Date Printed: 11/06/2008

JTS Box Number:	IFES_12
Tab Number:	5
Document Title:	Comprehensive Proposal for Electronic Voter Registration (1998-1999)
Document Date:	2002
Document Country:	Tajikistan
IFES ID:	R01883

International Foundation for Election Systems (IFES)

Final Project Report
REPUBLIC OF TAJIKISTAN
October 1, 1997 – September 30, 2002
USAID Cooperative Agreement EE-A-00-97-00034-00

Comprehensive Proposal for Electronic Voter Registration (1998-1999) (in English)

TECHNICAL ASSESSMENT MISSION TO TAJIKISTAN

FINAL REPORT

ANTECEDENTS.

Overview.

The technical assessment mission to Tajikistan started on November 5, when I traveled from Quito to Washington, for consultations. I stayed two days and arrived in Almaty with Mr. Anthony Bowyer on November 9, 1998, at 1:30 am,

After presentations I was briefed in the current security situation in Tajikistan, were the rebel forces of Crnl. Kubordaiev have attacked the city of Khujand in the Leninabad Oblast, precisely the city where I was supposed to work. According with Mr. Thomas Leckinger, IFES Program Manager in Central Asia it was not possible any trip to Tajikistan at least in two weeks. In the end, I had to stay in Almaty until November 30, 1998. Almost one month of work in the field was lost due to this unpredictable circumstance. In view of this situation, the place of my destination was also changed to the capital city of Dushanbe. Seen in perspective, this decision proved right. All the political contacts, all the information and all the sources of data had been unavailable for me in Khujand, due to the strict hierarchical structure of administration that rules Tajikistan.

On November 10, 1998, I assisted to a meeting in the USAID with Mr. Bowyer and Mr. Leckinger. In this meeting it was said that the main objective of the mission was to put a computer network on site, ready and programmed to work in a new voter's registration system. Nevertheless, later the same day, when I requested more information, Mr. Leckinger told me that the computer hardware was not part of the first phase. This fact led to my request to amend my scope of work, because it is obviously physically impossible to install a non-yet-bought computer network, and because technically speaking, the first step to develop a system is to design it. Just then you can program it and define the necessary activities and resources for its implementation.

During my stay in Almaty, I used my time in the following activities:

1. I developed technical specifications for the computer network and visited the local dealers.
2. I prepared a survey for the Tajik delegation to the Regional Conference of the Central Asia Electoral Officers and met them in the Ala Tau Convention Center to brief them on the objectives of my assessment mission.
3. I prepared theoretical initial papers and control project for the registration system. This initial conception proved correct and it is still the frame of the proposed system.

Finally, it was possible to travel to Dushanbe, Tajikistan, on December 1, 1999. Mr. Thomas Leckinger traveled with me, and we started visiting all the prominent persons and Organizations involved in elections. These meetings lasted continuously for fourteen days and proved to be extremely beneficial for our endeavor. Nevertheless, represented another delay for the work in the field. In the practice, I was able to work directly in the system from December 15 to February 11, and thanks to an extension, up to February 20. From 22 to 28

February, I was assigned to be part of an electoral pre-assessment mission, in conjunction with the United Nations and the OSCE. In resume, I worked in the field 58 workable days of the 79 originally scheduled, including the extension. In order to produce adequate results, a tight work schedule was programmed and implemented.

It was decided to have, as a final report, a feasibility study, containing all the necessary parameters to implement a voter's registration system. To reach this goal I used the classical approach of system analysis, dividing the study in three phases:

1. Analysis of the current system and definition of feasible objectives.
2. Analysis of alternatives and source of data.
3. Development of the new system, including all activities, resources and time necessary to implement it. Final recommendations.

The first phase required long time to gather information from the very disperse files and organizations that play some role in the election system. I visited the Presidency of the Republic, the Majlisli Oli, the Commission of National Reconciliation (CNR), the City hukumats and the Central Commission of Election and Referenda. In order to obtain information from some places, I had to request special authorization just to look at the files and papers. Once I got authorization, people were very cooperative and open. Nevertheless, the decentralization and specialization of tasks allows nobody to know all the procedures and permits a great variety of different ways to perform the same operation. The standardization of tasks, a basic principle in western administration is almost unknown here. This fact will be also a serious problem during the citizen's registration, using the new IFES form, and later, if the system is going to be operated directly by the CEC. The emphasis given to training in the feasibility study has its roots in this fact. Major changes in the structure and staff of the CEC will be necessary to operate the computer system after elections. Some possibilities for a future use of the computer network are outlined in the feasibility study.

The alternative's analysis also involved investigation in the field. The use of the local passport files (The "propiska files") was specially demanding. An order from the Prime Minister himself was necessary just to visit the central files in Dushanbe. To obtain this authorization took one month, because of the political sensitivity of the information contained in these files. At the end, it was rejected as the source of data for the registration system precisely for this reason and the danger of IFES to be involved in accusations to pass information to external organizations, something that has been already commented in some political circles.

