TELECOMMUNICATIONS AND INFORMATION TECHNOLOGIES

I. TELECOMMUNICATIONS SERVICES

A. Basic data

Please provide basic data on the current state of the telecommunications services market in your country. The indicators should be chosen so as to enable the Macedonian market to be presented in a similar way as appears for candidate countries in the regular reports[1] on the implementation of the EU regulatory framework. The reference date is either 30 June 2004 (for status data) or calendar year 2003 (for cumulative data).
For further guidance concerning the requested indicators please refer to the reports published for the candidate countries on the web-site of DG INFSO at:
http://europa.eu.int/information_society/topics/ecomm/all_about/international_aspects/main_areas_work/eu_enlargement/index_en.htm
Sections 4, 5 and 6 of the reports are the relevant parts and the meaning of abbreviations used in the reports are explained in section 7. A questionnaire used to compile these reports is available from the Commission upon request.

Basic data on the current state of the telecommunications services market are given in Annex, see 19_Annex_01.

B. Legislative and institutional framework

1. Please describe the legislative framework of the sector, with reference to current and planned primary and secondary legislation.

The Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04) regulates the terms and conditions according which the telecommunications activities are performed.

The 1998 amendments to the Telecommunications Law provided conditions for privatisation of JSC Macedonian Telecommunications (JSC MT), defined the exclusive rights in certain segments, introduced competition in mobile telephony and Internet services, defined the scope and conditions for providing universal telecommunications service, regulated the issue of granting concessions for telecommunications services, defined radio frequency spectrum management, use and control, as well as the procedure for using radio stations and terminal equipment, as well as the inspection supervision issue.

In addition, the 1998 amendments to the Telecommunications Law provided for establishment of a regulatory body for telecommunications – the Telecommunications Directorate, as a legal person, within the Ministry of Transport and Communications.

Pursuant to the 2004 amendments to the Telecommunications Law, competition was introduced in the provision of cable television services, with which, it is implemented the obligation of the Republic of Macedonia undertaken by the Stabilisation and Association Agreement for introduction of competition and liberalization as of 01.05.2004.

The 2004 amendments to the Law contain provisions that provide higher level of protection of users of telecommunications services in respect of the restriction to the availability of free-of charge services, receiving free of charge detailed bill, etc.

Based on the Telecommunications Law, the following secondary legislation was enacted:

- Rulebook on Interconnection of Public Telecommunications Networks (“Official Gazette of RM” No 69/99);
- Rulebook on Universal Services (“Official Gazette of RM” No 106/00);
- Rulebook on Numeration (“Official Gazette of RM” No 47/99 and 39/02);
- Plan on Radio Frequency Allotment (“Official Gazette of RM” No 62/97); etc.

The new Law on Electronic Communications shall be enacted during the first quarter of 2005, and it shall regulate the communications area based on the European legislation, more precisely, the directives, decisions and recommendations from the reform packages of the European Union, such as: Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive); Directive 2002/20/EC on authorisation of electronic communications networks and services (Authorisation Directive); Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (Framework Directive); Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive); Directive 2002/77/EC on competition in the markets for electronic communications networks and services; Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on Privacy and electronic communications); Decision 2002/676/EC on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision); Regulation 2000/2887/EC on unbundled access to the local loop; Directive 98/48/EC amending the Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations; Directive 98/84/EC on the legal protection of services based on, or consisting of, conditional access; Directive 98/61/EC amending Directive 97/33/EC with regard to operator number portability and carrier pre-selection; Directive 98/10/EC on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment; Directive 92/44/EC on Leased Lines; Directive 97/33/EC on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP).

The new Law shall provide liberalisation and competition in all segments of the telecommunications' market; non-discriminatory conditions for access to the PSTN network by new operators and service providers; objective criteria and reasonable prices for interconnection and leased lines; provision of universal service with obligatory minimal package of services; protection of users of the telecommunications services; establishment of an Independent Regulatory Body (Agency) for telecommunications, and other issues related to fully regulated telecommunications' sector.

The new Law on Electronic Communications and secondary legislation that will arise from it shall completely regulate the communications area in the Republic of Macedonia.

2. Please describe the current and planned institutional framework of the sector, with reference to government bodies, the role of the parliament and possible parliamentary committees and the role of representative organisations of public and private sector players and of consumers.

Pursuant to the Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04), the Ministry of Transport and Communications and the Telecommunications Directorate are authorised to regulate the activities in the telecommunications sector.

The Ministry of Transport and Communications implements the policy of the Government of the Republic of Macedonia in the telecommunications sector; coordinates telecommunications activities; promotes development of competition; adopts a Plan on Radiofrequency Bands Allotment upon a proposal of the Directorate; prepares and adopts a list of universal services; enforces decrees of the Government of the Republic of Macedonia for telecommunications operations in a case of a military or emergency situation or in case of a force major; co-operates with administrations of foreign countries; coordinates radiofrequencies on an international level; represents the Republic of Macedonia in international negotiations, international organisations and conferences in the telecommunications area.

The Telecommunications Directorate conveys the following activities:

- Provides access for the users to public telecommunications networks and public telecommunications services on a non-discriminatory basis;
- Undertakes measures and prevent public telecommunications networks and providers of public telecommunications activities from engaging in anti-competitive conduct;
- Controls the prices and the quality of public telecommunications services pursuant to the provisions of this Law;
- Analyses and submits regular reports to the Ministry of Transport and Communications relating to development of the telecommunications domain in the Republic of Macedonia and abroad;
- Submits proposals to the Minister of Transport and Communications as regards the awarding of concessions;
- Submits proposals to the Minister of Transport and Communications as regards the amounts of fees prescribed by this Law;
- Issues licences for telecommunications activities prescribed with this Law;
- Approves use of radio stations and terminal equipment used in the Republic of Macedonia, and issues approval certificates;
- Determines the standards for interconnection of telecommunications networks in a case when public telecommunications operators are not able to reach an agreement; and
- Performs inspection supervision.

The Sector for Communications as competent Sector of the Ministry of Transport and Communications is responsible for preparing draft-laws in the domains of telecommunications, broadcasting and postal traffic and further on, the Ministry of Transport and Communications submits them to the Government. First, the Secretariat-General of the Government reviews the legislative projects, which are then further reviewed by the Committee for Political System and by the Committee for Economy Policy, and afterwards the concerted texts are reviewed on a Government session. The Government submits the proposed draft-laws to the Assembly of the Republic of Macedonia, which reviews them on a plenary session based on a prior parliamentary procedure of review by the Committee for Transport, Communications and Environment and the Committee on Legislation and Legal Affairs, where amendments can be proposed.

In the process of preparation of legislative projects, the Ministry of Transport and Communications has established a practice of consultation and providing direct participation of the public telecommunications operators, the providers of public telecommunications services and representatives of the associations of private electronic media, associations of consumers and other associations and institutions, in order to review all relevant aspects.

Pursuant to the Draft-Law on Electronic Communications, the Ministry competent for electronic communications and the Electronic Communications Agency are responsible regarding the regulation of activities in the field of electronic communications.

The Ministry responsible for the electronic communications domain: implements the policy of the Government of the Republic of Macedonia in the field of electronic communications; prepares legislation related to the field of electronic communications in co-operation with the Agency; performs activities concerning the development of electronic communications and information technology.

The Minister competent for the activities from the field of electronic communications prepares the National Strategy for Development of Electronic Communications and Information Technology; promotes the development of competition in the field of electronic communications and in increasing the access and use of electronic communications and information technology determined by the Government of the Republic of Macedonia; coordinates and harmonizes activities in the field of electronic communications and information society; enforces Decrees for performing activities in the field of electronic communications in state of emergency or war; recommends to the Government of the Republic of Macedonia the manner and timing of implementation of the European "E-112" single emergency call number in the Republic of Macedonia; represents the Republic of Macedonia in

international organizations in the field of communications and information society, negotiates and signs bilateral and international agreements in the field of communications and information society on behalf of the Government of the Republic of Macedonia.

Furthermore, according to the new Law, a Electronic Communications Agency shall be established as an Independent Regulatory Body in the electronic communications area. The competences of the Agency are listed in the Draft-Law which are as follows: supervision, control and monitoring of the performance of the electronic communications network operators and the service providers; ensuring interconnection between electronic communications networks on non-discriminatory terms based on approved referential offers; conducts registration with notification on the operators of electronic communications networks and to the providers of electronic communications services; issues radio frequencies approvals; assigns numbers and series of numbers to the operators of public communications networks and the providers of public communications services; prepares and administers public tenders for allocation and use of radio-frequencies; controls the prices for communication services and undertakes measures, in cases where an operator, either alone or jointly, holds a dominant position in the relevant market for communication services; controls the tariff regimes laid down in the existing concession agreements; cooperates with competent institutions in the area of broadcasting and competition; adopts and implements the secondary legislation as well as implements the national and international standards and technical regulations etc.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

3. What are the legislative and regulatory provisions to ensure fair trading and consumer protection in the sector?

The Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04) and the Law on Protection of Competition (“Official Gazette of RM” No 04/05) regulate the issues related to protection of rights of consumers.

Pursuant to the Law on Protection of Competition, in order to protect the consumers, the Commission for Protection of Competition may request from the telecommunications sector operators to deliver data related to their economic and financial situation and to their business relations and connections. In addition, during working hours it may review the trade books and other business documents of the operator. Owners of enterprises or their duly authorised representatives (telecommunications operators) are obliged to deliver the requested data, to make available their trade books and other business documents for review and to allow access to all relevant business facilities.

The Law on Protection of Competition does not exclude the telecommunications sector from its application. This means that in case the providers of telecommunications services violate the competition rules, a competition body shall be authorised to act, which body is designated as the Commission for Protection of Competition, pursuant to the provisions of the Law on Protection of Competition. Generally, this type of behaviour is demonstrated through misuse of the dominant position during establishment of prices for services, unequal market treatment and denying access to using networks or infrastructure facilities. These procedures shall protect market competition and users of services.

Article 7 of the existing Telecommunications Law provides for protection of the users of telecommunications services.

Namely, the public telecommunications in the internal and the international telecommunications traffic are accessible to every user under non-discriminatory, objective and transparent terms and conditions, except in case of limitations associated with the capacity of the service provider.

The user has the right to receive uninterrupted, efficient and regular service, and is compensated by the public telecommunication operator or the public telecommunication service provider for any shortcoming in the quality of the public telecommunication service the user receives.

The Fixed Public Telecommunications Operator, owner of a public telecommunications network, based on previously defined conditions and upon a request of a user of public telecommunication service, is obliged to provide leased lines, through its network, for which a fee is charged.

The provider of public telecommunications service, within the scope of services and upon a written request of the user of telecommunication services, is obliged to provide limitation of service availability free of charge. After a period of six months the limited service can be re-established free of charge.

The Fixed Public Telecommunications Operator is obliged to provide free of charge access to phone numbers for emergency calls from any telephone terminals and public payphones, according to the Telecommunications Networks and Services Numeration Plan of the Republic of Macedonia.

Upon a written complaint of a user of telecommunications services, the provider of public telecommunications services is obliged to provide the user with itemized service review for the period covered by the bill, free of charge.

Any unauthorised access of users to telecommunications networks and terminal equipment is prohibited.

Pursuant to the Telecommunications Law, the users have the right to submit complaints concerning the fee charged for providing telecommunication services in case they are unsatisfied, upon which the Telecommunications Directorate, pursuant to legal obligations, may perform inspection supervision / control and examination of the bills, and in case it is determined that users have been damaged, the Directorate, based on a written record, may order the operator to undertake corrective actions and to make a compensation in the next bill for services.

Users have the right to have the fees for public telecommunication services invoiced in a way which is easy to understand.

Providers of public telecommunications services must enter into an Agreement with users of services / subscribers for connection to telecommunication networks and providing of public telecommunications services.

The Agreement must include the following: providing of telecommunications services and connection to networks, quality of services, initial connection fee amount (if envisaged), conditions for payment of monthly bills (invoice) and consequences in case of a failure to fulfil this obligation, rights and obligations of the contracting parties and terms of termination of the agreement.

Secondary legislation is currently in preparation, which shall thoroughly define the general terms for providing public telecommunications services in the Republic of Macedonia by the providers of public telecommunications services, shall regulate the relations between providers and users, shall determine the basic rights and responsibilities of providers of public telecommunications services and of users that result from their contractual relations based on using / providing public telecommunications services, and shall provide protection of users of public telecommunications services.

The new Law on Electronic Communications shall provide protection of users of communications services through transparent publishing of decisions on prices and tariffs that are being applied, data and information that must be published by operators, as well as information that must be published by the Electronic Communications Agency. Concerning the subscription agreements, concluded between operators and end-users, the Draft-Law prescribes the elements to be included in the agreement, which shall provide protection of users / subscribers. In addition, provisions are foreseen on protection of quality of public communications services, providing users' rights for tone dialling and calling line identification, users' right to being registered in telephone directories, as well as end-users' rights to obtain an itemized bill up to a certain level, which shall provide an opportunity for the

users to confirm and control their using of telephone services and the charged fee amount. Furthermore, provisions are foreseen concerning the right to an appeal and complaint as regards the access and methods of providing services, provisions concerning limiting or terminating access to public telephone network without consent of the user (in case of upgrading, modernisation, maintenance activities, or in case of irregularities or damages occurred), as well as provisions concerning the impact of the public as regards defining criteria and measures for the electronic communications market by the Agency.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

4. What are the regulatory instruments and procedures for data security and the protection of privacy in the sector?

Regulatory instruments and procedures concerning security and protection of privacy of data are prescribed with the Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04).

Telecommunications networks and facilities must be designed, built, used and maintained in a manner that shall not cause interference in operation and utilisation of other telecommunications networks and facilities (Article 64 of the Law).

Telecommunications networks and facilities owners and operators shall not interfere with the operation of telecommunications networks and facilities of other owners and operators (Article 8 of the Law).

Owners and operators of telecommunications networks and facilities and providers of public telecommunications services are obliged, within technical possibilities, to secure inviolability of the privacy of messages, especially referring to inviolability of the privacy of transmitted messages in state of emergency.

Persons that have access to the content of messages transmitted by telecommunications networks and facilities are forbidden to disclose / communicate the information to unauthorised persons.

If inviolability of the privacy of messages is not provided, especially as regards the inviolability of privacy of messages in state of emergency, or in case the content of messages is disclosed to unauthorised persons, the Telecommunications Law foresees misdemeanour measure, which gives ground for the Telecommunications Directorate to initiate misdemeanour procedure against the violator according to the Law on Misdemeanours (“Official Gazette of RM” No 15/97).

The protection of privacy of messages does not refer to messages which, according to international agreements concluded by, or acceded to, the Republic of Macedonia or according to national regulations of the Republic of Macedonia, are regulated as exceptions from this obligation (Article 10 of the Law).

Concession Agreements concluded between the Ministry of Transport and Communications and the operators regulate the issue of confidentiality of communications and information regarding subscribers and foresee that the Concessionaire must introduce efficient procedures and put maximum efforts to guarantee the inviolability and confidentiality of subscribers’ communications, as well as to introduce procedures for confidentiality of business secrets and personal data concerning the subscribers.

The Concessionaire shall provide a printed directory or directories of subscribers, and their updated versions, printed on an annual basis, for the geographic area or areas determined by the Concessionaire, which shall include all subscribers of telecommunications services, excluding those who have specifically requested not to be included.

The Directory, at minimum, shall include, in standard format, names of the subscribers of a particular area, the correct abbreviation of their address as indicated by the subscribers, their telephone numbers, as well as a list of local, national and international calling numbers and numbers for urgent and operational services.

While providing services from the information technology domain that include transmission of information by telecommunications networks, the transfer and the assurance of access shall include automatic, intermediate and transitional saving of the transmitted information during the process of the transmission, with a single goal of performing the transmission by telecommunications networks, on condition not to keep the information / data longer than necessary so as to complete the transmission.

The services of the information technology domain shall be used according to the procedures prescribed by a special Law for information of relevant public authorities for assumed illegal activities that have been undertaken, for information provided by the users of services or obligation to forward them to the relevant authorities upon their request, and for information that enables identification of the subscribers with whom they have a saving agreement. (Articles 7-a, 7-b, 7-c, 7-d of the amendments to the Telecommunications Law No 04/02).

The new Law on Electronic Communications shall regulate issues concerning privacy and confidentiality of communications, whereas the operators are obliged to take appropriate technical and organisational measures for protection of their networks, to warrant the subscriber for identification and restriction of presentation of calling-line identification of incoming and outgoing calls, to delete or to make the subscribers' traffic data anonymous, as well as not to present the location data of the subscribers in case they are not relevant for realisation of telephone traffic. In addition, it shall be ensured that subscribers are given the opportunity to determine whether their personal data are included in the public directory of subscribers or the data is fully restricted.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

5. What are the mechanisms for market surveillance and for dispute resolution in this regard?

The Telecommunications Directorate, pursuant to the Telecommunications Law ("Official Gazette of RM" No 33/96, 17/98, 28/00, 04/02 and 37/04), the Ministry of Economy through the State Market Inspectorate and the Commission for Protection of Competition, pursuant to the Law on Protection of Competition ("Official Gazette of RM" No 04/05) regulate the issues concerning market surveillance and resolution of disputes on the telecommunications market.

The Commission for Protection of Competition, pursuant to the Law on Protection of Competition, adopts decisions in case of preventing, limiting and disrupting competition. The decisions of the Commission may be appealed, upon which the Commission for second instance disputes will decide. An administrative dispute may be initiated before the Supreme Court of the Republic of Macedonia against the decisions of the Commission. In addition, non implementation of the decision of this body is considered a breach, subject to fines which are to be imposed onto the legal entity and the responsible person thereof, in a court proceeding.

The Telecommunications Directorate is responsible for market surveillance and for adopting decisions and orders, pursuant to the Telecommunications Law. The provisions of the Law on General Administrative Procedure ("Official Gazette of the SFRY" No 47/86) shall apply to all issues related to the procedure before the Telecommunications Directorate, which are not regulated by the Telecommunications Law. Decisions adopted by the Director of the Telecommunications Directorate are not final and binding. An appeal can be lodged, within a period of eight days as of the date of receiving the decision, to the competent Commission of the Government of the Republic of Macedonia for resolution of second instance disputes. The appeals against these decisions do not postpone their execution.

In case a party does not comply with the adopted decision of the Telecommunications Directorate or with the decision of the competent Commission of the Government of the Republic of Macedonia for resolution of second instance disputes, the Telecommunications Directorate may, through its telecommunications inspectors, seal the telecommunications equipment or premises, or initiate a misdemeanour procedure in the Court of First Instance (Basic Court), pursuant to the Law on Misdemeanours ("Official Gazette of RM" No 15/97).

The Draft-Law on Electronic Communications foresees the Electronic Communications Agency, to be responsible for resolution of disputes between operators of communications networks and communications service providers. The dispute resolution procedure is initiated ex officio or upon a request of one of the concerned parties. In the process of resolution of disputes, the Agency is obliged to take into account the provision of an efficient competition and protection of the interest of market users, as well as to publish the decisions in regard to disputes, having in mind not to disclose business secrets of the concerned parties. Furthermore, pursuant to the new Law, operators of communications networks and communications service providers shall be able to settle in writing and agree whether the resolution of disputes shall be by means of mediation or arbitrage according to methods and procedures as prescribed by law.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

6. Of which relevant international organisations does your country hold membership?

The Republic of Macedonia is a member of the following international institutions:
- International Telecommunications Union (ITU);
- European Conference of Postal and Telecommunications Administrations (CEPT);
- European Telecommunications Standardisation Institute (ETSI);
- International Satellite Communications Organisation (INTELSAT);
- European Satellite Communications Organisation (EUTELSAT);
- International Satellite Organisation (INMARSAT);
- European Broadcasting Union (EBU);
- European Telecommunication Network Operators' Association (ETNO);
- World Trade Organisation (WTO) and other organisations.

C. Policy and regulatory frameworks

1. Please describe the policy for the telecommunications sector. If a strategy document covering the sector exists, please provide a copy in an EU language.

According to the determination of the Republic of Macedonia for integration in the European Union and the obligations from the Stabilisation and Association Agreement, the Government of the Republic of Macedonia and the Ministry of Transport and Communications are making continuous efforts so as to adapt and accept the EU legislation and standards in the telecommunications area, as well as to implement them into a national regulatory framework, in order to speed up the process of liberalisation and deregulation of telecommunications as well as inclusion in the global information society.

The new Law on Electronic Communications, prepared by the Ministry of Transport and Communications, currently ongoing a procedure in the Assembly, shall include solutions compatible with the directives, regulations and recommendations of the reform packages of EU.

The Ministry of Transport and Communications in 2005 shall prepare and propose to the Government a document – Strategy on Development of the Electronic Communications and Information Society, which shall determine the dynamics of realization of activities in this field on a long-term basis.

The liberalisation of the telecommunications commenced with enactment of the Telecommunications Law in 1998, which was prepared according to the EU requirements for reforms in the telecommunications sector. The Law, in addition to the conditions for privatisation of the public telecommunications operator, established the conditions for introduction of competition in the telecommunications services market. Subsequently, secondary legislation was enacted relating to regulation of the issues of frequency spectrum management, interconnection of public telecommunications networks, numeration and addressing of telecommunications networks, as well as provision of universal service for telecommunications. In addition, the Law created a basis for establishment of the Telecommunications Directorate as a national regulatory body. The Law provided for establishment of a free market for mobile telephony, Internet services and other types of telecommunications services through awarding concessions according to determined criteria, exclusive of the fixed telephony area where due to the requirements for equal development of quality telecommunications infrastructure on a national level, the fixed incumbent operator was granted an exclusivity period until 31.12.2004.

2. What is the timetable for legislative approximation to the acquis communautaire?

The new Law on Electronic Communications, to be enacted by the Assembly of the Republic of Macedonia during the first quarter of 2005, shall regulate the overall telecommunications area on new basis, approximated with the directives, decisions and recommendations contained in the reform packages of the European Union, such as: Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive); Directive 2002/20/EC on authorisation of electronic communications networks and services (Authorisation Directive); Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (Framework Directive); Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive); Directive 2002/77/EC on competition in the markets for electronic communications networks and services; Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on Privacy and electronic communications); Decision 2002/676/EC on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision); Regulation 2000/2887/EC on unbundled access to the local loop; Directive 98/48/EC amending the Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations; Directive 98/84/EC on the legal protection of services based on, or consisting of, conditional access; Directive 98/61/EC amending Directive 97/33/EC with regard to operator number portability and carrier pre-selection; Directive 98/10/EC on the application of open network provision (ONP) to voice telephony and on universal service for telecommunications in a competitive environment; Directive 92/44/EC on Leased Lines; Directive 97/33/EC on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP).

The process of approximation and harmonisation of our legislation with the European legislation concerning electronic communications is a dynamic process containing a time-frame for implementation of certain activities depending on the development of the telecommunications market, the economic capacity of citizens and business and the interest for introduction of new telecommunications operators and providers of telecommunications services. It is estimated that within a period from six to seven years the legislative approximation with the acquis communautaire shall be completed.

3. What is the policy and timetable for liberalisation and privatisation in the sector?

The politics of the Government of the Republic of Macedonia concerning liberalisation and privatisation of the telecommunications sector is regulated by the following acts:

- Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04);

- The Stabilisation and Association Agreement, concluded between the Republic of Macedonia and the European Communities and their Member States – concluded on 09.04.2001, entered into force on 01.04.2004; and
- The Law on Ratification of the Protocol of Accession of the Republic of Macedonia to the World Trade Organisation.

The 1998 Telecommunications Law amendments enabled the introduction of liberalisation in certain segments of the telecommunications sector, such as: mobile telephony, data transfer and Internet services, according to the principles of the European Union concerning telecommunications liberalisation.

According to the Law, all telecommunications activities are performed by concessions and by concluding concession agreements between the Minister of Transport and Communications as a Conceder, and the Concessionaire.

In the Republic of Macedonia, after the Telecommunications Law was enacted in 1998, 10 concessions for data transfer and Internet services were awarded, and one concession was awarded to JSC Kosmofon in 2001, as the second GSM operator.

The issue of privatisation is regulated with the provisions of Articles 84 – 90 of the 1998 Telecommunications Law, pursuant to which the Government of the Republic of Macedonia shall privatise the existing Public Telecommunications Operator (PTO) through selling a part of its shares, in one or more transactions to a strategic investor selected through a public international tender procedure; furthermore, the Government of the Republic of Macedonia shall retain the right to own a “Golden Share”.

JSC Macedonian Telecommunications (JSC MT) was privatised in December 2000/January 2001, according to the Telecommunications Law (“Official Gazette of RM” No 17/98).

The Stabilisation and Association Agreement between the Republic of Macedonia and the European Communities and their Member States entered into force on 1st of April 2004. According to Article 95 of the Agreement, the Government of the Republic of Macedonia is obliged to harmonise the national legislation with the EU acquis concerning the telecommunications sector, as well as to provide liberalisation in this domain one year after the entry into force of the Agreement. As a result, the Telecommunications Law, according to which JSC MT was granted exclusive rights until 31.12.2005, was amended and JSC MT was granted exclusive rights until 31.12.2004. Namely, pursuant to Article 14 of the Law Amending and Appending the Telecommunications Law (“Official Gazette of RM” No 37/04), the duration of the exclusive rights of JSC MT was accordingly shortened and they have ceased on 31.12.2004. Until that date, the existing PTO had exclusive rights to provide fixed voice telephony services, telegraphy services, telex services, public pay phone services and leased line services and to construct, own and operate fixed public telecommunication networks.

