

Telecommunications in Israel *2006*



From Monopoly to Competition: 1994-2006

Market Sectors	1994	2006
Domestic Fixed Services	Bezeq	Bezeq Hot (the cable companies) 012 Telecom Cellcom Fixed Telecommunications Services Globcall
Mobile Telephony	Pelephone	Pelephone Cellcom Partner Mirs
International Services	Bezeq	Internet Gold Golden Lines Netvision Barak Bezeq International Xphone
Multi-channels TV	Cable companies (Golden channels, Tevel, Matav, Gvanim, Idan)	Hot (cable companies) Yes (satellite company)
Internet Service	Only university network	Internet Gold Netvision Bezeq International Barak Golden Lines Over 50 smaller ISP's

The telecommunications market has been a major driving force in the global economy over this last decade. Ours is the 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.

Telecommunications presently contribute approximately 4% of the Gross National Income, and in 2006, the average ratio of household communications expenditures from total household consumption expenditure was 7% (130\$).

Telecommunications is one sector that has kept growing steadily, even in years of economic crisis. In 2003-2005, the average growth rate was 3.91%. The main factors in this growth are the cellular, 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

Structural Changes

Israel's communications market is characterized by fundamental technological and structural changes, large investments, and rapid development. The substantial changes that have taken place in Israel's communications market over the recent years are due, in part, to a basic change in policy on the part of the Ministry of Communications, which serves as the primary sector regulator. The Ministry has removed the exclusivity of Israel's incumbent operator and has opened the sector to competition and to the influence of market forces. This change in policy has been successful; it has facilitated the development of a wide variety of high-quality telecommunications services and has proved to be beneficial to consumers. The Ministry is currently implementing its policy at two main levels:

- Legislation: a regulatory regime is being implemented that is suitable for a multi-operator environment;
- Licensing: CLEC (Competitive Local Exchange Carrier) licenses are being issued for infrastructure, transmission, data, local and international telephony services;

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. 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 corporations in the multi-channel broadcasting market.

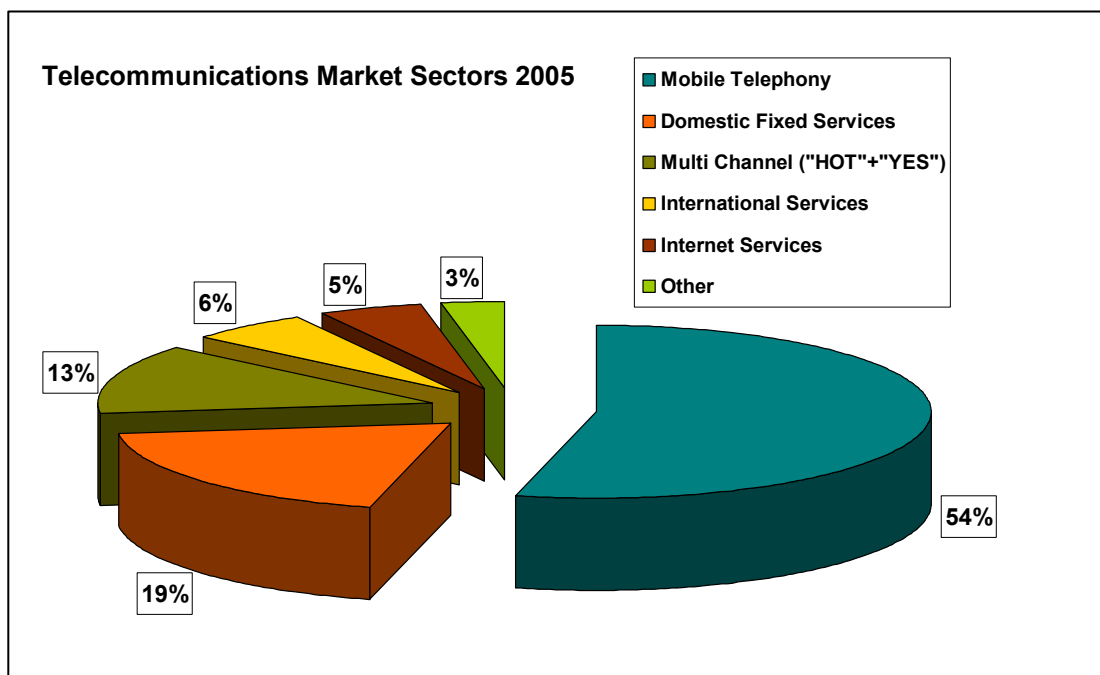
Bezeq's exclusive monopoly-by-law on fixed telephone services, ended in June 1999. Subsequently, in September 2000, the Minister of Communications enacted regulations for the licensing of new operators in the fixed services market – any entity meeting the licensing criteria may receive a license. In 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. Currently, the mobile companies are intensively marketing advanced 3G services which enable, among other things, faster Internet surfing, video chats, and much more.

