ministry of Communications. Additionally in the area of Broadcasting there are two Authorities: the Israel Broadcasting Authority (in the Prime Minister's Office); the Second Authority for Television and Radio (in the Ministry of Education);

The Israel Broadcasting Authority

Established by the Broadcasting Authority Law of 1965 it has both operational as well regulatory tasks. It operates two television channels, one terrestrial, the First Channel and another by satellite and broadcast only for cable subscribers (Channel 3 or in Channel 33 in the Cables). It operates several radio stations under the name of Kol Yisrael: the A, B, C, D and E (short waves) networks; a foreign languages radio (Immigrants Absorption); a road security channel in the north part of the country (The Gal Batuach); a road and business channel in the central part of the country (Kol HaDerech LeAssakim).

The budget for the IBA comes from the TV duty paid by TV sets owners; income from services broadcasts and sponsorships; the radio and the car radio duty; direct subsidies from the Finance Ministry for the direct broadcast through Channel 3 of the Parliament deliberations.

The bodies in charge of overseeing and supervising the IBA are:

The **Plenary of the Broadcasting Authority**: composed by 31 members. They are nominated by the President of the country - 30 of them indicated by the government and 1 by the Jewish Agency. They are nominated for a mandate of three years.

The Executive Board composed by 7 members of the plenary nominated by the government. The chairman and vice chairman are nominated by the government. The **Executive Board** has executive authority as the law states in item 19 "To discuss and decide on matters of concern of the Authority".

The Minister in charge of the executing the law is now the Prime Minister. In the past this task has "migrated" between the Minister of Education and Culture and other Ministers nominated by the Prime Minister to carry out this task.

The Second Authority for Television and Radio

An statutory body established by the Law of the of the Second Authority for Television and Radio from 1990. It is in charge of commercial broadcasts (Television and Radio) financed by income from commercial advertising.

The Second Authority is in charge of the Second Channel of TV. It started broadcast in November 1993. Its broadcasting hours through the 7 week days were divided equally among 3 licensees which are three different commercial consortia occupying 84% of the broadcast time. The Educational TV received a franchise for 14.3% of the broadcast time at the Second Channel. The News Broadcasts at the Second Channel are not directly broadcasted by the franchise operators but by an autonomous body, the "News Company" which has the standing of an independent franchise. The budget of the "News Company" is covered by the three commercial franchise holders (Establishment, Acquisition and Maintenance) and by the Second Authority which is supposed to cover the current expenses of the News Company from the income it receives from the license holders.

The Authority has been given responsibility for the new Channel 3, the commercial channel established through an amendment of the Parliament in March 2000.

The Regional Radio

Radio commercial broadcasts are regulated by the Law of the Second Authority for Television and Radio. It provided in 1995 franchises for 13 regional radio stations that broadcast in pre defined geographical areas. The content of their broadcast is not different from the national radio channels except for some programs that are supposed to deal with local issues. They are financed by broadcasting commercial advertisement. In contrast to the Second Channel that is the only one authorized to broadcast advertisement, the regional radio stations are in competition with the National Radio Channels which for many years broadcast commercial advertisement.

The Second Authority is subordinated to a Public Council ("The Authority's Council"). The Council is composed by 15 members including the chairman; they are nominated by the government for a mandate of four years. The Director General is nominated by the Council following the recommendation of the Minister and authorized by the government for a period of five years

The Minister in charge of the Second Authority for Television and Radio is the Minister of Education Culture and Sports. With the establishment of the new government in June 1999 was transferred to the Ministry of Communications.

The Educational Television and the IDF Radio Station

The Educational Television is directly subordinated to the Ministry of Education Culture and Sports and is not regulated by an statutory body.

The IDF Radio Station subordinated to the Ministry of Defense and its civil broadcasts should be supervised by the IBA as determined by item 48 of the IBA Law.

Cable Television

There are three companies with franchises for Cable TV broadcasts in Israel. The penetration rate is very high reaching more than 70% of the households in the areas covered (which cover 90% of the households in the country).

The Council for Cable and Satellite Broadcasting at the Ministry of Communications is the regulatory body for Cable Television in Israel. The Council serves also as the tender committee for the allocation of licenses. The licenses themselves are provided by the Minister of Communications who has the authority to issue the regulations.

The Council determines the rules concerning the services to be provided through the the cable system. The technological area of establishing and running the cable network is supervised by the Director of the Service of Cable Television and Subscribers at the Ministry of Communications.

The Minister in charge of Cable Television is the Minister of Communications.

Frequencies allocation authorities

Ministry of Communications, Spectrum Management Division - Mr. Moshe Galili
Managing spectrum in Israel and granting broadcasting licenses including planning, allocation, licensing, supervising and monitoring.

