

Noteworthy, that in case of successful fulfillment of the first container delivery, the action will take constant character.

As mentioned above, the process of information and communication technologies and Internet promotion mainly takes place in the capital and some other cities, while regions suffer great need in ICT development and implementation of different programs. Great efforts are under way to increase connectivity with the rural population. There are several projects currently underway in Georgia that will help reduction the digital divide between the capital and the regions. Chevron is financing a project to integrate and network all 30 regional centers of two main Georgian Universities. According to the program, regional centers will be equipped with close to 1,300 new computers that will create a new IT infrastructure in some of the remote regions of Georgia. Also, under a separate program – six main cities of Georgia will be linked with each other over the Internet through an optical cable network. Those cities are Tbilisi, Kutaisi, Batumi, Rustavi, Poti, and Zugdidi.

CONCLUSION: Developing the ICT Workforce is generally considered to be at the stage 2, in some cases 3.

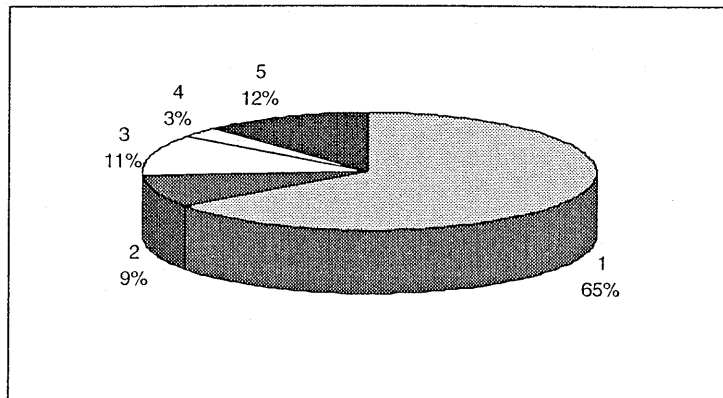
3. Networked Society

3.1. People and organizations online presence

According to sociological assessments, approximately 65% of population is aware of the Internet:

Chart 7. Awareness level

- Tbilisi
- Imereti
- Ajara
- Kakheti
- The rest

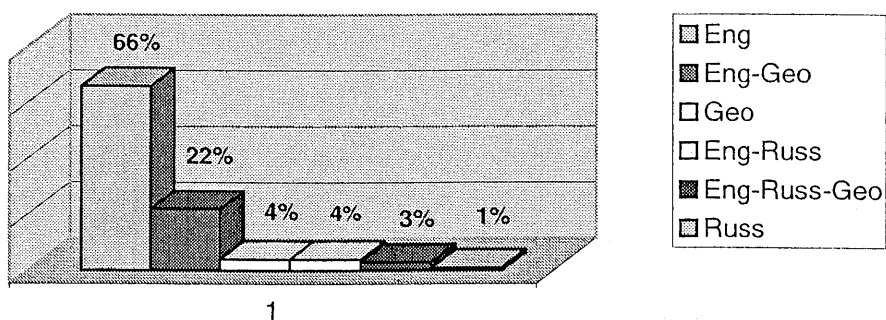


Source: polling results conducted by the GeDG team

It is worth to be mentioned that there are no large discrepancies to online presence among different groups and national minorities in Georgian communities. According to unofficial data, the males between the ages of 10 and 35 outline the number females in usage of Internet.

As of early 2001, more than 100.000 –120.000 people have used the Internet. This is 1.85-2.2% of the population. The number of recent computer users has considerably increased and is estimated to be about 200,000-250,000 that makes 3.5-4.5% of population. Still there is a growing tendency in the number of Internet users.

The actual number of online users is one of the hardest indicators to track and there are few reliable indicators that accurately map how many people are online. Resting upon the results of the sociological poll the following data was obtained on the size of potential users.



1

Different online interest groups, chats, forums, interactions and other entertainment opportunities cannot be estimated as very popular and frequently attended ones, which is stipulated first of all by low level of presence of online users, and secondly by poor range of tools and design. Thus, Georgian chats are very plain from the viewpoint of interface and do not support Georgian fonts that cause inconvenience in usage.

Currently there are over 40 online Georgian newspapers, mostly hosting on www.opentext.org.ge. Majority of them are electronic versions of the leading Georgian newspapers and support only Georgian language, with Georgian font download options. Normally they provide information on local topics. In general, their interfaces are similar to each other - simple and aesthetically not developed that is explained by weak demand on electronic versions of newspapers, magazines and other publishing agencies among Georgian population.

Table 12. List of news Agencies and Newspapers Online, 2001

News agencies, Newspapers and Magazines Online	URL	Languages
Tablo	http://www.tablo.ge	Geo,Eng,Russ,
Inews	http://www.inews.com.ge	Geo
Georgia Today	http://www.georgiatoday.ge/	Eng
Svobodnaya Gruzia	http://www.svobodnaya-gruzia.com/	Russ
Georgian International Press Center	http://www.gipc.org.ge/	Geo,Eng,Russ,
ABRA Magazine	http://www.osgf.ge/abra/	Geo
Alioni	http://www.opentext.org.ge/alioni	Geo
Arili	http://www.opentext.org.ge/arili	Geo
Dilis Gazeti	http://www.opentext.org.ge/dilisgazeti	Geo
Dro	http://www.opentext.org.ge/dro	Geo
Droni	http://www.opentext.org.ge/Droni	Geo
Georgian times	http://www.sanet.ge/gtze/	Eng
7 Dge	http://www.opentext.org.ge/7_dge	Geo
Axali Taoba	http://www.opentext.org.ge/akhalitao	Geo
Others	See more on www.opentext.org.ge	

CONCLUSION: Locally Relevant Content is generally considered to be at stage 3.

3.3. ICT in everyday life

Approximately 200 respondents participated in sociological poll conducted by local experts, from where 80 were organizations and 100 private persons. Based upon the results of this survey it could be said that ICTs are more widely used by official institutions then by the Georgian population.

Following results came from the sociological poll:

Table 13. Computer usage.

72% of inquired organizations use computers, the rest (28%) do not

Quantity of computers	Percentage
1	52%
2	12%
15 and more	8%
0	28%

1,5% of inquired persons use computers.

Table 14. Fax usage

72,6% of inquired organizations use fax service, the rest (27,4%) do not.

Quantity of faxes	Percentage
1	27,2
2	27,2
3	9,1
5	9,1
0	27,4

1,2% of inquired persons use fax services.

Table 15. Phone usage

Quantity of phone lines	Percentage
1	20
2	46,6
3	13,3
4	6,7
10 and more	13,4

Mobile usage: Currently there are 268 000 mobile subscribers in Georgia, which constitutes 5% of the population and this number has a tendency to grow.

Pager usage: Regarding paging services, two paging companies have been established in Georgia, Paging-1 and Paging-2, both with the strategic participation of U.S. Metromedia.

TV usage: TV remains most popular and usable public source for obtaining appropriate information. Latterly in Georgia there appeared several cable TV-s, as they are Ayety TV and 7-Channel, which provide an access to foreign and international channels, apart from local ones. This fact improves a number of TV consumers.

100% of inquired persons are TV consumers.

CONCLUSION: ICT in everyday life generally can be considered to be at the stage 3.

4. Networked Economy

4.1. ICT employment opportunities

ICT industry is a new field in Georgia. As the Georgian government gives a priority to the assimilation and development of this industry as whole Georgian society pays attention to this innovation. Organizations and work centers gradually computerize their working processes, more and more use ICTs in every day work. Such tendencies cause a demand of IT specialists, programmers and create employment opportunities in ICT sector.