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 "General-Specific License". Until May 2006 three of these Licenses were given by the Ministry of Communications to 012 Telecom, Globcalll Telecommunications and Cellcom fixed Telecommunications services.

While Bezeq remains Israel's leading domestic, fixed-service operator, and retains a general operating license, these days we can see the beginning of a fundamental change while the cable companies (HOT Telecom) have acquired above 100,000 voice telephony subscribers, mainly on the households segment.

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, 3 regional-monopoly cable television providers (in a merger process to become a unified countrywide provider) as well as 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.



Israeli Telecommunications Market Sectors

Fixed Services

Israel has 2.9 million direct exchange lines, using a 100% digital network (97% owned by Bezeq, the Incumbent Local Exchange Carrier) and 3% by HOT (the cable company) that provides advanced services to all customers. The phone lines-to-households penetration rate is over 91% while the home-pass penetration rate exceeds 99%. There are currently 1,230,000 subscribers to broadband services, both Bezeq's ADSL and HOT's cable internet services (end of 2005).

In March 2002, the cable companies were granted licenses to provide broadband telephony access on their infrastructure (using cable modems). The infrastructure of the cable companies 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 58% in June 2005, and to above 60% in the June 2006. The broadband service in Israel sums up to 800,000 ADSL subscribers and 430,000 cable modem subscribers with a home-pass of 99%. The prices of the broadband Internet Access have decreased in dozens of percentages (about 9 US\$ a month in July 2006). This allows Israel to integrate within the global Internet economy, which is an important key in advancing the Israeli market.

As of June 2005, the Voice-over-Internet Protocol (VoIP) service is provided to 1,230,000 subscribers. The three cable companies have also been licensed to provide voice telephony services, which were launched in November 2004. As of September 2006, there are more than 100,000 customers using HOT-Telecom VOIP Technology Telephony.

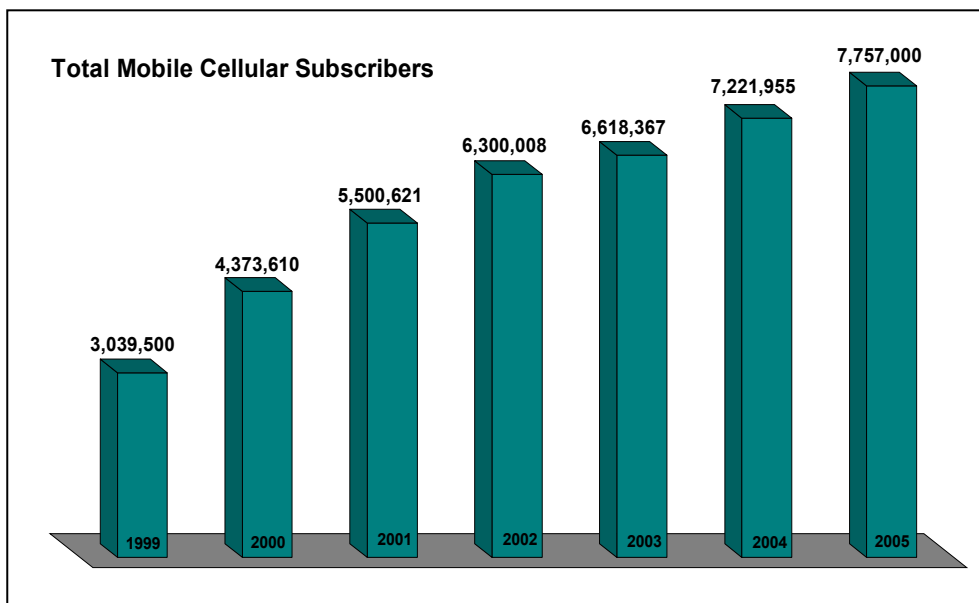
Competition in the Local Fixed Telephony Market: In light of the fact that real competition within the domestic fixed telephony market has not developed, a public committee was appointed in March 2002, to set a policy and rules of competition in this field. The Minister officially decided how each article of the committee report has to be implemented. The basic principle that guided the Committee was the need to lower entry barriers. Some of the key recommendations, and ministerial decisions based upon them, are:

- The merger of the cable companies and the merged cable company's joining the fixed-line communications market, as a central player with national deployment; create an opportunity for competition in this market. The cable network constitutes a universal alternative of real competitive potential Vs Bezeq Co., both in the domestic sector and in the business sector;
- Facility-based competition should continue among operators who own their **independent infrastructures** and not operators who use the infrastructures of the ILEC;
- The telephony market will be fully open to competition **not limited by the demand area requirement**, within 1-3 years;
- Bezeq and the merged cable corporation will be obliged to provide a **universal service** package, which has to be offered to all country residents, everywhere, for an identical and reasonable price;
- **Transmission and data communication services** should be opened up to competition immediately;
- **Frequency assignment policy** should be revised: WLL and LMDS frequencies for fixed communication services will be provided in small units without tender, to existing operators as well as to new ones;

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 3 providers operating according to those licenses.