Telephone: +972-3-5198281

3.3 Office for the protection of economic competition

The Anti Trust Authority in Israel was established to protect the competition in the Israeli economy through the enforcement of the Anti Trust Law of 1988 in cooperation with the Anti Trust Court of Law and the Tribunals System. All the units of the Authority, legal, economic, investigative work in coordination to achieve the above goal. The specific tasks are: (a) Supervision over

monopolies to limit their market power; (b) Supervision of mergers to avoid the establishment of monopolies or monopoly centers of power; (c) Supervision over limiting arrangements to avoid arrangements that contravene competition.

The Legal Department start legal proceedings against those who infringe the Anti Trust Law; announcing monopoly owners, legal consultancy, provide exemptions. The Economic Department provide economic analysis on matters concerning cases being dealt by the Authority. The Investigation Department investigate suspicion of contravention of the Anti Trust Law and to establish evidence in cases being dealt by the Authority.

The target populations of the Authority are: (a) Companies, business and directors suspect of contravening the Anti Trust Law; (b) Monopolies; (c) Companies wishing to merge and asking for authorisation; (c) Companies asking for exemption for establishing limiting arrangements.

The Authority is managed by the Anti Trust supervisor, Dr David Tadmor, +972.2.6556111

3.4 Consultative councils

The regulatory bodies described in item 3.2 above serve as consultative councils for telecommunications policy. In addition, almost all the Committees established in recent years for policy planning and implementation have asked for comments and recommendations from the public. These public policy committees invited those providing thoughtful comments to appear frontally in the committee.

**Somer recent developments regarding these consultative councils follow:
The Supreme Court Disband the Council of the Second Broadcasting Authority**

The Supreme Court of Justice decided that the the members of the Assembly of the Broadcasting Authority and the members of the Council of the Second Broadcasting Authority were nominated through an irregular procedure. The Court decided that the government should nominate the membership for these bodies in four months. The Court accepted the actions by the Associations of Directors, Screen Play Writers and the Documentary Films producers against the government and by the Association for Good Government and the High Schools Teachers Association against the government and the Second Broadcasting Authority. The Court strongly criticized the previous and the present government by the fact that they didn't comply with the legal requirement to consult with specific public institutions like the Council for Higher Education, the Teachers Associations, the different Artists Associations in the process of nominating the members of these statutory bodies. Instead a political key was agreed amon the political parties in 1998 and the resulting list sent to the consultative bodies but their objections weren't accepted. Haaretz, 23.8.2000, A6.

3.5 Bodies in charge of RTD policy

The **Office of the Chief Scientist** at the Ministry of Trade and Industry established in 1968 is one of the main foci stimulating technological innovation in Israel and support to R&D. As significant proportion of this support is channelled to initiatives related to the infrastructures needed for the development of the IS: information technologies, multimedia, broadband communications, computer and software industry, microelectronics and the like. In 1985 the Law for the Encouragement of Industrial Research and Development was enacted, and defined the government's policy. The Office is entitled to subsidize up to 50% of an existing company's R&D expenses and up to 66% of start-up's R&D expenses. In 1999 the Office of the Chief Scientist provided \$428 million in subsidies for R&D and received royalties of \$128 million, which was 32% of the amount expended. The Office provides assistance in other frameworks as well, such as intenational funds for cooperation; MAGNET – assistance for developing generic technological infrastructure; technological

development incubators, assistance for new entrepreneurs with innovative technological ideas.

The latest development related to the Office of the Chief Scientist is the decision of the government to accord it an autonomous status. It will become in the coming months an independent support unit of the Ministry. The office will integrate several RTD related functions carried out so far in independent bodies outside the Ministry like MATIMOP (The Israeli Industry Center for RTD).

A joint committee formed by the office of the Chief Scientist and the Budgeting Division of the Ministry of Finance are now elaborating the new law for the support of RTD.

The defense establishment is responsible for part of the R&D activity that also has a significant impact on civilian applications. A considerable number of Israeli companies, the most notable perhaps being Checkpoint, developed on the basis of knowledge and experience acquired from military applications. The unit in charge of military RTD planning and budgeting is MAFAT at the Ministry of Defense.

The **Ministry of Science** hosts several committees for basic scientific infrastructures. The **National Committee for IT Infrastructures** the committee developed a program for demonstration projects in the Super Highway of Information, some of them having had a strong impact. One demonstrated the feasibility and problems that should be circumvented when offering free information for citizens. Other projects injected funds into initiatives of community networking, distance education, GIS and statistical information, digital libraries, developing harvesting and search engines in Hebrew and more. New calls are being issued by the Ministry with special attention put into **Hebrew** support issues and the **Internet II / New Generation Internet** projects.

The bulk of budgeting for basic science research at the Universities is channeled by the Council of Higher Education, through the VATAT - Committee for Planning and Budgeting. The Council, formally under the Ministry of Education, has complete autonomy being budgeted directly by the Ministry of Finance. The Council and the National Academy for Science which manages the Science Fund enable complete autonomy to the universities in their decisions regarding basic science research.