After dissolution of the Soviet Union European technologies or ICT started to appear and be implemented in every field of Georgian society. This process appeared as a basis of using not traditional ICT methods in different fields. If before during the office work paper and telephone had been used as main tools, now the number of organizations using computers, digital devices, faxes, etc. are being rapidly increased. In other words, gradually work processes are being computerized and electrolyzed in Georgia. On the one hand ICT gives an opportunity to manage such processes more effectively, but on the other hand it makes difficulties for that people, who were get used of traditional methods and this problem of adoption really exists. It is recognized that ICT creates principally new economical environment, which stimulate a huge demand through the population of studying computer-related technologies. There are several computer-training centers providing such facilities in Georgia.

According to statistics, in 1988 office work was managed by means of computer by 8% of organizations, now 50% use computers for such reasons. It means that ICT is being rapidly adopted in Georgia and the problems connected with ICT adoption gradually overcome. There are several (donor and commercial) organizations providing IT technology courses in Georgia. Most of them are located in Tbilisi, so it is not easy to obtain knowledge in IT technology field in regions.

These organizations could be classified into relative two categories:

Organizations dealing with preparation of computer users or providing computing studies for only office work –studying Microsoft Office, Internet usage etc.

Organizations dealing with preparation of proficient IT specialists.

There are about 30 organizations and computer centers, which could be gathered in above-mentioned first category. For example, following donor organizations: British council computer training center, OSGF, IREX.

Not similar situation is in the second category; only two computer centers care for preparation of proficient IT specialists:

Kamara computer LTD

CIT LTD (Center of informational technologies)

These two computer centers offer to customers relatively profound knowledge of IT technology: studying various computer languages - C++, Visual basic, Delphi; also Webmaster and network administering. They give an opportunity of preparation for different internationally valid certification, as it is Microsoft or Novell certification.

These organizations are being improved rapidly, because of high degree of desire towards IT technologies through Georgian population, but still these computer centers are not enough equipped, that makes difficult to achieve desirable objectives during the studying processes.

CONCLUSION: ICT employment opportunities can be generally considered to be at the stage 2.

4.2. B2C E-commerce

Organizing commercial deals via Internet named E-commerce almost do not exist in Georgia. Nowadays the Internet is mostly recognized as source of different information or alternative source of communication between persons and communities, but not as an opportunity of organizing commercial deals. (B2C, B2B.) Moreover there is no sophisticated regulatory and promotional draft law, which would provide high security level for e-commercial activity. Thus Georgia is in need of creating appropriate framework for functioning of this Internet dimension. Still there are essential innovations in this field: nowadays it became possible to make online purchases as locally as outside of the country - several banks (e.g. TBC-Bank) offer local and International debit cards (Erocard/Mastercard.) to do currency transactions; Recently several local web-sites appeared, which propose remote purchasing via Internet, e.g. "The flower's planet" on www.flowersplanet.com. Hotels and airplane tickets booking online is also available.

CONCLUSION: B2C E-commerce can be considered to be at the stage 2.

4.3. B2B E-commerce

Different situation is in case of B2B. Practically all business deals take place off-line, using traditional communication tools. It can be explained by the absence of insufficient law environment and low awareness level.

CONCLUSION: B2B E-commerce can be considered to be at the stage 1.

4.4. E-Government

E-government infrastructure in Georgia is still in its infancy, though some special initiatives have been launched. Recently within the framework of project financed by UNDP a local network was built by means of fiber optical cables, which integrated 17 ministries and the State Chancellery. This new network makes communication more effective and flexible between legislative and executive authorities. This event can be recognized as a significant step in the process of implementing E-government tools in Georgia.

The majority of ministries is presented online (11 ministries from the total 17) and has their personal web pages. These webs are simple and rarely updated, without any interactive e-government related tools.

CONCLUSION: E-Government in general is at the stage 1, in some cases (mostly in large cities).

5. Networked Policy

This component at present is underdeveloped, (main source been the lack of hardware, the literacy in informatics been rather high), but nevertheless, there are many factors indicating the improvement of situation, the major one may be the support for “informational society” (IS) policy of Georgian government - the fact that building of Information society is recognized as one of the main priorities for Georgia.

The Georgian government is committed to exploiting the opportunities provided by information and communication technologies to the benefit of the country’s economy and civil society. It is consciously developing the institutions, infrastructure and laws to establish the groundwork of a modern information society (IS). A unified coordinating structure has been established to plan, guide and promote the emergence of an information society in Georgia. In many cases the coordinating bodies are supported, and have representation from both the government and private sector entities (NGOs, ISPs, IT industry, academic associations, etc.).

5.1. Telecommunications regulations

Some of the major representatives of this structure are:

State Governance

State Council on Information and Communication Technologies (look in IST Policy topic on www.georgia-gateway.org) was established in accordance with the Order (#267, July 8, 2001) of the President of Georgia. The same order repealed the Presidential Order #456 of July 26, 1999, which provided for the establishment of the Coordinating Council of Georgia for the development of Information and Communication Technologies.

State Council for ICT is a consultative body to the President of Georgia for developing strategies of ICT development/ deployment, evolution and employment in all areas of state building, information safety and national security, as well as the formation of information society. The Council develops and submits to the President recommendations in the area of ICT, in particular:

- state policy, namely national, regional, international policy, as well as economic, social, legal, technological and other aspects;
- institutional capacity building, aimed in particular at implementing specialized programs and projects, creating appropriate executive bodies, establishing and developing state commissions;
- formation of communication/ digital environment, including the creation of digital telephone network, development of global and local digital networks, as well as ensuring access to global and international networks ;
- formation of digital information environment, including global state and sectional information banks, as well as development and deployment of computerized management systems;
- improving public awareness, promoting ICT knowledge, developing appropriate working skills;
- creating legislative basis, developing necessary normative acts, providing for amendments and supplements to existing normative acts, or their repeal, as appropriate, as well as for necessary degree of standardization and unification;
- attracting foreign investments and credits, ensuring their efficient allocation;
- collecting, processing and disseminating information for broader public access to media tools, and education;

formation of electronic information space in the country, its integration into world electronic information space with the aim of developing security strategies;
formation of information society, including the development of strategic plans, necessary stages and measures.

State Commission for the Development of Information Society was established in accordance with the Order (#374, August 17, 2000) of the President of Georgia. It aims to provide Internet access to all strategic state agencies, promote the development of information society, create global information computerized network for all sectors of national economy.

Goals:

coordination of programs for the development of information society;
development of general concepts of information services (e-commerce, tele-medicine, environmental monitoring, etc) for introducing innovative technologies in all sectors of economy;
coordination of activities carried out by various groups involved in ICT development for proper allocation of funds and resources in the framework of the Presidential program;
development of approaches for promoting ICT development, and providing coordination;
development and adoption of the Statute providing for ICT strategy and tactics, prospects of ICT development, assessment of information projects, conducting examinations.

Regulatory Bodies of State Governance for Communication and Postal Services (according to the Law of Georgia on Post and Communication of July 23, 1999)

Ministry of Transport of Communications represents a state governance body in the area of communication and post in Georgia.

Activities in the area of transport and post are regulated by the National Commission for Communications of Georgia.

Bodies of state governance in Abkhazia and Ajara are represented by the territorial units of the Ministry.

Ministry of Transport and Communication. (www.mtc.gov.ge) State executive body involved in determining general directions of state policy in the area of communication and post, and ensuring its implementation.