The design and conceptualization of the new system required long discussions and lobbying before a full, although reluctant, acceptance from all instances. The necessity to provide transparency, for example, it is not yet fully understood. The soviet idiosyncrasy, which states that all data referred to people is secret and should be used only within a closed environ is deeply rooted in all minds. The old culture of mistrust is still latent and present.

Other issue I had hard time to clarify it is the odd concept (gotten who knows where) that we are testing a new system in Tajikistan because is a backward country. I made my bests efforts to clarify this miss understanding. I developed a summary of the system to be delivered to all the participants. I gave personal explanations. I gave a press note trough Asia plus, stating that

computerized registration systems are the norm and not the exception all around the world and that we are trying to help the CEC in the implementation of a well tested system.

I dedicated additional efforts to bid the computer system. Six offers were received and send to Washington and Almaty. Offers were received form Almaty, Moscow and Dushanbe. Prices have a broad range, from US$300.000 to US$180.000. An important offer from the representative of DELL in Tajikistan it is not received yet. Nobody, so far, have offered the correct scanners and this equipment will need to be decided later.

I interviewed fourteen candidates for the posts of main programmer, auxiliary programmer and network administrator. Only five can be considered adequate for the posts of auxiliary programmer and network administrator. None is adequate for the post of main programmer in Informix. A technician will have to be brought from Kazakhstan or Russia for this purpose, it is the most important post of all and a part of the success of the system relies in his expertise.

The CEC, with the support of IFES, was incapable to locate premises for the computer center. This task is also relevant for obvious reasons and Mr. Bjezhod Mingboev, the local administrator of IFES in Dushanbe is in charge to follow up the development of this activity. Four different premises were examined, and none, for technical, political or monetary reasons was considered sufficient.

The budget of the project is divided in two parts, one for the development and implementation of the registration system and an additional one for the development of election-related activities to be initiated after the registration is concluded.

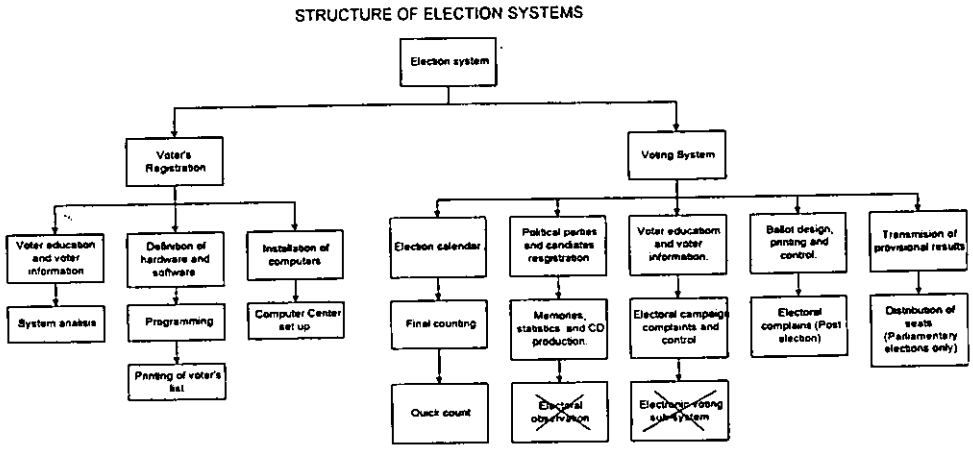
The registration system has been defined as the collection of activities and resources necessary to build a database of all Tajik citizens allowed to vote and to print the voter's lists for elections.

Additional activities are considered those which can be performed using the registration database and the computer network in benefit of the Central Commission of Elections and Referenda. These are:

- Transmission of provisional results during Election Day.
- Distribution of seats for parliamentary elections.
- Definitive counting for all elections and distribution of definitive results to all political parties and international community in an electronic media.
- Quick count and parallel tabulation for the CEC and the international community.
- Voter education and voter information for the registration system.
- Political parties and candidates registration.
- International and domestic observers registration.
- Control of the CEC logistics for all elections.
- Control project of the election calendar for the CEC.
- Memories and CD of the development of the registration system activities.

It is not to expect that the system will run without problems. Some variables like the outcome of the election law and the date of elections are not defined so far. The definitive hardware to be used will depend on the results of the pilot project. The volatile political environment can change from one moment to another and the current support for the system can change

accordingly. The difficult geography of Tajikistan and the lack of reliable routes and communications can obstruct and delay the implementation of the system. Internal security, which is paramount for elections, is far from an acceptable average. Some powerful political instances are definitely hostile to IFES. Uncertainty and insecurity are present in all minds. Technical staff is not available and it will be difficult to hire. The Central Commission of Elections has no resources to provide an adequate counterpart and IFES will have to pay and develop the whole system from ground up in its behave. It will not be easy.