Some late development in this area follows:

The Ministry of Finance proposes the transfer of the functions of the Ministry of Science, Culture and Sports to other Ministries. External relations in the area of Science should be transferred to the Planning and Budgeting Committee of the Council of Higher Education; the Ministry of Education should receive the activities for encouraging the sciences among special populations; NIS 40 million from the budget for infrastructural R&D should be channeled to the Council for Higher Education; additional budgets should be transferred to the Ministry for Trade and Industry. The proposal caused a strong reaction in the Ministry specially the decision regarding the budget for infrastructural R&D; they bring as an example of the importance of the program the NIS 8 million invested in R&D in the area of optical technologies; as a result today there are in Israel about 50 companies that have mobilised capital of the order of \$1.7 billion. They add that the optical knowledge of Chromatis company sold a few months ago for \$4.7 billion was developed in the framework of that program. Haaretz, 15.9.2000, C1. Following an intensive lobbying pressure by the Ministry of Science developed through the mobilisation of leading scientists the Prime Minister in consultation with the Minister of Finance decided not to bring the proposal for discussion in the weekly government meeting. Haaretz, 18.9.2000, C9.

3.6 Organisations in charge of the promotion of the IS

In Israel the **Ministry of Finance** has the strongest leverage vis a vis every other Ministry as it controls budget disbursement through its own officers at the different Ministries. The **IT Policy Group** established at the Ministry and the

TEHILA (Internet at the service of the Israeli Government) has had a great impact in the creation of the adequate awareness at the government level. Training of government officers; supplementary budgets for demonstration projects at the different Ministries; documents dealing with issues of access, privacy, encryption, copyrights; guidelines for tenders in the IT area; a secure servers farm and more were some of tools used.

HILA - Preparation of Israel for Information Age is the team established in the P.M. Office for the promotion of IS in Israel the main results of its work so far having been the establishment of the Governmental Portal, starting the Computer for every Child program and establishing an IT prize.

The unit was transferred (May 2000) from the Prime Ministry Office to the Ministry of Science, Culture and Sports. The competitive call for nominating the director of the unit from among the present officers of the Ministry did not succeed in nominating the director. There is now an open call for an external nomination. Before the nomination process is completed the unit is not expected to become fully operational.

The **Ministry of Education, Culture and Sports** since 1993 was involved in an ambitious programs for computerization of the school system; this program started its second phase in 1999 and there is a strong program for training and pedagogical development of IS programs. National networks are being established for administrative and pedagogical purposes (Kishurim).

The **Ministry of Foreign Affairs** pioneered the use of Internet for information distribution purposes serving as a paradigmatic example for USIS. (see: <http://www.israel-mfa.gov.il>) The **Ministry of Communications** in addition to its strategic role in setting the development and regulatory framework is one of the best examples of providing complete information on its activities to citizens through its Web (see: <http://www.moc.gov.il>).

Electronic Commerce: The director general of the **Ministry of Trade and Industry** established a joint committee with the Israel Industry Association for setting policy guidelines concerning electronic commerce in Israel. The committee was established last March.

Local Authorities play a role in financing large national education projects related to IS - the computerization program of the educational system and the establishment of national pedagogical and administrative networks. Some of the **municipalities** have established impressive information services for their citizens; **Jerusalem** leads in the sophistication and comprehensiveness of its services. Lately, web sites for almost all the local authorities in Israel were established by the Israel Local Authorities Association. The **National Lottery**, owned by the Local Authorities has had an important role financing the computerization of the educational system as well as with its own initiatives like the project being planned for a **National Digital Library**.

The Press and other Mass Media

The press in Israel, the radio and the different TV channels have had a very important role in setting IS issues as an integral part of the national culture. Every major national newspaper has a section dedicated to the Internet and/or a weekly supplement totally dedicated to IS issues. There are radio programs like Inter-Bet in the main national radio channel; TV programs for youth like Zombit and many other initiatives. Another aspect of the role of the press is a process of convergence - many radio and TV programs indicate their Web sites addresses where further information may be retrieved and are open for the participation of the audience in Web based forums.

The mass media, including outdoors, play an additional role in the advertising campaigns launched periodically by every new contender to a leading role as ISP. Such campaigns which involved large budgets and much creativity have contributed much to endear the Internet as an intrinsic part of mass culture.

The Universities; Academic, Regional and Teachers Colleges; Technological Networks

The post-secondary system of education have had an important role for development of the awareness of IS. They provide free access to the Internet for many of its students and faculty members. They pioneered the development of sophisticated information services. The basic training in the use of computers and networks offered or demanded as pre-requisites from the students creates a large cadre of people proficient as users and developers. These institutions and the technology education networks have been the site of many initiatives directed to the k12 educational system, to teacher and other target populations they try to outreach for IS purposes.