Main functions:

Implementation of state policy in the area of post and communication based on the Constitution and other legislative acts;

Development, implementation and control of short, medium and long term strategies and priorities, and respective programs for the development of networks and tools for communication and postal services within its particular area of competence;

Development and implementation of normative acts for designing, exploiting and building networks;

Implementation of strategies for the development of the Internet and IC technologies, designing the development plan, coordinating IC infrastructure;

Development of short and long term programs and projects for ICT development;

Promotion of innovative IC technologies; introduction of principles for informational management;

Integration of local ICT with the international market;

Developing normative basis in the area of communication and post; monitoring technical and economic situation in communication;
Assessment of investment plans for the development and construction of communication networks and units.

Department of Communication, Post and Information Technologies was established at the Ministry of Transport and Communication in July 2000 (Order #15 of the Minister of Transport and Communication of July 25, 2000).

Goals:

Implementation of the policy of the Ministry in the area of communication, post and information technologies; management and control in the area of communication and post. Among other issues the Department focuses on tele-communication provision of information technologies, telecommunication science, participation in the distribution of radio-frequency range, efficient use of Georgia's position on geo-stationary orbit, ensuring control and management in this area, participation in short, medium and long term programs for technical support of technologies, creating favourable conditions for privatisation, institutional capacity building, restructuring of the sector, drafting and submitting to the State relevant laws, promoting integration of Georgia in global networks, attracting investments, grants, etc.

Georgian National Communications Commission (www.gncc.ge) Independent Commission was established under the Presidential Order #411 of September 18, 2000 on the basis of the Law on Post and Communication of July 23, 1999. In its activities Commission shall comply with general state policies in the area of post and communication.

Goals:

Creating adequate legislative basis;
Promoting institutional capacity building in the area of post and communication in cooperation with other institutions involved;
Creating fair and equal competition environment;
Protecting legal consumers rights;
Banning monopoly in the area of communication and post;
Banning issuance of exclusive licenses;
Ensuring stable and proper functioning of the market, receiving adequate revenues by parties engaged in relevant activities;
Ensuring open and transparent relations with the society;
Ensuring compliance of normative, technological and technical basis of the activities conducted in the area of communication and post with international standards, creating favorable investment climate;
Promoting within its own area of competence the interests of Georgia in the area of communication and post with other countries and international organizations;
Cooperating with international organizations, developing and implementing joint programs, etc.

Activities:

Establishing licensing conditions in the area of post and communication, issuing licenses; modifying, suspending, invalidating licenses;
Establishing and regulating tariff ranges for network services;
Regulating technical and economic conditions for reciprocal engagements;
Certifying communication and postal tools, standardizing and providing metrological services;

Establishing and regulating general contract conditions for reciprocal engagements among licensees;
Distributing frequencies;
Resolving within its own area of competence conflicts between licensees, as well as between licensees and customers;
Attracting funds for promoting the development of local communication and post networks;
Establishing specialized funds in accordance with existing rules.

In May 2000 the Council of Experts (attached to the Commission) was established. Goals:
Considering, exploring and analyzing issues faces by the Commission, developing recommendations with the aim of their further implementation in the conditions of transparency and openness;
Exploring, analyzing, predicting world trends and processes.
Proposals, prepared by the Council are of advisory nature, and upon approval are to be submitted to the Commission.

Georgian State Department of Information Technology (www.gsdit.gov.ge) (according to the provisional Statute of the Department). Independent state body implementing state policies, and ensuring realization of state objectives and tasks in the area of informatization. Department promotes and controls the processes of comprehensive informatization throughout Georgia, application of latest technologies and practices, ensures their full and efficient use in all sectors of the state. Department ensures total informatization of state governance, integration of Georgia into world information space, and joining the community of high-tech nations. Department is accountable to the President of Georgia.

Goals: computerization of the country; ensuring information access through local and global computer networks with the use of information, linguistic and other tools (with the exception of equipment and program/mathematical basis of the networks); development of specialized computer systems for information processing; formation of global electronic/information space of the country, integration into international information space.
Tasks: Developing and implementing regional, local concepts of informatization; linguistic basis; training. Providing recommendations to state organizations, juridical and natural persons.

Legislation.

Georgian State Department of Information Technologies drafted the Law on E- document and the Law on Databases of Natural and Juridical Persons.

Privatization of telecommunications

Legislation differentiates communication tools that may be owned by the state or private party.

On February 22, 1999 the President of Georgia issued the Order #75 On the Establishing the Strategy for Attracting Investments and Developing Telecommunication Sector in Georgia.

Goals: reforming telecommunications sector, increasing the role of regulatory bodies and releasing the Ministry of Communication from economic and industrial functions, liquidation of state monopoly and high concentration of market, creating competitive environment, attracting foreign investments, developing market and increasing the degree of regulation, improving services, etc. Implementation of strategic decisions based on alienation of state owned assets, privatization and transfer of management rights (for 20-25 years) through international tenders.

Currently the privatization tender is being announced for the Georgian Telecom (51% owned by the state), and local telecommunication network - Joint-Stock Company "Sakartvelos Elektrokavshiri" (75% owned by the state). The tender is to be held in autumn 2001.

Main direction of the state ICT policy

On July 26, 1999 the President of Georgia issued the Order #456 On the Measures for the Development of Information and Communication Technologies. The Order stated, that: revolutionary changes in the world ICT development make necessary to turn ICT into the main driving force of the Georgian society;
present stage of societal development calls for renovation and further development of ICT;
elaboration of state ICT policy; development of short and long term ICT strategies.

It is important to take into consideration geopolitical and strategic location of Georgia. ICT should be viewed in the context of such projects as TRACECA, New Silk Road, Baku-Supsa Pipeline, as well as an independent field. In addition to the existing main lines between CIS states new mainlines are currently under construction in the South Caucasus, Central Asia, the Black Sea basin states.

(The above Order was repealed by the Presidential Decree #267 of July 8, 2001)

On August 2000 the President of Georgia issued the Order #865 On Urgent Measures for the Promotion of Informatization in Georgia. Goal: The Department of Informatization and ministries were charged with ensuring informatization of agencies, and creating global information infrastructure.

Protection of information

The Constitution of Georgia (Article 20) declares inviolability of private records, correspondence, telephone and other kind of conversations conducted through technical means, as well as notices received with the use of technical means. Restriction of these rights is possible only when appropriate court judgment is delivered, or without it - in some urgent cases specified in the Law.

According to Article 24 of the Constitution, any person has the right to receive and disseminate information, express and disseminate his/her opinion orally, in writing or any other form. Media is free. Censorship is prohibited. Neither state, nor individuals are allowed to monopolize media or any means for disseminating information. The rights specified in points 1 and 2 of this article may be restricted by the Law to the extent needed in democratic society for ensuring state or civil security, territorial integrity; preventing crimes; protecting rights and dignity of other persons; preventing dissemination of information that has been considered confidential; or for ensuring independence and impartiality of justice.

The principle of free dissemination of information is fixed also in the Law on Communication (Article 15), and the Criminal Code of Georgia (Article 13).

General Administrative Code of Georgia (Article 10) provides for the right of any individual to seek public information of administrative bodies and receive its copy, unless such information contains state, professional or private secret.

Criminal Code of Georgia provides for criminal prosecution for computer crimes.

Issues of intellectual property pertaining to ICT

Georgian legislation provides no references to the institute of domains. The Law on Brands protects brands registered with Sakpatenti, and recognized in accordance with Article 6 of the Paris Convention.

The Law on Copyright recognizes the monopoly of authors of works of art, literature or science to use them in any needed way, as well as the right to prohibit such use by other parties. The Law introduced the prerogative right for the authors of computer programs and databases. Copyright term is determined as 70-year time period after the author's death.

