Telecommunications in Israel 2008

From Monopoly to Competition: 1994-2008

Market Sectors	1994	2008
Domestic Fixed Services	Bezeq	Bezeq Hot (the cable company) 012 Telecom Cellcom Fixed Telecommunications Services Partner Fixed Telecommunications Services Globcalll
Mobile Telephony	Pelephone	Pelephone Cellcom Partner Mirs
International Services	Bezeq	012 Smile Barak-Netvision Bezeq International XFone
Internet Service	Only university network	012 Smile Bezeq International Barak-Netvision Golden Lines Over 50 smaller ISP's

The telecommunications market is a major driving force in the global economy. Ours is an era of fast communications and accessible information. In this era, advanced infrastructures, varied services, and wide coverage are absolutely necessary for any service provider in order to be able to compete in this market. A healthy competition in the field of communication services is, in our day, a most essential factor in promoting civilian welfare.

In Israel, the competition in the telecommunications market is ever more exuberant and vigorous, and in the following pages we shall provide you with facts and data that will give you a current update, as well as a historic account, about that market. We shall also describe the evolving role of the regulator in the rapid passage from monopoly to competition, which characterizes Israel's communications market.

In 2007, the telecommunications sector in Israel had revenues of US$ 7 billion, representing about 4% of the GDP. As of 2006, the average percentage of household communications expenditures out of total household consumption expenditure was 7% (130$).

Telecommunications is one sector that has kept growing steadily, even through years of economic crisis or recession. In the years 1998-2007, the average growth rate per annum was 6.8%. The main factors in this growth are the mobile, the Internet and the multi-channel television fields. The growth of the telecommunications market emphasizes the strength and positive effect of this market on the Israeli economy.

Regulation

A Policy for a Multi-operator Environment

Israel has pursued progressive liberalization and privatization in its communications and information technology subsector. These reforms included privatization, with the sale by the Government of its controlling interest in Bezeq, Israel's incumbent fixed-wire line service provider, in 2005; adoption of a regulatory regime suitable for a multi-operator environment; and competitive local exchange carrier (CLEC) licenses for infrastructure, transmission, data (broadband) and telephony services.

Regulatory functions are exercised by the Ministry of Communications.

The Communications Law empowers the Minister of Communications to enact legislation concerning all relevant telecommunications services and equipment, including technical specifications for telecommunications equipment and type approvals. The Communications Law states that any license and change thereof must contribute to competition in the field of telecommunications. It also provides that a licensee must fulfill certain prerequisites (requirements vary from one licensee to another). Licenses may be revised or cancelled if an operator becomes, *inter alia*, anti-competitive, or unfit to provide telecommunications services. There are generally no controls over the tariffs of private suppliers, except for those licensed through public tenders under which tariffs are part of their commitment, and certain “Bezeq” tariffs, which are regulated owing to Bezeq’s strongly monopolistic market position. Cross-subsidies from monopolized services to competitive services are not allowed.

The Communications Law was amended in August 2001 to eliminate the existing cable television franchises and introduce a revised licensing regime. This allows use of cable infrastructure for the provision of telephony and advanced fixed telecommunications services, such as data communications and broadband Internet access, in addition to multi-channel subscriber television already provided by franchise. In May 2003, a new amendment to the Communications Law allowed CLECs to compete in the fixed telecommunications services without USO (universal service obligation) as from September 2004. The Ministry of Communications subsequently issued a set of regulations to establish the terms of procedures to apply for such a licence, called a "Specialized Domestic licence", and, to date 4 such licenses have been granted.

The Chronology of Market Liberalization

In 1984, the regulatory and operational functions in Israeli telecommunications were separated. All telecommunications facilities, which had until that time been government-operated, were transferred to the newly established Bezeq company. Bezeq was granted a tightly-regulated monopoly for the provision of telecommunications services.

The rise of the ICT revolution in the 90’s, the interest of existing and potential carriers in using the new technologies to provide enhanced services, and a desire to confer the benefits of competition onto the consumer, have led the Ministry to initiate strategic amendments to the existing regulatory structure.