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. 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 penetration rate of mobile phone subscription exceeds 100% (over 7.7 million mobile subscribers).



The introduction of competition in 1995 led to an extremely high subscriber growth rate, one of the highest in the world. This rapid growth was achieved by providing nationwide coverage, low tariffs, the 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 two years, since the advanced third generation technologies were launched, consumers enjoy video conferences, surf high-speed mobile Internet, download varied contents, 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.

Number Portability

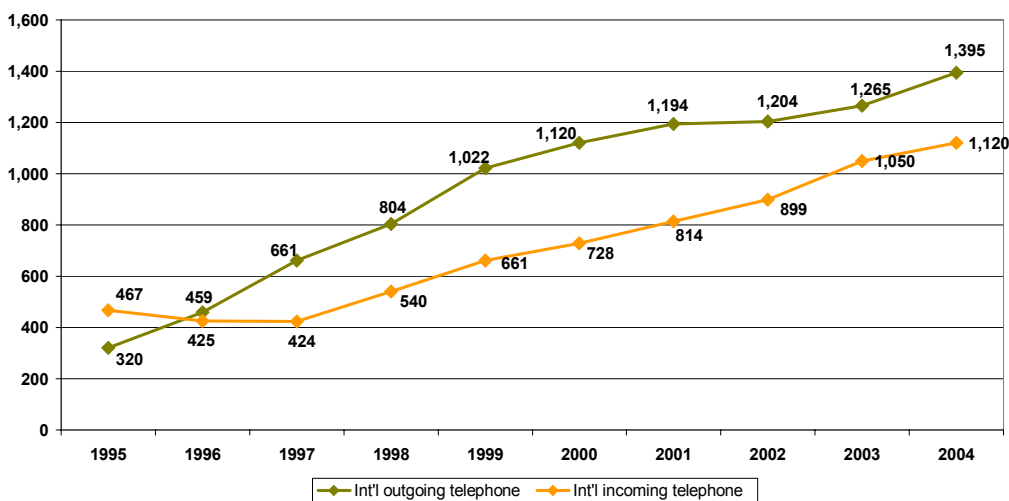
On September 1, 2006, the act approved by the Israeli government on August 15, 2004 regarding the operation of the number portability in Israel has become valid. "The Portability Law" allow fixed and mobile telephony subscribers to keep their phone number in the case of exchanging operators.

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.

In 2005 the total number of minutes used in international services was 2.5 billion minutes (Incoming & Outgoing).

International Traffic 1995-2005 (Unit: 10x6)



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.

Internet & Broadband

Internet penetration is also growing quickly. Five major and about 70 smaller Internet service providers serve 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.

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.

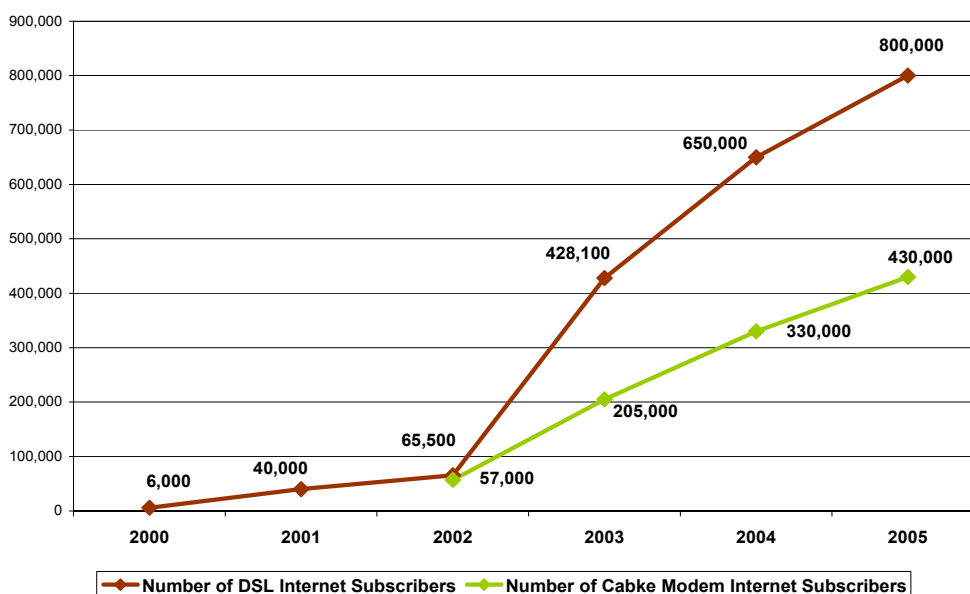
The cable companies and Bezeq are obligated to provide universal deployment of broadband Internet access service. Broadband penetration rates are quite promising: 800,000 ADSL subscribers and 430,000 cable modem subscribers, as of December 2005, translate to a penetration rate of 58% per households in 2005 and 18% 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 cables companies (both are under universal service obligation), 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 more than 60,000 web pages 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).