CONCLUSION: Telecommunications Regulation can be considered to be at the stage 2.

5.2. ICT Trade Policy

Support of entrepreneurship. Georgian legislation provides for the freedom of entrepreneurship and comprehensive organizational and legal forms.

Licensing is regulated by the Law on Communication, Law on License Duties and subordinate legislation of the Commission for Communications.

Communication and postal services are offered on the basis of licensing with the exception of cases specified in the Law. Licenses are issued by the National Commission for Communication.

Subject to licensing, along with other services, are the following activities (Law on Communication, Article 36.2):

- transmitting data and providing Internet services through cable networks;
- transmitting data and providing Internet services through satellite system;
- transmitting data and providing Internet services through radio lines;
- transmitting data and providing Internet services through frequencies.

There is no need in licensing if communication tools are used for ensuring security, management and environmental monitoring of the country; or, if radio-relay lines serve intra-organizational purposes (special permission needs to be issued by the Commission). However, such organizations shall be registered by the Commission.

Agreement on reciprocal engagements. The issue of reciprocal engagements is regulated by the Law on Communication (Article 411) and the Statute of the Commission for Communications (adopted on July 10, 2001). Statute obligates operators to be connected, either directly or indirectly, to all other operators.

Breach of licensing rules is punishable and results in administrative fine and suspension of license.

Regulation of prices (telephone services, competitive price policy)

According to the Georgian legislation in force tariffs are set by the Commission for Communications. Law on Communication requires the price policy to take into consideration conditions of competition, social and economic situation in the country, legal stability, and regional specificity.

Commission for Communications passed the Resolution (#5, May 22, 2001) on establishing maximum tariffs for telephone services.

In accordance with the Resolution #4 of the Commission on the regulation of tariffs for postal and communication services, licensees are allowed to set tariffs for services that are not subject to applying maximum tariffs without Commission's approval, though they should inform the Commission on all tariffs applied and provide economic justification for each service category. The same applies to tariffs for reciprocal engagements.

With the deployment of new digital telephone stations time-based tariffs are being introduced for local contacts, which hampers the use of the Internet by most part of population.

CONCLUSION: ICT Trade Policy can be considered to be at the stage 2.

6. Conclusion

The results from the E-Readiness assessment of Georgia should act as the starting point in a participatory planning dialogue. A planning process should be undertaken as a true partnership among business, government and other members of the community. The process should encourage participation of the whole community and raise awareness among population.

Recommendations on existing state infrastructure:

Law on Communication should address general issues of coordination activities carries out by various state agencies and determine functions and position of the Georgian State Department of Information Technologies. Georgian State Department of Information Technologies drafted the Law on E- document and the Law on Databases of Natural and Juridical Persons. These draft laws should be considered and adopted in the nearest future. In this connection it is necessary to ensure their compliance with the Directives of the European Union. It is also very important to provide institutional support to the deployment of e-commerce, e-banking, e-business, e-insurance and other Internet tools. It is necessary to set the conditions of privatization so that they protect and guarantee the rights of operators to equal access, and provide for economically reasonable tariffs.

Criminal Code of Georgia provides for criminal prosecution for computer crimes. It is necessary to make amendments to the Criminal code, in particular, include articles of the EU Directive referring to cybercrimes. Based on international expertise and the EU Directive, it is necessary to draw up legislative norms that will recognize and regulate the status of domain registration.

In order to ensure informatization on regional levels, as well as equal and affordable access to communication tools for whole population, irrespective of geographic location, it is necessary to employ universal licenses, develop the State ICT Policy, and the Strategy for building information society and ICT. Policy and Strategy should address all aspects of legal regulation and promotion of ICT development, and shall be approved by the Presidential Decree. Policy and Strategy shall comply with the international standards and normative documents.

Curricula must be redesigned to encourage the use of ICTs in the pursuit of problem solving, group learning and research. Students should be taught from the earliest age possible to use information and communication technologies to enhance and improve their learning experiences. Full integration of ICTs into the learning process is optimal, and collaborative, project-based learning can make up a solid pedagogical strategy for ICT-enhanced education.

Also, problems with hardware & software and Internet availability and affordability should be taken into consideration with the purposes of bridging digital divide and integrate into the networked world.

Annex 1. Questionnaire

The data submitted by you will be confidential, would not be transferred to third parties and would be used for statistical purposes only, what will serve for implementation of informational technologies in Georgia. Filling up the questionnaire you support your own business as well as economical growth of Georgia in whole.

E-Readiness assessment questionnaire

1. How many phone lines has your organization/department? _____

Does the telephone connection quality satisfy your needs?

yes no

F

3. Have you a fax?

yes (number) _____ no

4. How many of your employees use cellular phones? _____

5. How many personal computers has your organization/department? _____

6. How many of your employees use personal computers? _____ among these

users (who only uses personal computer for his work) _____

information technology specialists (who provide continuity of service) _____

7. What are the works you use personal computers in your organization/department?

working with documents (Microsoft Office; Word; Excel;...)

for standard tasks (accountancy; personnel department; storage;...)

for specific needs of your organization

creating databases

other _____

8. Are the personal computers of your organization/department integrated in net?

yes no

9. Have you a net engineer and/or administrator?

yes no

10. Does your organization / department use Internet and who is your Internet-provider?

Sanet

GOL

Geonet

Iberia Pack

ICN

MMC

Global 1

OSGF (Soros)

other _____

11. Have you a dedicated line connection with your Internet-provider?

yes no

12. What is the average time per month your organization/department uses Internet?

13. Does your organization/department has a web-site in Internet?

yes (URL _____) no

14. How often you use local georgian internet?

rarely frequently do not use

15. What coding for georgian symbols is used in your organization/department ?

38-symbol Georgian standard coding (Geo-Times, Geo-Arial,...)

coding based on Latin keyboard (Litnux, GeoDumb,...)

coding based on Russian keyboard (Cveulebrivi, GDumb,...)

other _____

each employee uses coding familiar for him/her

16. Do you organize qualification improvement courses in informational technologies for your employees?

yes no

17. Is the software you use licensed?

yes no

18. Only for Internet-providers:

How many dial-up subscribers are registered with you _____

How many customers have registered e-mail account?

How many dedicated lines have you leased to your clients?

What is your Internet connection speed?

What is the number of modems you have on incoming lines?

To your opinion, what is the number of Internet users in Georgia?

19. Only for organizations selling computer hardware:

19.1. What is the number computers you sell per month?

19.2. Are there buyers of software from you?

yes no

20. To common citizen:

Do you use Internet and how many hours per week?