In 1994, the first significant step towards a competitive telecommunications market was taken: the incumbent Bezeq was required to form subsidiary companies in order to provide services in market sectors other than domestic, fixed wire line telephony, such as the cellular (Pelephone Ltd.) and international (Bezeq International Ltd.) market sectors. By the end of 1994, the cellular market sector became indeed a competitive one, when Cellcom, the second cellular company, began operations, after winning a tender issued by the Ministry of Communications. Competition levels grew further in 1998, as Partner stepped in (again through a public tender) and in 2001 when MIRS was granted a cellular license. The international telephony and data market saw the entry of competition in 1997, as Barak and Golden Lines began operation. The introduction of competition in the international calling

field was indeed a “case study” in the effects of competition: the price of a call abroad dropped over 70% in a matter of weeks. An amendment of the Telecommunications Act in 1997 enabled the licensing of DBS satellite TV service provider; which began operation on July 2000, and competes with the cable company in the multi-channel broadcasting market.

Bezeq’s exclusive monopoly-by-law on fixed telephone services ended in June 1999. Subsequently, in September 2000, the Minister of Communications enacted regulations for the licensing of new operators in the fixed services market – any entity meeting the licensing criteria may receive a license. In February 2001 the Ministry issued a tender for the assignment of additional 2G and 3G cellular frequencies. The tender for additional cellular services using 2G or 3G frequencies was concluded successfully, and frequency bands were allocated for future use by the three major mobile telephone operators.

In August 2001, the Telecommunications Act was amended by the Parliament on the basis of a proposal drafted by the Ministry of Communications. This amendment did away with the existing cable television franchises, and introduces instead a licensing regime, which allows use of cable infrastructure for the provision of telephony and advanced fixed telecommunications services such as data communications and broadband Internet access, in addition to the continued provision of multi-channel subscriber television.

In May 2003, the Telecommunications Act was amended by the Parliament, in order to allow CLEC’s to compete in the fixed telecommunications services without USO (Universal Service Obligation) as of September 2004. Subsequently, the Ministry of Communications has issued a set of regulations to establish the terms and procedures to apply for such a license, called a “Specialized Domestic License”. Up to the present, four of these Licenses were given by the Ministry of Communications to 012 Telecom, Globcalll Telecommunications. Cellcom fixed Telecommunications services, and Partner fixed Telecommunications services.

While Bezeq remains Israel’s leading domestic, fixed-service operator, the cable operator HOT Telecom has acquired above 300,000 voice telephony subscribers, mainly in the households and small business segment.

In early 2007, the Minister of Communications appointed a public committee, headed by Professor Rueben Gronau of the Economics Department at the Hebrew University (the Gronau Committee), to recommend a future regulatory and competitive policy. The committee presented its recommendations in the summer of 2008. To provide incentives for investment by incumbent operators, the committee recommended that the Minister adopt a policy of mandated access to incumbent networks, including, *inter alia,* local loop unbundling (along with other network elements necessary to implement LLU), wholesale line rental and resale of incumbent services. The committee’s recommendations were based on a thorough investigation of the European regulatory scheme, and were designed to ensure that competitive carriers would upgrade network infrastructure, causing incumbents to do so as well.

The committee recommended that Bezeq not be given a “regulatory holiday” nor any monopoly over the use of the NGA, and that competitors be provided access to the NGA according to European best practices as they evolve over time. The Minister adopted the recommendations of the committee on the matter of a wholesale market in fixed communications, as the committee recommended them.

Altogether, Israel has made great strides in opening up its telecommunications sector to competition. Since the mid-90’s, the communications market consists of four domestic cellular operators, six international service providers, a cable television provider, a satellite television provider and 2 fixed domestic operators with universal service obligation. All of the above are facility-based, have been issued general licenses, and more than 200 special licenses have been issued for the provision of value-added services.

Review of Israel's Telecommunications Market Sectors

Fixed Services

As of 2008, Israel has 2.9 million direct exchange lines, using a 100% digital network (approximately 87% owned by Bezeq, the Incumbent Local Exchange Carrier, and 13% by other carriers, chiefly HOT, the cable company), that provides advanced services to all customers.