The Voluntary Sector

Many of the IS related actions in the Israeli context are based on voluntary associations or non-profit institutions associated to government initiatives. Outstanding in matters concerning IS are ILA - The Israel IT Association and its affiliated organizations; The Israel Internet Association; MOAH - Israeli Association for Computers in Education; The Israeli Association for Information Systems in Medicine; ITA - The Israeli Teleworking Association; and many more. Trade associations also play an important role like the Israel Industry Association; The Chambers of Commerce Association; The Israeli Software Houses Association; the Electronic Commerce Forum established by the Export Institute and the Chambers of Commerce; the SME Authority; ILTAM The Israel Association for Advanced Technologies in Electronics; the Electronics Industries Association; The Journalists Association; the Lawyers Council; and many more. These institutions organise workshops, seminars and annual conferences that have increasingly been dedicated to IS issues. They are focus of education, support and self-help in IS related matters.

4. International relationships and agreements

WTO Commitments

In 1997, Israel signed the World Trade Organisation Agreement on Basic Telecommunication Services, committing itself to opening the local basic telecommunication services market to competition. The country planned to begin competition in the local services market, including infrastructure, data transmission and basic telephony by January 1999; actually competition has been effectuated starting from September 2000.

4.1 Multi-lateral Agreements

The Agreement	The International Organisation	Place and date of signature
Constitution Agreement of the International Telecommunication Union constitution	International Telecommunication Union (ITU)	Kyoto, Japan 1994
Constitution of the Universal Post Union	Universal Post Union (UPU)	Seoul, South Korea, 1994
Constitution documents of Immarsat	Immarsat	London, England, 1987
Agreement for the use of vessels, ports, and coastal waters	Immarsat	London, England, 1989
GATT Agreement on Telecommunications	World Trade Organisation (WTO)	Geneva, Switzerland, 1997
Constitution documents of Intelsat	Intelsat	Washington, D.C., U.S.A., 1989

4.2 Bi-lateral Agreements

The following bi-lateral agreements include general obligations in the area of telecommunications and postal services. The bi-lateral agreement serves as a foundation for developing relationships and cooperation between Israel and the signatory country. The content of most of these agreements is declarative. Israel signed until 1998 19 such bi-lateral agreements with 18 countries.

Number	Country	Date of Signature
1.	Estonia	14/05/97
2.	Georgia	19/06/95
3.	South Korea	18/11/95
4.	South Korea - Summary of Discussion	17/07/97
5.	India	20/11/94
6.	Hungary	01/03/89
7.	Vietnam - Summary of Discussion	14/06/97
8.	Jordan	18/01/96
9.	Letonia	14/05/97
10.	Lituania	16/05/97

11.	China	22/11/94
12.	Poland	14/01/97
13.	Portugal	26/01/98
14.	Philipines	18/06/97
15.	Khazahstan - Summary of Discussion	22/01/92
16.	Cyprus	12/04/94
17.	Rumania	16/12/90
18.	Russia	21/11/95
19.	Turkey	03/11/94

4.3 Other Conventions

No.	Sides to the Convention	Convention	Date
1.	Israel and Hungary	Agreement regarding the coordination of the projection from the Amos Satellite	1996
2.	Israel and the P.L.O.	Intermediate agreement: Item 16 of addendum number 1 of Annex III is entitled "Telecommunications" and it arranges the relations between Israel and the Palesitnian Council regarding the management of the electromagnetic spectrum and line infrastructures, and it establishes a Joint Technical Committee (JTC)for dealing with current affairs.	1995
3.	Israel and the European Union	Agreement on governmental acquisitions in the telecommunications field	1997

4.4 Other developments:

Morocco: The Minister of Communications, Binyamin Ben-Eliezer and the Minister of Communications and Technology of Morocco, Mr. Larbi Ajoul conducted a working discussion for the first time in four years. Ben Eliezer reported that Morocco is at the beginning of a privatisation process and is interested in an exchange of knowledge with Israel in the field of hi-tech and telecommunications and proposed a visit of a delegation for this purpose.

Palestinian Authority: Israel and the Palestinian Authority signed agreements (dated 19.8.99) that regulate the aspects of operation, settling of accounts and security of the postal exchange between the Autonomy's territories, Israel and overseas. The agreements enable the Autonomy to forward mail directly to Jordan and Egypt. The Palestinian Authority has been allocated the PS TLD for Internet purposes.

Jordan: following the visit of the Minister of Communications to Jordan an agreement was reached between the the directors of the JTC (Jordan Telecom Corporation) and the director of the Ministry of Communications, Daniel Rosenne regarding the establishment of a new communications cable between the two countries. Bezeq Beinleumi (Bezeq International) and the JTC will set the cable with an investment of 1.5 million dollars.

5. Market: Privatisation, foreign investment, mergers, acquisitions, call for tenders,...

The largest mergers and acquisitions in the year 2000

The year 2000 will be recalled as the turning point for the high technology industry of Israel. The large transactions of 1999 were still fresh when it began: the acquisition of DSPC by Intel for 1.6 billion dollars, in cash, in middle '99; the sale of the Meimad Hahadish company for 620 million dollars; and the sale of Mirabilis to American Online for 400 million dollars. The transactions held in 2000 provided a renewed expression of the internal strength of the high tech Israeli companies and their global importance. A decisive event was the selling of Chromatis to Lucent for 4.6 billion dollars in shares. The two entrepreneurs who established the company had already experience in establishing a previous start up and selling it successfully; they had successful academic records and practical experience in large companies; and they developed an integrated system solution.