20.2. How many of your friends uses Internet?

20.3. What do you use for Internet access?

Internet café private entry organization other

21. Do you find it affordable for you Internet usage?

yes no

22. For learning organizations:

22.1 What is the number of specialties connected with informational technologies?

22.2. What is the number students/pupils studying on specialties connected with informational technologies?

22.3. What is the total number students and special personnel?

Name _____

Position _____

Organization _____

Address _____

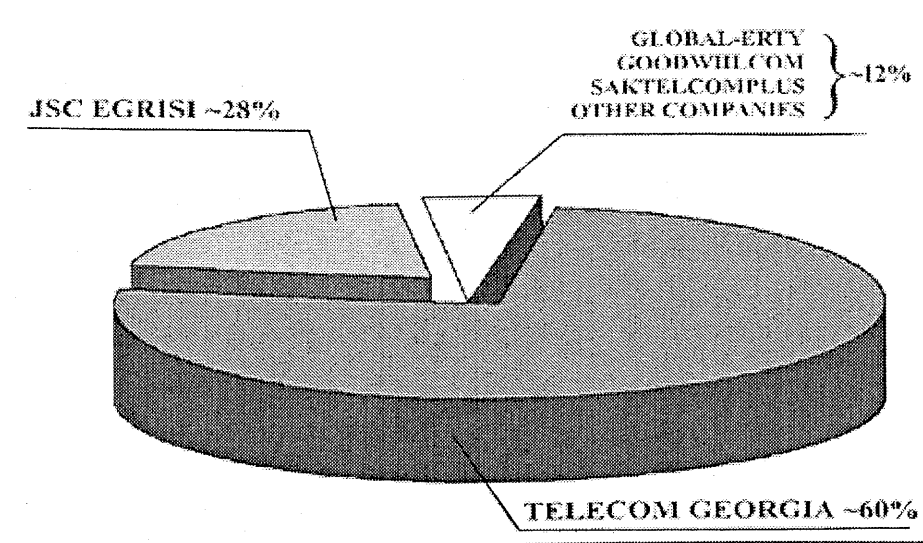
Telephone _____

Fax _____

E-mail _____

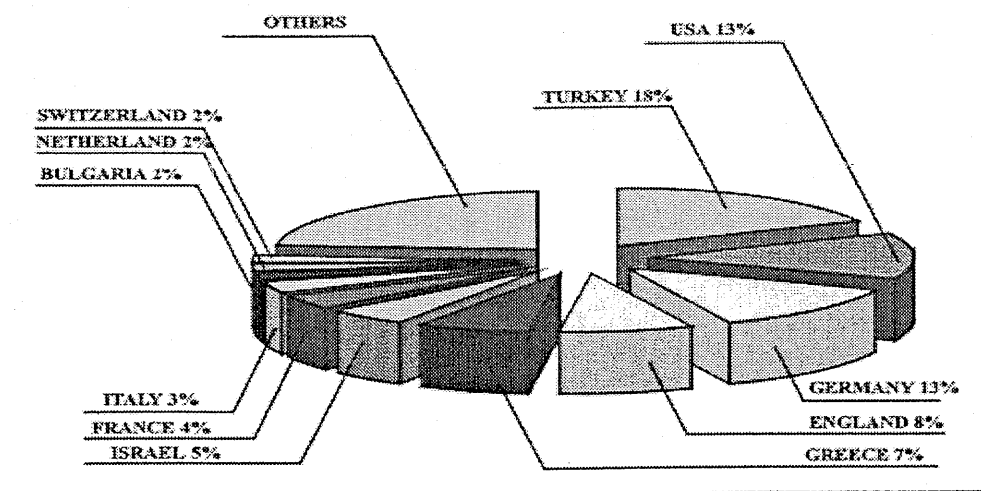
Thank you for help

Annex 2. Georgian telecommunication companies share in international connections

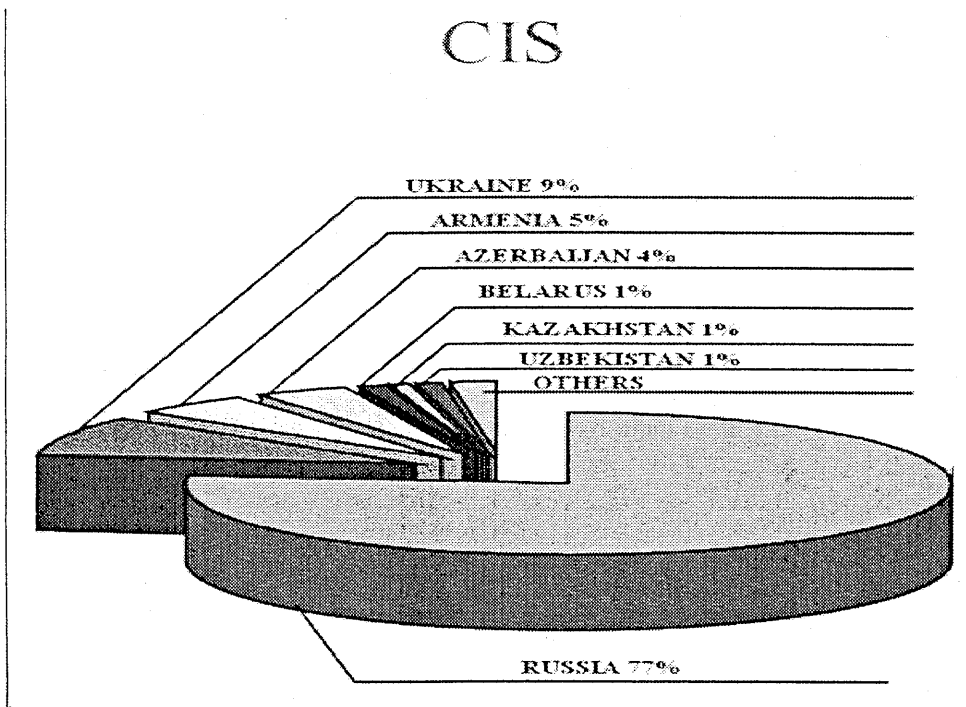


Annex 3. International Partners of Telecom Georgia

International

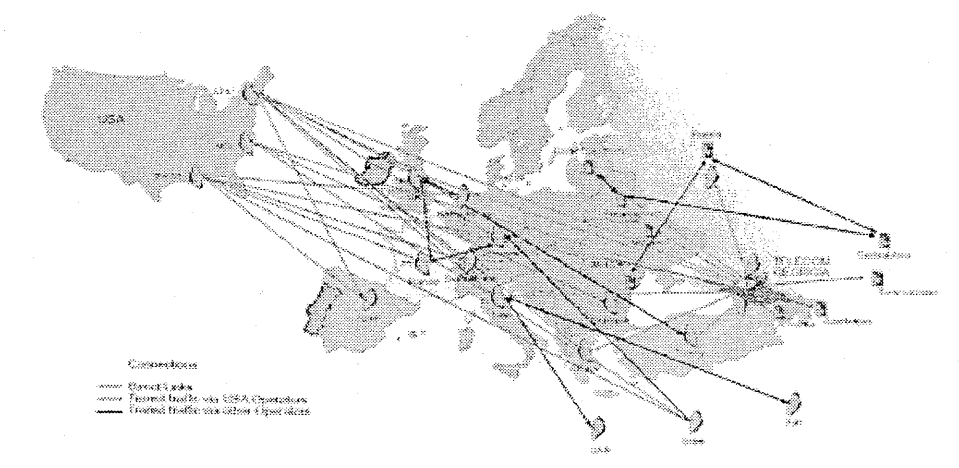


Annex 4. Telecom Georgia connections with CIS countries



Annex 5. Telecom Georgia Main Directions of Traffic

TELECOM GEORGIA'S MAIN DIRECTIONS OF TRAFFIC



Annex 6. International Tariffs

Destination	Time	Prices (USD)
USA, Canada	08.00 - 24.00	0,65
	24.00-08.00	0,50
	Weekends,	0,50
	Holidays	
Europe \$ Baltic countries	08.00 - 24.00	0,60
	24.00-08.00	0,50
	Weekends,	0,50
	Holidays	
Afghanistan, Iran, India, United Arab Emirates, Lebanon, Maldives, China, Pakistan, Philippines, Saudi Arabia, Syria, Japan, Egypt, Bangladesh, Laos, Cambodia, Burma.	08.00 - 24.00	0,75
	24.00-08.00	0,70
	Weekends,	0,70
	Holidays	
Bahrain, Jordan, Kuwait, Oman, Qatar, Yemen, Hong-Kong, Indonesia, Korea, Iraq, Mongolia, Papua New Guinea, Taiwan, Thailand, Vietnam.	08.00 - 24.00	1,25
	24.00-08.00	1,20
	Weekends,	1,20
	Holidays	
Turkey, Israel	08.00 - 24.00	0,50
	24.00-08.00	0,45
	Weekends,	0,45
	Holidays	
Australia	08.00 - 24.00	0,75