The political environment.

The farthest outpost of the former URSS, Tajikistan was also the poorest and less developed of their associated countries. When the empire disintegrated from within, Tajikistan was ill prepared for any type of self-rule and worst for a full and thoroughly Democracy. The immediate outcome of the rupture of the fragile social cohesion provided by the iron fist of the URSS, was a civil war, which officially ended with the signing of the peace accord, in June 27, 1997.

Like most post-conflict, in-development countries, Tajikistan expects to finalize the long time delayed fulfillment of the peace accord holding democratic elections, somehow between August and November 1999. Three and maybe four elections are expected to occur in a row: a constitutional referendum in late August, early September, a parliamentary election and a presidential election - maybe two rounds - in November 1999. None of these assumptions is definitive and is still subject to unexpected changes due to political and internal security developments.

These elections in Tajikistan are transition elections. Coming from a non-democratic rule, passing trough a civil war and going into a new stage of political development, Tajikistan needs to prove his eagerness to transit the path of democracy. It is not a democratic republic and it is far from being one. Civil and human rights, freedom of press and expression, peace and security are just words written in the sand. International standards for free and fair elections are not accomplished, even at the minimum level demanded to a country emerging from a civil war. However, at some degree, an imperceptible change is starting to occur in the

fabric of the civil society, the source and origin of all changes. Elections must not only be seen as the last step in the fulfillment of the peace accord but the start of a full acceptance of the republic within the International Community. Hence, elections in 1999 are paramount for the legitimacy of the future elected governmental officials. A good designed and efficient election system can play a major role in the consecution of this objective, by providing political party and citizen's confidence. This is the real goal of the registration system, beyond an impossible objective to register all citizens.

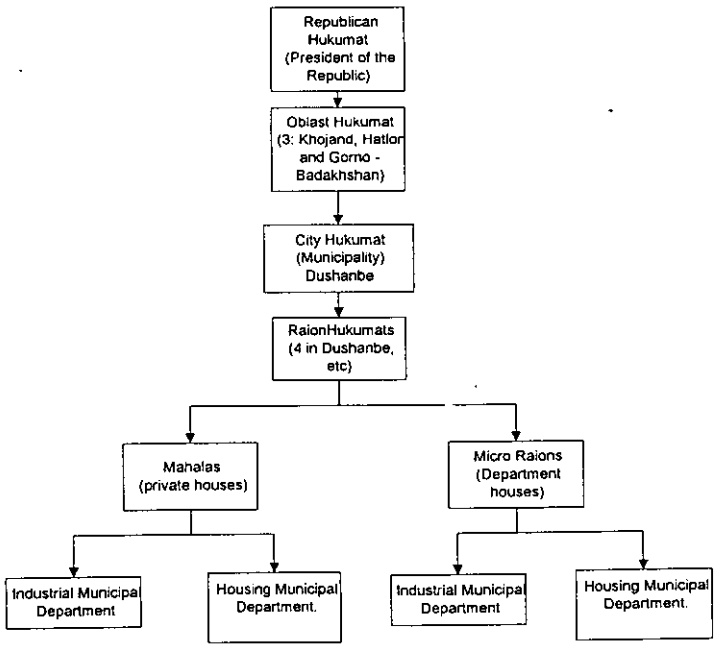
THE CURRENT VOTER'S REGISTRATION SYSTEM IN TAJIKISTAN

Voter registration does not really exist in Tajikistan meaning that citizens come to register voluntarily. The system consists in an updated transcription from the propiska stamped passports to the voter list. "Hukumats", "Mahalas", "Micro raions", "Jamoats" and "Kolhozes" carries out these tasks, according with the procedures described below.

"Hukumats" are the equivalent of Municipalities and they are appointed by the President of the Republic, who is, himself, the "Republic Hukumat Chief". Among their main functions maintaining public services they have the function to update the voter's list for each election, to special request of the CEC, at least 50 days prior to Election Day.

The functions and work of the "Address Inquiry Bureau – AIB -" the passport offices, who maintains the propiska system, and the hukumats are closely intertwined. The AIB stamps the passports and issue the provisional work permissions that the hukumats verifies house by house during the process of collection of data. The Hukumats notifies to the AIB of all citizens found without duly stamped passports or work permissions, closing the circle and establishing a tight bond between the election and propiska systems.

The structure of Hukumats is the following:



Description of participant branches:

Махаля (Mahala): Are the organizational nodes in charge of public services and his ratio is some blocks of streets inside residential urban areas, with individual houses only. The "housing municipal department" and all its members are in charge of the election data collection house by house.