Despite the fact that the crisis in NASDAQ spilled over to the shares of producers of computers, chips and communications equipment – at the end of the year very large deals continued to be carried out in Israel. Marvel bought Galileo in a shares deal for 2.7 billion dollars; her competitor, Broadcom, bought VisionNet in a shares deal of 776 million dollars. The start up companies closed due to the crisis didn't leave unemployed people – about a thousand technical personnel were immediately absorbed in larger companies hungry for human resources.

The high technology industry showed extraordinary stability, specially against the background of the ongoing events in Gaza, Judea and Samaria. The software industry exported more than 2.5 billion dollars and it is expected to continue to grow without any relation to the political events. "Technological Israel" seems to have become a label so strong that its use brings tangible advantages vis a vis other competitors. Doron Lipshitz, Haaretz, 28.12.2000, C2.

The ten largest acquisitions of Israel companies in 2000			
Month	The company buying	The company being bought	Price in millions of dollars
5/00	Lucent	Chromatis	4,600
10/00	Marvel	Galileo	2,700
12/00	Broadcom	Visonic	776
1/00	Crio	The pre-printing division of Scitex	640
3/00	Librait	Morcom	560
3/00	Vertical Net	Tredium	480
7/00	Comvers	Exlink	480
12/00	Polycom	Accord	340
3/00	Cisco	Infogear	301
8/00	Tzoran	Nogatech	158

Israeli Enterprises traded in the NASDAQ – the downturn

The latest quarter of 2000 the consequences of the downturn in the NASDAQ Stock Exchange were felt. This affected Israeli companies and start ups. Israel is the third country in number of companies traded, after the USA and Canada. The following table present the developments regarding the prices of the shares for the largest Israeli companies traded in NASDAQ:

The largest Israeli companies traded in NASDAQ (updated for 9.1.2001)			
Place	Company	Market value in Millions of dollars	Change in % from the beginning of 2001
1.	Check Point	16,828	-17%
2.	Comvers	15,915	-12%
3.	Amdocs	13,712	-6%
4.	Teva	7,809	-15%
5.	Mercury	4,924	-33%
6.	Orbotech	1,179	-1%
7.	ECI	1,131	-10%
8.	Partner	1,017	-3%
9.	Koor	924	-15%
10.	Galileo	622	9.7%

Source: Haaretz, 10.1.2001, C1

Software for the amount of 107 million dollars to be sold to Electronic Components Consortium

Tradium, the division for software solutions of VerticalNet signed an agreement with the E-Commerce consortium of large electronic components producers, Converge. It will deliver software and technical assistance for three year for 107.5 million dollars. Tradium which developed a platform for electronic commerce was acquired earlier this year by VerticalNet for 474 million dollars. Converge announced that it is acquiring NECX, the global e-commerce platform of VerticalNet for electronic components. Converge was established in May 2000 by a consortium of the 15 largest producers in the world including Compaq, IBM, GateWay, AMD, Hitachi, NEC, Samsung and Quantum. VerticalNet is one of the leading companies in the ecommerce field and it operates 58 ecommerce arenas by industrial branches. Haaretz, 21.12.2000, C7.

The Fishman Group acquires 51.5% of Kavei Zahav from Aureq for 93 million dollars

AreKavei Zahav deals with International Telephony services, data communications and Internet. The company is expected to participate in the tender for spectrum allocation for wireless connections (LMDS). Aureq has 51/5% of the shares of Kavei Zahav; Telecom Italia, 26.4% and the Fishman Group 21.1. Italia Telecom received an option to enlarge her interest in the company by an additional 20%. Aureq decided to leave the Israeli market due to the restrictions regarding cross ownerships in the communications market. The structure of the Fishman-Monitin group and Telecom Italia is the following:

Fishman-Monitin Group				
7%	25%	65%	21%	30%

MED 1	Yedioth Aharonot → 35%	Aruzei Zahav	Kavei Zahav	Company for submarine cables
51%			26.4%	70%
Telecom Italia				

Hadar Horesh, Haaretz, 13.12.2000, C1

Eurocom to acquire additional 25% of the Talal Satellite Company

Eurocom owns 30% of the DBS YES company which is one of the largest customers of TALAL. Talal markets communication services of the satellite Amos. Talal is controlled by the Israel Aircraft Industry, H.Mar, a group of investors headed by Meir Amit and Gilat. Gilat is negotiating her share in Talal (25%) with Eurocom.