	24.00-08.00 Weekends, Holidays	0,70 0,70..
Africa and the rest of the world	08.00 - 24.00 24.00-08.00 Weekends, Holidays	1,50 1,40 1,40
Russia	From region From Tbilisi	0.20 0.25
Azerbaijan, Armenia	From region From Tbilisi	0.30 0.35
Other countries of CIS		0.35

Annex 7 Tariffs of Mobile Companies

OPERATORS	MAGTI GSM		GEOCELL GSM		MEGACOM	
STANDARD SERVICES	(USD)		(USD)		(USD)	
SIM Card	22.5		15		10	
Subscription	5.1		9		5	
Activation	Free		Free		Free	
DESTINATION	Day	Night	Day	Night	Day	Night
Mobile to Mobile	0,144	0,144	0.130	0.07	0.065	0.065
Mobile to Georgia	0,144	0,144	0.144	0.07	0.065	0.065
Incoming calls	free	free	Free	Free	0.065	0.065
OTHER SERVICES						
Mobile cards	15 / 30 / 60		22,5 / 25 / 50 / 100		12/ 30/ 54	
Roaming	Deposit-250		Deposit-100		150	
Activation of Fax service	20		15		-	
Activation of WAP service	25		-		-	
Activation of Data function	20		15		-	
SMS Massage	-		0.03		-	

Annex 8. Hardware prices

Desktop computers	Configuration	USD
Intel Celeron 566MHz	GIGABYTE 6VX7-4X -Sound on Board/DIMM 64MB PC133/ FDD/ HDD QUANTUM 10GB/ VIDEO S3 TRIO 8MB AGP/ CASE ATX/ KEYBOARD/ MOUSE/PS/2/ PAD + + MONITOR VIEWSONIC E50 15" 1554	483
AMD DURON 800MHz	ELIT GROUP K7VZA /AMD® Sound on Board/ DIMM 64MB PC133/ FDD/ HDD QUANTUM 10GB/VIDEO ELZA RIVA TNT2 16MB/ CASE ATX/ KEYBOARD/ MOUSE/PS/2/ PAD+ +MONITOR VIEWSONIC E50 15"	512

Intel PIII 600EB MHz (133/256)	ASUS P2B/Slot1<443BX> AGP ATX 3DIMM/ISA/PCI/AGP3/4/1 /DIMM 64MB PC133/ FDD/ HDD QUANTUM 10GB LD-A/ VIDEO VIDEO ELZA RIVA TNT2 16MB/SOUND/CD ROM 48x Panas. / FAX MODEM 56k MOTOROLA/ SPEAKERS/ CASE ATX/ KEYBOARD/ MOUSE PS/2 / PAD + MONITOR VIEWSONIC E50 15"	603
VIEWSONIC		
E50 15" 0.28mm,800x600@89Hz 1024x768 max. res.,		179
G55 15" 0.27mm, 800x600@89Hz 1024x768@87Hz		225
PF77 17" 0.25mm, 1600x1200@77Hz1280x1024@89Hz1152x870@104Hz 1024x768@118Hz		469
SONY		
SONY E100 15"0.24-0.25mm		268
SONY G420 19" 0.24mm 800x600@170Hz1600x1200@89HzMAX TCO'99 ENERGY 2000		795

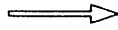
Annex 9. Hardware components prices

CPU		
Intel Celeron™		
INTEL CELERON™ 667 Mhz FCPGA		58
Intel Pentium™ III		
INTEL™ PIII-600EB (133/256) SECCII		94
INTEL™ P4-1.4 GHz 423 PGA BOX		236
AMD Athlon™		
AMD Duron™700 SOCKET A		41
AMD Athlon™ K7 THUNDERBIRD 1.3GHz 266 FSB		157
Motherboard		
ASUS CUV4x-E/FCPGA/Via Appollo Pro 133A/UDMA66/ATX		108.0
ASUS A7V /133 Socket A/ViaKt133/UDMA100/ Sound/ ATX		159.0
ASUS P2B/Slot1<443BX> AGP ATX 3DIMM/ISA/PCI/AGP3/4/1/RAM up to 768 MB		65.0
CASING		
CASE ATX		30
Venus ATX Case + Mouse + Keyboard +Speakers SP-G10		143
RAM		
SDRAM PC133 64 MB		12
SDRAM PC133 128 MB Micron		23
SDRAM PC133 256 MB Micron		43
PC133 256MB MICRON REGISTERED		109
MODEMS		
AXLE ROCKWELL 56K MODEM PCI		15
MOTOROLA 56K int Voice		17
US Robotics 2976 56K int.Voice Hardware FaxModem		70
3COM Message Modem external 56k		94
3COM COURIER V.EVERYTHING external modem		215
VIDEO		
AXLE RIVA TNT 16Mb		43
ATI FURY VIVO PRO 32MB AGP Video In Video Out		88

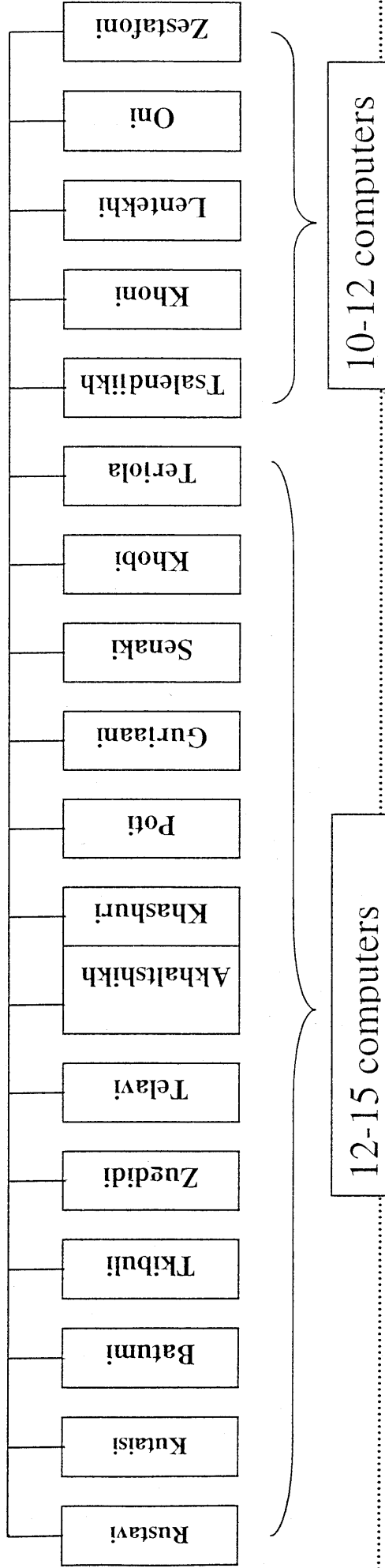
ASUS 7700 Pure 32MB AGP	202
ASUS 7700 T/32MB AGP /PAL	224
ASUS 7700 Deluxe 32MB AGP	250
Sound Cards	
CMEDIA 8738 PCI	10
ABIT Home Theater AU10	44
Live Value CT 4832/30 Creative Sound Blaster (OEM)	53
Creative Live! Player 5,1 PCI SB0060<EMU10K1>+Analog/Dig.Out,Front Out,Rear Out	64
Speakers Genius	
SP-active	7
SP-G06	14
SP-G10	21
SP-SW4.1	86
SP-SW5.1	121
HDD&SCSI ADAPTERS	
Quantum QMP10000LD-A	74
Quantum QML30000LD-A	101
IBM 30Gb 5400 RPM, ULTRA ATA 100, IDE	105
IBM 40Gb 7200RPM, ULTRA ATA 100, IDE	147
MK6014MAP TOSHIBA 10.0GB 9.5MM 2.5" (for notebooks)	145
Quantum QM309100X/C-LW 9.1Gb. SCSI U160 68 pin	216
CD-Rom Drives	
CD-Rom PANASONIC 48X IDE	42
CD-Rom Asus 50x, IDE.	48
CD-RW Drives	
CD-RW PANASONIC 8x/4x/32x, IDE, CW-7586-B	101
DVD HITACHI GD7500 12X/40X	73
Mouse, Keyboard, Joystick, Digitizer, Pad and Accessories	
Keyboard	
KB-06 PS/2 Eng/ru	7.7
Keyboard Compaq PS/2	29
TwinTouch Wireless Eng/ru	83.6
Mouse	
Mouse Telmouse	53
Easy Mouse PS2	3
MUSBP Stick mouse PS/2	7
NetScroll Optical+Eye PS2	32
NetScroll Optical PS2	40
Genius F-33dMaxFighter F.Feedback Joystick	145
Genius Speed Wheel Force Feedback	150