Furthermore, according to the Broadcasting Law (“Official Gazette of RM” No 20/97 and 70/03), cable operators had exclusive/monopoly rights to perform cable radio/TV services in selected areas, which was also modified with the amendments to the Telecommunications Law, according to which it is determined that the number of concessionaries for cable/TV services in a particular area is not limited (Article 14, Paragraph 4 of the Law Amending and Appending the Telecommunications Law (“Official Gazette of RM” No 37/04). This provides for termination of the exclusive rights and enables competition in the provision of cable radio/TV services, which means practical implementation of the Stabilisation and Association Agreement.

Due to the fact that the exclusive rights of JSC MT were terminated, the telecommunications market in the Republic of Macedonia, as of 01.01.2005, is open for new operators and service providers for fixed voice telephony, international telecommunications traffic and for constructing and operating the telecommunications infrastructure.

In order to provide complete liberalisation and competition in all segments of the electronic communications market, a new Law on Electronic Communications was prepared.

According to the Draft-Law on Electronic Communications, the owner of the public communication network – JSC MT is obliged to provide the subscribers of telephone services of its network with access and possibility to select another operator that provides services in the international and the national traffic.

Furthermore, the Draft-Law enables portability of subscriber number if the subscriber is changing the operator or provider of public telecommunication services, as well as the possibility for access to subscriber lines of other operators and providers of communication services.

The Draft-Law foresees the following deadlines for the incumbent fixed telecommunications operator JSC Macedonian Telecommunications:

- The operator is obliged, within 15 days from the day of entry into force of this Law, to adopt and to publish a reference offer for interconnection and/or access;
- The operator is obliged, within 90 days from the day of entry into force of this Law, to adopt and to publish a reference offer for unbundled access to the local loop;
- The operator is obliged, within 6 months from the day of adoption of this Law, to establish accounting separation of the activities related to interconnection and/or access;
- The operator is obliged, within 6 months from the day of entry into force of this Law, to enable access and utilisation of specific network facilities;
- The operator is obliged, until June 2005, to provide option on selection of operator and pre-selection of operator; and
- The operator is obliged, within 2 years from entry into force of this Law, to provide option of subscriber number portability.

After the initial delay of the preparation of the Draft-Law on Electronic Communications (according to the Programme for Approximation of the National Legislation with the EU Legislation for 2004, the Law was envisaged to be enacted in the fourth quarter of 2004), the Law has entered a procedure in the Assembly, and is expected to be adopted in the first quarter of 2005. In order to accelerate the adoption procedure, the Government has decided to propose the Law to the Assembly of the Republic of Macedonia in a shortened procedure. At the same time, TAIEX expertise was requested regarding the Draft-Law, whereas possible interventions will be integrated as amendments.

4. What is the current stage of sector liberalisation? Please provide information on:
a) infrastructure, including "alternative" infrastructure;
b) use of cable television for telecommunications;
c) reserved services, liberalised services.

a) JSC Macedonian Telecommunications is the only public fixed telecommunications operator with concession for providing of fixed voice telephony services, telegraphy services, telex services, public payphone services and leased lines services, as well as to build, own and operate fixed telecommunications networks.

The public fixed telephony network covers the following: public telephone switches (100% digital) in all cities and settlements in the state, built subscribers' fixed telephony network, built optical and radio network of transmission systems between public telephone switches in the state and international telecommunications centres.

Two concessions for mobile public telecommunications networks and mobile public telecommunications services with GSM 900 technology were granted to JSC Mobimak and to JSC Kosmofon.

The public telecommunications service for data transfer, including the Internet service, is provided on a concession basis by 5 Internet service providers, which are as follows: MT Net, Unet, On Net, Sonet and MOL.

One concession was awarded to JSC Link Telekom for providing of public telecommunications service for data transfer – paging service.

After the introduction of telecommunications' liberalization, telecommunications networks of the JSC Electric Power Company of Macedonia and the PE “Macedonian Railways”, which have their own networks with optical and other types of cable systems, shall be used as alternative infrastructure on the territory of the Republic of Macedonia.

b) 65 concessions were awarded on the territory of the Republic of Macedonia for distribution of radio and television programmes or other telecommunication signals through cable radio- and television-networks (excluding provision of voice telephony services).

The cable radio- television network, besides broadcasting of radio and television programmes, as of 01.01.2005 shall be used for providing of other types of telecommunications services, including voice telephony and Internet.

c) Reserved services as monopoly rights to JSC MT are: fixed voice telephony services, telegraph services, telex services, public payphone telephony services, leased line services and building and operating fixed and public telecommunications networks.

Other types of telecommunications services, such as data transfer and Internet services have been liberalised and are carried out on a competitive basis.

The new Law on Electronic Communications, after its enactment, shall provide for liberalisation of the telecommunications sector in the Republic of Macedonia as regards the infrastructure part, including the alternative infrastructure.

5. What is the situation and policy as regards universal service obligations?

The universal telecommunications service is regulated with the Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04). The Law determines the minimum scope of telecommunications services, i.e. it determines the initial set of universal services (Article 21 of the Law). The Law prescribes, the Minister of Transport and Communications to adopt the regulations related to provision of universal services and the procedure for collecting fees for those services. The regulations for providing universal services refer to the following: identification and description of the universal services; procedures to be used for selection of universal service providers through public tenders or other forms; warranting availability of universal service for disabled persons; methods determining the maximum prices for universal services; introducing a mechanism to compensate the providers of telecommunications services that provide universal services.

The initial set of universal services, i.e. the minimal scope of universal services consists of: access to fixed voice telephony service; access to emergency calls; access to public payphones and telephone operators; access to operator and information service. Pursuant to the Law, the Minister of Transport and Communications may change and extend the list of universal services by amending the secondary legislation for universal services.

The draft-Law on Electronic Communications defines the following issues: provision of universal service through a minimal number of services by ensuring access to all users regardless of their geographic location; ensuring a sufficient number of public payphones; as well as ensuring access to information in the single directory and directory enquiry services. Pursuant to the Law, the Electronic Communications Agency shall select one or more universal service providers by initiating a public tender procedure. During procedure of selection of universal service providers, the Agency shall take into consideration the principles of effectiveness, objectivity and transparency. Furthermore, when

certain services under the universal service are not sufficiently present or are not present at all, the Agency shall conduct a tender proceeding for selecting a provider of such services. The Agency signs the agreement with the universal service provider after the completion of the tendering procedure and after the previously given approval by the minister competent for issues regarding electronic communications.

Furthermore, the Agency shall monitor changes and level of prices of services that fall under universal service, which must be equal throughout the territory of the Republic of Macedonia. Universal service providers may offer special prices or packages for subscribers, with low incomes and/or special needs that differ from those provided for other subscribers. The Agency also prescribes the technical requirements for the quality of universal service, the technical parameters and their measuring and the minimum quality requirements.

In addition, according to the Law, the universal service provider has the right to compensation in case the costs for provisions of universal service are higher than the real costs. The Agency prescribes the method of calculating real costs by taking into consideration the EU recommendations concerning the universal service.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

6. Please describe the competence, structure and degree of independence of the regulatory body for telecommunications. Also provide information on its establishment, budgetary and human resources and administrative powers.

The Telecommunications Directorate was established on 27.11.2000, as a body within the Ministry of Transport and Communications and functions as a legal person, according to the Law on Organisation and Operation of the State Administrative Bodies (“Official Gazette of RM” No 58/00) and the Telecommunications Law (“Official Gazette of RM” No 33/96, 17/98, 28/00, 04/02 and 37/04).

The Telecommunications Directorate is managed by a Director, appointed and relieved of duty by the Government of the Republic of Macedonia upon a proposal of the responsible Minister for a term of office of five years, who may be reappointed for a second five-year term, but may not be appointed for more than two terms.

The Telecommunications Directorate has 94 employees in 7 Departments and 24 Divisions, which are as follows: Department for Communications (Division for Telecommunications Networks, Services and Standards and Division for Information); Department for Radio-communications (Division for Fixed and Mobile Radio Systems and Division for Satellite Systems and Broadcasting); Department for Legal, Human resources and Supply Related Affairs (Division for Legal Affairs, Division for Human resources, Inspection Division in Skopje, Štip and Bitola, and Experts Administrative Division); Department for Financial Operations (Division for Plans and Analysis and Division for Financial Operations); Department for Control and Monitoring of Radiofrequencies (Division for Control and Monitoring of Radiofrequencies in Skopje, Štip and Bitola); Department for Technical Inspection (Division for Technical Inspection in Skopje, Štip and Bitola and Division for Maintenance of Fixed and Monitoring Stations); Department for International Co-operation (Division for Monitoring the International Regulation and Euro-integration and Division for Implementation of International Regulation).

The 94 employees allocated in the above-mentioned sectors are of the following educational structure:

- 43 employees with University degree (23 Bachelors in Electrical Engineering, 5 Bachelors in Economy, 5 Bachelors in Law and 10 degrees of other faculties)
- 5 with post-secondary degree
- 46 with high school education

The Telecommunications Directorate, pursuant to Article 18 of the Telecommunications Law, is financed by revenues from charged fees for using frequencies, numbering and supervision fees. The

revenues received from the charged fees are primarily used to defray the expenses for the activities of the Directorate, and the excess is deposited into the budget of the Republic of Macedonia. The annual funds for the activities of the Directorate are approved by the Minister of Transport and Communications, which funds must be sufficient to carry out in a satisfactory manner the activities of the Directorate, within the framework of its authorisations. The annual budget of the Telecommunications Directorate for 2003 was 77.455.000 MKD.

The activities and businesses in the field of telecommunications, pursuant to Article 4 of the Telecommunications Law, are performed on a basis of a permit, and some activities or businesses regarding the field of telecommunications are performed on a basis of a concession.

Pursuant to Article 18 of the Telecommunications Law, the Telecommunications Directorate has the following responsibilities:

- Issues licenses for telecommunication activities prescribed by the Telecommunications Law;
- Approves the utilisation of radio stations and terminal equipment used in the Republic of Macedonia and issues certificates of approval;
- Approves the standard contract between public telecommunication operators, public telecommunication service providers and users;
- Allocates numbers and ensures that the numbers are used efficiently and that numbers and ranges of numbers are allocated to public telecommunication operators and to public telecommunication service providers pursuant to objective criteria and non-discriminatory terms and conditions;
- Manages, regulates and assigns frequencies, prepares radio communication plans, designates frequencies for transmission and reception, inspects and monitors radio communication networks, and ensures that radio stations and devices of a type that has not been approved are not used;
- Decides upon disputes in a first instance arising between public telecommunication operators, telecommunication service providers and users of telecommunications services, in accordance with the Telecommunications Law;
- Investigates violations of this Law, the provisions and regulations that implement this Law, the licenses, concessions and permits issued pursuant to this Law; ensures the confidentiality of information obtained during these investigations; determines whether violations have occurred and, if so, initiates relevant procedure; and
- Carries out any other functions necessary for implementation of the provisions determined in this Law.

Pursuant to the Draft-Law on Electronic Communications, an Electronic Communications Agency shall be established as an independent regulatory body, which shall commence with operations from the date the members of the Commission are appointed (not later than 60 days from the date when this Law enters into force), and from the date the Director is appointed (within 30 days from the day of establishment of the Commission). The Agency is established as independent, autonomous and non-profitable legal entity with public authorisations. The Agency, in its work and in taking decisions within the scope of its competencies, is independent and not subordinated to any state body or other public legal entity or trade company engaged in operations in the field of electronic communications and shall be impartial towards them. The work of the Agency shall be public.

Pursuant to provisions of the new Law, the Agency is accountable to the Assembly of the Republic of Macedonia and is obliged to submit an annual report on its work to the Assembly of the Republic of Macedonia. Bodies of the Agency shall be the Commission and the Director. The President and members of the Commission shall be appointed by the Assembly of the Republic of Macedonia upon a proposal of the Committee on Election and Appointment Issues of the Assembly of the Republic of Macedonia, whilst the Director of the Agency shall be appointed by the Commission on a public tender. The Director shall be professionally full-time engaged employee in the Agency.

Candidates for President and members of the Commission shall be proposed under the condition that they are holders of a university degree in the fields of electrical engineering, law or economy,

with professional knowledge and experience of more than five years, and relevant knowledge of the electronic communications sector, whilst the Director, in addition to the previously mentioned, has to possess organisational and managing abilities.

In connection with the issue of organisation and employment as regards the Agency, the Law prescribes, with the Statute of the Agency, to be regulated the internal organisation and the terms and conditions for employment with the Agency in accordance with the Labour Relations Law ("Official Gazette of RM" No 80/03). Provisions of the Law on Civil Servants shall not apply to the employees of the Agency.

Pursuant to provisions of the new Law, the operation of the Agency shall be financed through: revenues of the fees stipulated in this Law; donations, loans and other types of financial and technical assistance. The Commission adopts an Annual Financial Plan of the Agency and submits it to the Assembly of the Republic of Macedonia for approval.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

7. Can decisions of the regulatory body be appealed? If yes, describe the procedure and its results over the past 1-2 years.

Pursuant to Article 80 of the Telecommunications Law, the decisions adopted by the Director of the Telecommunications Directorate are not final and effective. Appeals against decisions brought by the Director of the Telecommunications Directorate, upon a proposal of the telecommunications inspector, can be submitted to the Commission for second instance disputes of the Government of the Republic of Macedonia, within a period of eight days as of the date of receipt. The appeals against these decisions do not postpone their enforcement.

The dissatisfied party has the right to institute an administrative dispute with the Supreme Court of the Republic of Macedonia.

As of the date of establishment of the Telecommunications Directorate, more precisely in a period of four years, 440 decisions for prohibition of operations were adopted by the responsible inspectors, which mean temporary confiscation of the equipment and devices. Furthermore, 86 verdicts were reached by competent courts, out of 414 filed misdemeanour charges.

In connection with the appealed decisions of first instance, almost each one of them was verified by the Commission for second instance disputes of the Government of the Republic of Macedonia.

According to the provisions of the Draft-Law on Electronic Communications, which is in parliamentary procedure, related to resolution of disputes, the Agency initiates a dispute resolution procedure ex officio or at the request of one of the parties in the dispute. The Agency shall apply the provisions of the Law on General Administrative Procedure ("Official Gazette of the SFRY" No 47/86) to the dispute resolution procedures. The Agency is obliged to resolve the dispute within 42 days from the date of receiving the proposal for initiation of a dispute resolution procedure.The Agency is obliged to publish decisions relating to disputes. An appeal against the decisions of the Director of the Agency may be submitted by the dissatisfied party to the Commission within eight days from the date of receipt. The Commission is obliged to decide upon the appeal within fifteen days from the date of receipt. An adminsitrative dispute may be initiated against the decision of the Commission before the Supreme Court. The procedures before the Supreme Court are urgent and the Supreme Court rules on them with priority.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

8. How does the allocation of frequencies and numbers/codes take place? Please indicate where relevant the involvement by CEPT and ITU.

The allotment of frequencies is carried out pursuant to the Plan for radio frequency band allotment in the Republic of Macedonia ("Official Gazette of RM" No 62/97) and according to the Plans for allotment of specified bands. The Plan for radio frequency band allotment was prepared and harmonized with the International Rulebook on Radio Communications of the International Telecommunications Union – ITU and decisions and recommendations of the European Conference of Postal and Telecommunications Administrations – CEPT.

The Plan for allotment of radio-stations which operate within the framework of particular radio services defines the conditions for operations of the radio-stations, regarding the standards of the European Telecommunications Standardization Institute – ETSI, as well as national regulations that administer their operations. The frequency allotment for certain services is carried out pursuant to Regional Agreements with frequency allotment plans, such as the Stockholm Regional Agreement 61 (ST 61), Geneva 75 and Geneva 84.

The frequency allotment to users is carried out according to the provisions of Chapter 6 – Radio-communications – of the Telecommunications Law. Two types of licences for radio-stations are foreseen to be issued, such as: the Licence to procure and install a radio station, which provides the owner the right to procure / import and install the radio station, and the Licence for radio station operation, which is issued after completion of technical inspection. The technical inspection is carried out in order to certify whether the radio station has been properly installed according to the approved geographic coordinates and technical characteristics, that is, to establish whether the specific type of radio services and radio stations have been in compliance with the prescribed norms and standards.

Pursuant to the Telecommunications Law, the Minister of Transport and Communications adopts the Plan for numeration of telecommunications networks and services in the Republic of Macedonia, upon a proposal of the Telecommunications Directorate.

The Telecommunications Directorate prepares controls and monitors the Plan for numeration of telecommunications networks and services in the Republic of Macedonia, allocates numbers and ensures their efficient use; the numbers and bands are allocated to the public telecommunications operators and telecommunications services providers in accordance with objective criteria and non-discriminatory terms and conditions.

The Plan for numeration of telecommunications networks and services in the Republic of Macedonia, which is adopted as a secondary legislation ("Official Gazette of RM", No 47/99 and 39/02), implements the international numeration recommendations of ITU-T, ISO and IEC, such as: the recommendations E.164, X.121, E.118, E.167, E.212, E.214, Q.704, W.708, T.35 of ITU-T and ETS 300 523 ISO standard.

Pursuant to the Telecommunications Law, the Telecommunications Directorate charges annual fees for utilisation of allotted numbers and series of numbers for public telecommunications networks and services, starting from the date of allotment. The fee is defined in points based on the purpose of the series of numbers, as well as the length of allotted numbers.

According to the Draft-Law on Electronic Communications, the Electronic Communications Agency prepares and administers the Plan for allocation of radio frequency bands, in line with the international acts in the radio-communications domain, and also prepares and administers the Plan for assignment and utilization of radio frequencies, which has to be conformant to the Plan for allocation of radio frequency bands

The Agency is obliged to keep a Main Frequency Register of existing frequency assignments that are used in the Republic of Macedonia and shall make relevant portions of the Register of assigned frequencies publicly available.

Natural persons or legal entities may only use specific radio frequencies on the basis of a decision of the Agency authorizing them to use such frequencies according to terms and procedures prescribed by Law.

The numbers and series of numbers of the Numbering Plan may be used on the basis of a decision of the Agency. The numbers are allocated according to terms and conditions as prescribed by Law.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

D. Description of sector

1. To what extent is there a separation of regulatory and operational competencies (including ownership control)?

The regulatory and operational functions and competencies are completely separated.

The Ministry of Transport and Communications, according to Article 17 of the Telecommunications Law, implements the policy of the Government of the Republic of Macedonia in the telecommunications area, coordinates the telecommunications activities and prepares the draft-laws and secondary legislation.

The Telecommunications Directorate, as a regulatory body for telecommunications, performs its activity ensuring equal treatment for all telecommunications operators and providers of telecommunications services on the basis of objective, non-discriminatory and transparent procedures, in order to provide quality telecommunications services for the customers. The Telecommunications Directorate is a legal entity within the Ministry of Transport and Communications.

Pursuant to the Draft-Law on Electronic Communications, the Ministry responsible for the electronic communications domain, implements the policy of the Government of the Republic of Macedonia in the field of electronic communications; prepares legislation related to the field of electronic communications in co-operation with the Agency; performs activities concerning the development of electronic communications and information technology.

Furthermore, pursuant to the Draft-Law on Electronic Communications, within the scope of its activities, the Agency promotes efficient competition in the field of electronic communications networks and services, supporting capacities and other services.

JSC Macedonian Telecommunications (JSC MT) is a telecommunications operator which had monopoly over the voice telephony and infrastructure until 31.12. 2004.

JSC MT is a telecommunications company whereas 51% of the shares are owned by the strategic investor MATAV, a Hungarian company; the Government of the Republic of Macedonia holds 47,125% of the shares, and the remaining 1,875% of the shares are owned by IFC (International Finance Corporation) – Affiliation of the World Bank.

2. What are the number of operators and the types of authorisation? Please provide information for the following sub-sectors:
a) public voice telephony (PSTN, alternative infrastructures, e.g. utilities);
b) public land mobile communications (analog and digital non-GSM, GSM, DCS 1800, UMTS, paging);
c) private land mobile telecommunications (e.g. taxies, transport, emergency services);
d) satellite communication;
e) data communication;
f) cable television.

a)

JSC MT is a public fixed telecommunications operator with the right to build, own and operate public fixed telecommunications networks and to provide services of voice telephony, telegraphy, data transfer, leased lines and other types of services, pursuant to the Concession Agreement valid until 31.12.2018.

b)

- There are no public mobile operators in the Republic of Macedonia that operate in the **non-GSM** band
- There are two 2 public mobile operators in the Republic of Macedonia that operate in the **GSM** band: JSC Mobimak, pursuant to the Concession Agreement valid until 31.12.2018, and JSC Kosmofon, pursuant to the Concession Agreement valid until 31.12.2023.
- No mobile networks were realized in the frequency band **DCS 1800** and **UMTS** in the Republic of Macedonia up to date.
- JSC Link Telekom is the sole provider of paging services in the Republic of Macedonia, operating on a basis of a concession for data transfer.

c)

Private land mobile communications (radio-communications networks for own needs): approximately 150 taxi associations, one system of JSC Electric Power Company of Macedonia; one system of PE “Macedonian Railways”; 20 systems of other beneficiaries; one system of the Red Cross of the Republic of Macedonia.

There are 150 taxi associations in the Republic of Macedonia that use radio systems, the JSC Electric Power Company of the Republic of Macedonia uses radio communications system, as well as the PE “Macedonian Railways”, PE "Makedonija pat", JSC Makpetrol and other public and private sector users.

d)

- JSC Macedonian Telecommunications (JSC MT) constructed a satellite centre connected to the EUTELSAT and INTELSAT systems.
- Concession was awarded to Elsacom – Italy, as a part of GLOBALSTAR, which is an operator for GMPCS.
- There are several VSAT networks in the Republic of Macedonia.
- The PE Macedonian Broadcasting has BSS land station for connection to the EBU.

e)

Six concessions were awarded in the Republic of Macedonia for provision of public telecommunications services for data transfer, out of which five are foreseen for provision of Internet services, and one for paging services. The concessions are valid for a period of five (5) years. The Minister of Transport and Communications, upon a proposal of the Telecommunications Directorate, awards the concessions.

f)

Prior to the adoption of the Law Amending and Appending the Telecommunications Law (“Official Gazette of RM” No 37/04), concessions for cable operators were granted by the Government of the Republic of Macedonia upon a proposal of the Broadcasting Council, pursuant to the

Telecommunications Law and the Broadcasting Law, and so far, 65 concessions for cable operators on specified areas have been granted.
According to the Law Amending and Appending the Telecommunications Law, the issue related to the cable radio-television service was liberalized and harmonized pursuant to Article 70 of the Stabilization and Association Agreement with EU as regards the introduction of competition in this field.

3. What are the manufacturers and manufacturing activities for network equipment and terminals in your country?

- "DASTO LLC. – Skopje" designs and manufactures telecommunications equipment (antenna systems, connectors, splitters);
- "MAKPETROL-TEAS AD – Skopje" designs and manufactures radio-communications equipment and electronic meters;
- "High Tech Corp – Skopje" designs and manufactures communications equipment and circuit boards: and
- "Cable factory – Negotino" manufactures electricity- and telecommunications- cables.

4. Which is/are the main public telecommunications operator(s)? Please refer to:
a) ownership and control of the operator;
b) type of authorisation;
c) principal subsidiaries;
d) revenue/net income;
e) number of employees;
f) number of main lines.

4.1
a)
JSC Macedonian Telecommunications (JSC MT) is the Fixed Public Telecommunications Operator which had exclusive rights in the area of voice telephony and as regards building and operating the fixed public telecommunications network until 31.12.2004.

JSC MT is privatised telecommunications company, whereas 51% of the shares are owned by the strategic investor MATAV, a Hungarian company; the Republic of Macedonia holds 47,125% of the shares, and the remaining 1,875% of the shares are owned by the IFC (International Finance Corporation) – Affiliation of the World Bank.

b)
Pursuant to the Concession Agreement, JSC MT is authorised to provide the following public telecommunications services on the entire territory of the Republic of Macedonia and between places in and outside of the Republic of Macedonia:

- Fixed voice telephony services;
- Telegraph services;
- Telex services;
- Public payphone services;
- Leased lines services;
- Public services for data transfer;
- Paging services;
- VAT services;
- Information services;
- VSAT and other types of satellite services; as well as
- To build, lease, own, develop, maintain and operate fixed public telecommunications networks, public networks for data transfer and cable radio- and television- networks.

According to the terms and conditions stipulated in the Concession Agreement, JSC MT had the exclusive rights, until 31.12.2004, to provide following public telecommunications services:

- Fixed voice telephony services, including, but not limited to, voice transit traffic; fixed voice telephony services provided through VSAT and other fixed satellite equipment, or through protocol TCP/IP, or any other given substitute for the particular protocol that exists within that specific period;
- Telegraph services;
- Telex services;
- Public payphone services;
- Leased lines services; and
- To build, lease, own, develop, maintain and operate fixed public telecommunications networks, including, but not limited to, capacities between mobile switching centres, between mobile switching centres and any point of connection to the fixed public telecommunications network, between switching centres for data transfer and between switching centres for data transfer and any point of connection to the fixed public telecommunications network.

During the period of exclusivity, the management and directing of international public telecommunications services, as determined above, which originate from, or end in, or transit through the Republic of Macedonia, may be provided exclusively by JSC MT.