Eurocom is controlled by the businessman Shaul Olowitz (51%) and Harrison Investments (49%). The company is now establishing a communications company that will compete with the historical operator as an inland telecom provider. A subsidiary of Eurocom, Europrom won a tender for spectrum in Greece for the establishment of a cellular system there.

Talal intends to send in two years the satellite Amos 2 that will replace Amos 1 whose communications capabilities have been exhausted. For this purpose it needs 100 million dollars from the owners, the capital market and bank credits. An intense conflict that developed among the owners created obstacles to their investments in the company and also for the mobilisation of capital from the banks and from institutional investors. Among the owner Eurocom is specially interested in the success of Amos 2; it will enlarge the broadcast capabilities of the DBS YES company and offer two way broadband Internet.

Israel became a laboratory for secure e-commerce credit card applications

Two Israeli companies, Ciuta and Appletics established in 1999 became world leaders in the field of security of credit card transactions in the Internet; the third leader in this market is the veteran Irish company, Orbitcom. These companies didn't figure out that Israel may be target market for their products, being too small. In August 2000 it was announced that in early 2001 customers of the Israeli credit card company Isracard will use the system developed by Ciuta; another Israeli company, Visa C.A.L., announced that it has chosen the alternative solution from Appletics (receiving options to buy its shares). The third company, Leumi Card is negotiating with the Irish Orbitcom.

The two Israeli products are very similar and are based on the installation of a small program in the customer's computer. It communicates with the central server of the credit card company and creates a virtual credit card for each transaction carried out by the customer, using a number provided by the Credit card company. The trader himself is not part of this process and only receive the virtual credit card number valid only for that specific transaction. The transaction time is also shortened and does not demand the transfer of information between all the parties. The security of the transaction is also guaranteed by a secret code that remains in the possession of the customer. Appletics already has a strategic world customer the credit card Canadian company – CIBC.

These development were made possible with the closing, in March 2000, of the e-commerce consortium established by Visa, Mastercard, Microsoft and IBM. It intended to create a joint security protocol for credit card transactions but their

solution was too expensive and complex for the end user. Oded Hermoni, Haaretz, 17.1.2001, E1.

Tenders for 2 billion dollars of telecom equipment in Israel

The year 2001 is expected a boom year for the providers of telecom equipment for the Israeli market. The amount of expected investment is above 2 billion dollars for the next three years. Two or three new telecommunications companies will compete with the historical operator; the cable TV companies will add telephony and data communications services to their networks; the cellular companies will enter the third generation offering broadband cellular Internet; the Ministry of Communication intends to add a fourth cellular operator..

Siemens, Erikson, Lucent, Nortel and Alcatel established a large presence in Israel to show their capabilities to server their customers in a large scale. Cisco is already present in Israel for many years through its RTD center and also employ a large selling work force. Also Motorola, present in Israel for five decades is expected to participate in the cellular tenders.

The present leader in the competition is the canadian company Nortel Networks. It was able to win the tender of the Ofek company for choosing the main installer of its telecom network.; it is a deal of hundreds of million of dollar whose details will be settled in the coming weeks. Nortel decided to leave the tender of the Barak company; the main contenders for this deal are Ericsson and Siemens. Siemens is considered to have an advantage in telephony – Barak in contrast to Ofek is establishing a traditional telephony network. Ericsson is the leading world supplier of wireless systems. Hadar Horesh, Haaretz, 17.1.2001, E2.

Privatization of the Historical Operator – the Bezeq

The Ministers Committee for Privatization decided that the control of the Bezeq will be sold as a whole package and did not accept the alternative option of a 40% sale. A package of 50.01% shares will be sold at the end of the year. Prior to the sale the Bezeq will issue privately 8.25% of its sales for institutional investors so as to finance the retirement agreement with Bezeq workers. The decision was possible in the wake of the announcement by the general manager of the Government Companies Authority, Yaron Jacobs, that an agreement has been reached with the workers. Haaretz, 28.8.2000, C1. The Finance Committee of the Parliament (Knesset) approved the request of the Government Companies Authority to sell 50.01 % of the Bezeq shares to a private investor; it rejected the proposal to sell them through the Stock Exchange; without knowing the identity of the buyer it is impossible to make the necessary future arrangements regarding the land dispute between the Bezeq and the Israel Land Authority that are still to be decided by a Court. Haaretz, 7.9.2000, C5.

The **agreement between the Bezeq management and the workers** refer to the conditions for the early retirement of 2000 workers until 2008. The cost of the agreement is evaluated as NIS 1.6 billion. Haaretz, 27.8.2000, C1

The groups competing in the tender for the control of the historical operator, the Bezeq, will need to include a foreign strategic investor having at least a 20% share. Israeli investors will need to cooperate with a foreign telecom operator as the Anti Trust regulations do not permit that Israeli telecoms participate in the tender (that is the cellular and international calls companies). It is expected that a minimum investment of 2.5 billion dollars will be needed. Among the Israeli groups that have shown an interest in the tender are Gad Zeevi, who holds 20% of the Bezeq; the Israel Corporation controlled by the Ofer family; Poalim Investments controlled by Sharm-Pudim-Kelner; and a group being organised by Doron Cohen, former general manager of the Governmental Companies Authority. Haaretz, 22.8.2000, C4.