Annex 10. Scientific Industrial Training Union of "INFORMATICS"
Ministry of Education of Georgia

MAIN CENTER
(30 computers)



Regional Centers of Informatics



Education Institutions

Annex 11. The E-learning pilot in Georgia "The Internet Bridge on the Great Silk Route for Poor Youth"

The E-learning pilot in Georgia called "**The Internet Bridge on the Great Silk Route for Poor Youth**" is carried out according to the initiative of the President of Georgia His Excellency **Eduard Shevardnadze** about the Digital Divide elimination between Georgia and developed countries. According to this initiative the ICT & IT large-scale introduction at schools of Georgia is the precondition for construction of an open democratic society, for education of new generation who will be better understanding world around and will be tolerant to other cultures. The Project is under aegis of the Georgian State Department of the ICT, headed by Mr. David Tarkhan-Mouravi. This initiative reuses donated **3200** computers and networking gear to connect 250 schools in Georgia (60 in the initial stage being already started) with the Internet and the Georgian-American Distance Educational Center creation at the Tbilisi Orbeliani State Pedagogical University (TOSPU DEC). TOSPU DEC recruits and assists the participating of local schools. The project staff develops and implements a business model that maintains the networks and keeps them connected at no cost to the schools by collecting fees from the non-school community outside of regular school time. The model is based on the sustainable implementation plan (This implementation plan can be viewed at the following URL: http://www.worldcomputerexchange.org/partner_plans/Georgia-TOSPU-Plan.doc)

The Georgia pilot is unique in the active personal leadership of President Eduard Shevardnadze and the long-term involvement of a diverse team including the following: Georgian State Department of Information Technologies, led by Mr. David Tarkhan-Mouravi, "Prometheus – Amirani", registered NGO led by President Dr. Teimuraz Chichua (the project leader); **Georgian Development Gateway (GeDG) led by Mrs. Ana Mikadze-Chikvaidze**; the International Research & Exchanges Board (IREX) of the Bureau of Educational and Cultural Affairs (ECA) led by Brad Scott (Citizen of the USA), Caucasus Regional Coordinator of the Internet Access and Training Program (IATP); at Ministry of Education Prof. Gia Gvaramia; Tbilisi Orbeliani State Pedagogical University (TOSPU) led by the rector Prof. Vakhtang Sartania; Georgian Research and Educational Network Association (GRENA) with the director Dr. Ramaz Kvatadze; iEARN- Georgia coordinator Mr. Paata Papava.

In the our already done job, as well as in preparation of the given application we based on the **World Bank resources**, accessible on the URL: <http://www.worldbank.org/education>.

Focus on the E-learning primarily concerned with the design and implementation of national systems of distance education, defined as all education in which the principal means of communication between teachers and learners is through technology, explicitly targeted on the needs of modern Georgia as a developing country. The main organizational types of the Distance Educational Centers are single mode institutions, dual mode institutions, mixed mode systems, consortia and projects. The Georgian-American Distance Educational Center at the TOSPU in the beginning has been conceived as mixed mode system (where distance teaching programs are designed, delivered, and administered by the same people who provide conventional programs). Now in the process of expansion of the project and involving in its performance of many organizations, the tendency of creation of a consortium was outlined. The consortium will be present arrangement in which the State distance teaching resources will be organized under a single management unit, made up of representatives of the institutions providing the resources. There will be needed procedures for defining and reviewing

institutional mission; for allocating human and financial resources among competing student demands and markets; for selecting, appointing, training and monitoring teachers; for recruiting, registering, and supervising students; for selecting and controlling the use of technologies; for controlling materials production systems; for managing budgets and finances; for managing local and regional centers. The GeDG E-learning component also will offer Courses to minorities in Georgia and to members of Georgian Diaspora abroad who are looking for Georgian subject education possibilities and foreign individuals (including students) who are looking to take courses in specific subjects – Georgian language, Georgian culture, history, literature etc. In addition to English, items will be provided in the Georgian language.

Ltd Camara

The company has established a training center, where information technologies are taught. The training center is the official license holder in given sphere (the license was issued by the Ministry of Education of Georgia. License Number: 01342958). The center prepares specialists in the sphere of software development and network marketing, as well as provides basic training in computer skills.

On the basis of the center are organized English language courses, where technical and accounting sphere language skills are being developed.

The center has provided training to over 5000 students. Trainers and lecturers are highly qualified specialists who have different academic degrees in their sphere. The faculty members have published over 40 scientific-research papers and have the status of Microsoft-certified specialists.

The training center is equipped with modern computer equipment and software. The training center of Ltd Camara has participated and won numerous tenders organized by different organizations.

Currently the training center is implementing a program financed by UNDP, which is targeted towards provision of training to staff of the Ministry of Interior of Georgia. Namely, the staff of the Ministry is currently participating in training course in English and computer software courses.

Projects Implemented by Joint Stock Company LSD

Name of the Project	Name of the Client and Contact Person	Type of Implemented Activities and Completion Year	Cost of the Contract (GEL)
UNDP GEO 97/20 Land register software development	UNDP D. Egiashvili	Development of software 2001	167000
UNDP GEO 97/20 Digitalization of taxpayers lists, Land register software development	UNDP D. Egiashvili	Development of software 2001	180000
UNDP GEO 97/20 development of software for data collection and processing in field conditions	UNDP D. Egiashvili	Development of software 2002	35250
SA-G-004 Development of graphical and alpha-numerical data base of Gori district for creation of cadastre	APLR Landowners Association, J. Ebanoidze	Digitalization of orthophotos, digitalization of users lists and their systematization, development of registration data base 2003	53750
SA-G-005 Development of cadastre-registration package of documents of Gori district, printing and sorting of documentation	APLR Landowners Association, J. Ebanoidze	Preparation of data for bilateral printing. Printing of certificates and registration cards 2003	118250
Processing and digitalization of Gori cadastre data (pilot project)	KfW K. Bushop	Data verification, digitalization of buildings, correction of data base 2003	7200
IR-94-S collection of Kazbegi and Akhgori district cadastre information and registration of real estate	WB LRU I. Melsahvili	Digitalization of orthophotos, detalisation and systematization of users lists, development of registration data base 2003	137164
Processing and digitalization of Imereti region	KfW K. Bushop	Digitalization of orthophotos, detalization and systematization of users lists, development of registration	213740

cadastre data		data base 2004	
Modification of Imereti region data base structure	KfW K. Bushop	Data verification, modification of data base 2004	44000
Development of soil map of lands of agricultural designation of Georgia	KfW K. Bushop	Digitalization and systematization of maps, development of data base 2004	150000

3-4 Alta software 社提供：事業概要（バンキングソフトウェア開発）

1. A brief history of “Alta Software” Ltd

“Alta Software” Ltd was established in 1996 year by Software and Bank professionals to provide information processing management, outsourcing services, professional consulting services and application software to the Financial Services and Lending industries.