The Concession period is valid until 31.12.2018.

c)
JSC MT has no subsidies.

d)
The income of JSC MT in 2003 was 16,9 billion MKD on a level of a group.

e)
In JSC MT in 2003 there were about 3.000 employees.

f)
JSC MT has a total of 525.000 main lines in its PSTN network.

4.2

The Republic of Macedonia has two main mobile (GSM) operators that operate on a basis of awarded concessions within the GSM band, with a possibility to extend the GSM 1800 band as follows:

a)
JSC Mobimak is a daughter company 100% owned and controlled by JSC MT.

b)
Pursuant to the Concession Agreement, JSC Mobimak is authorised to provide the following public telecommunications services on the entire territory of the Republic of Macedonia and between places in and outside of the Republic of Macedonia:

- Cellular mobile telephony services;
- DCS 1800 mobile telephony services; and
- GSM mobile telephony services; as well as
- To build, lease, own, develop, maintain and operate mobile public telecommunications networks.

The Concession period is valid till 31.12. 2018.

c)
JSC Mobimak has no subsidies.

d) The total income of JSC Mobimak in 2003 was 7.223.577.483 MKD.
There were about 390 employees in JSC Mobimak in 2003.

f) JSC Mobimak has about 515.000 pre-paid mobile subscribers and about 105.000 post-paid subscribers.

4.3

a)
JSC Kosmofon is 100% owned and controlled by OTE, Greece.

b)
Pursuant to the Concession Agreement, JSC Kosmofon is authorised to provide the following public telecommunications services on the entire territory of the Republic of Macedonia and between places in and outside of the Republic of Macedonia:

- Cellular mobile telephony services;
- DCS 1800 mobile telephony services;
- GSM mobile telephony services;
- VAT services (including any type of telecommunications services, as well as voice and non-voice telecommunications services, such as mobile services for data transfer and Internet services for mobile subscribers); and
- To build, lease, own, develop, maintain and operate mobile public telecommunications networks (including installation, development, operation and maintenance of central stations and base stations and other equipment), and after 31.12.2004 to build, lease, own, develop, maintain and operate telecommunications facilities between mobile switching centres and between mobile switching centres and points of connection to fixed public telecommunications networks.

The Concession period is valid until 31.12. 2023.

c)
JSC Kosmofon has no subsidies.

d)
The total income of JSC Kosmofon in 2003 was 410.689.476 MKD.

e)
There were about 270 employees in 2003 in JSC Kosmofon.

f)
JSC Kosmofon has about 145.000 pre-paid mobile subscribers and about 11.000 post-paid subscribers.

5. What strategic telecommunications alliances exist in your country? Please provide information on partners, shareholders, fields of activity and the approvals by the competition authorities.

The Strategic partner of JSC Macedonian Telecommunications (JSC MT) is the telecommunications operator MATAV – Hungary with 51% of the shares. The Concessionaire JSC MT is a public fixed telecommunications operator, which, pursuant to the Concession Agreement from 2000, concluded with the Ministry of Transport and Communications, has the right to build, own and operate the public fixed telecommunications network, as well as to provide services such as: voice telephony, telegraphy, data transfer, leased lines and other types of services.

JSC Mobimak is a GSM operator, 100% owned by JSC MT. The Concessionaire JSC Mobimak is a public mobile telecommunications operator, which, pursuant to the Concession Agreement from 2001, concluded with the Ministry of Transport and Communications, has the right to build, own and operate the public mobile telecommunications network, as well as to provide mobile telephony services.

JSC Kosmofon is a GSM operator, owned by OTE, Greece. The Concessionaire JSC Kosmofon is a public mobile telecommunications operator, which, pursuant to the Concession Agreement from 2001, concluded with the Ministry of Transport and Communications, has the right to build, own and operate the public mobile telecommunications network, as well as to provide mobile telephony services.

6. What type of cost accounting system is used by the main public network operator(s)? Is it mandatory to use this in justifying their prices? How are retail prices regulated? How are wholesale prices (i.e. for interconnection) regulated?

Pursuant to Article 19 of the Telecommunications Law, prices for public telecommunications services offered on a competitive basis shall be established by public telecommunications operators and telecommunications service providers.

Telecommunications services operators and public telecommunications service providers shall establish the price for services which are not subject to competition on the basis of the following principles:

- Prices must be based on costs and, for similarly situated users, must be non-discriminatory;
- Prices must be structured and their levels set as to attract investments into the telecommunications sector; and
- The regulations and recommendations of international organisations of which the Republic of Macedonia is a member, shall be taken into consideration while establishing prices.

The Telecommunications Directorate may establish a special price regulation regime applicable to a public telecommunications operator or a public telecommunications service provider, unless otherwise stipulated in the Concession Agreement, in the following cases:

- Where there is only one public telecommunications operator or public telecommunications service provider or where the public telecommunications service provider has dominant position in the service market;
- Where a single or dominant public telecommunications operator or public telecommunications service provider fully-subsidises a competitive network or service from the revenues of the network or services as to which it is the sole or dominant provider;
- Where a particular public telecommunications service is not fully competitive, or where a particular public telecommunications service is not subject to pricing on a fully competitive basis.

Pursuant to the Concession Agreement, JSC MT has submitted to the Directorate a proposed cost accounting system which demonstrates and provides an opportunity to the Directorate for verification, on a reasonable basis, of the compliance of the Concessionaire with conditions of the Agreement. The proposal is prepared according to the international accounting standards and provides for bookkeeping of the investments, incomes and expenditures resulting from providing of public telecommunications services and public telecommunications networks within the scope of exclusivity awarded with the Telecommunications Law, as well as concession services and networks that do not fall in the scope of exclusivity awarded with the Telecommunications Law and other Concessionaire related activities.

Pursuant to existing regulations of the Republic of Macedonia, public mobile telecommunications operators are not obliged to implement a specific cost accounting system.

Retail prices are regulated in a way that allows for free establishment of prices according to market conditions.

Wholesale prices (for interconnection) are regulated by Interconnection Agreements concluded between public telecommunications operators.

According to the new Law on Electronic Communications, operators with significant market power in a relevant market are obliged to keep separate accounting records for interconnection and/or access related activities. Operators with significant market power shall be obliged upon a request of the Agency to submit accounting records, including data on revenues received from third parties, which may be published by the Agency in order to contribute to a competitive and open market. If the Agency deems that there is lack of effective market competition, it may impose on an operator with significant market power obligations that the service prices shall be based on real costs, which means that the cost accounting system is obligatory for the purposes of price controls.

Furthermore, the Agency may impose obligations onto an operator with significant market power in a specific retail market relating to regulation of retail services, if it determines that a relevant market intended for end-users is insufficiently competitive and if the wholesale regulated market did not yield the expected results. The Agency may prescribe one of the following methods of retail rate regulation: retail price capping (price cap regime); regulation of individual tariffs; cost orientation of prices; orienting prices towards those on comparable markets. The Agency may also specify and/or approve the format and accounting methodology to be used by such operators in the process of retail rate regulation.

TAIEX expert is currently revising the initial provisions of the Draft-Law on Electronic Communications.

7. Please provide information on the number and type of ISDN users and of internet users. Is there a regulatory body for the use of the internet? Can cable operators provide internet to their subscribers? How are prices for internet use determined?

There are 10.500 ISDN Basic rate users in the Republic of Macedonia, out of which 7.000 are business users, 3.500 are residential users, and 350 are ISDN Primary rate business users.

There are 126.000 Internet users in the Republic of Macedonia, out of which 64.000 are natural persons, 12.000 are legal entities and 50.000 are pre-paid users (source Telecommunications Directorate).

There is no separate regulatory body for use of the Internet in the Republic of Macedonia. The regulatory functions in all areas of telecommunications are carried out by the Telecommunications Directorate.

Cable operators, through cable radio – television networks, distribute radio – television programmes according to conditions prescribed in concession agreements. According to the Law on Amending and Appending the Telecommunications Law, enacted in 2004, the cable operators can provide Internet to their subscribers, whereas upon a request of the cable operators changes in the concession agreements can be made for providing this type of services.

The prices for use of Internet are determined by the Internet providers on a competitive basis in accordance with Article 19 of the Telecommunications Law.

II. POSTAL SERVICE

A. General legal framework

1. To what extent is your legal framework regarding postal services aligned with the relevant Community acquis (Directive 97/67/EC as amended by 2002/39/EC)? Please provide details about the license regime; universal service provision; reserved area; requirements for tariff principles; transparency and separation of accounts for service providers; standards for quality monitoring for postal services.

The Law on Postal Services ("Official Gazette of RM" No 55/02) was prepared according to the Directive 97/67/EC of the European Parliament and the Council on common rules for the development of the internal market of Community postal services and the improvement of quality of service.

Directive 2002/39/EC is not implemented in the Law, because the Law was prepared and enacted in 2002, before the new Directive was adopted, whilst the transposing of this Directive is connected with the operations of the PE "Makedonska posta", i.e. from the period when this enterprise will achieve positive economic – financial results.

Pursuant to Article 7 of the Law on Postal Services, the Universal Postal Service is provided by the Principal Postal operator – the PE "Makedonska posta", which at the same time represents a Concession Act for the PE "Makedonska posta". Within the scope of universal services, pursuant to Article 9 of the Law, it is established that the PE "Makedonska posta" performs reserved postal services for postal items with weight up to 350 grams.

Pursuant to Article 18 of the Law, non-reserved postal services for postal items with weight over 350 grams can be provided by another legal entity according to conditions prescribed by Law, i.e. by entering into a Concession Agreement, awarded by the Government of the Republic of Macedonia.

The provision of courier services requires a licence, which is issued by the Minister of Transport and Communications (Articles 13 and 14 of the Law).

Pursuant to Article 10 of the Law, it is determined that the Government of the Republic of Macedonia approves the tariffs for reserved postal services provided by the PE "Makedonska posta".

Article 11 of the Law determines that the Minister of Transport and Communications may stipulate a special method for separation of accounts for reserved postal services from other services.

The quality of postal service operations is regulated by Article 8 of the Law and is referred to standards and criteria concerning the postal items delivery.

Secondary legislation for postal services, derived from the new Law on Postal Services, is currently in preparation, such as: Rulebook on General Conditions for Postal Services Operations; Rulebook on Numbering of Postal Services and Rulebook on Organisation of the Postal Network in the Republic of Macedonia. The Rulebooks are expected to be adopted in the first quarter of 2005.

2. Do you have any plans to modify the existing legislation and/or to restructure the postal services? Please give details and timetables.

The new Law on Postal Services, envisaged to be enacted by 2007, shall transpose the Directive 2002/39/EC, providing for reduction of the scope of reserved postal services, i.e. reduction of the current weight of 350 grams of postal items. Due to the need of economic strengthening of the PE "Makedonska Posta", it is necessary to maintain the weight of 350 grams for reserved postal items

until 2007, which will provide for positive performance of the operations of PE "Makedonska Posta" and successful operations after 2007 with other operators in a competitive environment.

B. Universal Service Obligations (USO)

1. What is the scope of universal service in your country?

Pursuant to the Law on Postal Services (“Official Gazette of RM” No 55/02) Article 7, paragraph 3, Universal Postal Service means minimal extent of postal services which are continuously performed on the entire territory of the Republic of Macedonia, with determined quality and affordable prices for the customers.

The Universal Postal Service includes receipt, sorting, transport and delivery of postal items up to 2 kg and of parcels up to 31,5 kg, such as: regular postal items (letters, postal cards, printed material, cécograms, small parcels, and similar); registered postal items (registered letter-post items, letters of value, parcels, postal money orders, cable money orders); Express Mail Service (EMS) postal items, and other postal items and services that contain goods with or without indicated commercial value.

2. What are the access and delivery conditions?

Pursuant to Article 2 of the Law on Postal Services (“Official Gazette of RM” No 55/02), the Universal Postal Service is carried out through public postal network access points, which means any type of facilities, including mail boxes located in public places or in the premises of the Universal Postal Service provider, where the postal items can be mailed by the users.

The Principal Postal Operator (PPO) receives and delivers postal items in all inhabited places in the Republic of Macedonia at least once each working day, and on Sundays and public holidays the mail is delivered through the service on duty (Article 8 of the Law).

In terms of the relevant distance, areas of the PPO network units are divided into:
- Closer area of network unit where receipt and delivery is carried out at least once a day;
- Wider area of network unit where receipt and delivery of postal items up to a particular weight or value and notification for receiving postal items exceeding the determined weight or value is carried out at least three times a week; and
- Widest area of network unit where receipt and delivery of postal items up to a particular weight or value and notification for receiving postal items exceeding the determined weight or value is carried out at least once a week.

3. Are postal services exempted from VAT?

Pursuant to Article 23 of the Law on Value Added Tax (“Official Gazette of RM” No 44/99), postal services and sale of stamps and envelopes for mass mailings with printed stamp sold by nominal value of the stamp, are exempted from VAT.

4. What are your standards of quality of service (target objectives for transit time performance)?

Pursuant to Article 8, paragraph 5 of the Law on Postal Services (“Official Gazette of RM” No 55/02):
- All postal items delivered on a closer area of the postal network unit should be delivered in the course of the working day following the mailing day;
- All postal items delivered on a wider area of the postal network unit should be delivered in the course of the second working day following the mailing day; and
- All postal items delivered on the widest area of the postal network unit should be delivered at least once a week after the mailing day.

5. Are there exceptions to the USO? Please specify.

According to Article 7, Paragraph 4 of the Law on Postal Services, as well as the Directive 97/67/EC, Paragraph 18, courier services and the document exchange service are not part of the Universal Postal Service.

C. Licensing and authorisations regime

1. How is the licensing regime applied in your country, in particular the granting, supervision and withdrawal of general authorisations and licenses?

For performing non-reserved services, within the universal postal service, the Government of the Republic of Macedonia (Grantor), pursuant to Article 18-26, grants concessions. Concessionaire can be any natural and legal persons entered in the trade register of the Republic of Macedonia, including foreign legal entities with a subsidiary registered in the trade register of the Republic of Macedonia. The terms, procedures and conditions for awarding concessions are regulated with the Law on Postal Services and the Law on Concessions ("Official Gazette of RM" No 25/02 and 24/03). The awarding of the concession is conveyed through public tender, and is implemented either as procedure for awarding concessions through open invitations or procedure for awarding concessions through limited invitations. The interested entities submit technical and economic-financial bid based on which a ranking list of bidders is prepared, and negotiations are further taking place with the first-ranked bidder so as to determine the conditions for the concession agreement.

The procedure for awarding concessions for performing non-reserved postal services is prepared, organised and implemented by the Commission established by the Grantor. The Commission shall prepare tender documentation which shall include aspects of the Law on Concessions, as well as the following aspects: type of postal service to be granted for concession; the area of postal service operations; general and special terms of postal service operations; commencement and duration of concession; supervision over the concession activity; methods for dispute resolution, etc.

The Concession Agreement precisely determines the concession period, which shall not be longer than 20 years.

The concession may be transferred completely or partially, with prior written consent of the Grantor, under conditions prescribed with the Law on Concessions and the Law on Postal Services. The awarded concession for performing non-reserved postal services can be transferred to another entity through submission of request by the entity that was granted a concession and by the entity to whom the concession is to be transferred to the Ministry of Transport and Communications, based on which the Grantor shall conclude an agreement with the Concessionaire to whom the concession was transferred.

The concession can be terminated pursuant to the conditions stipulated in the Law on Concessions and in cases determined with the Concession Agreement.

The inspection supervision over the execution of the Concession Agreement, concluded in accordance with the Law on Postal Services, is carried out by the state inspectorate of transport, through postal traffic inspectors. In case the postal traffic inspector determines a violation of the rules regulating rights and obligations as regards the provision of postal services, prescribed with the provisions of this Law, relevant secondary legislation and the concession agreements, he/she shall reach a decision ordering removal of the determined irregularities and deficiencies within a specified time period.

The courier services, pursuant to Articles 13-16 of the Law, can be carried out by foreign and domestic natural and legal entities as postal operators, based on a licence granted by the Minister of Transport and Communications.

In order to be granted a licence for courier services, the concerned entities shall submit a request to the Ministry of Transport and Communications, which shall include the name, address of the applicant, company registration document, description of and manner for performing the service, date of commencement with the service operations, list of international standards for delivery of items, proof of technical and financial competence for performing service with respective quality. The licence is granted for a period of five years, with a right to be extended.

D. Reserved area

2. Are reserved services operated as a de facto monopoly or defined through your postal services legislation?

Article 9 of the Law on Postal Services regulates the reserved postal services operations, which are carried out both de facto and de jure.

According to the Law, reserved postal services include postal items that weigh up to 350 grams and PE Makedonska posta has monopoly over these items within the universal postal service, whilst postal items that weigh more than 350 grams are liberalised and can be delivered by other operators which have been awarded concessions for performing postal activity.

In addition, courier services are also liberalised, and within the framework of the market of postal items delivery in the Republic of Macedonia, they are carried out by world reputable operators for courier services such as: DHL, UPS, FedEx, TNT.

3. In case of the latter situation, how are the relevant requirements defined in national legislation?

Pursuant to Article 9 of the Law on Postal Services (“Official Gazette of RM” No 55/02), within the framework of the universal postal service, reserved postal services that consist of receiving, collecting, sorting and delivering postal items, including direct mail, provided that these items are up to 350 grams, are provided only by the Principal Postal Operator (PPO – PE “Makedonska posta”).

The reserved postal services are provided only by the PPO in order to ensure funds for provision of the Universal Postal Service on the entire territory of the Republic of Macedonia, including non-profitable inhabited places, as well as for construction, maintenance and improvement of the public postal network. The public postal network is used by PPO, and if other operators use it, they are obliged to pay fees for using the public postal network.

Non-reserved postal services, within the frames of the Universal Postal Service, besides PPO can be provided by other postal operators, based of concessions.

E. Universal Service Provider (USP)

1. How are the obligations of the USP defined in your country? When was the relevant legal framework adopted and what form does it take?

The Law on Postal Services (“Official Gazette of RM” No 55/02), adopted on 16.07.2002, defines the obligations of the Universal Service Provider (USP).

Pursuant to Article 7 of the Law on Postal Services, the Principal Postal Operator (PPO – PE “Makedonska posta”) is the only Universal Postal Service Provider on the entire territory of the

Republic of Macedonia. The provision of Universal Postal Service should offer a service which shall be available for all customers on the territory of the Republic of Macedonia under equal conditions and without any form of discrimination due to political, religious or ideological reasons. In addition, the service should guarantee confidentiality and safety of postal items, and is not to be interrupted or terminated, except in the case of a Force Majeure.

According to Article 7 of the Law on Postal Services, the Universal Postal Service means a service that includes receipt, sorting, transport and delivery of postal items up to 2 kilograms and of parcels up to 31,5 kilograms, such as: regular postal items (letters, postcards, printed material, *cécograms*, small parcels and similar); registered postal items (registered letter-post items, letters of value, parcels, postal money orders, cable money orders), EMS postal items and other postal items and services that contain goods with or without indicated commercial value.

The Universal Postal Service related operations should provide equal access for all customers to the public postal network which provides services in connection with the relevant distance of their permanent residence, including the public mail boxes and official premises of PPO.

2. How is the provision of the universal service by USP supervised, in particular regarding the granting of any exceptions or derogations from the universal service requirements? Is this supervision exerted by an NRA (National Regulatory Authority) or other supervising national authorities?

Pursuant to Articles 55 and 56 of the Law on Postal Services (“Official Gazette of RM” No 55/02), supervision over provision of universal services is conveyed by the State Transport Inspectorate, a body within the Ministry of Transport and Communications, through its inspectors responsible for postal traffic.

In case the postal traffic inspector determines violations of the regulations governing the rights and obligations regarding provision and assurance of postal services, he/she shall order, by way of decision, a removal of the determined irregularities and faults within a specified time period.

3. Is partial or full privatisation of the USP envisaged?

According to the Transitional and Final Provisions of the Law on Postal Services, the PE “Makedonska posta” may be restructured into a Joint Stock Company in state ownership, according to the Law on Public Enterprises (“Official Gazette of RM” No 59/96, 06/02 and 40/03), the Company Law or any other applicable legal provisions.

The Government of the Republic of Macedonia may decide to privatise the Joint Stock Company through selling or transferring all or part of the shares, in one or more transactions.

The possibilities for partial or complete privatisation of the PE “Makedonska posta” are currently being analysed. More importantly, pursuant to the Law on Postal Services, there is a possibility for introduction of competition in the operations of postal services within the Universal Postal Service for postal items with weight over 350 grams, for which the Government of the Republic of Macedonia can award concessions through a public tender procedure.

F. Tariffs for Universal Service

1. Describe the tariff structure for the Universal Service and the way in which this is defined, including any relevant legal provisions.

Pursuant to Article 10 of the Law on Postal Services (“Official Gazette of RM” No 55/02) the tariffs for reserved postal services operations are determined by the PPO and the Government of the Republic of Macedonia gives its consent on those tariffs. The prices should be realistic and all customers are to have equal access to the services offered on the entire territory of the Republic of Macedonia. The

prices are to be determined on the basis of PPO expenditures for performing postal services, so that the PPO can develop the postal network and invest in new technologies that shall contribute towards improvement of the services, as well as to meet the customers' demands. The tariffs referring to postal services that are not within the framework of the reserved postal service are not subject of consent by the Government of the Republic of Macedonia.

The postal services' tariffs are based on determination of the starting price for a regular letter with 20 g weigh, and subsequently the tariffs are determined on a weight basis as well as the type of delivery of postal items, whether: regular, registered, letter of value or express mail.

G. Accounting

1. Are systems for the supervision and control of accounting requirements for universal service providers (systems for cost accounting and accounting separation) already in place? If not, what are the time schedules for their implementation?

Pursuant to Article 11 of the Law on Postal Services, the Minister of Transport and Communications shall prescribe onto the PPO (Principal Postal Operator) a special method for separate accounting systems for reserved services, in a competitive environment, as well as for courier services. Until now, the Minister has not adopted an act for separate accounting systems for reserved services. The cost accounting separation for particular services of the PE "Makedonska Posta" is still not applied. Due to the fact that there is no other provider of non-reserved services within the scope of universal services, there is no need of introducing separate systems for cost accounting and accounting separation systems.

The introduction of a new postal operator for providing of postal services within the scope of universal services shall provide for introduction of a separate accounting system.

H. Quality of Service

1. Who sets the quality standards for service providers and supervises them?

Quality standards of service providers are prescribed with the Article 8 of the Law on Postal Services. The Rulebook on general conditions for postal service operations is currently in an enactment procedure. These regulations determine the areas of postal items delivery, which contributes towards reaching equal quality for all service beneficiaries in terms of relevant distance of their permanent address, as well as the time limit for delivery of the postal items.

The quality standards are supervised by the Ministry of Transport and Communications through its postal traffic inspectors.

2. Is the performance of the universal service providers (measuring quality of service against the standards set for domestic and cross-border mail and ensuring corrective action is taken when necessary) periodically monitored? If not by the National Regulatory Authority (NRA), by whom?

Pursuant to Article 55 of the Law on Postal Services ("Official Gazette of RM" No 55/02), the Ministry of Transport and Communications monitors enforcement of the Law and its secondary legislation, as well as implementation of international agreements concluded, or acceded to, by the Republic of Macedonia in the field of postal traffic.

The State Transport Inspectorate of the Ministry of Transport and Communications, through the postal traffic inspectors, performs inspection supervision as regards regulations derived from the

Law, implementation of Concession Agreements, as well as licences issued pursuant to the Law. In case inspectors determine breach of regulations they shall bring a decision ordering removal of determined irregularities and deficiencies within a specified time period.
During supervision, the postal traffic inspector is authorised, pursuant to Article 57 of the Law, to monitor the quality of service relating to receiving, sorting, conveying and delivery of postal items, to control the technical-technological organisation and postal network functioning, to temporarily prohibit the use of postal network capacities in case certain irregularities are established, to control the mail boxes and the application of the price list for performing postal services, as well as to prohibit the operations of a postal operator which is not a holder of concession or licence.

The State Transport Inspectorate performs regular supervision and control of enterprises providing postal services as regards the quality of service relating to receiving, sorting, conveying and delivery of postal items in national and international postal traffic, as well as technical-technological organisation and postal network functioning and control of the application of the price list for performing postal services, etc.

During 2003, 62 controls were executed, including 55 of the Postal Network Units of the Public Enterprise “Makedonska Posta”, and 55 reports were prepared in connection with the situation on site. Based on those reports, 48 decisions were adopted, by which this enterprise was obliged to remove the determined irregularities and deficiencies within a specified time period, as well as to inform, within a specified time period, the State Transport Inspectorate of the undertaken measures. The PE “Makedonska Posta” did not lodge any complaints against the decisions of the inspectors.

I. Complaints procedures

1. What main measures have been taken to establish complaint procedures?

Article 61 of the Law on Postal Services provides that, if the postal traffic inspector, during a supervisory inspection, determines irregularities and violations in provision of postal services, he/she brings a Decision, against which the unsatisfied party may lodge a complaint, within eight days from the day of receipt of the decision, to the Minister of Transport and Communications, who decides in a second degree. The complaint against the Decision shall not withhold the execution of the Decision.

J. National Regulatory Authority

1. Has a Postal Market NRA (National Regulatory Authority) been established? If not, are there plans in this respect and what is the time schedule? If yes, is it an autonomous body? To what extent is it independent from universal services providers? How and to what extent is its operational independence ensured?