The "phone-lines-to-households penetration rate" is falling, owing mainly to increased use of mobile services and broadband (rather than dialup) internet, and currently stands at approximately 92%, while the "home-pass rate" for domestic telephony exceeds 99%. Broadband service in Israel (by cable modem or ADSL) has a home-pass rate of 99%, and a penetration rate of approximately 70% of households (2007).

In March 2002, the cable companies (before the merger into the unified HOT Telecom company) were granted licenses to provide broadband telephony access on their infrastructure (using cable modems). The cable infrastructure became a competitor to the Bezeq's infrastructure. As a result, the penetration rate of broadband to households had grown from approximately 4% in 2002 to approximately 70% in 2007, with a home-pass of 99%. The prices of broadband Internet Access have decreased precipitously, and currently stand at approximately 90 NIS (about $23 per month). Since high-speed internet access is a key driver for the global ICT economy, , it is an important key in advancing the Israeli market.

Since September 2004, it had become available to new competitors to enter the fixed telecommunications service market, free from Universal Service Obligation, and there are 4 providers operating according to those licenses. These licences are granted to operators who own limited infrastructures, and to operators who provide VOIP service over broadband infrastructure of other operators.

Cellular Telephony

There are four cellular operators in Israel who provide digital technology countrywide coverage and modern 3G (third generation) services. Pelephone uses CDMA2000 technology, and is currently rolling out a UMTS network. The second operator, Cellcom, uses the American IS-136 TDMA, European DCS 1800 and UMTS. Orange (Partner Communications), the third operator, uses GSM technology DCS 1800 and UMTS. The last licensed cellular operator is MIRS, who uses iDEN ESMR technology.

The introduction of competition in 1995 led to an extremely high subscriber growth rate, one of the highest in the world. As of 2008, penetration stands at approximately 118%. This rapid growth was achieved by providing nationwide coverage, low tariffs, introduction of Calling Party Pays (CPP) method in 1994, network quality, and effective marketing. On December 18, 2001, tenders were concluded for licenses for additional 2G and 3G cellular frequency bands, in order to expand network capacities and enable use of broadband cellular applications employing DCS-1800 and UMTS technologies. Cellcom, Pelephone and Partner participated in these tenders; a total of 115MHz has been assigned to those parties at a total license fee of 240 million USD. The new frequencies enable the operators to provide GSM1800 modern services and 3rd Generation UMTS features. During the year 2004 additional 10 MHz were assigned to the UMTS network of Cellcom, by tender.

The second and third generation frequencies allowed the continuation of growth of the cellular market and development of third generation services. During the past 4 years, since the advanced third generation technologies were launched, consumers enjoy video conferences, surf high-speed mobile Internet, download varied contents, and receive video news, updates and more. Text and data services are now available in SMS, WAP and IP formats, and GPRS and CDMA 1X. EVDO technologies have become available during the recent years.

The Ministry of Communications is committed to increasing competition in the mobile market; to this end it has recently published for public hearing a policy to allocate spectrum in the 2.5 Ghz band for Wimax and LTE applications; in addition, following the recommendations of the “Gronau Committee”, the Ministry is preparing a shelf license for a virtual mobile network operator (MVNO).

Number Portability

On September 1, 2006, the act approved by the Israeli government on August 15, 2004 regarding the implementation of the number portability in Israel has become valid. "The Portability Law" allow fixed and mobile telephony subscribers to keep their phone number in the case of exchanging operators. Over 100,000 consumers have taken advantage of this option, which is seen as a critical factor in improving the competitiveness of both the mobile and fixed telephony markets.

International Telecommunications Services

International long distance services have traditionally been a monopoly of Bezeq International (a subsidiary of Bezeq). In July 1997, two privately-owned facility-based carriers, Golden Lines and Barak, were also licensed. In May 2004, three additional licenses were given to Internet Gold, Xphone, and Netvision. Consolidation in the sector has narrowed the number of current operators to 4.