2. Products

“Bank 2000” – Accounting software

“Bank-Client 2000” – Software for connection and information flow (including real time payments) between system participants

“Loan 2000” – Loan (with collateral) Portfolio processing and management software

“Deposit 2000” - Savings/Time Deposit processing and management software (developing stage)

“Voice Banking” – Access bank/account information by telephone, record speech, redirect calls, live information for acc/manager and other

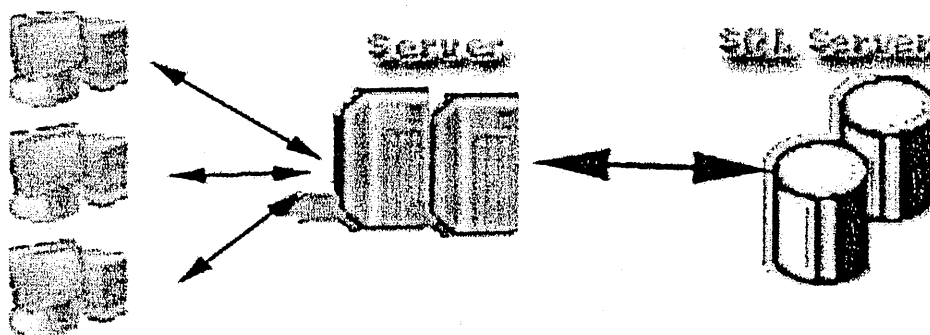
“SWIFT converter” – import and export MT 101, MT 103 format messages from B2000 to SWIFT system

“NBG converter” - import and export documents from B2000 to “NBG” RTGS system

“WEB Banking” – Manage accounts through “Internet Explorer”

“B2000 Messenger” – sends and receives free format messages between system participants

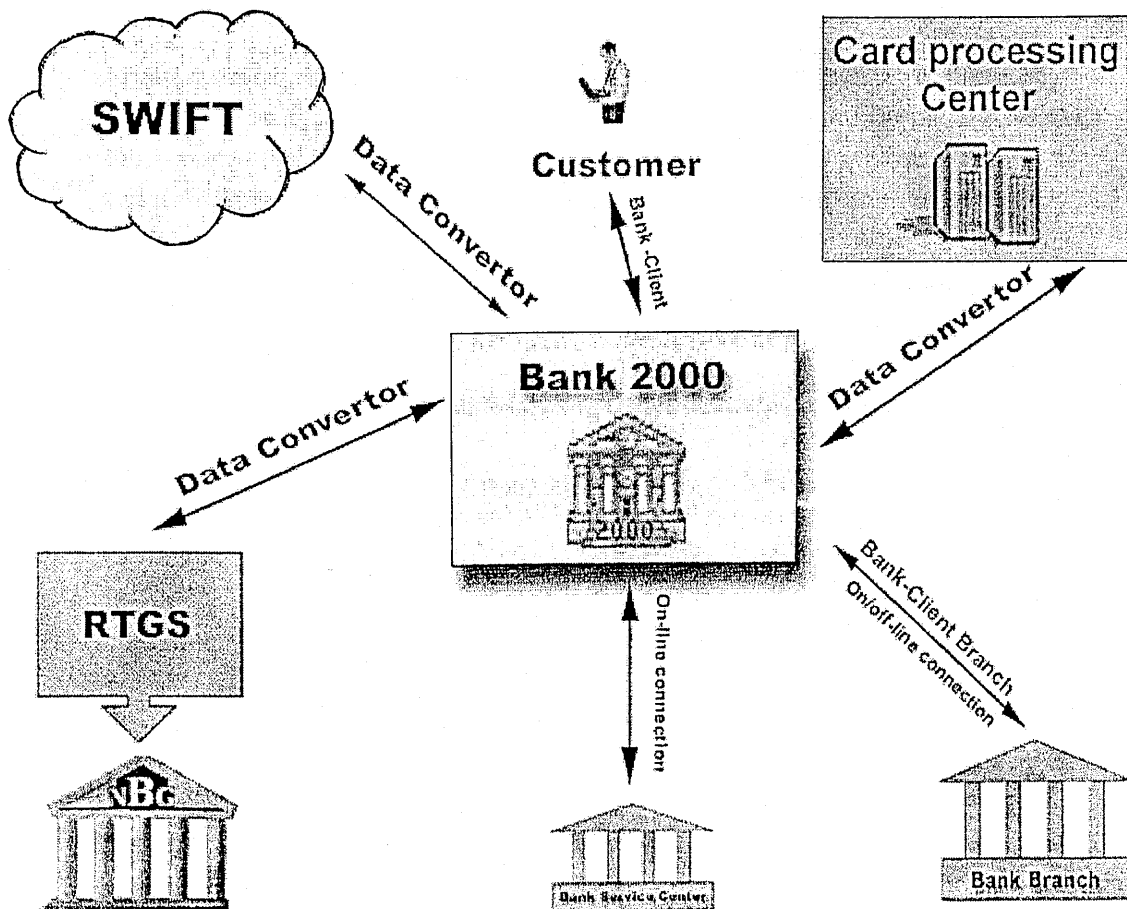
3. Developing tools and System configuration



Company's multicurrency and multilingual programmes are designed and developed in accordance to three-tier architecture: client's part - application server (business-logic)- database server. Microsoft SQL Server acts as a database server. The client's part of a system is developed with the help of Borland Delphi 5.0. The system is built according to a modular principle. That allows designing a system configuration in accordance to the particular requirements of each bank. Unrestricted amount of users. Access to the task is being adjusted with the help of the division of users authority subsystem. Each user is granted an access to a certain set of modules. The level of access is being defined for each task.

4. Partners

Georgian banking community consists from 25 banks. Our partners are 13 banks. Largest bank by structure consist from 37 branches (locating by regions) and head office.



5. Information flow and settlement system

Our product "Bank-client" supports connection and information flow (including real time payments) between system participants. Connection is available by internet or telephone line.

System:

- ✓ RTGS processes information.
- ✓ does not allow (or does allow depending on bank policy) any overdraft and no queuing (*centrally located queues*) nor intra-day liquidity mechanism is available: if the settlement account to be debited has insufficient funds to cover the debit, the transaction is rejected by the system and sent back (the rejected transfer orders will be input into the system again at a later time when the sending branch has covering funds. Until that time, sending branches may keep and control the pending transfers within their internal system (*internal queues*)).
- ✓ Each transaction has unique encryption. Prepared transaction is signed by 1024 bit RSA algorithm digital signature, then compressed by LZ algorithm, then encrypted by Triple DES algorithm (for each session symmetric key is unique). Symmetric session key is encrypted by 1024 bit RSA algorithm.
- ✓ Payment is considered to be final as soon as beneficiary participants account is credited.
- ✓ Provides confidentiality of information, identification of digital signatures, archiving of information.