A separate Regulatory Body for the regulation of the Postal Service Market, has not been established in the Republic of Macedonia yet, and the functions of such a body are conveyed by the Ministry of Transport and Communications pursuant to the Law on Postal Services (“Official Gazette of RM” No 55/02).

In that context, the Ministry of Transport and Communications acts as a Regulatory Authority and implements the policy of the Government of the Republic of Macedonia concerning the national and the international postal traffic, proposes to the Government of the Republic of Macedonia as regards undertaking measures for gradual and controlled liberalisation of postal services operations, monitors and analyses the implementation and the development of universal postal services and other postal services and proposes undertaking of certain measures. Furthermore, the Ministry controls the process of implementation of approved tariffs for universal postal services, supervises and controls

the enforcement of this law and relevant secondary legislation, as well as international agreements concluded, or acceded to, by the Republic of Macedonia, establishes the postal services development strategy, including the temporary steps for introduction of competition, and other issues determined by the Law on Postal Services.

The establishment of a Postal Market National Regulatory Authority is not a mandatory obligation of the Republic of Macedonia, which is also the case in other European states. However, by the end of 2007, the functions of regulatory authority for postal services shall be transferred by authorisation to another existing regulatory authority.

2. Please provide information on the organisation of the Authority, including the number of its staff. Do you have any plans to strengthen the human resources (in terms of full-time equivalent) dealing with postal services available to this body?

Within the frames of the Ministry of Transport and Communications, the Postal Traffic Department is the body responsible for regulation of activities dealing with postal services. The Department has three employees (Head of Department and two officials), and there are no plans as regards strengthening of human resources.

3. Has the NRA been assigned responsibilities similar to those defined in the postal acquis in respect to European NRAs?

The Ministry of Transport and Communications, as a National Regulatory Body in respect to postal traffic, has competences which are similar and within the frames of those defined in the postal acquis of the European national regulatory bodies (NRAs).

4. What are the nomination procedures and terms of office of the NRA's head? What are the NRA's powers?

The question cannot be answered due to the fact that there is no independent national regulatory body in the Republic of Macedonia.

5. Are there several regulatory bodies dealing with different aspects of postal services, e.g. specific regulatory issues, tariff regimes and prices, market competition, etc.?

The question cannot be answered due to the fact that there is no Independent National Regulatory Body in the Republic of Macedonia.

III. INFORMATION TECHNOLOGY

A. Policy

1. Please describe the policy for the development of the information society in your country. If a strategy document exists, please provide a copy in an EU language. Is there any policy initiative similar to the eEurope initiative?

The strategic goal of eEurope is to move fast towards a *global information society*. The modern trends are the introduction of broadband, convergence of the existing networks, the integration of services, a digital economy, digital administration and a knowledge based society.

The strategic goal of the Republic of Macedonia is *membership of the EU*. Development of an information society is an intrinsic part of the long-term reforms that the country has initiated, in order to achieve EU standards.

Initiatives for IS development:

The challenges Macedonia is facing, in its development of an information society, are low internet penetration (<5% of population), a low level of ICT literacy, the absence of motivational legal regulation for the expansion of e-commerce, lack of IT system integration in the public institutions and on-going institutional reforms. In addition to the transitional shocks and poor economic climate, the country is facing a 'digital divide'.

To encourage activities to drive the country towards an information society and a digital economy, the ***"e-Macedonia for all"*** initiative was started by the former president Boris Trajkovski in July 2000. It was followed by the preparation of the **"e- Declaration 2002",** a document with specific recommendations for accelerating the development of an information society and digital economy in the country. This declaration was officially adopted by Parliament in July 2002 (see 19 Annex 02) and is recognised as a **national priority**.

The following six gaps that the country needs to close have been identified: (i) bringing together the private sector and the Research and Development community; (ii) creating an enabling environment for a pro-active adaptation and use of ICT by government and businesses; (iii) establishing new e-government services for citizens and businesses; (iv) improving the regulatory framework; (v) protecting intellectual property rights; and (vi) developing the necessary competencies and skills.

The document recommends specific actions to be undertaken by all actors – the Government, Businesses, ICT companies, Universities, Units of local self-government (LG) and the Media. Therefore, the document itself calls for a form of **"strategic bonding"** for the development of an ICT Society in Macedonia and offers a shared vision for harnessing ICT for development (ICTD).

On the regional level, within the **Stability Pact,** the country is **committed** to the ***eSEE regional initiative***, as a signatory of the **"eSEE Agenda for the Information Society"** in Belgrade 2003, and has reaffirmed its commitments by signing the "Joint statement for Building Information Society" in Budapest in 2004.

European Partnership Framework, the platform for streamlining the key national priorities of the EU integration process, including the information society development, fully incorporates the regional eSEE agenda, thus giving the *EU dimension to the initiative.*

On the global level, the country has also committed itself to the Declaration of Principles and Plan of Action, adopted during the first phase of **WSIS** (World Summit on the Information Society) in Geneva in December 2003.

Committee for Information Technology (CIT):

Following these initiatives and its commitments, at the end of 2002 the government established the **Committee for Information Technology (CIT)**. Its strategic considerations were:

- ICT should foster the *economic development* of Macedonia, *decrease the number of unemployed* and enable the establishment of new markets;
- Macedonia should join the developed countries in *research and the development* of new technologies, and foster their use in the creation of new products and services; and
- There is an urgency for the development of *digital administration*, that will satisfy the needs of citizens and companies;

The *CIT's Work Programme for the period 2003-2007* (see 19_Annex_03), and a corresponding *Action Plan*, describe the goals, priorities and activities of the Committee:

- Advise the Government in formulating *information society policies* and creating an environment for ICT development. Initiate, promote and coordinate the activities in ICT domains;
- Ensure open and participatory work of the Committee:
  - Establish a web site, www.kit.gov.mk, and open communication with the public;
  - Establish the Information Centre of the Committee with registers of all issues related to sustainable ICT development policy and strategy; and
  - Initiate panel discussions with the key stakeholders: ministries, economic, educational, cultural and scientific institutions as well as the donor community, in the analysis of the current situation of ICT in Macedonia.
- Assess the current situation:
  - Assess the current IT situation, and initiate a survey, in order to select clear indicators for benchmarking with eEurope+;
  - Review good practice and experiences elsewhere (countries in the region and developed countries);
  - Review the legislation, and all legal, administrative and technical obstacles that exist in the public sector; and
  - Take into consideration the current decentralisation reform and assess the opportunities for balanced central/local development initiatives.
- Prepare the environment for the development of a NISP and an Action Plan for its implementation:
  - Establish teams to develop the NISP and the Action Plan;
  - Define a clear organisational structure and clear roles and responsibilities for the implementation of the IS Action Plan;
  - Review and establish mechanisms for incorporating ICT projects into the state budget, and establish appropriate financial management mechanisms.
- Correlate the ICT priorities with the European Partnership Action Plan priorities and streamline the donor community projects; create an integrated framework for planning, priority target areas and strategic projects.
- Coordination of the priority projects in the national interest:
  - Implementation of strategic ICT projects focused on improving the confidence of the citizens and the accountability of the government. These are: (1) EU integration process; (2) Integrated cross-border management system; (3) Integrated customs system; (4) Integrated justice system; (5) Social protection; (6) Education and science; and (7) Public procurement.

- Macedonia gov.mk - The Government must offer a web page which will provide comprehensive information about its work including routine information; budget information; grants etc;

- E-business (initiate projects focused on economic growth, e-business, promotion of the ICT sector); and

- Internet public access points - the Committee will initiate a project for the installation of public access pointstaking into account the very limited resources of citizens.

- Defining the Committee's strategies for joint action outside Macedonia, within the frameworks of regional and global initiatives;

Based on the work programme, the CIT has initiated, facilitated and supported a number of activities in order to foster information society developments.

Progress Report on the country commitments to develop information society:

Two of the main objectives of the Committee for Information Technology are to prepare environment for development of national policies for information society, and increase in the speed of implementation of actions according to the eSEE Agenda and the WSIS Agenda commitments.

These initiatives are in strong correlation with the EU integration process and the national priorities of the Republic of Macedonia.

The Republic of Macedonia is **committed** to the following:

- ✓ To develop National information society policies and strategies;
- ✓ The adoption of a legal and regulatory framework;
- ✓ The establishment of regional and national implementation mechanisms;
- ✓ The promotion of an active IS for development; and
- ✓ ICT benchmarking

*The following is a **progress report** on the key activities, in the light of country commitments to develop an information society:*

1.1 Development of NISP and the Action Plan

The CIT presented its *Conceptual Framework of principles*, *actions and priorities for e-government* at a round table in November 2003. (see 19_Annex_04).

The following *key strategic factors* have been identified for assessment: (1) the institutional framework; (2) the legal and regulatory framework; (3) human resource capacity; (4) budgetary resources; (5) the flow of information between institutions; (6) telecommunications and informatics infrastructure; (7) current connectivity and ICT usage within the government; (8) the e-business climate; (9) readiness for change within the government at all levels; and (10) other factors determining the society's readiness, including national infrastructure, political stability, economy, social situation, education, information policies and private sector developments.

During 2004, the relevant activities for the formulation of the NISP have been intensified. The CIT has signed an agreement with UNDP and the Foundation Open Society Institute Macedonia (FOSIM) to develop a National Information Society Policy **(NISP)** and Strategy (see 19_Annex_05).

The short term project objective is the formulation of the NISP and an associated Action Plan, through a truly inclusive and open consultation process. The long term objective is to ensure that ICT is harnessed in addressing poverty and strengthening and expanding e-governance based practices, and supporting the processes towards EU integration.

The project strategy is based on the eSEE Common Guidelines for NISP, prepared by the UNDP Regional Support Centre (Bratislava, Slovakia), and the South East Europe Telecommunications and Informatics Research Institute (INA, Thessalonica, Greece).

In order to coordinate and communicate the process of formulation of the NISP and the implementation the Action Plan, a Project Advisory Board (PAB), Donor Coordination Board (DCB) and Task Force (TF) have been established.

The **NISP Task Force,** consisting of representatives from the Government institutions, Universities and Research Centres, Chamber of Commerce, NGOs, MASIT (Macedonian Association of IT companies), Media and other relevant institutions, had a series of brainstorming and consultation sessions on 3 & 4 December 2004 in Skopje. In addition, a one-week training course at the e-Governance Academy in Tallinn – Estonia has been organised (13-17 December 2004).

The TF shaped the ***initial framework of the NISP*** strategic document which is built around the following pillars:

- ICT Infrastructure;
- e-Citizens;
- e-Business;
- e-Education;
- e-Health;
- e-Government;
- Information Society and Sustainable Development; and
- Regulatory environment and Legal Aspect as a Cross-cutting issue.

For each of these pillars there will be an assessment of current positions, a definition of strategic directions and policy measures and the roadmap for the implementation of key strategic projects as well as the main indicators for benchmarking will be defined.

*The main NISP **principles** are:*

- The NISP should be a nationally driven process;
- The strategy be consistent with national priorities;
- Targets must be achievable, in line with the actual human and financial capacity;
- The vision must be built on the confidence and trust of the citizens and should have a clear orientation towards improving the quality of life;
- It should be an open and participatory process, including stakeholders from different areas;
- It should follow the eSEE guidelines, the eEurope, eEurope+, eEurope 2005 action plans and benchmarking standards;
- *The ICT sector is a key factor* for economic growth and increasing employment opportunities; and
- *EU integration process* is the *transformation vehicle to bring* Macedonia from its current position to the EU society based on ICT and knowledge.

*The NISP should be **supported** by:*

- Strong political commitment;
- A public campaign for the promotion of NISP, raising awareness of the potential role of ICT in national development;
- A clear institutional infrastructure to coordinate and implement the NISP Action Plan;

- Budget provision (national) and strong support from the donor community; and
- Employment of ICT specialists in government institutions at an appropriate managerial level..

In parallel, the CIT has been working continuously in close cooperation with the donor community, taking into consideration their priorities, recommendations and experiences. The Draft NISP and the Action Plan will be communicated to the Donor Coordination Board for comments, suggestions and possible contributions.

The NISP will be developed by **March 2005** and will be presented for adoption by the Parliament no later than **June 2005.**

1.2 ICT Related Legal and Regulatory Framework

Establishing a predictable legal and non-discriminatory regulatory framework in line with EU standards is the main precondition for attracting foreign investments and obtaining significant benefits from ICT.

In general, the legal framework for the development of the IS, is in an *advanced draft stage*. The following is the current status of the legislation (at January 2005).

Legislation related to IS	EU measures	Status
Law on electronic communication	32002L0019; 32002L0020; 32002L0021; 32002L0022; 32002L0058; 32002L0077; 32002D0676; 32000R2887; 31998L0048; 31998L0034; 31998L0084;	*Advanced draft (government)* enactment expected 2005
Law on broadcasting	31989L0552; 31997L0036;	*Advanced draft (ministry);* enactment expected 2005;
Law on postal services	31987L0067;	*Initial draft (ministry)*
Protection of personal data	31995L0046;	*Enacted, January 2005*
Protection of consumers	31984L0450; 31985L0374; 31985L0577; 31987L0357; 31988L0378; 31992L0059; 31993L0013; 31994L0047; 31997L0007; 31997L0055; 31998L0006; 31998L0027; 31999L0044; 32001L0095;	*Enacted, 2004*
Copyright and related rights	31984L0450; 31985L0374; 31985L0577; 31987L0357; 31988L0378; 31992L0059; 31993L0013; 31994L0047; 31997L0007; 31997L0055; 31998L0006; 31998L0027; 31999L0044; 32001L0095;	*Enacted, January 2005;*
Access to information	31990L0313;	*Advanced draft, 1st phase;* (parliament), expected enactment 2005
Electronic signature	31999L0093;	*Enacted, 2001*
Electronic commerce/ business	32000L0031	NO
Amended criminal code		Yes
Convention on Personal Data Protection	Signed; ratified;	*Ratified: 24.01.2005*
Convention on Cyber Crime	Signed; ratified;	*Ratified: 15.09.2004;*
Independent regulatory body of telecommunications		*Yes/No;* planned for 2005
Government structure dedicated to IS development	CIT; Sector for Informatics within the government; ICT centre within the Ministry of education; IT departments within the ministries; Agency for Civil Servants; State Statistical Bureau	*In progress*

In parallel, activities related to the increasing of the institutional capacity for implementation of legislation, have been intensified. *Progress* has been made in:

- Intensifying the activities related to the telecommunication sector and liberalisation of electronic communications; operational Directorate for Telecommunications (planned for 2005);

- Establish Data Protection Directorate (planned for 2005);
- Activities in the field of regulation, organisational structure and technological environment to implement the digital signature and e-commerce legislation; and
- Further cooperation with the eSEE countries on security issues and implementation of the ratified Cyber Crime and Personal Data Protection Conventions.

1.3 ICT Benchmarking

The introduction of some *benchmarking system* has been identified as a key factor for appropriate positioning and comparison of IS developments with the eEurope benchmarking standards.

The CIT has facilitated and supported a number of surveys on the current ICT situation in the Republic of Macedonia. Data has been collected on different target groups and data analysis from different aspects has been conducted:

SEED/PSP, supported by GTZ	Strategy to develop information technology in Macedonia, with special reference to the Software Development Sector, July 2003	http://www.gtzpsp.com.mk
UNDP – Local e-Governance	ICT assessment of Macedonian municipalities. The analysis is a basis for local community development programmes in line with the current process of decentralisation, 2003	http://www.undp.org.mk
FOSIM	General Data about the situation regarding ICT, July 2004. Data and results on knowledge about ICT technologies, their usage, and the actual state of ICT in the companies in general	http://www.soros.org.mk
CBS	IT baseline statistics survey 2002-2003, with the goal of identifying the capacity and trends in the ICT Sector, July 2004	http://www.cds.com.mk

Although no consistent benchmarking methodology is implemented, data collected are valuable resources for the assessment of starting and current ICT positions and key indicators.

To ensure that the NISP and the Action Plan are in the line with EU standards, and to relate with the eEurope benchmarking indicators, the CIT initiated a statistical review of ICT usage in the Republic of Macedonia, to be conducted by the *State Statistical Bureau*, according to EUROSTAT methodology: (1) non-financial enterprises; (2) financial enterprises; (3) households; and (4) government bodies and the public sector.

Data will be collected on hardware equipment, networking, Intranet, web usage, presentation and connectivity, operating systems, databases, software, searching engines used, human resources related to ICT, trainings and investments in ICT.

Data collection is underway. The NISP TF will select a *set of indicators* in order to ensure consistency with the eSEE and eEurope benchmarking standards. The result will be incorporated into the e-Readiness component of the NISP and the Action Plan, March 2005 – June 2005.

1.4 Establishment of regional cooperation and national implementation mechanisms

The eSEE initiative builds its agenda from both, the Stability pact specific targets for co-operation and *regional development*: economic prosperity, democracy, social cohesion, stability, and regional security, and the eEurope and eEuorpe+ processes for building inclusive information society, taking into account specific situations of the region's countries.

All of these specific targets are translated into the ***European Partnership Framework (EP)*** *priorities* and the *national priorities* of the Republic of Macedonia. The integration of *ICT development programmes* into this framework plays an important role in meeting EU objectives and those of the

broader information society agenda. The **NISP** will strongly correlate these priorities in the national policies for developing information society.

The Republic of Macedonia has been working on the following priorities: (1) education and research; (2) development of local democracy; (3) fighting organised crime and corruption, drugs, migration, border management and security issues; (4) entrepreneurship and employment; and (5) Other key priorities: financial, social, health, culture, agriculture, statistics and the environment sector.

These priorities reflect *long-term reforms and in-depth programmes* that the country has initiated in order to achieve EU standards. All these reforms have incorporated both, the *regional cooperation* and the *national* implementation mechanisms.

In light of the information society developments, the ICT systems incorporated into the reforms present the *building blocks of the information society*, on *national*, *regional* and *broader level.* Building the information systems and networks within the sector reforms are the groundwork for bridging the 'digital divide', and 'European divide', for establishing information society for all.

The ICTs integrated into these priorities can serve as *vehicles for economic growth* and as *tools for development*, thus accelerating the pace of sector reforms and maximising the benefits of information technology.

Careful ***phasing of the reforms***, creating the ***institutional building blocks*** and the ***gradual incorporation of ICT*** should make progress towards European integration.

Currently, there are *significant efforts on both national and regional levels, and partial results* have been achieved in the following selected areas:

EDUCATION & RESEARCH	Educational reforms (2005-2015)
Establishing a *schools network* for all primary and secondary schools	Computerisation of all primary and secondary schools; establishing computer labs; access to internet; result 57pupils/PC for primary, and 24.5 for secondary schools; introduction of broadband to underserved areas; (For more details see 18_I_C_3)
Upgrade of Macedonian Academic and Research Network *(MARNet),* connection to ERA, GEANT	Connecting the Skopje universities campuses; connection to GEANT and ERA; continuation in the FW6; (need national budget contribution); (For more details see 19_III_C_3)
Educational programmes	Training of teachers, pupils, introducing modern technological tools; VET educational programmes, ROMA educational programme;
University reforms	Curricula, research of new technologies, e-libraries; e-business; university networks;
These projects are in line with the ongoing process of *reforms in the educational system (2005-2015).* The main goal is create a technological infrastructure to enable access, increasing the knowledge and skills of the younger generation, which is necessary in the modern competitive world. The vision of the former President Trajkovski "computerisation of all schools, enabling access to the Internet, increasing computer literacy, and introducing modern technological learning tools" is becoming a reality. Upgrading of the MARNet, and connection to regional networks, ERA, and GEANT. It is of outmost importance for the researchers; a *critical challenge is the financial contribution* of the country in participation of FW6 programme; *EP/NISP pillars: ICT infrastructure; e-Education;*	

DEMOCRACY AND RULE OF LAW	Reforms (2005-2007) (Police, Judiciary, Customs, Finance)
Regional cooperation	Established MARRI regional centre (migration, asylum regional cooperation); Regional cooperation and exchange of information in the fight against corruption, terrorism, drugs and migration and asylum; ICT support.
Police reforms	Establishing a network for the *Integrated Cross Border Management System,* connecting responsible institutions; ICT support to the *Data Protection Directorate* and the Department for the *Fight Against Organised Crime*, including computer crime; Implementing Data Protection and Cyber Crime Conventions;
Judiciary reform	*Integrated Judiciary Information System*; computerisation of courts, prisons, prosecution offices; The goal is increasing the courts effectiveness, decrease the bottlenecks; Establishing integrated network, and exchange of information between the courts, prosecutors and prisons; capacity building;
Customs reform	Establish an *Integrated Customs Information System*; a network on border lines and connection to the border management system; Connect to the New Transitional Transport Centre;
Financial sector reform	ICT Support for the *Procurement Office*, *Audit Office*, *Tax Office*; *Financial Police*; increase financial capacity.
The goal is to strengthen the capacity of the state to fulfil the *Copenhagen criteria* of democracy and the rule of law. Reforms are focused on strengthening the *institutional capacity* of the state to fully implement the rule of law, on both *national* and *regional levels.* From the ICT aspect, the goal is to establish the *technical infrastructure, networks and data infrastructure*, in order increase effectiveness, the exchange of information, and the development of integrated functions between the relevant institutions, as well as *regional cooperation* in the fight against corruption, terrorism, drugs, asylum migration, etc. *EP/NISP pillars: ICT infrastructure; eGovernment;*	

LOCAL DEMOCRACY	Decentralisation (2005-2007)
Development of local democracy	Local e-Governance; establishing PAP (19ICT centres), and citizen information centres (17CIC); establishing different forms of communication with the citizens; introducing basic services (tax, birth certificates); established 27 web sites of the communities; UNDP: http://www.undp.org.mk/ictc/ CIC: http://www.lgrponline.com/ LSG: http://www.logincee.org/;
Increase the capacity to perform new responsibilities	Set of programmes/projects to be developed, in line with the detailed decentralisation plan that should be completed in March 2005: transfer of responsibilities in education, urban, cultural, social, environment and financial sectors.
Network of LSG and cooperation	Cooperation in the regional Network of Local Governments from SEE: http://www.nalas-see.org/
The goal is the development of local democracy and balanced regional development; creating an environment for economic growth and poverty reduction. From the ICT aspect, the goals are to: bridge the digital divide gap, enable internet access to local communities, improve ICT literacy, enable different forms of communication with the citizens; and introduce services. The design of balanced central/local infrastructure and the development of services with a consistent data infrastructure requires careful design in order to avoid the development of fragmentary IT systems and the duplication of services. Therefore, the design and implementation of replicable models should be considered. The activities related to ongoing *decentralisation reform* and the transfer of responsibilities to the local communities, are critical challenges for the country. There is a need to focus projects on increasing the administrative capacity of the municipalities to perform the new functions. A gradual phased approach is needed, in order to achieve balanced regional developments. *EP/NISP pillars:ICT infrastructure; eGovernment; eCitizen;*	

ENTERPRENEURSHIP AND EMPOLYMENT	Economic growth, competitiveness, knowledge and skills, job creation and poverty reduction
Business portals	Regional business portal (SEEbiz.net): http://www.seebiz.net.mk Euro Business Trade portal: http://www.eurobc.com.mk Chamber of Commerce: http://www.mchamber.org.mk Regional Euro info correspondent centre: http://www.euroinfo.org.mk Tourism Portal: http://www.exploringmacedonia.com Job seeking/offering portal: http://www.zvrm.gov.mk
Industry clusters	Establishing industry clusters (IT, wine, tourism, lamb and cheese) to attract investments; Cluster ICT companies; Digital Media Focus Claster; MCA: http://www.mca.org.mk/
Competitiveness	Projects to increase the competitiveness of SMEs and create jobs; training programme for SMEs; knowledge and skills development. MCA: http://www.mca.org.mk/
Technological parks	Establish synergy between research and private sector: *Bitola Regional centre for technology transfer which would benefit from a donation*: http://www.etc.org.mk
Training of unemployed	Training programmes for pre-qualification of unemployed in different fields, including ICT; increased knowledge and skills.
Job creation is a top priority for Macedonia's economic development activities. ICT is a proven contributor to economic growth, enabling improved efficiency in business processes and increased access to markets, for example for SMEs. Using ICT potential for improving skills, innovative activities and different ways of communication will enable *job creation*. ICT cabling, telecommunication networks, broadband services, new technologies and new partnerships should be recognised as *investments.* The following policy areas should *promote* the adoption of ICT in the economy: (1) investments in knowledge and skills; (2) enhancements to the flexibility of the labour market and competitiveness; (3) fostering innovative activities; (4) improving the regulatory framework for e-business; and (5) promoting and investing in new forms of partnership (incubators, clusters, technological parks, transfer of technology centres etc.). *EP/NISP pillars: ICT infrastructure; e-business;*	

QUALITY OF LIFE	Social, Health, Culture, Agriculture, Environment, Cadastre, Statistics
Social reforms	Labour market reform, creating flexible working time; Social protection network; create services; ICT support; Job seeking: http://www.zvrm.gov.mk; Pension Reform: http://mapas.gov.mk;
Health reforms	Establishing IT systems within the health system; Support the Health Fund; creation of services for public health;
Culture	Digital heritage, e-libraries; public access points in libraries; digital content; Electronic lingual corps; Culture: http://www.culture.in.mk; National library: http://nubsk1.nubsk.edu.mk/cobiss/;
Agriculture	Establish the agriculture information system; animal registration, wine; plants;
Cadastre	Establishment of cadastre and real estate register - *basic register* for developing *e-services;*
Environment	EIONET – regional cooperation; http://nfp-mk.eionet.eu.int/
Statistics	Regional cooperation: Statistics – EUROSTAT;
To improve the quality of life and protect the values of the society; support for accessibility; develop services; ICT aspect: ICT infrastructure and networks; introduce basic services on central/ local level; enable widespread access; improve social, culture, environment networks; develop and introduce ICT system in health, agriculture, and the Cadastre register; Develop mechanism to evaluate and indicators for comparison, on different aspects, including the ICT benchmarking. *EP/NISP pillars: e-citizen; eHealth; eGovernment; ICT infrastructure;*	

All these projects are in line with the European Partnership short and long term priorities (2003-2007), and national priorities. The synergy between these key areas and ICT projects is obvious.