The Israel Corporation controlled by the Ofer family and Telefonica are considering cooperative arrangements towards their joint participation in the tender for the Bezeq. The companies have already cooperated in the past in several international tenders through the Call 1 company (owned by the Israel

Corporation). Another international expression of interest in the Bezeq tender came from the Finnish Sonara company. Haaretz, 23.8.2000, C1.

Consulting firms for the Bezeq tender. The Government Companies Authority contacted 6 large law firms in Israel for a closed tender for consulting services for the privatization of the Bezeq; some difficulties are expected as the largest firms are or soon will be contracted by the groups competing in the tender. The Authority is also contacting 12 large investment banks for consulting services in the privatization process. The tender will be published in December and is expected to be completed in April 2001. Haaretz, 8.9.2000, C1.

Bezeq chooses Shamrok for Buying Pelephone

Following the deal between Motorola and Telefonica regarding the acquisition by the latter of several companies the issue of the Israeli Pelephone veteran cellular company came to the fore. Bezeq, the historical operator, partner to Motorola in Pelephone has a first refusal option for Motorola shares which it decided to effectuate. Being a government owned company the Bezeq board preferred to hold the shares of Pelephone until its privatization expected in the very near future through an holding company. The candidates were a consortium of the Israel Company-Tzadik Bino-Ganden, the Steinmatz-Hapoalim Investments, Shamrok and Gad Zeevi. The board accepted the recommendation of a committee composed by the General Director, Ilan Biran; the Legal Counsel, Bismat Shalosh; and the directors Hava Shechterf, Gabi Last, and Iris Stark. Four directors who are also directors in the Pelephone board did not participate in the vote due a possible conflict of interests. The proposal was accepted unaimously although the commission asked by Shamrok wasn't the lowest one (8 million dollars against 3 million dollars asked by another group (Israel Company-Tzadik Bino-Agnden). The discussions held in the press previous to the completion of the deal stressed its relevance to the future acquisition of the historical operator itself, the Bezeq, in its near future privatisation. (Haaretz, 28.11.2000, C1).

Partner and Cellcom with appeal to the Supreme Court in case a Cellular Telephony

MIRS is a company owned by Motorola which provides wireless communications services for closed business networks. The company implement a technology that enables it to use the allocated spectrum both for wireless as well as for cellular telephony. It markets a service that enables both kinds of communication through the same device. It has 150 thousand customers and it also provides cellular Internet services. Its license doesn't allow it to charge for incoming calls to its customers. Income of the order of tens of million NIS is forfeited each year.

MIRS asked for a license as a cellular telephony operator. The Ministry of Communication intends to provide it without charge; the Ministry of Finance argues that it has been allocated spectrum for radio communications purposes and a change in the way the frequencies are used requires that the company pays for it as it would have been the case whether it participated in the tenders for cellular telephony. Partner paid for its license 400 million dollars and Cellcom was able to win the cellular tender in which it participated by offering a very low price of 8 NIS cents per minute of connection. These companies argue that a gratis cellular license for MIRS will provide her with unfair commercial advantages. Partner and Cellcom consulted with the Ministry of Justice in view of their intention to ask for the intervention of the Supreme Court of Justice. Officers at the Ministry of Justice said that it will be hard to defend a decision by the Ministry of Communication to provide a license at a price that do not reflect its economic value. Hadar Horesh, Haaretz, 19.12.2000, C5.

6. Standards

6.1 Standardisation bodies dealing with IS issues

The **Standards Institution of Israel - (SII)** is the country's official body for the preparation and publication of Israeli standards. It is, as well, deeply involved in the testing and certification of nearly every type of local & imported consumer, industrial & building product available on the Israeli market, and in auditing & certifying quality systems.

Standards are prepared, revised and published by the Standardization Division according to the Rules for Preparing Standards approved by the Minister of Industry and Trade. More than 2000 Israeli standards have been published. Standardization activities are divided into 17 different fields, each of which has a Central Committee. Actual preparation is carried out by approximately 300 Technical Committees and Working Groups, on which SII staff experts and professional volunteers representing all the diverse sectors of the economy, serve together. The roster of volunteers includes some 3,000 people.

Adopting International Standards

SII follows a policy of harmonization of standards, whenever possible. The Technical Committees are encouraged to adopt existing, accepted international standards as Israeli standards, unless there is a specific local reason for not doing so. On occasion, certain local Israeli standards have been adopted by the international community.