Growth of Broadband Subscribers



Broadcasting & Multi-channel TV

Multi-channel subscriber TV market is currently comprised of two major television operators competitors: HOT (Matav, Tevel, Golden Channels), and a single DBS (Direct Broadcasting Satellite) operator (49.9% of which is owned by Bezeq) who began operations in July 2000 using Israel's AMOS-1 communications satellites. The cable and satellite operators provide their subscribers with over 40 locally-produced channels, not including interactive and shopping channels.

Two dedicated theme channels are broadcasted in the cables & DBS: the music channel (24) and the designated Russian Channel (9). Since early 2005, the cable companies have been providing VOD (Video On Demand) to their subscribers.

Before July 2000, the three cable companies (Matav, Tevel, Golden Lines) each held a regional monopoly. The 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 cable operators 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 48% of all households subscribe. 29% of households subscribe to the DBS service operated by "Yes". 78% of cable subscribers receive digital service (the DBS is all digital).

There are four national public TV channels broadcasting in Israel (the terrestrial Channel 1, the satellite-delivered Channel 33, the cable-carried Educational TV channel and the Knesset (the Israeli Parliament) Channel (99) which is satellite-delivered), and one national commercial channel (Channel 2). 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 DBS operators, who also provide packaged access to locally produced movies, sports and other special interest channels as well as dozens of foreign offerings. There are currently 22 FM public and commercial radio stations that use around 150 AM/FM radio transmitters.

Postal Services

The state of Israel decided in 2003 to open the postal market to competition and to transform the Postal Authority to a government owned company. Eventually, in 2006 the postal market opened to competition in 2005, and the Postal Authority became a governmental company in March 2006.

In February 2006 a new permit regarding the delivery of quantitative mail was published. An owner of this permit can deliver quantitative mail. Currently, six licenses for quantity services were issued to private mail operators. By September 2006, 95 licenses were given to Israeli companies for delivering domestic and international mail.

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.

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.

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 twenty-four countries, and six additional countries are currently in various stages of negotiations with us. 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.

Objectives for the Near Future

The Ministry of Communications' objectives for the coming year, include: Fully activating the number portability plan by the fixed and mobile operators; Expanding competition in the fixed market, by licensing new competitors without universal service obligation; preparing a policy on VOIP communications (Voice Over Internet Protocol) based on VOB (Voice over Broadband) Technology and on a recently-published consultation with the public; promoting the Wimax technology and developing a policy on Wimax; promoting the deployment of advanced cellular services and promoting the competition in the cellular market- MVNO (Mobile Virtual Network Operator) concept is being discussed as one possibility; ensuring the existence of original Hebrew productions; expanding competition within the postal market; Safeguarding service quality for consumers and encouraging advanced telecommunication services.

The 2006 Statistics

The Revenue figures are of 2005

The Israeli telecommunication service providers market

General information

Population	7,707,000
Land area	20,770 sq k"m

Fixed Services

Number of domestic telephony operators	2 + 3 (unique domestic operator licenses)
Number of fixed phone lines	2.9 million
Total revenues	\$1,125 million
Percentage of digital telephone network	100%
Home-pass	99%
Number of broadband infrastructure operators	2 (Bezeq and a cable operator, in each region)
Market share of new broadband infrastructure entrants	40% (Bezeq market share- 60%)

Internet & Broadband

Number of ISP	73 (5 major players)
Number of broadband subscribers	1,230,000 (800,000 ADSL, 430,000 CM)
Broadband penetration	62% 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	\$3,130 million
Number of subscribers	7,7 million
Penetration rate	106%
Average ARPU	\$34
Average MOU	320
Date of UMTS spectrum auction	December 2001
Number of UMTS licenses	2
UMTS frequencies band price	\$45 million (per operator)

International telecommunications Services

Opening of competition	1997
Number of operators	6
Total number of minutes	2,5 Billion (Incoming & Outgoing)
VoIP	Permitted only for licensed operators

Multi-channel TV

Opening of competition	2000
Number of operators	2
Total revenues	\$800 million
Cable companies home-pass	97%
Number of subscribers	1.4 million
Digital subscribers	89%
Market share of new entrant	39% ("YES"- the DBS operator)