Although *there is* ***progress*****,** the *complexity of the issues* and the *national context* call for *careful* incorporation of targeted ICT projects into the *sector reform priorities*, aligned with the *broader national priorities*.

The critical challenge is to integrate the ICT systems, taking into consideration the *limited capacity* of the country. The Government must consider and balance the *limited national budget and institutional capacity for implementation* against the *national priorities* and broader *International Community priorities.*

Streamlined, long term **International Community (IC)** support is of utmost importance in order to pave the way for long term sustainable development, sector reforms and information society developments, reflected in the EU objectives.

Key supporters of the IC assistance are: EC, EIB, EBRD, UNDP, USAID, WB, UNESCO, UNECE, GTZ, DFID, bilateral and multilateral assistance programmes and grants (Netherlands, Norway, Germany, France, Italy, Switzerland, Austria, Japan, China etc).

The NISP Action Plan will appropriately relate these priorities and ask the IC for support.

1.5 Active promotion of IS for development

The government is the initiator and is responsible for establishing the environment for IS development and the e-government.

Some of the important initiatives are:

- In December 2003, a strategic partnership agreement has been signed between the Government and the *Microsoft Corporation*, aiming to: (1) regulate software licensing; (2) develop IT knowledge and stimulate the IT industry; (3); ensure enforcement of intellectual property law; and (4) increase the use of electronic media to serve the government's needs.

This is part of the government strategies to build *partnerships*, in order to promote and attract investments for information society developments and economic growth.

- In September 2004, the Government established the new *Sector for Information Technology* within the General Secretariat, with responsibility for implementation of the NISP Action Plan.

- In October 2004, the *Concept of e-government* has been presented to the Government.

e-Government: Conceptual framework

The broad concept of the e-government includes many aspects of the society, and calls for partnership between the government, businesses and citizens.

But, the e-government calls firstly for a fundamental transformation of the way the government works and people think. Therefore, the state administration has a *key role* in the implementation of e-government. The transformation of the administration towards the e-administration is intrinsic part of the public administration reform.

Some of the benefits expected from the e-government concept and the IS developments are responsible and democratic government, greater confidence amongst citizens, and more efficient and transparent work of the administration, with services oriented towards users and businesses.

The current situation within the government institutions is not suitable to introduce ICT solutions for e-administration and services. There are a number of issues: Fragmented ICT systems, lack of IT staff, not completed government network, low level of ICT literacy, paper/stamp oriented administration, resistance and administrative obstacles at all levels.

Such a poor situation requires a deep, *long term reform process of transformation* of the administration towards e-administration.

The **critical challenges** for e-government/e-administration are:

- Consistent long term policy measures;
- Planning, budgeting and monitoring capabilities;
- Institutional capacity;
- ICT capacity;
- Linkages between the governmental institutions, both horizontal and vertical; and
- The legal framework and procedures.

These critical challenges are all components of the public administration reform agenda. It is clear that the *transformation of the administration* is not a simple, one-off project, but a long term process that requires the involvement and collaboration of all. The complexity, synergies and other aspects of e-government, internally (the back-office) and externally (the front-office), call for the careful design of *essential target projects* for public administration reform that should also address these challenges.

There is a need for a *phased approach and the gradual implementation of ICT projects*, *in parallel* with building the *institutional, technical and managerial capacity* and the *transformation* of the administration itself.

e-Government – recent achievements

Sector for Information Technology – General Secretariat

The government recently established the new Sector for Information Technology, in line with the eSEE guidelines for NISPs and TOR for governmental structure to implement these policies.

Sector for Information Technology (SIT) is one of the 9 sectors in the General Secretariat of the Government of the Republic of Macedonia.

The Sector for Information Technology comprises of the following units:

- Unit for Organisation, Planning and Development;
- Unit for Information Structure and Exploitation and
- Unit for Web Page Support and Multimedia.

SITs responsibilities are:

- prepares, enforces and follows the e-Government guidelines; organisational, methodological and analytical affairs in the field of designing of the information system of the Government; provides expert opinions concerning the information technology procurement requirements; monitors the development of new information technologies and studies the requirements for introduction of new information services;

- provides expert opinions and training in respect to planning and development of information systems, project management, monitoring, maintaining of the required quality of the prepared application solutions and standard tools; proposing standards in the field of information and communication technologies;
- info-security of the information system; manages the information system technical base; prepares the joint bases and standards for Internet maintenance in the Government and the General Secretariat, and maintains the up-to-date communication of the General Secretariat with the citizens through the government portal.

According to the Rulebook on Systematisation of Job Posts of the General Secretariat of the Government of the Republic of Macedonia, 31 job positions are foreseen in the Sector for Communication Technology.

The Sector has two employees and the activities for its further staffing have commenced (with employment of new persons through public announcements and re-assignment of appropriate personnel from other state institutions). The Plan for its relevant upgrading is being prepared along with the ongoing equipping activities.

WG –ICT: Working group (building capacity)

A working group, ICT_WG consisting of ICT staff from all of the ministries has been established. It works within the Twinning project – Slovenian Government, focused on the national legislative process across the state institutions.

Supporting projects focused on different aspects of the public administration, are as follows: DFID PAR-UK Government; NORMAK-Norwegian Government; and UNDP.

The aim is to ensure a common framework for the overall ICT situation within the state administration, problems, needs and possible solutions, prerequisites for the introduction of e-administration, ensuring collaboration between institutions and team building, and increasing the general *ICT capacity* across institutions. Specific objectives are as follows:

ICT_WG	Activities : (http://www.sei.gov.mk/twinning)
Increasing the ICT capacity in the institutions	(1) ICT equipment, critical needs; (2) Training of ICT staff, system administration (50 trainees); (3) Training of target user groups – legal departments, on basic ICT skills, and specific related to the legislative process (200 trainees);
ICT support to the legislation process	(1) Analysis of the legislative process, including the necessary legal changes; (2) establish single in/out point for information/document flow across the institutions; (3) Support the NPAL/ interfaces and the register;
ICT departments; government network	(1) Analysis of current ICT systems, critical problems and needs within the state administration; (2) organisational issues; (3) managerial issues; (4) position of ICT staff within; (5) government network, problems, solutions;
ICT standardised procedures	(1) Technical guidelines and standardised procedures for maintenance of LANs; (2) Public procurement procedures, maintenance contracts and legal aspects;
ICT project management	(1) Matrix of current/ planned ICT projects, harmonise priorities with the EP; (2) ICT structured expenditure; (3) Incorporate the ICT plans into the budget plans;

The outputs of the ICT_WG should serve for further analysis, legal changes, government decisions, and the design of new projects, in order to increase the *administrative capacity* and create an *environment* (the back-office) for the implementation of e-government/ e-administration services.

e-Government services

It is the responsibility of the government to play a pro-active role in developing e-government services and promoting IS developments. The government is pressed to present its work on-line, in an open, participatory and user/ citizen oriented manner.

The government has made *initial steps* in order to present its work on-line and introduce the provision of basic services on-line (the front-office):

Web presentation of government institutions	Improved web sites of the ministries, offering basic information services, with initial advanced services, such as: downloading forms, applications, call centres;	In progress
Ministry of Finance http://www.finance.gov.mk;	Forum; Audio; Photo; Survey; Forms Download;	In progress
Call centers http://www.customs.gov.mk http://www.mvr.gov.mk;	Call centers of the Ministry of Interior, and the Customs; Video; Interactive Tariff; Download; Guidelines; Interactive MAKCIS	In progress
Job seeking (http://www.zvrm.gov.mk)	Portal for job seeking of the State Employment Agency;	In progress
Web presentation of SEI (http://www.sei.gov.mk)	Interactive web site of the SEI; email, forum, quiz, interactive (NPAL) system to support the national program for approximation of legislation; Searchable donor assistance database (CDAD);	In progress
Web presentation of Parliament (http://www.sobranie.mk)	The parliament improved its web site, offering basic services, and audio recording from the sessions; Parliamentary questions;	In progress
Government portal (www.gov.mk)	Establishing base for governmental portal (priorities); Questions to the Government; Annual Government Programme; Government Session; Services, Jobs, Police/ application;	Planned/ priority; design/ testing
TAX system (http://www.ujp.gov.mk)	Tax information system;	Planned/ priority
Public procurement	Design of public procurement portal, to put all government tenders on line;	Planned/ priority;

Both parts of the e-government paradigm, the back-office and the front-office, are under pressure from internal and external factors: the citizen, businesses and the administration itself. Therefore, the *widespread adoption* of e-government services will set the *pace* for moving information society developments and e-government forward. In that respect, it is very important to *select and prioritise* e-government projects, in the *national context* and within the *actual capacity* for implementation. The expectations of emerging results and the goals of qualitative change should be very careful balanced.

The e-government is a building block of the NISP and of the Action Plan. Strategies, policy measures, sequenced actions proposed in NISP, as well as priority projects, will be the cornerstone of e-government developments.

2. What body is in charge of this policy, including its implementation?

The government is obligated to create *institutional structure* and *administrative capacity* in order to implement the NISP Action Plan.

Some of the *critical challenges* are as follows:

- Strong Cabinet-level *leadership*, with long-term political commitment and explicit support reflected in decisions, actions and long-term financial support;
- *Collaboration, building support* and shared understanding between different levels of officials, executives and administration, *within* and *across* governmental institutions;

- Building *planning, budgeting and monitoring capabilities*; Building ICT projects management, including financial management;
- Building *capacity to manage, implement and maintain* the e-government service, including organisational, technical and staffing issues;
- Building of *skills, knowledge* within the administration, and building *transfer of knowledge*, between different levels, within and across governmental institutions;

Currently, there are several public bodies that represent the *institutional infrastructure* and administrative capacity for planning, implementation and supporting the IS development:

- The top Cabinet level officials, *policy and decision maker*s;
- The *Committee for Information Technology IT (CIT)*, a body, with responsibility to advise the Government on strategic transformation from the current position to the e-government, established in December 2002;
- The recently established *Sector for Information Technology(IT)* within the General Secretariat of the Government of the Republic of Macedonia, responsible for implementation of the NISP Action Plan, September 2004;
- The *Sector for Informatics Logistics*, in the Ministry of Education of , responsible for maintenance of the government network, and implementation of ICT projects related to common functions;
- The *IT departments* within the line ministries, responsible for planning and implementation of ICT projects;
- The *Ministry of Transport and Communications*, and the *Telecommunications Directorate*, responsible for telecommunications infrastructure and market regulation;
- Civil Servants' CS' Agency (ACS), as in-service training centre for civil servants' capacity building;
- State Statistical Office
- Data Protection Directorate (PD), Bureau for Classified Information (CI), Public Procurement Office, State Auditing Bureau;

Several other institutions and bodies are also involved in the development and implementation of the IS:

- Several other ministries responsible for IS development, e.g. Ministry of Education, Ministry of Interior, Ministry of Finance, Ministry of Defence, etc;
- Sector for European Integration, as key body for co-ordination and monitoring of the European Partnership Framework, responsible for strategic planning and directing of projects related to the EU process;
- The universities play an important role ("Ss. Cyril and Methodius" University, "St. Kliment Ohridski" University, and South East European University (SEE University)).
- Professional IT organisations, MASIT
- NGOs
- Media

The clear institutional structures, responsible for coordination and implementation will be completed as one of the outcomes of the NISP and the Action Plan **(June 2005).**

3. What is the budget allocated to the policy and what are the implementation mechanisms?

The budgetary policy and coordination of the budget on the state information systems is performed by the Government, the Ministry of finance and the state institutions.

A new administrative body, the *Sector for Information Technology,* within the General Secretariat of the Government is in charge of activities on the operational side of the ICT policy. Administratively, those activities are financed with the budget of the General Secretariat of the Government. In additional for 2005, there is a separate budget line within the Budget of General secretariat of the Government, of *14 million MKD* aimed towards supporting of the implementation of NISP and the Action Plan.

Furthermore, the *Sector for Informatics Logistic*, in the Ministry of Education and Science, has a separate budget for maintaining the governmental network and the common functions of the ministries. *5 million MKD* were allocated in the 2005 budget.

Each of the *ministries* plans its own budget. ICT costs for development, implementation and the running expenses of ICT systems, are included into the budgetary items.

It is very difficult to estimate the precise budget allocated for ICT in the national budget, due to the implicit nature and synergy effects of ICT usage, as well as the non-consistent planning framework and structured ICT expenditures.

The budget allocated for development, implementation, and maintenance of ICT projects within the state institutions, is roughly estimated to be *around **0.4%** of the annual national budget, with declining tendency each year*. Continuous budgetary restrictions led to inability for *long-term planning* and appropriate *maintenance* of the current ICT systems, up to a critical level, with long-term consequences. For comparison, developing countries, allocate around (1-3%) from the annual budget.

The *long-term reforms*, that the country initiated in order to move forward with the European integration process, are associated with *risks and costs*, overloading the *limited national budget*. In that respect, the important challenge for the government is to increase the national ICT budget, in a *short period*.

The Republic of Macedonia is programming and streamlining the International Community financial support, taking into consideration these challenges. Therefore, *integration of ICT projects* within the *sector reforms* should ensure long-term International Community (IC) support for development, long-term focusing on ICT projects and sustainability of the information society developments.

Furthermore, in order to promote and attract investments, the government builds strategic *partnerships* that should contribute to the economic growth and the information society developments.

Gradual implementation of ICT projects, associated with appropriate policy measures for IS development, and at the same time *increasing of the institutional capacity* to plan, manage and implement projects, should create space for *gradual increasing of the national ICT budget.*

The incentive for further funding of ICT projects should be: successful implementation, taking into consideration the impact and benefits of ICT usage, reflected in overall progress of the reforms against the EU requirements, as well as IC and national broader objectives.

In the NISP Action Plan, a coordinated action is planned for the promotion of the budget needs for its implementation. This is to be presented to the *Prime Minister Cabinet* and the *Ministry of Finance*. Budget policy for supporting NISP Action Plan and appropriate implementation mechanisms are intrinsic part of the process of building of needs. These needs-related activities are being considered in strong correlation with the national priorities and the European Partnership framework, as well as interventions made or planned from the donor community.

B. Basic data on Internet access

1. Please provide Internet access rates for:
(a) schools, both primary and secondary education;
(b) households;
(c) enterprises, per size (SMEs, medium, large) and sector if possible.

Number of Internet users with Internet access - around 124,948; dial-up access – 63,557.

Price per 1 minute local telephone traffic is given bellow:

Intensive traffic period (06:00-18:00) Monday to Saturday	Low traffic period (18:00-24:00) Monday to Friday (Sunday 06:00 – 24:00)	Night traffic period (24:00 – 06:00) All weekdays
1,00	0,60	0,60
Source: JSC MT Note: 18% VAT is not included in the price of packages.		

The following are the biggest Internet Service Providers (**ISPs**) in the Republic of Macedonia, which cover 95% of the market: "JSC Macedonian Telecommunications" **(JSC MT)**, "Macedonia On-line" **(MOL)**, **Unet** and **On.net**.

The ISPs offer different types of Internet access, as given in the table bellow:

Type of access ISP	Pre Paid Access	Post Paid Access	ADSL	Cable Access	Leased lines
JSC MT	☑	☑	☑°		☑
MOL	☑	☑°		☑°	☑
UNET	☑	☑°			☑
On.net	☑	☑°		☑	☑

° special pricing policy for the education sector, including primary and high school education

It should be emphasized that certain public schools which participate in some projects of USAID and JSC MT, have free Internet access.

There is no reliable data on prices for internet access for the sectors of business and education separately. The ISPs offer different packages, discounts, contractual arrangements, and different methodologies for different type of internet access. Some of the ISPs offer approximately 20% discount for the educational sector.

In order to acquire *rough, general picture* of the price levels, for some of the types of access offered, a rough calculation of the average prices has been made. Average prices have been calculated on pre-paid, post-paid and leased line internet access. For each type of access, the following are the *estimated average price*s:

- Pre-paid dial-up access, the average price for unlimited access, for one month, is approximately *1.235,00 MKD/month*;
- Post-paid dial-up access, the average price for 30hours/month, for 64Kbps access, is approximately *1.530,00 MKD/month*, for *legal entities;*
- Post-paid dial-up access, for 30hours/month, 64Kbps, the average price is approximately *1.263,00 MKD/month,* for *education*;
- Leased lines, for 64Kbps, monthly contracts, the average price is *34.931,00 MKD/month*; single subscription fee is not included;

*VAT and tariff for local telephone are not included;

Please note that calculated data on average prices may not be accurate, do not present the real price policy of the ISPs, and should not be considered as official.

Currently, Statistical Bureau is conducting a survey on ICT usage, according the EUROSTAT methodology. There are four questionnaires for: (1) non-financial institutions; (2) financial institutions; (3) households; (4) public sector.

Data analysis should give more reliable data on prices for internet access, for each of the sectors required.

The survey is to be realised in the period January - March 2005, as a part of NISP.

Detailed tables on prices for Internet access, for each of the ISPs, are given below:

The prices are in MKD.

1 JSC Macedonian Telecommunications (JSC MT)

1.1 Pre paid dial-up access

Regarding Internet access for natural persons, JSC MT offers 5 different types of Internet cards, valid for a period of 60 days, for modem 56Kbit and ISDN 64Kbit/s, with 1 e-mail address, web mail, time check, technical support 24/7, as follows:

Internet hours	Price
2	69,00
5	160,00
10	310,00
20	610,00
30	910,00
Source: JSC MT Note: 18% VAT is not included in the price of packages; the tariff for local telephone impulse is not included in the price.	

1.2 Post paid dial-up access

Connection of a personal computer or a local area network to the Internet through a phone line, for natural persons and legal entities, as well as for the sector of education, is as follows:

- Modem 56k (analogue data transfer)
- ISDN line (digital data transfer)

The basic "Surfer" package, that is offered without payment of monthly subscription fees, contains the following: one e-mail address (username@mt.net.mk), anti-virus protection of all e-mail messages and 24-hour support on a free of charge telephone number.

Package	Internet hours	Mail2SMS messages	Monthly subscription fee	56/64 kbps Price*		
				Intensive traffic (06:00-18:00 Monday to Friday)	Low traffic 1 (18:00-24:00 Monday to Friday and 06:00-24:00 during weekends and state holidays)	Low traffic 2 (24:00-00:00 all weekdays)
Surfer	0	0	0	1,60	0,80	0,35
Surfer +5	5	5	250	1,40	0,70	0,35
Surfer +10	10	10	490	1,20	0,60	0,35
Surfer +20	20	20	950	1,10	0,55	0,35
Surfer +30	30	30	1.390	1,00	0,50	0,35

Source: JSC MT
Notes: 18% VAT is not included in the price of packages; the tariff for local telephone impulse is included in the price; * prices per additional minutes (per using hours of the packages); For Internet access through ISDN 128Kbit/s, prices are two times higher than the prices for ISDN 64Kbit/s and modem 56Kbit/s.

1.3 ADSL

JSC MT provides **discounts for the sector of education,** depending on the package and the promotional activities of the company for increasing Internet usage.

For natural persons:
Access speed 384/128Kbps (download/upload) with: one e-mail address, five Mail2SMS, five WEB2SMS, dynamic IP address, USB modem or Ethernet modem, for one computer access

Pricelist		Discounts			
Single subscription fee for unlimited contract for installation	Monthly subscription fee for unlimited contract	Single subscription fee for one year contract for installation	Monthly subscription fee for one year contract	Single subscription fee for two years contract for installation	Monthly subscription fee for two years contract
4.900,00	2.990,00	3.900,00	2.690,00	3.900,00	1.990,00

Source: JSC MT
Note: 18% VAT is not included in the price of packages; no extra charges.

For legal entities:

Access speed 512/128Kbps (download/upload) with: one WIN 5 hosting package, ten e-mail addresses, ten Mail2SMS, ten WEB2SMS, dynamic IP address, Ethernet modem, three computer access.

Pricelist		Discounts			
Single subscription fee for unlimited contract for installation	Monthly subscription fee for unlimited contract	Single subscription fee for one year contract for installation	Monthly subscription fee for one year contract	Single subscription fee for two years contract for installation	Monthly subscription fee for two years contract
7.500,00	6.990,00	6.000,00	6.290,00	6.000,00	5.590,00

Source: JSC MT
Note: 18% VAT is not included in the price of packages; no extra charges.

Access speed 1024/256Kbps (download/upload) with: one WIN 10 hosting package, twenty Mail2SMS, twenty WEB2SMS, dynamic IP address, Ethernet router and access for ten computers.

Pricelist		Discounts			
Single subscription fee for unlimited contract for installation	Monthly subscription fee for unlimited contract	Single subscription fee for one year contract for installation	Monthly subscription fee for one year contract	Single subscription fee for two years contract for installation	Monthly subscription fee for two years contract
9.500,00	16.990,00	7.600,00	15.290,00	7.600,00	13.590,00

Source: JSC MT
Note: 18% VAT is not included in the price of packages; no extra charges.

1.4 Internet access through leased lines

Access speed: from 64 Kbit/sec to 2 Mb.

All packages are of guaranteed speed and include 10 e-mail addresses, WEB hosting up to 10 MB, 16 IP addresses (initially, more if needed), MRTG overall traffic monitoring and user support 24 hours / 7 days on a free of charge telephone number. The packages and prices are given bellow; the prices are in MKD, 18% VAT is not included in the price, single subscription fee (as in the price list of "MT") is charged only for the leased line (Digital leased Line - DLL). The single subscription fee is not charged for a three-year contract.

Subscription fees for unlimited contracts			
Speed	Leased lines	Access	Total
64 Kbps	8.554,00	35.350,00	43.904,00
128 Kbps	11.176,00	65.660,00	76.836,00
192 Kbps	16.568,00	90.020,00	106.588,00
256 Kbps	18.500,00	115.960,00	134.460,00
320 Kbps	21.540,00	139.460,00	161.000,00
384 Kbps	23.380,00	163.150,00	186.530,00

448 Kbps	25.105,00	186.150,00	211.255,00
512 Kbps	26.830,00	223.180,00	250.010,00
576 Kbps	28.270,00	246.680,00	274.950,00
640 Kbps	29.710,00	269.650,00	299.360,00
704 Kbps	31.150,00	292.150,00	323.300,00
768 Kbps	32.580,00	314.250,00	346.830,00
832 Kbps	33.960,00	336.020,00	369.980,00
896 Kbps	35.340,00	357.460,00	392.800,00
960 Kbps	36.720,00	378.580,00	415.300,00
1024 Kbps	38.100,00	399.410,00	437.510,00
1088 Kbps	47.060,00	412.420,00	459.480,00
1152 Kbps	48.060,00	433.120,00	481.180,00
1216 Kbps	49.060,00	453.620,00	502.680,00
1280 Kbps	50.060,00	473.820,00	523.880,00
1344 Kbps	51.060,00	493.920,00	544.980,00
1408 Kbps	50.680,00	513.720,00	564.400,00
1472 Kbps	51.680,00	533.420,00	585.100,00
1536 Kbps	52.680,00	552.920,00	605.600,00
1600 Kbps	53.680,00	572.220,00	625.900,00
1664 Kbps	54.680,00	591.420,00	646.100,00
1728 Kbps	55.680,00	610.420,00	666.100,00
1792 Kbps	56.680,00	629.320,00	686.000,00
1856 Kbps	57.680,00	648.120,00	705.800,00
1920 Kbps	58.680,00	666.720,00	725.400,00
1984 Kbps	59.680,00	685.220,00	744.900,00
2048 Kbps	62.160,00	703.520,00	765.680,00

Source: JSC MT.