Микрорайон (Micro raion): They perform the same functions, but its environment is urban areas with multi-department buildings.

Хукумат (Hukumat): There are two kinds of hukumats; city hukumat, only in Dushanbe; and raion hukumats, in the rest of the cities. Dushanbe itself has 4 raion hukumats.

Чамоат (Jamoat): They are the rural nodes of the structure. They have a special law, but in election time they perform the same duties as Mahalas and Micro raions in cities. They do not take information directly from passports, because few people in rural areas have passports, but from propiska lists and special permissions.

Kholkoze: Collective farms. Only peasants work here. Some of them speak only the old Tajik language, never have voted and do not posses passports.

The CEC (Central Commission of Election and Referenda of the Republic of Tajikistan) has the following mandate, according with the current Election of Deputies of the Majlisi Oli Law, adopted on December 1, 1994:

1. To control enforcement of this Law, as well as its unaltered application throughout the territory of the Republic of Tajikistan. To explain procedures for the proper application of this Law within its mandate;
2. To establish, name, and number polling Districts;
3. To establish the District Electoral Commissions and release information on their location;
4. To direct the work of the electoral commissions; if necessary change their memberships; independently revoke decisions made by the District Electoral Commissions on the election of the People's Deputies to the Majlisi Oli at the request of the Prosecutor General if they do not comply with the present Law;
5. To designate the polling sites which shall be set up outside the Republic for the polling Districts;
6. To provide equal conditions for the candidates for participation in the Election;
7. To allocate funds to the electoral commissions, control the provision of premises for the electoral commissions, as well as the availability of transportation and communication, and provide other logistical support;
8. To establish samples of ballot forms, lists of voters, protocols of the electoral commissions, other election related documents, samples of ballot boxes and seals of the electoral commissions; to define the rules for maintaining election related documents;
9. To hear the reports of heads of ministries, state committees and offices of the Republic of Tajikistan, local bodies of the local executive power, representatives of political parties and bodies of public associations on the questions relating to the election process;
10. To count the results of the election in the Republic, register the elected deputies, promulgate in the press the results of the election and a list of the elected People's Deputies to the Majlisi Oli;
11. To convey the documentation necessary for checking the eligibility of the People's Deputies;

12. To deal with the issues related with the conduct of run-off elections;
13. To solve questions dealing with the organization of recall of People's Deputies and conduct the run-off elections;
14. To consider the applications and complaints about the decisions and actions of the electoral commissions, and make final decisions on all those issues;
15. To convey the documentation related to the conduct and organization of elections to the archives;
16. To implement other functions in accordance with the present Law and other laws of the Republic of Tajikistan.

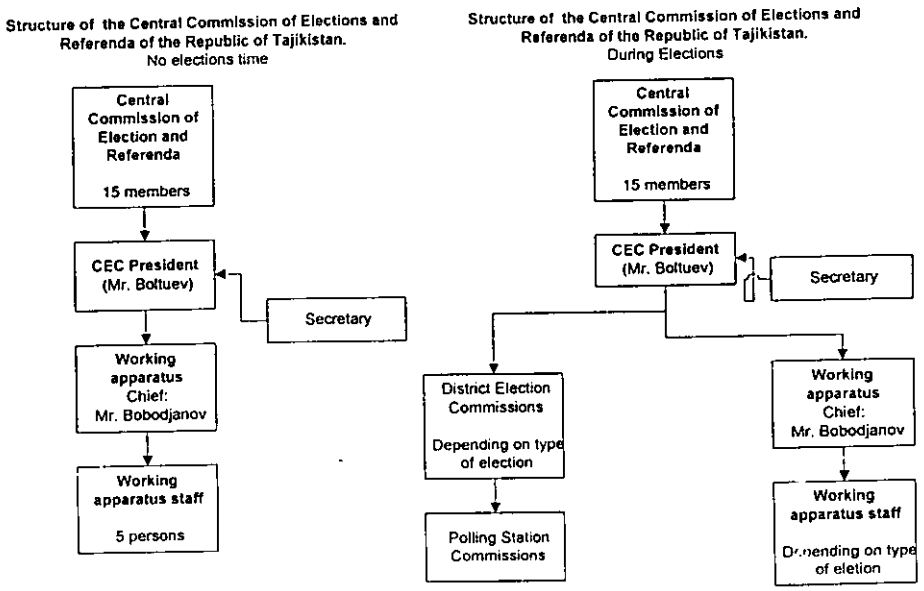
In practice, due to the lack of budget and resources of the CEC, local authorities, basically the hukumats, carries out most of these functions, without established audit procedures.