In 2007, outgoing fixed international telephone traffic amounted to 1.6 billion minutes; the figure for incoming traffic was 1.3 billion minutes.

The licensed operators currently deliver services over a modern digital network, including several switching facilities incorporating advanced intelligent network infrastructure. The operators also use VOIP technology. Other enhancements include optical submarine cables (including Lev, a 5 Gb/s fiber cable between Israel, Cyprus and Italy, in service since 1998, and MED Nautilus, a 3.84 Tb/s DWDM system in restorable ring configuration, between Israel, Cyprus, Greece and Italy); digital satellite links; modern operator facilities; and advanced data communications facilities.

Outgoing traffic quickly tripled and the new carriers rapidly gained substantial market share as the incumbent operator lost its exclusive position. Fair and transparent interconnection arrangements, equal access rules and bold cuts in retail prices, have enhanced competition in international services. As a result of the competition –in 1997- prices dropped by approximately 70% and in 2004 additional substantial reductions accrued.

Although ARPU in the international long distance sector continues to decrease, as noted above, consolidation in 2006 has resulted in the creation of 4 operators instead of the previous 6, and prices have remained stable. It should be noted that owing to the significant overlap in business expertise between international long distance and internet services (mainly, the need to maintain international points of presence and transmission), most ILD operators provide ISP services as well.

Internet & Broadband

There are 3 large Internet service providers in Israel and 45 smaller license holders, serving more than three million users, including above 60% of households and above 80% of businesses. Cellular phone companies introduced wireless Internet during 2001. Bezeq began to offer ADSL services in 2000, and the cable companies started to provide broadband cable modem access in March 2002.

Internet service providers purchase international IP bandwidth, connect to the backbone networks of Bezeq and HOT, and provide services to consumers based on a VPN configuration. The most common download speed in Israel is currently 2/2.5 Mbps, with speeds of up to 10 Mbps available on HOT's network and 8 Mbps on Bezeq's network. Bezeq has recently announced a trial rollout of a fiber-to-the-curb, expected to significantly increase available bandwidth in the local loop.

As a result of the competition, the penetration rate of broadband to households has grown from approximately 4% in 2002 to approximately 62% in June 2006. Fixed broadband service in Israel (by Cable Modem or ADSL) has a home-pass of 99%. The tariffs of broadband Internet have decreased in dozens of percentages.

The cable company and Bezeq are obligated to provide universal deployment of broadband Internet access service. Broadband penetration rates are high: over 1,000,000 ADSL subscribers and 600,000 cable modem subscribers, as of December 2007, translate to a penetration rate of 70% per households in 2005 and 23% per inhabitants, placing Israel among the leading countries in the world in terms of broadband penetration.

Factors encouraging this growth include the competition between Bezeq and the cable company (both are under universal service obligation for broadband as well as telephony), competition between five major ISP's widespread use of computer in business and at home, advanced telecommunications infrastructure and a regulatory policy of minimal intervention. Several sophisticated Hebrew-language portals and a vast array of Hebrew web sites also contribute to ubiquitous Internet use in Israel.

Israel is a world leader in developing Internet technologies and applications, and Israeli companies operating in the field have marked several international successes. This international reputation is also recognized on the home market, and influences local interest and use.

The country's strong tradition of academic inquiry and research has placed Israel on the global research network for the NGI (Next Generation Internet), linking Israel to the world's seekers of scientific and industrial knowledge through StarTap (Chicago) to the U.S.-Internet 2 Network, through the Point of Presence (London) to the EU GEANT Network and to Q-Med (Mediterranean consortium Quantum extension).

Broadcasting & Multi-channel TV

Multi-channel subscriber TV market currently comprises three regional cable television operators (Matav, Tevel, Golden Channels), as well as a single DBS (Direct Broadcasting Satellite) operator (Yes – 49.9% owned by Bezeq) that began operations in July 2000 using Israel's AMOS-1 communications satellites.