	Prices for one year contract								
	Monthly subscription fee			Monthly subscription fee for advance payment for 6 months			Monthly subscription fee for advance payment for 12 months		
speed	Leased lines	Access	Total	Leased lines	Access	Total	Leased lines	Access	Total
64 Kbps	8.554,00	23.913,00	32.467,00	8.554,00	22.717,35	31.271,35	8.554,00	21.521,70	30.075,70
128 Kbps	11.176,00	45.261,00	56.437,00	11.176,00	42.997,95	54.173,95	11.176,00	40.734,90	51.910,90
192 Kbps	16.568,00	61.830,00	78.398,00	16.568,00	58.738,50	75.306,50	16.568,00	55.647,00	72.215,00
256 Kbps	18.500,00	80.163,00	98.663,00	18.500,00	76.154,85	94.654,85	18.500,00	72.146,70	90.646,70
320 Kbps	21.540,00	96.534,00	118.074,00	21.540,00	91.707,30	113.247,30	21.540,00	86.880,60	108.420,60
384 Kbps	23.380,00	113.265,00	136.645,00	23.380,00	107.601,75	130.981,75	23.380,00	101.938,50	125.318,50
448 Kbps	25.105,00	129.510,00	154.615,00	25.105,00	123.034,50	148.139,50	25.105,00	116.559,00	141.664,00
512 Kbps	26.830,00	155.853,00	182.683,00	26.830,00	148.060,35	174.890,35	26.830,00	140.267,70	167.097,70
576 Kbps	28.270,00	172.521,00	200.791,00	28.270,00	163.894,95	192.164,95	28.270,00	155.268,90	183.538,90
640 Kbps	29.710,00	188.802,00	218.512,00	29.710,00	179.361,90	209.071,90	29.710,00	169.921,80	199.631,80
704 Kbps	31.150,00	204.741,00	235.891,00	31.150,00	194.503,95	225.653,95	31.150,00	184.266,90	215.416,90
768 Kbps	32.580,00	220.401,00	252.981,00	32.580,00	209.380,95	241.960,95	32.580,00	198.360,90	230.940,90
832 Kbps	33.960,00	235.827,00	269.787,00	33.960,00	224.035,65	257.995,65	33.960,00	212.244,30	246.204,30
896 Kbps	35.340,00	251.010,00	286.350,00	35.340,00	238.459,50	273.799,50	35.340,00	225.909,00	261.249,00
960 Kbps	36.720,00	265.968,00	302.688,00	36.720,00	252.669,60	289.389,60	36.720,00	239.371,20	276.091,20
1024 Kbps	38.100,00	280.710,00	318.810,00	38.100,00	266.674,50	304.774,50	38.100,00	252.639,00	290.739,00
1088 Kbps	47.060,00	288.468,00	335.528,00	47.060,00	274.044,60	321.104,60	47.060,00	259.621,20	306.681,20
1152 Kbps	48.060,00	303.228,00	351.288,00	48.060,00	288.066,60	336.126,60	48.060,00	272.905,20	320.965,20

1216 Kbps	49.060,00	317.718,00	366.778,00	49.060,00	301.832,10	350.892,10	49.060,00	285.946,20	335.006,20
1280 Kbps	50.060,00	332.118,00	382.178,00	50.060,00	315.512,10	365.572,10	50.060,00	298.906,20	348.966,20
1344 Kbps	51.060,00	346.428,00	397.488,00	51.060,00	329.106,60	380.166,60	51.060,00	311.785,20	362.845,20
1408 Kbps	50.680,00	360.558,00	411.238,00	50.680,00	342.530,10	393.210,10	50.680,00	324.502,20	375.182,20
1472 Kbps	51.680,00	374.508,00	426.188,00	51.680,00	355.782,60	407.462,60	51.680,00	337.057,20	388.737,20
1536 Kbps	52.680,00	388.368,00	441.048,00	52.680,00	368.949,60	421.629,60	52.680,00	349.531,20	402.211,20
1600 Kbps	53.680,00	402.138,00	455.818,00	53.680,00	382.031,10	435.711,10	53.680,00	361.924,20	415.604,20
1664 Kbps	54.680,00	415.728,00	470.408,00	54.680,00	394.941,60	449.621,60	54.680,00	374.155,20	428.835,20
1728 Kbps	55.680,00	429.228,00	484.908,00	55.680,00	407.766,60	463.446,60	55.680,00	386.305,20	441.985,20
1792 Kbps	56.680,00	442.638,00	499.318,00	56.680,00	420.506,10	477.186,10	56.680,00	398.374,20	455.054,20
1856 Kbps	57.680,00	455.958,00	513.638,00	57.680,00	433.160,10	490.840,10	57.680,00	410.362,20	468.042,20
1920 Kbps	58.680,00	469.188,00	527.868,00	58.680,00	445.728,60	504.408,60	58.680,00	422.269,20	480.949,20
1984 Kbps	59.680,00	482.328,00	542.008,00	59.680,00	458.211,60	517.891,60	59.680,00	434.095,20	493.775,20
2048 Kbps	62.160,00	495.315,00	557.475,00	62.160,00	470.549,25	532.709,25	62.160,00	445.783,50	507.943,50

Source: JSC MT.

Prices for two year contract									
	Monthly subscription fee			Monthly subscription fee for advance payment for 6 months			Monthly subscription fee for advance payment for 12 months		
speed	Leased lines	Access	Total	Leased lines	Access	Total	Leased lines	Access	Total
64 Kbps	8.126,30	19.927,50	28.053,80	8.126,30	18.931,13	27.057,43	8.126,30	17.934,75	26.061,05
128 Kbps	10.617,20	37.717,50	48.334,70	10.617,20	35.831,63	46.448,83	10.617,20	33.945,75	44.562,95
192 Kbps	15.739,60	51.525,00	67.264,60	15.739,60	48.948,75	64.688,35	15.739,60	46.372,50	62.112,10
256 Kbps	17.575,00	66.802,50	84.377,50	17.575,00	63.462,38	81.037,38	17.575,00	60.122,25	77.697,25
320 Kbps	20.463,00	80.445,00	100.908,00	20.463,00	76.422,75	96.885,75	20.463,00	72.400,50	92.863,50
384 Kbps	22.211,00	94.387,50	116.598,50	22.211,00	89.668,13	111.879,13	22.211,00	84.948,75	107.159,75
448 Kbps	23.849,75	107.925,00	131.774,75	23.849,75	102.528,75	126.378,50	23.849,75	97.132,50	120.982,25
512 Kbps	25.488,50	129.877,50	155.366,00	25.488,50	123.383,63	148.872,13	25.488,50	116.889,75	142.378,25
576 Kbps	26.856,50	143.767,50	170.624,00	26.856,50	136.579,13	163.435,63	26.856,50	129.390,75	156.247,25
640 Kbps	28.224,50	157.335,00	185.559,50	28.224,50	149.468,25	177.692,75	28.224,50	141.601,50	169.826,00
704 Kbps	29.592,50	170.617,50	200.210,00	29.592,50	162.086,63	191.679,13	29.592,50	153.555,75	183.148,25
768 Kbps	30.951,00	183.667,50	214.618,50	30.951,00	174.484,13	205.435,13	30.951,00	165.300,75	196.251,75
832 Kbps	32.262,00	196.522,50	228.784,50	32.262,00	186.696,38	218.958,38	32.262,00	176.870,25	209.132,25
896 Kbps	33.573,00	209.175,00	242.748,00	33.573,00	198.716,25	232.289,25	33.573,00	188.257,50	221.830,50
960 Kbps	34.884,00	221.640,00	256.524,00	34.884,00	210.558,00	245.442,00	34.884,00	199.476,00	234.360,00
1024 Kbps	36.195,00	233.925,00	270.120,00	36.195,00	222.228,75	258.423,75	36.195,00	210.532,50	246.727,50
1088 Kbps	44.707,00	240.390,00	285.097,00	44.707,00	228.370,50	273.077,50	44.707,00	216.351,00	261.058,00
1152 Kbps	45.657,00	252.690,00	298.347,00	45.657,00	240.055,50	285.712,50	45.657,00	227.421,00	273.078,00
1216 Kbps	46.607,00	264.765,00	311.372,00	46.607,00	251.526,75	298.133,75	46.607,00	238.288,50	284.895,50
1280 Kbps	47.557,00	276.765,00	324.322,00	47.557,00	262.926,75	310.483,75	47.557,00	249.088,50	296.645,50
1344 Kbps	48.507,00	288.690,00	337.197,00	48.507,00	274.255,50	322.762,50	48.507,00	259.821,00	308.328,00
1408 Kbps	48.146,00	300.465,00	348.611,00	48.146,00	285.441,75	333.587,75	48.146,00	270.418,50	318.564,50
1472 Kbps	49.096,00	312.090,00	361.186,00	49.096,00	296.485,50	345.581,50	49.096,00	280.881,00	329.977,00
1536 Kbps	50.046,00	323.640,00	373.686,00	50.046,00	307.458,00	357.504,00	50.046,00	291.276,00	341.322,00
1600 Kbps	50.996,00	335.115,00	386.111,00	50.996,00	318.359,25	369.355,25	50.996,00	301.603,50	352.599,50
1664 Kbps	51.946,00	346.440,00	398.386,00	51.946,00	329.118,00	381.064,00	51.946,00	311.796,00	363.742,00
1728 Kbps	52.896,00	357.690,00	410.586,00	52.896,00	339.805,50	392.701,50	52.896,00	321.921,00	374.817,00
1792 Kbps	53.846,00	368.865,00	422.711,00	53.846,00	350.421,75	404.267,75	53.846,00	331.978,50	385.824,50
1856 Kbps	54.796,00	379.965,00	434.761,00	54.796,00	360.966,75	415.762,75	54.796,00	341.968,50	396.764,50
1920 Kbps	55.746,00	390.990,00	446.736,00	55.746,00	371.440,50	427.186,50	55.746,00	351.891,00	407.637,00
1984 Kbps	56.696,00	401.940,00	458.636,00	56.696,00	381.843,00	438.539,00	56.696,00	361.746,00	418.442,00
2048 Kbps	59.052,00	412.762,50	471.814,50	59.052,00	392.124,38	451.176,38	59.052,00	371.486,25	430.538,25

Source: JSC MT.

Prices for three year contract									
	Monthly subscription fee			Monthly subscription fee for advance payment for 6 months			Monthly subscription fee for advance payment for 12 months		
Speed	Leased lines	Access	Total	Leased lines	Access	Total	Leased lines	Access	Total
64 Kbps	7.698,60	15.942,00	23.640,60	7.698,60	15.144,90	22.843,50	7.698,60	14.347,80	22.046,40
128 Kbps	10.058,40	30.174,00	40.232,40	10.058,40	28.665,30	38.723,70	10.058,40	27.156,60	37.215,00
192 Kbps	14.911,20	41.220,00	56.131,20	14.911,20	39.159,00	54.070,20	14.911,20	37.098,00	52.009,20
256 Kbps	16.650,00	53.442,00	70.092,00	16.650,00	50.769,90	67.419,90	16.650,00	48.097,80	64.747,80
320 Kbps	19.386,00	64.356,00	83.742,00	19.386,00	61.138,20	80.524,20	19.386,00	57.920,40	77.306,40
384 Kbps	21.042,00	75.510,00	96.552,00	21.042,00	71.734,50	92.776,50	21.042,00	67.959,00	89.001,00
448 Kbps	22.594,50	86.340,00	108.934,50	22.594,50	82.023,00	104.617,50	22.594,50	77.706,00	100.300,50
512 Kbps	24.147,00	103.902,00	128.049,00	24.147,00	98.706,90	122.853,90	24.147,00	93.511,80	117.658,80
576 Kbps	25.443,00	115.014,00	140.457,00	25.443,00	109.263,30	134.706,30	25.443,00	103.512,60	128.955,60
640 Kbps	26.739,00	125.868,00	152.607,00	26.739,00	119.574,60	146.313,60	26.739,00	113.281,20	140.020,20
704 Kbps	28.035,00	136.494,00	164.529,00	28.035,00	129.669,30	157.704,30	28.035,00	122.844,60	150.879,60
768 Kbps	29.322,00	146.934,00	176.256,00	29.322,00	139.587,30	168.909,30	29.322,00	132.240,60	161.562,60
832 Kbps	30.564,00	157.218,00	187.782,00	30.564,00	149.357,10	179.921,10	30.564,00	141.496,20	172.060,20
896 Kbps	31.806,00	167.340,00	199.146,00	31.806,00	158.973,00	190.779,00	31.806,00	150.606,00	182.412,00
960 Kbps	33.048,00	177.312,00	210.360,00	33.048,00	168.446,40	201.494,40	33.048,00	159.580,80	192.628,80
1024 Kbps	34.290,00	187.140,00	221.430,00	34.290,00	177.783,00	212.073,00	34.290,00	168.426,00	202.716,00
1088 Kbps	42.354,00	192.312,00	234.666,00	42.354,00	182.696,40	225.050,40	42.354,00	173.080,80	215.434,80
1152 Kbps	43.254,00	202.152,00	245.406,00	43.254,00	192.044,40	235.298,40	43.254,00	181.936,80	225.190,80
1216 Kbps	44.154,00	211.812,00	255.966,00	44.154,00	201.221,40	245.375,40	44.154,00	190.630,80	234.784,80
1280 Kbps	45.054,00	221.412,00	266.466,00	45.054,00	210.341,40	255.395,40	45.054,00	199.270,80	244.324,80
1344 Kbps	45.954,00	230.952,00	276.906,00	45.954,00	219.404,40	265.358,40	45.954,00	207.856,80	253.810,80
1408 Kbps	45.612,00	240.372,00	285.984,00	45.612,00	228.353,40	273.965,40	45.612,00	216.334,80	261.946,80
1472 Kbps	46.512,00	249.672,00	296.184,00	46.512,00	237.188,40	283.700,40	46.512,00	224.704,80	271.216,80
1536 Kbps	47.412,00	258.912,00	306.324,00	47.412,00	245.966,40	293.378,40	47.412,00	233.020,80	280.432,80
1600 Kbps	48.312,00	268.092,00	316.404,00	48.312,00	254.687,40	302.999,40	48.312,00	241.282,80	289.594,80
1664 Kbps	49.212,00	277.152,00	326.364,00	49.212,00	263.294,40	312.506,40	49.212,00	249.436,80	298.648,80
1728 Kbps	50.112,00	286.152,00	336.264,00	50.112,00	271.844,40	321.956,40	50.112,00	257.536,80	307.648,80
1792 Kbps	51.012,00	295.092,00	346.104,00	51.012,00	280.337,40	331.349,40	51.012,00	265.582,80	316.594,80
1856 Kbps	51.912,00	303.972,00	355.884,00	51.912,00	288.773,40	340.685,40	51.912,00	273.574,80	325.486,80
1920 Kbps	52.812,00	312.792,00	365.604,00	52.812,00	297.152,40	349.964,40	52.812,00	281.512,80	334.324,80
1984 Kbps	53.712,00	321.552,00	375.264,00	53.712,00	305.474,40	359.186,40	53.712,00	289.396,80	343.108,80
2048 Kbps	55.944,00	330.210,00	386.154,00	55.944,00	313.699,50	369.643,50	55.944,00	297.189,00	353.133,00
Source: JSC MT.									

2 Macedonia On-Line (MOL):

2.1 Pre paid dial-up access

MOL offers 3 different types of Internet cards for natural persons and legal entities using Internet: for modem 56 Kbit, with 1 e-mail address (name@mol.com.mk), web mail, time check, telephone support 24/7, as follows: **5 hours for 125,00 MKD, 15 hours for 250,00 MKD and flat rate for 500,00 MKD**. In the price of Internet cards 18% VAT is included, and the price for local telephone impulse is not included.

2.2 Post paid dial-up access

The prices for the 4 packages offered by the company for natural persons and legal entities are given in the table bellow. The prices for the sector of education, including primary and high school education, are 20% lower than the prices for natural persons and legal entities, as given bellow.

Package	Internet hours per month	56/64 kbps		128 kbps	
		Monthly subscription fee	Annual subscription fee (in case of advance payment)	Monthly fee	Annual subscription fee (in case of advance payment)
Start	20	1.200,00	7.130,00	1.920,00	11.410,00
Standard Package	50	1.200,00	8.050,00	1.920,00	12.880,00
Business package	100	1.200,00	11.500,00	1.920,00	18.400,00
Flat rate package	720	1.720,00	15.180,00	2.760,00	24.290,00

Source: MOL
Note: 18% VAT is included in the price of packages, the tariff for the local telephone impulse is not included; all packages include the following: 1 (one) e-mail address (name@mol.com.mk), telephone support 24 hours / 7 days).

2.3 Internet access through leased lines

Access speed: from 64 Kbit/sec to 2 Mb

Permanent Internet access up to 64 Kbit/sec, with: 10 e-mail addresses (name@company.com.mk), WEB hosting up to 5-100 MB, additional Dial-up (ISDN 128K), 16 IP addresses, MRTG overall traffic monitoring, technical intervention 2-4 times a month during work hours, telephone support 24 hours/7 days a week).

Contractual period	Price/month		
	MOL	JSC MT	Total
Monthly contract	10.200,00	11.100,00	21.300,00
12 months contract (1+12)	10.200,00	8.500,00	18.700,00
24 months contract (1+24)	9.690,00	8.100,00	17.790,00
36 months contract (1+36)	9.180,00	7.700,00	16.880,00
Advance payment for 12 months	8.670,00	8.500,00	17.170,00

Single subscription fee: access fee and modems, line installation fee	21.950,00

Source: MOL
Note: 18% VAT is not included in the price.

Permanent Internet access up to 128 Kbit/sec with: 10 e-mail addresses (name@company.com.mk), WEB hosting up to 5-100 MB, additional Dial-up (ISDN 128K), 16 IP addresses, MRTG overall traffic monitoring, technical intervention 2-4 times a month during work hours, telephone support 24 hours/7 days a week.

Contractual period	Price/month		
	MOL	JSC MT	Total
Monthly contract	16.000,00	11.100,00	27.100,00
12 months contract (1+12)	16.000,00	8.500,00	24.500,00
24 months contract (1+24)	15.200,00	8.100,00	23.300,00
36 months contract (1+36)	14.400,00	7.700,00	22.100,00
Advance payment for 12 months	13.600,00	8.500,00	22.100,00
Single subscription fee: access fee and modems, line installation fee			21.950,00
Source: MOL Note: 18% VAT is not included in the price.			

Permanent Internet access up to 256 Kbit/sec with: 10 e-mail addresses (name@company.com.mk), WEB hosting up to 5-100 MB, additional Dial-up (ISDN 128K), 16 IP addresses, MRTG overall traffic monitoring, technical intervention 2-4 times a month during work hours, telephone support 24 hours/7 days a week.

Contractual period	Price/month		
	MOL	JSC MT	Total
Monthly contract	19.900,00	11100,00	31.000,00
12 months contract (1+12)	19.900,00	8.500,00	28.400,00
24 months contract (1+24)	18.905,00	8.100,00	27.005,00
36 months contract (1+36)	17.910,00	7.700,00	25.610,00
Advance payment for 12 months	16.915,00	8.500,00	25.415,00
Single subscription fee: access fee and modems, line installation fee			21.950,00
Source: MOL Note: 18% VAT is not included in the price.			

Permanent Internet access up to 512 Kbit/sec with: 10 e-mail addresses (name@company.com.mk), WEB hosting up to 5-100 MB, additional Dial-up (ISDN 128K), 16 IP addresses, MRTG overall traffic monitoring, technical intervention 2-4 times a month during work hours, telephone support 24 hours/7 days a week.

Contractual period	Price/month		
	MOL	JSC MT	Total
Monthly contract	29.600,00	11.100,00	40.700,00
12 months contract (1+12)	29.600,00	8.500,00	38.100,00
24 months contract (1+24)	28.120,00	8.100,00	36.220,00
36 months contract (1+36)	26.640,00	7.700,00	34.340,00
Advance payment for 12 months	25.160,00	8.500,00	33.660,00
Single subscription fee: access fee and modems, line installation fee			21.950,00
Source : MOL Note: 18% VAT is not included in the price.			

2.4 Cable access

Cable Internet is provided through the cable TVs: "Telekabel", "Kabelsat", "Zora", "MKS" (in the city of Skopje).

For natural persons

	64 Kbps DOWNLOAD 64 Kbps UPLOAD with transfer limit of 500 MB, IP address, 1 e-mail address	128 Kbps DOWNLOAD 64 Kbps UPLOAD with transfer limit of 1 GB, IP address, 1 e-mail address	256 Kbps DOWNLOAD 64 Kbps UPLOAD with transfer limit of 2 GB, IP address, 1 e-mail address	512 Kbps DOWNLOAD 128 Kbps UPLOAD with transfer limit of 5 GB, IP address, 1 e-mail address
Monthly subscription fee	500,00	846,00	1.800,00	3.000,00
Advance payment for 12 months	400,00	676,80	1.440,00	2.400,00
Single subscription fee for installation, modem and splitter	3.000,00			

Source: MOL
Note: 18% VAT is not included in the price of packages.

For legal entities

	128 Kbps DOWNLOAD 64 Kbps UPLOAD with: transfer limit of 1,5 GB, 8 IP addresses, 5 e-mail addresses	256 Kbps DOWNLOAD 64 Kbps UPLOAD with: transfer limit of 3 GB, 8 IP addresses, 5 e-mail addresses	512Kbps DOWNLOAD 128 Kbps with: transfer limit of 6 GB, 8 IP addresses, 10 e-mail addresses
Monthly subscription fee	2.200,00	3.600,00	6.000,00
Advance payment for 12 months	1.760,00	2.880,00	5.000,00
Single subscription fee for installation, modem and splitter	6.100,00		

Source: MOL
Note: 18% VAT is not included in the price of packages; the prices for the sector of education, including primary and high school education, are 20% lower than the prices for natural persons and legal entities, as given in the table.

3 Unet

3.1 Pre paid dial-up access

Unet offers 6 different types of Internet cards for natural persons using Internet: for modem 56 Kbit, with 1 e-mail address, web mail, time check, telephone support 24/7, as follows:

- one hour of Internet access each day, for a period of 30 days: the card costs 100,00MKD;
- unlimited Internet access during a period of 30 days between 18:00 and 08:00 hours: the card costs 300,00 MKD;
- Internet by zones, for a period of 90 days (pricing is according to table 3.1): the card costs 350,00 MKD;
- unlimited Internet access during a period of 30 days: the card costs 700,00 MKD;
- Internet by zones, for a period of 90 days (pricing is according to table 3.1); the card costs 950,00 MKD;
- 20 hours Internet access for a period of 45 days; 1.000,00 MKD

Note: 18% VAT is included in the price of cards; the tariff for local telephone impulse is not included.

Table 3.1 – pricing per minute / Zone Internet

Intensive traffic period (06:00 – 18:00) Monday to Friday	Low traffic period (18:00 - 24:00) Monday to Friday (weekends 06:00 - 24:00)	Night traffic period (24:00 - 06:00) weekdays and weekends
1,25	0,40	0,16
Source: Unet Note: 18% VAT is included in the price;		

3.2 Post paid dial-up access

For education[1], including primary and high school education: 1 e-mail address, technical support 24/7, IP address

Monthly fee	Intensive traffic period (06:00 – 18:00) Monday to Friday	Low traffic period (18:00 - 24:00) Monday to Friday (weekends 06:00 - 24:00)	Night traffic period (24:00 - 06:00) weekdays and weekends
0,00	1,25	0,40	0,16
Source: Unet Note: 18% VAT is included in the price, pricing per 1 minute in zones; the tariff for the local telephone impulse is not included in the price.			

For legal entities: 1 e-mail address, technical support 24/7, IP address, hosting up to 5MB

Monthly fee	Intensive traffic period (06:00 – 18:00) Monday to Friday	Low traffic period (18:00 - 24:00) Monday to Friday (weekends 06:00 - 24:00))	Night traffic period (24:00 - 06:00) weekdays and weekends
0,00	1,25	0,66	0,33
Source: Unet Note: 18% VAT is included in the price; the tariff for local telephone impulse is not included in the price.			

3.3 Internet access through leased lines

Access speed: from 64 kbps to 2 Mbps

The basic packages offered by the company for Internet access through leased lines are given bellow, which could be subject to change depending on the clients' requests for certain services not included in the package, or for the purposes of increasing and reducing the volume of services included in the package. For the purposes of provision of this service, the customer signs a contract only with Unet.

Internet access through leased lines 64 kbps: 10 e-mail addresses (name@yourdomain.com.mk), anti-virus and anti spam-filters, hosting up to 5 MB, backup dial-up, 8 fixed IP addresses, MRTG monitoring, preventive maintenance and maintenance in case of emergency, and telephone support 24 hours / 7 days a week.

[1] Until now, "Unet" has provided free Internet access to 10 primary and high schools

Contractual period	price / month		
	Unet	JSC MT	Total
Monthly contract	24.000	11.120	35.120
12 months contract	17.000	8.554	25.554
24 months contract	16.000	8.126	24.126
36 months contract	13.000	7.698	20.698
Single subscription fee	3.000	29.500	32.500
Source: Unet Note: 18% VAT is not included in the price; the single subscription fee is not charged for the 3 year contract.			

Internet access through leased lines 128 kbps: 20 e-mail addresses (name@yourdomain.com.mk), anti-virus and anti-spam filters, hosting up to 10 MB, backup dial-up, 16 fixed IP addresses, MRTG monitoring, preventive maintenance and maintenance in case of emergency, and telephone support 24 hours / 7 days a week.

Contractual period	price / month		
	Unet	JSC MT	Total
Monthly contract	42.000,00	14.529,00	56.529,00
12 months contract	32.000,00	11.176,00	43.176,00
24 months contract	30.000,00	10.617,00	40.617,00
36 months contract	25.000,00	10.058,00	35.058,00
Single subscription fee	3.000,00	29.500,00	32.500,00
Source: Unet Note: 18% VAT is not included in the price; the single subscription fee is not charged for the 3 year contract.			

Internet access through leased lines 256 kbps: 30 e-mail addresses (name@yourdomain.com.mk), anti-virus and anti-spam filters, hosting up to 20 MB, backup dial-up, 32 fixed IP addresses, MRTG monitoring, preventive maintenance and maintenance in case of emergency, and telephone support 24 hours / 7 days a week.