The budget of the CEC for 1994 elections was TR272,800,000 (Tajik Rubles), which at a rate exchange of 58 TR per Dollar in 1994, represents US$4,700,000 Dollars. TR1,000 (US$17,25) was assigned to each District Election Commission and TR560,00 (US$9,66)to each Polling Station. District Election Commission and Polling Station Commission members do not receive additional payment and their functions are considered patriotic. They receive permission and are paid their regular salaries by the institution they work for. This budget is clearly insufficient, even measured by Tajik standards. Election budgets for similar population in South America goes up to 15 to 20 million Dollars, depending on the electoral system.

181 District Election Commissions were appointed in 1994 for Parliamentary Election and 68 for Presidential Election.

The budget proposal for 1999 includes TR200,000(US$83,3) for District Election Commissions and TR100,000 (US$42) for Polling Station Commissions (US$1,200 per Dollar). A final draft of the budget is not yet concluded at present date (January 25, 1999), because there is not an election law and it is not known if just one or two elections are going to be carried out.

Structure of the CEC.



During non-election time the CEC is composed by:

- The Plenum of the CEC, 15 members nominated by the Parliament (Majlisli Oli). These members have meetings only when necessary. Only one of them, the President, is permanent and has a salary, the rest only assist to the meetings. As support staff there is one secretary.

- The working apparatus, or administrative branch. Composed by one chief and 5 person. They are in charge of logistics, salaries and the rest of typical administrative functions.

- The CEC currently works in the Majisli Oli building, occupying three rooms.

On election time, the structure of the CEC grows accordingly, including the District election Commissions and Polling Station Commissions. The functions of the CEC during election time can be better understood reading the Annex "*Electoral legislation and practice*"

Current procedures to build the voter list.

1. The CEC, once an election is called out requests to the Governmental Hukumat to produce voter lists and send them a special form (Form 4) to collect information house by house. The Governmental Hukumat passes the order to all city and raion hukumats.

2. The Hukumat instructs "Mahalas" and "Micro raions" in urban areas and to "Jamoats" in rural areas to fill in these forms.

3. The "housing municipal commission" of the mahala/micro raion/jamoat visits house by house, requests passports and takes information from them, directly, collecting the following data:

   - Surname, name and patronymic of each person above 18 years old.
   - Year of birth, except when the person is going to be 18 years old until Election Day. In this case collects the full date.
   - Address: Street, street number, and department number.

   Visits are carried out during the evening or early in the morning to get people in their houses. If someone is found without passport or propiska stamp, the "Address Inquiry Bureau" (passport office, head of the propiska, belonging to the Ministry of the Interior" is notified. Citizens without passport, propiska or temporal permission to work are not entered in the voter list.

4. The hukumat collects forms and assigns people to polling stations. If it is necessary requests the change of boundaries or creation of new polling stations to the CEC10

5. The CEC makes the requested changes if decides they are acceptable. In the practice they are always accepted.

6. Hukumats nominates polling stations commissions, usually from their own people, 60 days prior to elections.

7. Lists of departments and voters, altogether with polling station assignment are delivered to polling station commissions.

8. Polling Station Commissions, along with the "Housing municipal departments" of Mahalas, Micro raions and Jamoats, verifies the voter's list again, house by house. Sometimes and in some areas this process is not carried out, whether for lack of resources or of time.

9. Polling station commission produces the voter list, sorted by Department number and alphabetic. In Dushanbe and some other hukumats they are typewritten; in rural areas, handwritten. Russian or Tajik language is used indistinctly. In rural areas Tajik is predominant and it is the only language used.

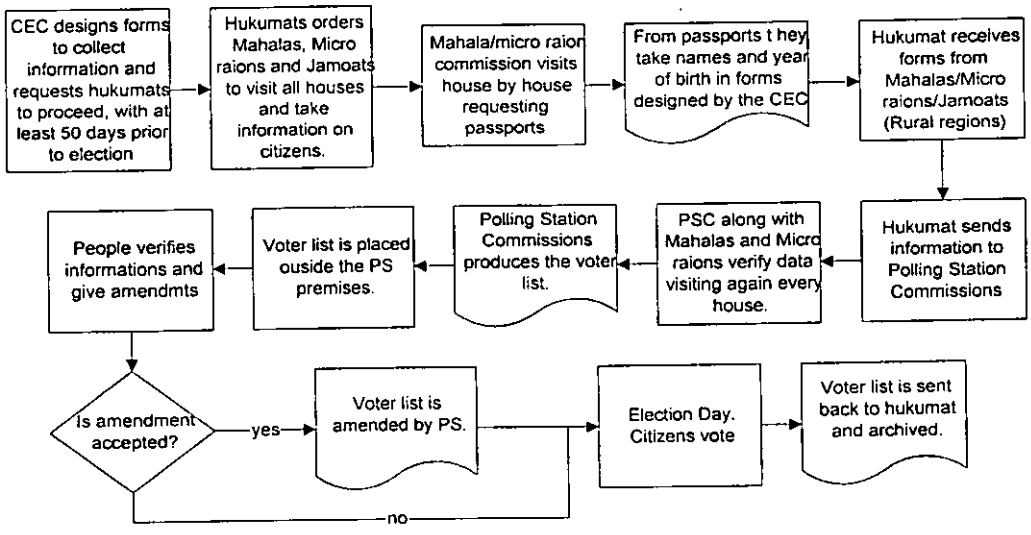
10. A copy of the voter list is exhibited outside the polling station, for public knowledge, 15 days prior to Election Day.