The three cable companies each held a regional monopoly until the July 2001 amendment to the Telecommunications Act, which cancelled exclusive cable concessions, opened the multi-channel subscriber television market to full competition, and separated content (broadcasting) from infrastructure.

During 2001 the (pre-merger) cable companies have implemented digital transmission technology, which uses HFC networks instead of the older coaxial distribution systems, and provides digital subscribers with a whole new dimension of interactivity.

Cable TV home-pass extends to 97% percent of households, and about 51% of all households subscribe. 24% of households subscribe to the DBS service operated by “Yes”. 60% of cable subscribers receive digital service (the DBS is digital by definition).

As of November 2001, there were three national public TV channels broadcasting in Israel (the terrestrial Channel 1, the satellite-delivered Channel 33 and the cable-carried Educational TV channel), and one national commercial channel (Channel 2). A fourth public Arabic-speaking satellite-delivered channel was launched by mid-2002 and unified with Channel 33 by mid-2004, and a second commercial channel (Channel 10) was licensed during 2001 by public tender, and started to operate through cable and satellite by February 2002. These channels must be carried by the cable and satellite operators, who also provide packaged access to locally-produced movies, sports and other special interest channels as well as dozens of foreign offerings. Two additional commercial special-interest TV channel licenses, for distribution by cable and DBS/DTH, started to operate during 2003: a Russian-speaking channel and an Israeli Music Channel.

There are currently 22 FM public and commercial radio stations that use around 150 AM/FM radio transmitters.

Postal Services

Over the past two decades the Israeli postal market has undergone wide-ranging reform. The process began with the establishment of the Israeli Postal Authority (IPA) in 1987 and culminated in 2006–07 with the creation of the Israeli Postal Company (IPC), the opening of the bulk-mail market to competition, the introduction of a new set of tariffs (in November 2007) and the granting of a new license to the IPC (in January 2008), thus creating a regulatory framework and introducing additional flexibility in the introduction of new products. Israel’s postal industry generates annual revenues of some $800 million (2006) from the delivery of some 710 million postal items (about 100 per inhabitant). The dominant firm in the market is the government-owned IPC, since it is the only universal provider and operates in every submarket.

Courier services have been provided by competitive operators for many years. In March 2001, a private company began providing mail delivery services to large bulk-mail customers, but further competition was prevented by legal processes. The legal debate lasted for several years and in the meanwhile a status quo was maintained: the company continued its activity without expanding its volume.

In March 2006, the IPA was transformed into the IPC and in September of that same year the “Sagi Report” on setting new tariffs was submitted. The report was adopted six months later and the tariffs came into effect 13 months later, in November 2007. On January 3, 2008, following a drafting process of over two years, a license to the IPC was finally granted. The license determined the regulatory framework in which the company operates in terms of the definition of universal service and the relationship between the regulator and the Company. Moreover, the license defined a framework for the addition of new and even non-postal services.

Today, the bulk-mail segment is entirely open to competition and in accordance with recommendations, the non-bulk-mail segment will be opened to competition in July 2009.

Israel's Role in World Telecommunications

Since Israel is a small country, with almost no natural resources, it has always had to depend on its intellectual resources, for survival and development. It is this factor that has made the country a technological leader.

Innovation and Manufacturing

Israel is widely acknowledged as a technological innovator. A major share of local service provider's networks and applications was designed and produced by Israeli companies. These technologies include public switching, transmission, access network technology, wireless local loop systems, data networking devices, network management software, billing systems and value added services software.

Hundreds of active start-up companies (approximately 800 in 2005) are developing a variety of new technologies, mostly related to information processing, and many in the telecommunications field. Technological R&D activities in Israel are intensive. Traditional industry-academy cooperation, supported by Ministry of Industry and Trade's Chief Scientist, has led the country to some significant breakthroughs in several areas.

Excellence areas include Internet applications, broadband, local area networks, digital wireless, opto-electronics, video and image processing, satellite communications, network management, network security and telemedicine. This excellence in R&D and original innovation has turned Israel's ICT industry into the country's leading economic sector.