Contractual period	price / month		
	Unet	JSC MT	Total
Monthly contract	70.000,00	24.050,00	94.050,00
12 months contract	54.000,00	18.500,00	72.500,00
24 months contract	50.000,00	17.575,00	67.575,00
36 months contract	42.000,00	16.650,00	58.650,00
Single subscription fee	3.000,00	29.500,00	32.500,00
Source: Unet Note: 18% VAT is not included in the price; the single subscription fee is not charged for the 3 year contract.			

4 On.net:

4.1 Pre paid dial-up access

On.net offers 7 different types of Internet cards for natural persons including: 1 e-mail address (name@on.net.mk), web mail, time check, telephone support 24/7, as follows:

- 7 hours of Internet access for 7 days; the price of the card is 125,00 MKD;
- zone Internet surfing (pricing is according to table 4.1); the price of the card is 350,00 MKD;
- midnight Internet in the period from 00:00 to 07:00; the price of the card is 195,00 MKD;

- family Internet in the period from 17:00 to 07:00; the price of the card is 380,00 MKD;
- ISDN Internet 20 hours / 90 days; the price of the card is 590,00 MKD;
- unlimited monthly Internet; the price of the card is 1.560,00 MKD;
- Boomerang, 10 hours; the price of the card is 590,00 MKD.

Note: 18% VAT is included in the price of cards; for cards No. 1–6, the price does not include the tariff for local telephone impulse; the tariff for local telephone impulse for card No. 7 is paid by On.net.

Table 4.1: pricing per minute / Zone Internet

Intensive traffic period (06:00 – 18:00) Monday to Friday	Low traffic period (18:00 - 24:00) Monday to Friday (weekends 06:00 - 24:00)	Night traffic period (24:00 - 06:00) weekdays and weekends
1,05	0,35	0,14
Source: On.net Note: 18% VAT is included in the price.		

4.2 Post paid dial-up access

The personal computer and the local area network are connected to Internet through a phone line, for the sector of education and for legal entities, as follows:

- Modem 56k (analogue data transfer)
- ISDN line (digital data transfer)

Sector of education, including primary and secondary education:

Package	hours of Internet	Modem 56 k and ISDN 64 kbps			ISDN 128Kbit		
		Monthly subscription fee without signed contract	Monthly subscription fee for signed 12 months contract	Monthly subscription fee for signed 12 months contract with advance payment	Monthly subscription fee without signed contract	Monthly subscription fee for signed 12 months contract	Monthly subscription fee for signed 12 months contract with advance payment
Bronze Package	50	1.200,00	900,00	700,00	2.400,00	1.800,00	1.400,00
Silver Package	100	2.300,00	1.750,00	1.300,00	3.510,00	2.670,00	1.980,00
Gold Package	720	3.900,00	3.500,00	2.800,00	5.100,00	4.450,00	3.470,00
Platinum Package	720	7.000,00	6.300,00	5.100,00	14.040,00	11.940,00	10.080,00

Source: On.net

Notes: 18% VAT is not included in the price of packages; the tariff for the local telephone impulse is not included in the price of packages;

The Bronze package includes: Internet access up to 50 hours/month, 1 e-mail address (name@on.net.mk) and telephone support 24/7 days;

The Silver package includes: Internet access up to 100 hours / month, WEB Hosting up to 30 MB, 5 e-mail addresses (name@company.com.mk), telephone support 24/7 days and technical support during work hours (twice a month or 2 hours);

The Gold package includes: unlimited Internet access 720 hours, WEB Hosting up to 50 MB, 10 e-mail addresses (name@company.com.mk), telephone support 24/7 days and technical support during work hours (four times a month or 4 hours);

The Platinum package includes: unlimited Internet access 720 hours per month, WEB Hosting up to 100 MB, 30 e-mail addresses (name@company.com.mk), Banner on http://www.on.net.mk, Dial-up home access, WEB page designing up to 3 MB (personal ID), telephone support 24/7 days and technical support during work hours (four times a month or 4 hours).

For legal entities

Package	hours on Internet	Modem 56 k and ISDN 64 kbps			ISDN 128Kbit		
		Monthly subscription fee without signed contract	Monthly subscription fee for signed 12 months contract	Monthly subscription fee for signed 12 months contract with advance payment	Monthly subscription fee without signed contract	Monthly subscription fee for signed 12 months contract	Monthly subscription fee for signed 12 months contract with advance payment
Bronze Package	50	2.000,00	1.500,00	1.100,00	4.000,00	3.000,00	2.200,00
Silver Package	100	3.800,00	2.900,00	2.100,00	5.800,00	4.400,00	3.200,00
Gold Package	720	6.500,00	5.500,00	4.600,00	8.500,00	7.000,00	5.700,00
Platinum Package	720	11.700,00	9.500,00	8.560,00	23.470,00	18.000,00	16.920,00

Source: On.net
Notes: 18% VAT is not included in the price of packages; the tariff for the local telephone impulse is not included in the price of packages;
The Bronze package includes: Internet access up to 50 hours/month, 1 e-mail address and telephone support 24/7 days;
The Silver package includes: Internet access up to 100 hours / month, WEB Hosting up to 30 MB, 5 e-mail addresses (name@company.com.mk), telephone support 24/7 days and technical support during work hours (twice a month or 2 hours);
The Gold package includes: unlimited Internet access 720 hours, WEB Hosting up to 50 MB, 10 e-mail addresses (name@company.com.mk), telephone support 24/7 days and technical support during work hours (four times a month or 4 hours);
The Platinum package includes: unlimited Internet access 720 hours per month, WEB Hosting up to 100 MB, 30 e-mail addresses (name@company.com.mk), Banner on http://www.on.net.mk, Dial-up home access, WEB page designing up to 3 MB (personal ID), telephone support 24/7 days and technical support during work hours (four times a month or 4 hours).

4.3 Internet access through leased lines

Access speeds: from 64 kbps to 2 Mbps

The basic packages offered by the company concerning Internet access through leased lines are given bellow. These packages can be changed depending on the requests of the clients regarding certain services not included in the package, or for increasing and reducing of the services offered in the package. In order to be provided with this service, the subscriber may sign a contract only with On.net, or with On.net (provision of access) and JSC MT (provision of line).

Permanent Internet access up to 64 Kbit/sec, including: 10 e-mail addresses (name@company.com.mk), WEB hosting up to 30 MB, additional dial-up (ISDN 128K), 8 IP addresses, MRTG overall traffic monitoring, level 1 support (technical intervention once a month, 24 hours/7 days), level 2 support (technical intervention twice a month during work hours), level 3 support (telephone support 24 hours/7 days a week).

Contractual period	Price/month		
	On.net	JSC MT	Total
Monthly contract	28.300,00	11.100,00	39.400,00
12 months contract (1+12)	19.500,00	8.500,00	28.000,00
24 months contract (1+24)	16.200,00	8.100,00	24.300,00
36 months contract (1+36)	13.000,00	7.700,00	20.700,00
Advance payment for 12 months	13.000,00	8.500,00	21.500,00
Single subscription fee: access fee and modems, line installation fee (to JSC MT)	23.000,00		

Source: On.net
Note: 18% VAT is not included in the price; the single subscription fee is not charged for the 3 year contract.

Permanent Internet access up to 128 Kbit/sec including: 30 e-mail addresses (name@company.com.mk), WEB hosting up to 50 MB, 2 additional dial-up (ISDN 128K), 16 IP addresses, MRTG overall traffic monitoring, level 1 support (technical intervention once a month, 24 hours/7 days), level 2 support technical intervention four times a month during work hours), level 3 support (telephone support 24 hours/7 days a week).

Contractual period	Price/month		
	On.net	JSC MT	Total
Monthly contract	52.200,00	14.500,00	66.700,00
12 months contract (1+12)	36.100,00	11.200,00	47.300,00
24 months contract (1+24)	36.100,00	10.600,00	40.600,00
36 months contract (1+36)	36.100,00	10.000,00	34.200,00
Advance payment for 12 months	36.100,00	11.200,00	35.400,00
Single subscription fee: access fee and modems, line installation fee (to JSC MT)	29.500,00		
Source: On.net Note: 18% VAT is not included in the price; the single subscription fee is not charged for the 3 year contract.			

Permanent Internet access up to 256 Kbit/sec with: 50 e-mail addresses (name@company.com.mk), 5 additional dial-up (ISDN 128K), 32 IP addresses, MRTG overall traffic monitoring, level 1 support (technical intervention once a month, 24 hours/7 days), level 2 support (technical intervention four times a month during work hours), level 3 support (telephone support 24 hours/7 days a week).

Contractual period	Price/month		
	On.net	JSC MT	Total
Monthly contract	94.000,00	24.000,00	118.000,00
12 months contract (1+12)	65.000,00	18.500,00	83.500,00
24 months contract (1+24)	54.000,00	17.500,00	71.500,00
36 months contract (1+36)	43.500,00	16.600,00	60.100,00
Advance payment for 12 months	43.500,00	18.500,00	62.000,00
Single fee: access fee and modems, line installation fee (to JSC MT)	49.500,00		
Source: On.net Note: 18% VAT is not included in the price; the single subscription fee is not charged for the 3 year contract.			

The pricing for permanent Internet access over 512 Kbit/sec depends on the subscribers' service requirements.

4.4 Cable access

Cable Internet through Cable TV "Telekabel" (covers part of the territory of the city of Skopje).

For natural persons (12 months contract)

	256 Kbps with 200 MB transfer 2 GB, IP address, 1 e-mail address	512 Kbps unlimited data transfer, IP address, 1 e-mail address
Monthly rate	500,00	1.500,00
For each 10 MB	50,00	/
Single payment for installation, modem and splitter	5.450,00	
Source: On.net Note: 18% VAT is included in the price of packages.		

For legal entities

	256 Kbps maximum access speed up to 256 k, guaranteed speed up to 32 k unlimited data transfer, IP address, 2 e-mail addresses, 2MB hosting. Technical support 24/7, logistics 1 a month	384 Kbps maximum access speed up to 384 k, guaranteed speed up to 32 k unlimited data transfer, IP address, 5 e-mail addresses, 10MB hosting. Technical support 24/7, logistics 2 a month	512 Kbps maximum access speed up to 512k, guaranteed speed up to 64 k unlimited data transfer, IP address, 10 e-mail addresses, 15MB hosting. Technical support 24/7, logistics 4 a month	512 Kbps maximum access speed up to 512k, guaranteed speed up to 128 k unlimited data transfer, IP address, 20 e-mail addresses, 30 MB hosting. Technical support 24/7, logistics (4+1) a month
Monthly contract / monthly subscription fee	6.540,00	8.006,00	16.120,00	32.240,00
12 months contract / monthly subscription fee	4.340,00	6.200,00	12.400,00	28.800,00
Advance payment for 12 months / price per month	3.940,00	5.540,00	11.160,00	22.320,00
Single subscription fee for installation, modem and splitter (of the company and the cable operator) including 18% VAT	5.450,00			
Source: On.net Note: 18% VAT is not included in the price of packages.				

C. Research

2. What is the specific public policy for promoting and supporting research on Information Society Technologies (ISTs)? If a strategy document exists, please provide a copy in an EU language.

The extraordinary *ICT potential* for transformation of the society is the groundwork for R&TD to translate that potential into the valuable development component of the Information Society and 'knowledge based society' reflected in the EU objective.

During the process of formulation of the ***National Information Society Policies (NISP)***, ISTs have been identified as *strategic factor for development.*

In the part of **eEducation,** one of the **NISP** pillars, a special attention is being paid to the research and development in the IST sector.

The **NISP** and the correspondent Action Plan will be completed not later than **June 2005.**

Educational reforms and ICTs:

The Ministry of Education and Science (MES) prepared a *Draft National Program for Education (2005-2105),* a platform of *reform programs* within the overall education system. The ICT is an important building block of the reforms.

On the basis of the *Draft National Program*me *for Education*, under the Title "Improvement of the competitiveness of the Macedonian society", special Chapter is dedicated to the development of the Information Society with recommendations that "the ICT should become a part of all segments of the society".

The following is foreseen with the other elements of the Programme:

- ICT literacy of young generations;
- Introducing custom oriented programs;
- Computerization of educational institutions and their connectivity through information systems,
- Supporting network establishment;
- Supporting the initiatives for creating transparent and complete database of the educational system, services and transfer of cultural heritage through new media; and
- Access to the international and national information systems and databases;

R&TD (Outlines)

(For more details on R&TD see chapter 17)

Macedonian researches have given priority to the following technological fields: *ISTs*, new materials, environment, biotechnology, high quality food production and earth sciences and engineering.

The institutional infrastructure for R&TD consists of: Macedonian Academy of Sciences and Arts, universities, higher schools, public scientific institutes, R&D units within the industry, regional scientific associations, and consulting agencies and offices. The vast majority of R&TD is carried out in universities and public research institutes.

Transitional shocks, industry reconstruction and poor economic climate caused deep consequences to the R&TD institutions and research community, which resulted in decreased number of researches and decreased role of R&TD within the overall national context. In the course of the on-going reforms, special attention will be paid on modernisation and building of a new R&TD structure.

Yet, although seriously weakened, the R&TD community has *good potential for technological development.* The R&TD community is active participant in many projects, national, regional and international level. In last two years, 200 young researches have entered the universities and scientific institutions.

In the framework of the on-going educational reforms, the MES is making efforts for successful transformation of higher education aimed towards better transfer of knowledge within the scientific and business sector.

As a part of these efforts, the Ministry prepared several Programmes for R&TD support (2002-2006):

- Programme for encouraging and supporting national R&TD projects;
- Programme for granting fellowships for post-graduate and doctoral studies both in the country and abroad;
- Programme for supporting researches for preparation at international meetings;
- Target research programme for coordination of R&D activities within the governmental bodies;
- Programme for encouraging and supporting technological development for the period 2002-2006;
- Programme for development of R&TD infrastructure

Summary of the recent achievements in ISTs in the educational reforms:

The cornerstones of current activities related to ICTs, are the two essential building blocks for the Information Society in the educational system, the networks:

- Building of *schools' network* (computerization of all primary and secondary schools; Internet access, deploy broadband to remote areas; building the schools' network);

- Building the *universities' network* (upgrading of the Macedonian Academy and Research Network (MARNet), and build connectivity towards the ERA,

In addition, a number of synergized projects are focused on the on-going reforms of the educational systems, building capacity, ICT training of teachers and pupils, introduction of modern learning tools, improving skills, and research activities, including ISTs.

The *evident progress* in building the *network infrastructure* of the educational institutions, in already initiated long-term reforms, *encourages all efforts* that the Republic Macedonia is making to *build solid foundation for the educational system, including R&TD in ISTs.*

These efforts have been recognized, and *strongly supported* by the International Community relevant institutions, organizations and associations.

Macedonia supports these reforms, by allocations from the national budget, and by programming the sector targeted, long-term International Community financial support, taking into account the national priorities and budget limitations.

Schools network:

All primary, secondary and VET schools are included in the activities for building of schools' networks:

- USAID "e-School project", completed installation of Computer labs – a new concept of ICT usage, in 100 secondary schools (20PC/School); activities in 300 schools (10PC/school) are on-going. Two-year teacher training program has started in selected schools in August 2004;
- The objective of USAID "Macedonia Connect" project is to establish a nationwide Internet broadband network, and provide broadband services for approximately 400 schools and selected university dormitories, until 2007. It is expected that the broadband network, as an add-in value, will result in commercial provision of competitive, affordable broadband services to other customers in underserved areas, including public and private sector institutions in remote areas.
- A number of ICT related projects are focused on VET reforms, including provision of ICT: PHARE/VET1-VET3 delivered 229PC, training courses, teacher trainings; GTZ provided Modernisation of three-year training programs in 8 VET schools.

The current *progress* is impulse for building 'knowledge' of young generations, encouraging further efforts, and support. The results are as follows: 57Pupils/PC for primary schools, and 24. 5Pupils/PC in secondary schools. Half of the secondary schools have internet access. The ICT teaching exam has been introduced from the V grade.

(For more details see 18 I C 3)

Universities' network:

A number of projects are focused on building the Macedonian Academic and Research Network **(MARNet)**. The goal is to upgrade the current internal capacity and connectivity, and step-by-step to acquire connectivity towards the research space of ERA.

- The capacity of MARNet has been upgraded by few synergized projects: MARNet SKOMAN (NATO scientific program), SEEREN (FW5); the on-going SEEGRID (FW6);
- There are few initiatives by the Greek Academic Networks (GRNET), one of the PoPs of GEANT.
- Macedonia is also included in two multilateral projects within the FW6: (SEE-ERA NET), and (ERA-WEST-BALKAN) aimed to improve interregional research cooperation and integration into the SEE-ERA.Net

Macedonia is considering these initiatives and applied projects for FW6, and makes additional efforts to facilitate the building of MARNet connectivity.

TEMPUS has been the key Programme for supporting higher education reforms in the country, since 1996.

A number of **TEMPUS** supported projects, are focused on the research in **ISTs**, in the following fields:

- Curriculum Development in Information Sciences,
- Computer science and software engineering;
- Multimedia in Music's; Information Technologies in Teacher Training;
- Modernisation of University Services and Support to University Management;
- Development of Virtual University;

Examples of the **TEMPUS ISTs** support, are as follows:

Introduction of the European Credit Transfer System (ECTS): (1) ECTS - Technical faculty (Bitola); (2) Modularization and implementation of ECTS in computer science, (Skopje); (3) A complex of university management in biotechnologies (Skopje, Bitola);

Promotion of the EU dimension in higher education: (1) Completed project for Department for translation and interpreting – translation tools; (2) Postgraduate studies in international management, incorporating distance education (Institute for Economics – Skopje); (3) A joint degree curriculum Software engineering, aiming at providing teachers mobility; (2004/2005) (Skopje); (4) Completed project for postgraduate students in Earthquake Engineering on regional level;

Lifelong learning: (1) Technology transfer center in chemical and textile engineering (Faculty of Technology and Metallurgy, Skopje); (2) Croatian center for technology transfer in biotechnology and applied economics for SEE countries (Macedonia participant); (3) A model for offices for international technology transfer (Faculty for Electrical Engineering, Skopje); (4) Euro-Regional technology center – Technology park (Bitola);

University governance and management: (1) Development offices and an information subsystem for administration and management of students record for distance education (Bitola, Skopje); (2) A feasibility study, development of models and pilot functioning of virtual classrooms, virtual laboratories and establishment of virtual campuses (Skopje, Bitola); (3) Library information systems (Skopje); (4) Development of the Integrated Academic Library Information System (Skopje);

An extensve work has been done in these fields, confirming the *good potential* of Macedonian researches, and encouraging further efforts in the ISTs R&TD activities. More detailed elaboration of the ISTs research is presented in the answer of the next question.

3. What are the main universities, research institutes or centres active in IST research? In which domains?

IST research is concentrated in the following Universities: “Ss. Cyril and Methodius” University, “St. Kliment Ohridski” University , and South East European University (SEE University).

- **University “Ss. Cyril and Methodius” University** in Skopje with 24 faculties, 10 scientific institutions and 6 associative members; Established 1949.
    - **Faculty of Electrical Engineering** (http://www.etf.edu.mk)
    - **Faculty of Natural Sciences and Mathematics - Institute of Informatics** (http://www.ii.edu.mk)

The Faculty of Electrical Engineering (FEE) employs around 50 professors and 53 teaching and research assistants, out of which 58 holders of PhD and 28 holders of MSc degrees. In addition, it has 10 technical assistants and laboratory technicians.

IST research is active in two of its four departments: the **Department of Electronics and Telecommunications** and the **Department of Computer Engineering, Computer Science and Automatics**.

On yearly bases, FEE participates in 20 wide research projects and its contribution to the scientific publishing society is about 200 research papers realized in many scientific magazines, technical journals, meetings and conventions.

Since its foundation, the Faculty promoted 3.358 BSc graduates, 88 MSc graduates and 30 PhD degree holders. Around 25% of these are in IST-related domains. To these numbers a part of academic and research activities of the Department of Electronics and Telecommunications should be added.

Out of the current **scientific projects** funded by the Ministry of Education and Science, five are of IST-related domains:

- Wireless local networks,
- Design of mobile Internet networks for heterogeneous traffic,
- Digital compression of video-sequences,
- User interfaces for medical practice,
- Web-based modelling and presentation of 3D archaeological objects.

There are several ongoing **international projects** in the framework of different programmes for international cooperation. In the framework of the Tempus program, the institution is actually a coordinator of three Joint European Projects in the domains of:

- Virtual Digital libraries and Digitalization
- International Technology Transfer Model and
- Wireless Campus for Student Services.

There are numbers of international projects in which the institution took active participation and a comprehensive list of past projects can be found at http://www.etf.edu.mk/zavrseni_proekti.htm.

Besides national and international funded research projects, the scientific research and application activities also include cooperation with companies and institutions, laboratory tests and

measurements. The institution makes development plans, expertise, analysis, project revisions and grading and organizes professional and scientific meetings and conventions.

Academic rules for awarding academic titles are determined by corresponding laws of the Ministry of Education and Science and contain legal tools determining the obligation of verifiable scientific research as a condition for obtaining academic titles. Thus, IST-related research is being realized in all main IST domains present at the contemporary Computer Engineering / Sciences University curricula.

Faculty of Natural Sciences and Mathematics - Institute of Informatics

The research in the IST domain at the Institute of Informatics is mainly concentrated around domains that are subject of majoring specialties of the BSc undergraduate studies offered at the Institution: Educational Informatics, Applied Informatics, Software Engineering and Informatics and Industrial Mathematics. The institute offers MSc and PhD degrees in Computer Sciences.

A program on Distance learning is in preparation, with already prepared software environment ("shkolka") WEBCT and three web-oriented courses developed. The project was funded by PHARE and the National contact point for Distance learning was established in 2000 (http://odoserver.ukim.edu.mk), as well as two study centres - at the Faculty of Pedagogy – Bitola of the "St. Kliment Ohridski" University, and at the Faculty of Electrical Engineering in Skopje. The equipment was partly funded by the Ministry of Education and Science and from the funds of two Tempus projects.

Online testing system was developed and is available at http://twins.pmf.ukim.edu.mk.

Research is financed primarily through performance, management and coordination of international and domestic research projects. The average annual value of the research projects over last three years was over 0,5 million EUR. The main fund sources were PHARE program, TEMPUS, IST program, Swiss SNSF and the Ministry of Education and Science of the Republic of Macedonia. There were also donations from the Ministry of Education of Greece, Taiwan, Macedonian Telecom, Ericsson, Open Society Institute of Macedonia and others. Most of the funds were allocated for equipment, mobility, specialization and staff training.

Research in IST domain is done in two administrative units: Theoretical Informatics and Software Engineering. There are more than 15 PhD holders in Computer Sciences and related fields and more than 20 research assistants with MSc degrees or following MSc studies. There are two technical assistants for the computer laboratories.

From the current **scientific projects,** funded by the Ministry of Education and Science and TEMPUS Programme, the following are of the IST related domains:

- Application of algebraic structures in communication and other processes
- Discrete correlated probability models and application in the theories of queuing, risks and insurance
- Pattern recognition models using Neural Networks
- Design and development of time series prediction algorithms
- Contact point for Distance learning
- Integrated library information systems
- Distributing Information Technologies
- Memory aspects of ILP
- Development of educational software
- Parallel processing

Comprehensive list of past projects can be found at http://www.ii.pmf.ukim.edu.mk/LinkoviLevo/Istrazuvanja/proekti.htm.

Within the framework of the institution, there are five research and applicative laboratories where the IST-related activities are concentrated:

- Wireless Application Laboratory (sponsored by Ericsson)
- Parallel Processing Laboratory
- Parallel and Distributed Systems Laboratory
- Laboratory for Virtual Digital Libraries
- National Contact Point for Distant Education

http://www.ii.pmf.ukim.edu.mk/LinkoviLevo/Istrazuvanja/laboratorii.htm.

Academic rules for awarding academic titles are determined by corresponding laws of the Ministry of Education and Science and contain legal tools determining the obligation of verifiable scientific research as a condition for obtaining academic titles. Thus, IST-related research is being realized in a wide range of the main IST domains present at the contemporary Computer Sciences University curricula. In addition, at this institution, research areas also cover mathematical and theoretical aspects of IST.

- **"St. Kliment Ohridski" University** in Bitola with 5 Faculties, one Advanced school and 3 Institutes. Established 1979.
    - **Faculty of Technical Sciences - Department for Mathematics and Computer Sciences** (http://www.uklo.edu.mk)

The Department of Mathematics and Computer Science employs six professors, PhD holders, and four teaching and research assistants - MSc holders or follows MSc studies. The institution and its researchers are participating in many national and international research projects. The academic staff participates in international scientific conferences and publishes papers in international scientific journals.

There are actually two joint European projects funded by the Tempus program under the partner - country coordination realised by the Department, one of which is from the ISP domain on the subject of development of the University Information System.

Thus, IST-related research is being realized in a range of the main IST domains present at the contemporary Computer Sciences University curricula which, in this case, is 6 semester studies in Technical Informatics.

- **SEE University** in Tetovo with 5 faculties and two academic units; Established 2001.
    - **Faculty of Communication Sciences and Technologies (CST)** (http://www.seeu.edu.mk)

The CST Faculty benefits from the new and Europe-oriented organisational structure teaching, administration and research and has attracted a corresponding interest in the academic environment in the country and the region. The institution takes advantage of the second biggest ICT installation in the country and a campus organized in a rich IST environment. The research fields and results are generally brought by the number of experienced professors teaching at the institution on a part-time basis and by many partnerships that the institutions built with relevant institutions in European and USA universities.