11. Polling Station Commission receives amendments or ads ups from people. If the amendment or add up is accepted, the voter list is modified concordantly. If it is not, the person keeps the right to lodge a complaint with he judiciary.

12. On Election Day people votes according with the law. Mobile ballot boxes are taken to hospitals, health centers and other places, so people who are impeded to vote in person are allowed to cast their ballots.

13. Voter lists used during elections are sent back to the correspondent hukumat for archive. When another election is carried out a brand new voter list is build up.

DATAFLOW IN THE CURRENT VOTER REGISTRATION SYSTEM IN TAJIKISTAN



In 1994, 2656 polling stations were opened. The same number is expected for 1999, although the number of voters will be increased. The following table shows both figures.

IFES

Tajikistan: Voter registration for 1994 elections

	Oblast, cities and rayons	Number of Polling Sites	# voters 1994	% of total voters	# voters(1) year 2.000
	The city of Dushanbe (City Hukumat)				
1	Railway district (32 Mahalas and 4 Micro raoins)	34	47,557	1.79%	56,786
2	October district	41	44,412	1.68%	53,030
3	Frunzensky district	73	106,630	4.02%	127,322
4	Central district	36	55,134	2.08%	65,833
	Subtotal	184	253,733	9.57%	302,970
	Cities and rayons of republican subordination				
1	the city of Kofarnihon, incl. the rayon	87	93,719	3.54%	111,905
2	the city of Nurek	11	14,204	0.54%	16,960
3	the city of Rogun	13	9,506	0.36%	11,351
4	the city of Tursun-zade, incl. the rayon	58	81,576	3.08%	97,406
5	Varzob rayon	32	23,391	0.88%	27,930
6	Garm rayon	45	30,556	1.15%	36,485
7	Gissar rayon	55	80,763	3.05%	96,435
8	Jirgital rayon	51	19,940	0.75%	23,809
9	Komsomolobad rayon	49	20,243	0.76%	24,171
10	Lenin rayon	113	117,645	4.44%	140,474
11	Tavildara rayon	21	5,258	0.20%	6,278
12	Tajikabad rayon	29	11,035	0.42%	13,176
13	Fayzabad rayon	36	27,921	1.05%	33,339
14	Shahrinav rayon	20	36,390	1.37%	43,452
	Subtotal	620	572,147	21.59%	683,173
	Gorno Badakhshan autonomous oblast				
1	the city of Khorog	9	14,855	0.56%	17,738
2	Vanch rayon	40	12,289	0.46%	14,674
3	Darvaz rayon	30	9,963	0.38%	11,896
4	Ishkashim rayon	44	12,459	0.47%	14,877
5	Murgab rayon	18	8,040	0.30%	9,600
6	Roshtkala rayon	29	11,489	0.43%	13,718
7	Rushan rayon	41	13,268	0.50%	15,843
8	Shugnan rayon	37	19,085	0.72%	22,788
	Subtotal	248	101,448	3.83%	121,134
	Leninabad oblast				
1	the city of Khujand	57	89,218	3.37%	106,531
2	the city of Isfara, incl. rayon	68	91,390	3.45%	109,124
3	the city of Kairakkum	16	20,277	0.77%	24,212
4	the city of Kanibadam, incl. rayon	51	79,226	2.99%	94,600
5	the city of Penjikent, incl. rayon	110	86,714	3.27%	103,541
6	the city of Taboshar	10	8,059	0.30%	9,623
7	the city of Ura-Tyube, incl. the rayon	56	79,707	3.01%	95,174
8	the city of Chkalovsk	18	20,169	0.76%	24,083