Foreign Investment

The Israeli telecommunications industry has consistently been highly attractive to foreign investors. Several leading multinational telecommunication companies have invested in the Israeli market, including investment in Israeli high-tech companies, R&D and manufacturing facilities in Israel.

More than 100 dedicated high-tech venture capital funds operate in Israel. Indirect investment in Israeli telecommunications firms is also provided by institutional and private investors purchasing shares of Israeli companies traded on the New York Stock Exchange, as well as in London and on other European exchanges.

Israel is one of the countries with the highest number of companies which are traded in the American stock exchange, Nasdaq. Israeli IT and telecommunication companies in Nasdaq are world leaders in areas such as Internet security, value added service solutions, billing solutions and customer care services, VoIP technologies, fixed wireless access technologies, telecommunication services via satellite, optical and copper networking solutions, data and ATM, etc.

International and Regional Cooperation

Over the past several years, Israel has pursued the development of international and regional telecommunications cooperation. Israel has signed bilateral telecommunications agreements with 24 countries. Israel is committed to an active policy of international and regional integration in order to participate in future cooperative endeavors relating to telecommunications products and services. The Israeli government believes these endeavors will be enhanced once the peace process revives and matures.

Israel has fully participated in the WTO (World Trade Organization) & GATS telecommunications services negotiations, and has committed itself, within the framework of the WTO multilateral agreement, to an open, competitive and transparent telecommunications industry.

Satellites

The AMOS-1 Israeli geostationary satellite, located at 4 degrees west, began operations in 1996. It was built by the Israeli Aircraft Industries (IAI) and uses 7 Ku-band transponders, primarily for direct-to-home television broadcasting, TV distribution and VSAT services for customers in the Middle East and in Central Europe. Spacecom Ltd. is the exclusive marketer and service provider of AMOS-1 services.

Another satellite, the Gurwin-II TechSAT, was launched in July 1998. This experimental satellite was designed, manufactured and is controlled by The Technion-Israel Institute of Technology. The Gurwin-II TechSAT provides communications, remote sensing and research services.

ImageSat system– designed and manufactured, like AMOS-1, by IAI, provides services via MBT Ltd., an international consortium headed by Israeli Aircraft Industries, had launched its EROS satellite in 2000. EROS is a non-geostationary orbit satellite, which provides highly accurate commercial photography and surveillance services.

In December 2003, Spacecom Ltd. launched AMOS-2 and it is co-located with AMOS-1. AMOS-2 has 11 Ku-band transponders and 3 backup transponders, 72 MHz bandwidth each. It has 3 spot beams: the Middle East beam supports up to 11 transponders; the Europe beam supports up to 6 transponders; and US East Coast beam supports up to 8 transponders.

Amos-3 was launched in April 2008, to replace Amos-1 in its geosynchronous orbit. Amos-3 has 15 Ku-band transponders.

2008 Statistics

The Israeli telecommunication service providers market

General information

Population	7,243,600
Land area	20,770 sq km

Fixed Services

Number of domestic telephony operators	2 universal + 4 (specialized domestic operator licenses)
Number of fixed phone lines	2.9 million
Total revenues	$1.05 billion
Percentage of digital telephone network	100%
Home-pass	99%
Number of broadband infrastructure operators	2 (Bezeq and HOT)
Market share of new broadband infrastructure entrants	40% (Bezeq market share - 60%)

Internet & Broadband

Number of ISP	70+ (3 major players)
Number of broadband subscribers	1,600,000 (1 Million ADSL, 430,000 CM)
Broadband penetration	70% of households
Broadband home-pass	99%

Cellular Telephony

Opening of competition	1995
Number of operators	4
Country coverage	99% of the Israeli population
Total revenues	$3.679 billion
Number of subscribers	8.1 million
Penetration rate	118%
Average ARPU	$35.6
Average MOU	320
Date of UMTS spectrum auction	December 2001
Number of UMTS licenses	3
UMTS frequencies band price	$45 million (per operator)

International telecommunications Services

Opening of competition	1997
Number of operators	4
Total number of minutes	2.9 Billion (Incoming & Outgoing)