Institute of Quality and Control

The Institute was established by the Ministry of Trade and Industry in 1959. It approves quality systems following international standards like HACCP, GMP, CE, ISO 14000, ISO 9000, TickIT, QS9000, EN 4600. The Institute seal is recognised by governmental bodies like the Acquisition Authority at the Ministry of Defense (MANHAR); the Ministries of Health; Ministry of Trade and Industry; Governmental corporations. The examiners of the Institute are trained, registered and accredited by the BVQI and IRCA (International Organisation for Accreditation of Quality Examiners).

Among the IS areas covered by the Institute are:

- Software, Computers and Communications
- Service Corporations
- Offices for Planning and Supervision
- Training and Schools
- Health Services
- Hotels and Tourism

For additional information see: <http://www.iqc.co.il>

W3C Office in Israel

An office of the W3C Consortium is being established in Israel and its board is chaired by Prof. Michael Bercovier from the Hebrew University. The steering committee is composed by the Israel Internet Association; ILA, Israel IT Association; the Hebrew University; the Technion; Tel Aviv University. Following the W3C council meeting held in May the office is beginning efforts to expand the membership of Israeli companies in this central standardisation body.

6.2 Relevant standards

Working groups relevant to Information Society issues active at the Standards Institution of Israel are briefly described in continuation. For additional information see: <http://www.sii.org.il> Contact: Mr Michael Wolf, Director, Standardization Division Phone: 972-3-6465180 FAX: 972-3-6412762 e-mail: michael@sii.org.il

001700	Standards for ICT (Telematics): Invoices for providers of telephony and ICT (Telematics) – True invoicing
001109	Hebrew in computerized systems and in the Internet: a simple Hebrew English transcription
111502	Security of computer units –additional danger: physical security for computers
001100	XI for standards of information systems –general security
001102	Documentation: Information Processing: (a) User's Manuals (b) Analysis and contents
001103	Data units: data processing, information transmission
001110	Terms in information technologies: definitions, terms, data preparation, terms definition, terms definition – networking,
001114	Security for computerized information systems: access rights, passwords, managing security, rules for implementing management, definition of management systems
001704	Radio and Television Broadcasting: broadcasting digital images (DVB) information definition
080103	Security for information technologies equipment: security for information technologies equipment.
111409	Threats analysis: security of information systems, threats analysis

The **Israeli Institute for Accountancy Standards** will publish in the last quarter a new standard for investments in R&D and in intangible resources. The new standard will be enforced from January 2002 and it express the changes brought by the new economy on the investments of the firms in R&D. Following the present rules R&D investments are immediately registered as a loss at the time when the expense is made. The new standard will differentiate, for accounting purposes, between investments in Research from those in Development. Research investment have a large uncertainty component; in development the uncertainty is much smaller. This distinction will be reflected in the balance of the firm. Recognition of investment in Development as a capital investment will allocate it through its entire economic life and not as an immediate loss; investments in Research will continue to be registered as an immediate loss. As a consequence of this change hi-tech companies will show larger margins of profit which will increase investments on them. Haaretz, 2.10.2000, C3.

Among the recommendations of the 1997 **Eitan Parliamentary Committee** establishing an Information Society policy for Israel there were references to standards related to **security** and the **use of Hebrew**:

Information Security

(a) To update the ordinance concerning encoding devices in three phases to adapt it to the new economic and business environment (b) To establish a National Authority for Data Protection or to enlarge the scope of action of the present Unit for Data Protection at the P.M. Office under the principle that the Unit should provide maximum information to the public and at the same time protect the Governmental Information System. (c) To budget the necessary standardisation activities necessary for data protection and in particular the Israeli

Standards: 4283 (Data Protection in Communication Infrastructures) and parts 4,6,7 of Standard 1495 (Data Security in Computerized Systems (d) To establish and budget an overall governmental body similar to the CERT for reaction against menaces to the national information system. (e) The government should initiate the training of adequate manpower for data security.

Hebrew and Standards

(a)The government should adopt the relevant standards for supporting Hebrew (RFC2070, Israeli Standard 1753 and directionality Unicode 2.0) and guarantee that every contract with IT providers demand the support of these standards (b) Develop open and general routines for Hebrew support to be included in the different IT products with Hebrew fonts (c) To budget through the National Committee for IT Infrastructures initiatives for the development of basic software and presentation for the implementation of IT in Hebrew; these tools including sources should be freely available to the public (d) In the governmental contracts for network based applications preference should be given for those were Hebrew support conforms to the standards and is not system dependent.

Hebrew Netscape Browser

The Israel Internet Association (<http://www.isoc.org.il>) announced that a Beta version of the Netscape Communicator 4.6 supporting for standard Hebrew is now available to the public. The association provided funds for developing such browser in cooperation with IBM. The purpose of this initiative is to avoid having the Israeli market dependent exclusively from the Microsoft Explorer version 5.0 browser for Hebrew support. So far the **Microsoft Explorer** was the only browser fully supporting standard Hebrew. A public domain version of the Netscape Communicator Messenger supporting standard (logical) Hebrew is to be developed next by the Association. These interventions became necessary as no other commercial body was interested in providing standard Hebrew support for Netscape products.

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