9	Aini rayon	60	31,172	1.18%	37,221
10	Asht rayon	54	46,151	1.74%	55,107
11	Ganchi rayon	53	48,626	1.83%	58,062
12	Zafarabad rayon	21	22,012	0.83%	26,283
13	Matchinskiy rayon	64	41,237	1.56%	49,239
14	Nayskiy rayon	19	44,755	1.69%	53,440
15	Jabbar Rasulovskiy rayon	35	46,846	1.77%	55,937
16	Khodjentskiy rayon	75	121,793	4.60%	145,427
17	Shahristanskiy rayon	15	11,987	0.45%	14,313
	Subtotal	782	889,339	33.56%	1,061,917
	Khatlonskiy oblast				
1	the city of Kurgan-tyube	23	29,727	1.12%	35,496
2	the city of Kilyab, incl. the rayon	47	73,595	2.78%	87,876
3	Bokhtar rayon	52	68,302	2.58%	81,556
4	Vakhsh rayon	45	45,641	1.72%	54,498
5	Vose`rayon	44	58,640	2.21%	70,019
6	Gozimalik rayon	20	26,963	1.02%	32,195
7	Jilikul rayon	21	28,454	1.07%	33,976
8	Dangara rayon	39	39,567	1.49%	47,245
9	Kabodien rayon	47	46,209	1.74%	55,176
10	Kolkhozabad rayon	52	48,868	1.84%	58,351
11	Kuibishev rayon	38	43,947	1.66%	52,475
12	Kumsangir rayon	35	36,145	1.36%	43,159
13	Moscow rayon	48	42,777	1.61%	51,078
14	Muminabad rayon	30	24,289	0.92%	29,002
15	Parkhar rayon	46	42,820	1.62%	51,129
16	Pyanj rayon	23	31,473	1.19%	37,580
17	Sovetskiy rayon	34	20,825	0.79%	24,866
18	Khovaling rayon	42	19,674	0.74%	23,492
19	Shaartuz rayon	42	38,466	1.45%	45,930
20	Shurobad rayon	37	14,337	0.54%	17,119
21	Yavan rayon	57	52,792	1.99%	63,036
	Subtotal	822	833,511	31.45%	995,256
64	**TOTAL**	**2656**	**2,650,178**	100.00%	3,164,451

(1): This number of voters was calculated projecting figures of 1994 to year 2.000 using a growth rate of 3% and without consideration of the internal migration and returning refugees.

Analysis of procedures.

The outstanding characteristic of the system is that deprives the right of vote from those citizens not registered with the propiska. If someone moves his/her residence without knowledge of the authorities, he/her will be not taken in account in the voter list. In such way only people who accomplishes with all regulations of the system are given the right of vote (And to health, housing, education, social security, etc. In the practice, they cease to exist as citizens). Additionally, the process is designed to control people living outside their places of residence, mingling the election system with the propiska system. Theoretically, it is possible to lodge a complaint after the voter list is published, but the inclusion in the list is denied if a passport duly stamped for the passport office is not presented as proof that the citizen has a

residence in the address he/her states is living. And, of course, exists the fear of being arrested if showing up in polling stations without the propiska papers in order.

The same situation occurs with people who are renting apartments, although in this case the reluctance of the landlord to avoid taxes adds weight to the case. Usually, people who rent apartments are foreigners or people who is moving his place of residence without knowledge of local authorities. This is a major phenomena; in Dushanbe only, an estimated of 400,000 people is said to be living outside of the system[1]. How to bring these people to the polling stations will be one of the major challenges of the new voting system and will rely, mostly, in an intense voter education campaign to attract citizen's confidence.

The system presents serious gaps in control and security, and allows the commitment of irregularities, especially from the government, who has a tight control of the whole structure of the system. Some of these irregularities are:

1. Possibility of multiple voting, with the acquiescence or simply laziness of one polling station member. Without any special control like stamp the passport or ink one finger, with the possibility to use several documents and the legal possibility to add names to the list, multiple voting is a real threat. Additionally, legal passports can be bought in some border regions[2].

2. No control in polling stations. When checking voter lists from 1994 in the Railway hukumat I realized that in all of them had, instead of the citizen signature, the word "da" written by the polling station commission. This is abnormal, according with Mr. Bobodjanov, who was present, but demonstrates lack of control. Using this simple method and depositing the same number of ballots, a serious irregularity can be committed. It also demonstrates the absence of voter's knowledge in voting procedures and the lack of interest in such.

3. The mobile ballot box is the source of most of the irregularities committed in the past. The possibility to add up any number of voters on Election Day, out of the polling station, supposedly from hospitals, houses, etc without any control, is a source of potential danger and suspicion. If possible, this type of voting should be eliminated or controlled.

4. The decentralization of the information makes impossible to check all voters and only partial verification can be done.

5. It is not possible to warranty that the voter's list is complete. Mahalas, Micro raions, Jamoats, hukumats and polling station commissions can conceal or add a lot of information with good possibilities to succeed. The percentage of people who verifies their own information is, according with Mr. Bobodjanov, not higher than the 10%. The whole process of confection of the voter's lists totally lacks transparency and control from the political parties and the citizenship.

[1] Source: Mr. Bobadjanov, CEC.

[2] Source: Sharq.

6. The whole process is in charge of the hukumats, local authorities directly dependent from the President of the Republic. The CEC does not have enough resources to verify it step by step.

ANALYSIS OF ALTERNATIVES.