The SEE University is in a process of institutionalising its research and publishing activities and several phases of this process have already obtained relevant affirmative independent reviews.

The CST Faculty is already an active member, as a partner institution, in several Tempus implementation projects and for the first time is proposing coordination of one of them.

The IST research actually consists of individual membership of the academic staff in Communication Sciences, Technologies and Computer Sciences related national and international projects. Certain clusters of scientific expertise are being detected and the research and applicative activities are planned to converge around the following fields in the future:

- Digital Media in Communications
- Digitalisation of Cultural Heritage
- Artificial Intelligence and Neuro-computing
- Network Security and Wireless technologies
- Data Bases and Knowledge management
- Natural languages processing
- Computational Intelligence

Numbers of IST-related activities are ongoing around the **Macedonian Academic and Research Network (MARNet)** within which, currently, 4 major projects are ongoing. The “Ss. Cyril and Methodius” University, computer network (UCN) in Skopje was established in 1993. With foundation of the MARNet and with the Internet connection at the University there is a growing need for upgrade and extension of the network capacities, which was done on several occasions in the previous period. The older DIGITAL direction equipment was replaced with modern CISCO equipment, and DECnet directed protocols were replaced with modern ones, based on TCP/IP equipage of protocols. The Internet connection is 1Mbps and the intra-communication is very good. Some faculties have re-built their web sites and have started with some courses based on e-education. Under the UNESCO, the project should improve scientific cooperation between SEE countries and propose a general reconstruction of the network, reaching a speed of 622 Mbps – 2 GB.

- **SEEREN project** (http://www.seeren.org). The objective of this project is establishment of international connection of academic and research networks in the countries from the region of Southeast Europe (Macedonia, Serbia and Montenegro, Albania, Bulgaria and Bosnia and Herzegovina) to the pan-European academic and research network – GEANT, thus creating conditions for their future full-pledged accession in GEANT. This project is carried out under auspices of the academic network of Greece – GRNET, one of the points of presence of GEANT. The set speeds of the links are going from 2 - 34Mbps, and the duration of the project is one year.

  In regard to Macedonia, an international link with Athens with a capacity of 4MBps was established. By the activation of this link, the capacity of international connection on MARNet increased 5 times, which represents significant improvement of the performances of now congested network. During this project the academic networks – users and participants in the project – should consider all the possibilities, i.e. they should provide sustainability of the connection after termination of the financing of the project within the frameworks of the planned budgets of responsible institutions in the countries.

- **MARNet SKOMAN (Skopje Metropolitan Area Network)** project of the **NATO scientific program**. As the title itself suggests, this is a project for construction of communication-information data network in the area of the city of Skopje, and it should be used for improvement of the connection inside the University network. It is well known fact that neither the quality nor the accessibility of the current links within the frameworks of “Ss. Cyril and Methodius” University, meets the current needs, and besides, there is a great number of unconnected members. The realization of this project should give an answer and solution to this problems through:

- Construction of wireless radio network on the University
- Purchase and installation of active network equipment
- The grant by the Austrian government for construction of optical infrastructure on UKM and MARNet in the city of Skopje
- the TEMPUS Project for modernization of the public administration at the University

The **Institute for Earthquake Engineering and Engineering Seismology (IEEES)** – Skopje (http://www.iziis.ukim.edu.mk), carries out a large number of applied and development research projects and provides consulting services for design and analysis of more sophisticated civil engineering structures. The highly-qualified personnel and the equipment of the IEEES Laboratories, the computer centers and the developed aplicative software are a guarantee of its successful performance.

In addition, a permanent and intensive international co-operation has been developed and maintained. Such international co-operation with universities, scientific institutions and centres worldwide is a prerequisite for more efficient and more complex scientific research within the Institute. A best illustration for regional cooperation is the recently completed Tempus supported project for postgraduate studies in Earthquake engineering involving students from Albania, Croatia and Macedonia. Synergy with DAAD financed postgraduate studies project was achieved bringing together students from the three above mentioned countries, as well as students from Bulgaria, Bosnia and Herzegovina and from Serbia and Montenegro.

In September 2002, an **e-Business Department** (http://www.ebusiness.edu.mk), was started on the Faculty of Economics within “Ss. Cyril and Methodius” University, to prepare students for career in international business, giving emphasis on disciplines in which Information and Communication Technology (ICT) plays crucial role, such as: Internet Marketing, Web Presence and Management of e-business. It is expected that this institution will become more important partner in projects from IST-related fields in the country.

Educational centres for the **Xpert program** of the German Academic Union are organized in 7 different locations in the respective branches of so called Workers’ Universities. About 250 trainees from republic of Macedonian passed the Xpert courses, starting from October 2002 year through the branch office of the Institute for International Cooperation of the German Adult Education Association.

The fact that on the web-site of the **National and University Library** “**St. Kliment Ohridski”** in Skopje, (http://www.nubsk.edu.mk) there is a possibility for on-line search through a system for search of mutual database COBIB.MK, or of databases available through COBISS/OPAC, represent an important link in IST research activities nationwide.

Professional IT and IST programs on different levels are also held by the above-mentioned Universities and by a number of private companies and authorized training centres, such as: **Microsoft** authorized training centre, **Autodesk** authorized training centres, **Cisco Academy** etc.

Some international donor institutions based in the country have a significant contribution in improvement of computer literacy in the country. **UNDP** through 19 ICT Centres established in 19 different municipalities in the country (5 of them in rural municipalities) has trained about 17.000 trainees of basic and advances computer courses. Beneficiaries are the municipality's administration, youth, unemployed and students. Besides the role of the IT education, these 19 ICT Centres play a role of free Internet Access point in their communities.

D. Public sector

1. What are the public services offered currently on-line to citizens and businesses?

The concept of **e-Government** is in its initial phase both in the aspect of services to citizens and to businesses. An in-deep research has been done in the area through an UNDP financed project on e-Government (http://www.undp.org.mk/e-governance), and the results, are an excellent basis for the future steps to be defined and implemented by the realisation of the National Information Society Policy (NISP) which is foreseen to be completed in June, 2005.

Preconditions in terms of actual ICT usage status in governmental institutions on central and local level are being established in the above mentioned project. The recent Law on Decentralization of the government services has deep implications on the organisational and back-office structure of the services to be provided.

However, many initiatives have already resulted in Web presence of a part of the government services through 153 governmental domain names (gov.mk).

The government and the ministries are offering with different level of interoperability and interactivity set of information, application templates, information on laws and procedures on the correspondent sites of the ministries and government agencies.

The public services offered on-line to citizens and business can be classified as being provided by:

(i) Central Government (http://www.gov.mk)**, the Ministries**, **the Parliament** (http://www.sobranie.mk)

(ii) Governmental agencies (Information, Employment, Supervision of Fully Funded Pension Insurance, Agricultural Development, Emigration, Civil Servants,

(iii) Other governmental institutions (Commissions, Directorates, Archives, Offices, National bank, State Statistics Office, Projects etc.) and

(iv) Municipalities - Out of 124 municipalities, 27 are presented with their own Web site/page offering variety of information and services. For this category of public services, in-deep research has been done in order to determine the capacities and equipment available for developing on-line offer. Several international agencies have completed the correspondent research and built the municipalities web sites / presentation through pilot-project activities. According to the recent Law on Decentralization the services to be offered on local government level are to be revised and correspondent changes in the Web presentations are to be expected.

The **services** offered can be classified in the following categories (Table 1.):

Table 1. Categories of services:

Service type	Service description
0	Information available
1	Documentation download
2	Search possibility
3	Registration of users
4	Forum
5	E-purchase
6	On-line administration
7	Online transactions

Public services offered to citizens and businesses presented by type of on-line service and by the Source/Destination of the service are given in Tables 2. and 2a.

Table 2. Services offered by type

Service source	Sites	Services offered						
		1	2	3	4	5	6	7
1. Central Government, Ministries, Parliament and President	14	14	7	1	5	0	4	1
2. Governmental Agencies	7	7	2	0	0	0	3	0
3. Other Governmental institutions	32	32	11	7	5	1	5	2
4. Municipalities	27	27	8	3	10	0	6	0

Table 2a. Services offered by Source/Destination

Service source	Sites	Services offered			
		G2C	C2C, C2G	G2C, C2G, G2B, B2G	G2C, G2G
1. Central Government, Ministries, Parliament and President	14	23	22	3	1
2. Governmental Agencies	7	4	3	0	0
3. Other Governmental institutions	32	27	26	2	1
4. Municipalities	27	27	26	4	3
G2C Government to Citizen B2G Business to Government G2B Government to Business C2G Citizen to Government G2G Government to Government C2C Citizen to Citizen					

The level of offered on-line interactivity and on-line availability of the public services is different for various governmental institutions - there are segments of public services that are offered with a high level of on-line availability. Tables 3.1 through 3.4 present some examples and services offered by category of governmental institutions.

Table 3.1 Examples of advanced services offered by **Government, Ministries and Parliament**

Central Government, Ministries and Parliament	Services offered
Government http://www.gov.mk	Information and documents concerning the work of the government Access and search of data base, Possibility to ask questions
Ministry of Economy http://www.economy.gov.mk	Information, Data archives and documents, Search and official forms download
Ministry of Finance http://www.finance.gov.mk	Information, News, Announcements, On-line questionnaires and Public forum
Ministry of Environment and Physical Planning http://www.moepp.gov.mk	Information, Laws, Licenses and Permits forms download, Annual reports, Campaigns, Publications, Search and registration of users
Ministry of Interior http://www.mvr.gov.mk	Access to database and forms, Questions and Public Forum, call center;
Parliament http://www.sobranie.mk	News, Laws, Members of Parliament, Delegations, Search possibility

Table 3.2 Examples of advanced services offered by **Governmental Agencies**

Governmental Agencies	Services offered
Civil Servants' Agency http://www.ads.gov.mk	Information, Activities, Public announcements, Job Vacancies for Public Administration, Forms
Agency for Agricultural Development Support http://www.agencija.gov.mk	Information, Advices, Publication download, Online forms for questions
Agency for Emigration http://www.emigration.gov.mk	News and Activities, Information, Laws, Announcements Questions by e-mail
Agency for Information http://www.sinf.gov.mk	Information, Links, Media, Database access and search
Agency for Supervision of Fully Funded Pension Insurance http://www.mapas.gov.mk	General information, Glossary of terms, Tender documentation, On-line application for retirement refund calculation;
Employment Agency http://www.zvrm.gov.mk	Information, documentation; *Job seeking* (interactive database), seek/offer;
State Statistical office http://www.stat.gov.mk	Informaion, documentation, Forms download, indicators, interactive mapping, Online forms for questions;

Table 3.3 Examples of advanced services offered by other **Governmental institutions**

Governmental Institution	Services offered
Customs Authority http://www.customs.gov.mk	Information, Export-import documentation, Quotas Application, Video-streaming, User Registration, Forum, On-line magazine subscription, Catalogue Search, Question Forms , call center;
Sector for European Integration http://www.sei.gov.mk	Information, Search, Documents Database and search, Interactive NPAL (database for legislative procedure), Interactive CDAD (central Donor Assistance Database), Forms download, Forum, On-line surveys and quiz
National Bank http://www.nbrm.gov.mk	Information, Exchange rates, Web and Wap user services, financial institutions, Search and tender documentation
State Archive http://www.arhiv.gov.mk	Information and Publications, Expositions, On-line material Requests: books and copies; Exibition Macedonia
Committee for Information Technology http://www.kit.gov.mk	Information, Documentation, User registration and Forum
Public Revenue Office http://www.ujp.gov.mk	Information, News, Documentation and Bulletin; Download of regulations and laws, Search
Official Gazette http://www.slvesnik.com.mk	Database of all laws from 1945 up to date; Membership and Search possibilities, Form for questions, Browse for publications

On a local level the initiatives of the **local municipalities** and the variety of financing sources for realisation of the web-oriented services result into variety of service solutions and levels of interactivity. The recent Law on Decentralization and the correspondent redefinition of the services to be offered by the local municipalities will have significant influence to the number and quality of the services to be offered on-line.

Actually, out of 124 local municipalities 27 are presented through own web site or page.

Table 3.4 Examples of advanced services offered by **Municipalities**

Municipality	Services offered
Bitola http://www.bitola.gov.mk	Information, On-line survey, Search and User Registration, Forms download
Skopje http://www.skopje.gov.mk	Information, On-line registration, Forum, On-line survey, eServices guide, Forms download; GIS;
Karpos http://www.karpos.gov.mk	Information, Free Bulletin, User registration, Calendar of events, Forms download; Citizen info center;
Struga http://www.struga.gov.mk	Information for citizens and businesses, NGO, Forum and Questions to Mayor; Forms download;
Veles http://www.veles.gov.mk	Information for citizens and businesses, NGO, Forum and Questions, Search
Tetovo http://www.tetovo.gov.mk	Information for citizens and businesses, NGO, Forum and Questions, Search
Gevgelija http://www.gevgelija.gov.mk	Information, Phone book, Local government structure, Forms
Delcevo http://www.delcevo.gov.mk	Infrastructure, Phone book, Forms download, Demography

The majority of the municipalities' web site are offering download of the various administrative forms for submitting a request for documents as: Birth certificate, Marriage certificate, Death certificate, Citizenship claim, Approval for construction, Terms for construction, Extract of the Urban Plan, Tax return for property tax, Tax return for inheritance and gift tax, Certificate of not having criminal record, etc.

2. What are the penetration/usage rates of these services?

It is difficult to give a reliable penetration / usage rate of these services - a methodology for scanning the actual penetration / usage rate has just been adopted by the State Statistical Office.

In particular sectors (such as the Customs Authority, Ministry of Finance, Ministry of Economy, Chamber of Commerce and State Universities) the penetration / usage rate is very high and according to some research results is approaching 40% on the average.

On the country level, according to some research methodologies, the penetration / usage rate is as low as 4%. This data is to be taken into consideration with high reserves due to the disproportion of the service usages by sectors and by population groups.

In the IT cluster of companies the penetration / usage of the services provided by the companies is much higher that the country average.

In the private sector, in the biggest private high educational institution (SEE University http://www.seeu.edu.mk) the penetration / usage rate of ICT services is higher than 80% in respect to 5000 students and more than 200 staff.

In order to relate more reliable data with eEurope benchmarking indicators, the Committee for Information Technology (CIT) initiated statistical review to be conducted by the State Statistical Office. The survey is on ICT presence and use, according to EUROSTAT methodology.

It consists of four questionnaires: (i) for companies; (ii) for companies from the finance sector; (iii) for households and (iv) for the government and governmental organisations, public sector and agencies.

Data will be collected on: hardware equipment, networking, Intranet, web usage presentation and connectivity, operating systems, databases, software, searching engines used, human resources related to ICT, trainings and investments in ICT.

The survey is to be realised in the period January - March 2005, as a part of NISP

E. Private sector

1. What is the rate of companies conducting e-business, per size and sector if possible? Which applications?

The requests by the citizens for e-business and e-commerce solutions are low, due to the small penetration of the Internet among the citizens in Macedonia.

Leaders in offering and practicing e-business solutions are the companies of the IT sector in Macedonia. This sector recorded annual growth of 11,44% (data for 2002/2003)[2]. Statistics and research in this sector are provided mainly from the Ministry of Economy, Economic Chamber of Macedonia, State Statistical Office, Macedonian Association for Information Technology (MASIT) http://www.masit.org.mk, UNDP and GTZ-PSP (Deutsche Gesellschaft fur Technische Zusammenarbeit GmbH - Private Sector Promotion) http://www.gtzpsp.com.mk.

Second ranged sector in the category of sectors performing e-business is the financial and banking sector. Some banks providing Internet electronic keys for their clients facilitate online review of the state of their accounts, such as: Stopanska banka (http://www.stb.com.mk), Komercijalna banka (http://www.kb.com.mk/), as well as the possibility offered by Tutunska banka (http://www.tb.com.mk/) for conducting on-line transactions in the domestic and foreign payment operations through Internet. There are also information about the transactions, credits, deposits, foreign currency market, services and analyses. Downloadable forms are offered on all banking sites. Access to the account information and domestic transactions has been recently opened to customers.

[2] IT baseline Statistic Survey for 2002 and 2003, CDS - Center for Business Co-operation, July 2004

According to the National domain name registry office (MARNet - Macedonian Academic and Research Network) the registered domain names in Macedonia are given in Table 1.

Table 1. Registered .mk domain name repartition

Domain type	Number of elements
.com.mk	4.635 (1.200 active)
.edu.mk	76
.gov.mk	153
.net.mk	280
.org.mk	844

The nature of the information present on the top 422 visited web-sites .com.mk is given in Table 2.

Table 2. Content type of the top .com.mk sites

Information type	Number of .com.mk sites (out of 422 most developed)
0 basic info	422
1 basic info, guide info;	29
2 one way interaction; download forms;	69
3 two way interaction	64
4 transaction	10

Table 3. Type of services offered through .com.mk sites

Service source	Services offered					
	B2B	B2C	C2C	C2B	B2C, C2C, C2B	B2C, C2B, C2C, B2B
Sites from the domain com.mk; 422 most developed out of total 1200 active sites	363	392	34	113	85	17
B2C Business to Client C2B Client to Business		B2B Business to Business C2C Client to Client				

Still, at the moment B2B segment is at a very low level and is only available as a provision of a price list, information and prospects for business partners and associates. In regard to this, there are several business portals, such as Macedonian Business Portal http://www.seebiz.net.mk, the portal of Trade Point (http://www.eurobc.com.mk), the ICT Trado Portal (http://www.trado.org), and the portal of the Economic Chamber of Macedonia (http://www.mchamber.org.mk), which offer information and tools for improvement of the way one business is led, as well as contacts and promotion of the companies locally and internationally through the efficient use of advanced information technology and trade-related services.

Some of the companies, as it is the case for JSC Macedonian Telecommunications (http://www.mt.com.mk), several companies from the IT sector and other companies, are offering complete portals with content that includes: Web portal, on-line shopping (www.ekupisi.com), search and documentation retrieval tools, interactive catalogues and subscription model offers, user registration, SMS and WAP service, m-commerce and similar.

A Comprehensive survey on the companies' competitiveness in terms of available resources and ability to do business in foreign markets is given in the recent study on Competitiveness of Western Balkan Companies (Brussels, 2004) supported by the Economic Chamber of Macedonia. Extracts of the several parameters from the study are given in Table 3.

Table 3. Extracts from the survey on equipment and e.mail accessibility for the registered companies

Parameters for Macedonian companies	Percentage of companies
Companies having one PC for each office employee	15%
Companies having e-mail address for each employee	9%
Companies having e-mail address for key employees	40%

There are several new initial stages in regard to the usage and application of **M-commerce** solutions mainly in the purchase of Internet subscription time, and there are no indications whatsoever for the usage of the mobile phones for "Small Payment".

Specialized search engine for Macedonian sites (http://www.najdi.com) has been introduced as a private initiative in search engines for documents from Macedonian sites.

In regard to the computer usage in the companies, 88,2% of the asked companies are using computers for the finances, while 82,4% of them are using computers also as a tool in some phase of the production process. 66% of the asked companies are using professional consultative services of other organisations in regard to the usage of the computers, e-mail and Internet.

2. Are there any incentives offered to companies using ICTs? What kind of incentives?

While there are still no elements for speaking about incentives offered to the companies using ICT, there are remarkable activities of the companies and business association of companies from the ICT sector (http://www.masit.org.mk) and activities undertaken from the Macedonian Chamber of Commerce (http://www.mchamber.org.mk) in promoting training and implementation of ICT standards in the business activities in Macedonian companies. It is expected that after the adoption of the National IST development strategy and the realisation of the several projects undertaken on behalf of the Macedonian Chamber of Commerce, a set of incentives to companies using ICT will be initiated and put into function.

The **Chamber of Commerce** proposed a project (April 2003) on **e-Business** in Macedonian businesses introducing EANCOM standard and XML format usage recommendations. After adoption of the Law on Electronic Signature, a set of practical recommendations and guides will be prepared by the Chamber of Commerce introducing the usage and archiving of digitally signed documents. A workgroup is being proposed to work on standardization of the financial transactions.

In the framework of the Chamber of Commerce an **Infocenter for e-commerce** is created, which is assisting the companies through seminars, training and consulting services.

On the basis of the up-to-date experiences of the Web-portal of the Chamber of Commerce improvements and widening of the provided services is anticipated under title Creation of Contemporary Business Services Using the Latest Information Technologies. The aim is building of a unique, integrated and interactive web-oriented information system of the Chamber of Commerce through upgrading and reengineering of the existent information system in the last 12 years. The following is included in the list of anticipated services to be provided: WAP service, matchmaking applications and **e-Market center** for the small enterprises web advertising. Improvements and updating are foreseen in the document management system, and the Chamber's data base usage.

The ongoing formulation of National Information Society Policy (NISP), http://www.kit.gov.mk, has a special Chapter on *e-Business* to be defined in the framework of the NISP document through priority projects until March 2005.

The Parliament adopted some of the key laws concerning the harmonization of the ICT standards such as: Law on Copyright and Other Related Rights (Official Gazette of RM No.47/96,3/98, 98/02 and 04/05), Law on Electronic Data and Electronic Signature (Official Gazette of RM No. 34/2001 and 05/2002), Law on Industrial Property (Official Gazette of RM No. 47/02, 42/03 and 09/04) and

Telecommunications Law (Official Gazette of RM No.33/96, 17/98, 28/00, 04/02 and 37/04) whilst the acts defining the procedures and institutions are currently in preparation.

For the situation and the activities of the ICT industry in Macedonia, as well as the companies working in this sector, several researches and analyses have been carried out in the last four to five years, where all the information and data presented below in this part of the report are realized by the German Technical Cooperation (GTZ) and Ministry of Economy of Macedonia, US Agency for International Development (USAID), Macedonian Business Resource Center (MBRC).

In addition, there are clear announcements that some institutions have plan for this year for further and deeper research of Macedonian ICT Profile: State Statistical Office of the Republic of Macedonia, the Project Macedonia Competitiveness Activity (MCA), and MASIT. The targets of these studies shall be to represent current developments, strengths, weaknesses and potentials of the ICT sector in Macedonia; to collect relevant data for important ICT indicators; and to inform the potential investors and international community about co-operation possibilities with Macedonian ICT companies as well as to show needs for technical support.

Still, average sale of PC is approximately 15,000 for the past few years and the ratio between hardware and software is 70% to 30%. The annual sale of PC's for the year 2000 is more than 23,000 and additional 2,000 servers, and for the total number of installed computers in the country there are estimations for 100,000 pieces, up to 150,000-200,000 according to other sources.

Year	Number of PCs	PC/100 households	PC/1000 per capita
2001	72,000	12.02	34.98
2002	94,000	15.56	45.3
2003	118,000	20.16	58
2004	140,000	28	81.3
Source: Statistical office of the Republic of Macedonia			

Most of the world’s largest IT companies such as Microsoft, CISCO, IBM, Autodesk, Compaq, Hewlett Packard, Dell, Siemens, Sun Microsystems, Apple, Lotus, ORACLE are present in Macedonia via branch offices, distributors, dealers, resellers, solution providers and business partners. In addition, there are a number of companies oriented towards assembling, sale and maintenance of their own computer systems. Despite the fact that, considered as a percentage of the total sales, sales of brand-name computers are growing, still around 65% of sold PCs are assembled in Macedonia and only 35% are brand-name computers. The situation with the Servers is as follows: 55% Brand Name and 45% assembled in Macedonia.

The latest big move in direction towards improving the presence of the global IT companies in the country is the official opening of the *Microsoft Office in Macedonia*, as one of the items covered by the Strategic Partnership Agreement signed in December 2003 between the Government of the Republic of Macedonia and Microsoft Corporation. According to this Agreement Macedonian Government will access the company's licensed software, and in return, Microsoft will invest 6 million USD in the next four years in Macedonia and will open its office in the capital, in order to assist the implementation of its applications in the governmental institutions. Microsoft also agreed to donate over 6,000 software licenses for the use in the schools in the country. This document specifies conditions for donating licenses, the associated consultancy services, and lists five other agreements which fall under the Strategic Partnership Agreement, namely: Enterprise Agreement, Enterprise Enrolment Agreement, Microsoft Business Agreement, Donation Agreement, and Services Agreement). The total cost of this Agreement is 3.9 million USD.

The number of employees in the IT companies in Macedonia ranges from 2 to 40 and it is approximately the same in the companies dealing with software development only. Mainly, the employees in this sector are highly qualified, well trained IT professionals, educated in some of the three universities in Macedonia, offering education to all students of ICT specialties. There are around 60 employees in ISP's in Macedonia On-line, in MTNet-ISP, owned by Macedonian Telecommunications, there are 74 employees and the average of this number for ISPs is around 20. In the companies dealing with telephone services operators the number of employees' ranges from 250 employees in JSC Cosmofon, 370 in JSC Mobimak and 3.192 employees in JSC Macedonian Telecommunications.

The average salary of IT professionals is around 400 Euros, and it is double compared to the total average for the Macedonian economy, but there are no separate data on professionals in each ICT activity area.

Within the frames of the Project Macedonian Competitiveness Activity at the end of 2003, an ICT cluster (http://www.mca.org.mk) was established that will highlight Macedonia's skill base and will provide an ICT platform from which leading Macedonian industrial sectors can produce and launch products that are more competitive.