An analysis of the different alternatives for the design of the registration system was conducted as a part of the feasibility study. The two main components were studied, the technological tools used to build the initial database and the different sources of data available to capture citizen's data.

HARDWARE AND SOFTWARE

There are two different technical approaches to conduct the voter registration in Tajikistan:

1. OR (Optical Recognition).

OR works with forms with a tear-off card to be given to the registered voter. The main body of the form is returned to the Central Operations Office and processed by OR scanning equipment.

The equipment necessary to implement this option consists of scanners, capable of reading up to 7.000 forms per hour (This performance is very theoretical. In the practice, due to manual operations and technical errors, this production can be reduced to the half). Each scanner includes a computer to control it and to store the scanned data. Data from these scanning computers will then need to be formatted for the registration database.

There are some variations of OR systems, OCR (Optical Character Recognition); OMR (Optical Mark Recognition) and ICR (Intelligent Character Recognition), which reads handwriting and is being used in China for the production of the new ID documents. ICR is the system that has been decided to use in Tajikistan if the adequate software in the Russian language can be found.

Advantages of OR systems:

a. They are faster and reliable. They are good for extensive data input and for systems with a close deadline. They have been used for registration and ID systems in countries like Peru, Bosnia, Ghana, Sierra Leone, Nicaragua and others, although in none of them have been completely satisfactory, despite they all have had available software in the language used in the country.

b. They require fewer people and less physical space. They eliminate the need for manual data entry, thereby eliminating a certain number of computers and data entry operators. According to measures conducted in several organizations an ICR system can shrink an organization's data-entry labor force by as much as 60%.

c. They reduce data entry errors and the period between data collection and completion of final lists.

d. They can reduce the budget up to a 40% if the capture of data is well conducted and the forms are adequate.

Disadvantages of OR systems:

a. They are more complicated to manage and require skilled technicians, not available at the moment in Tajikistan.

b. They are not error safe. Although the level of error is reduced using this equipment, up to a 5% of error rate has to be expected, due to the high dependence on good and clear handwriting during the collection of data.

c. It is not known if the special characters used in the available OR scanning software will correctly interpret the Tajik Language. The whole set of characters in the Tajik language can be introduced in the software, but this option will delay the start, and increase the cost of the operation.

d. It is highly dependent on technicians. If one or some are not available to correct an error or fix a machine the system is consequently delayed.

e. ICR requires a lot of computer power to recognize and read hand printed letters and numbers. While some low versions of ICR exist, their results can be quite dismal. For systems as big as the registration of voters is necessary to use "contextual editing" which operates in three stages: The pre-recognition stage that covers the kind of paper and the good design of the form; the second stage involves the recognition process itself using until three different and redundant engines. Each engine will attempt to recognize the character and "vote" (how appropiate) on what each character is likely to be. While expensive, these engines can improve recognition accuracy by 50%; post-recognizion is the most elaborate of the three stages and tries to clean up and correct errors it made during recognition. One process involves contextual editing, which lets the computer check recognized data for correctness. Look up tables, dictionaries and automated spell checkers are other tools involved in an ICR recognition process.

2. Manual data input.

This is the traditional method that introduces data directly into the computer in a two step operation: data input and validation of data.

Advantages of manual data input:

a. It is easy to train and hire computer operators. Even in developing countries like Tajikistan, where there are few data entry operators, it is possible to select and train personnel and start immediately.

b. It is not technician dependent. A data input computer operator can be replaced immediately, especially if a standby roster of operators is implemented.

c. Provides a beneficial social effect. It is true that the time required to complete the system it is higher, but provides jobs (although temporary) for as many as 150 families in Tajikistan. At the same time, the training and practice provides these people with new skills to work in clerical jobs as secretaries or computer operators.

d. At the end of the process equipment is left in the country (If it is donated!) that can be used in another systems, to benefit both, government and people. Computers are more useful than scanners. It will be necessary to specify the final use of the computer equipment, to avoid the possibility of installation in the offices of mid and/or high ranked governmental officials, or for their private use. It is necessary to remember that election systems have a peak use every four years (approximately) and that after elections a high percentage of equipment will remain without use.

Disadvantages of manual data input.

a. It is slower and more subject to human error. The standard percentage of error in data input operations is as high as 10%. That can be reduced to 1% or 2% if adequate measures of validation are taken. The production per computer is approximately 60 registers/hour.

b. The quality control of manual operations is higher and must be conducted by very serious supervisors.

c. It will be necessary to use approximately 150 people for four to six months to fulfill the objectives of the system.

d. It is the most expensive and logistically the more complex to handle.

COLLECTION OF DATA

"Collection of data" means the process of collecting information from each of the voters in Tajikistan and abroad in order to build a reliable and integrated computer database.

There are four possibilities to collect this information:

1. USING THE CURRENT VOTERS LIST.

This option supposes to use the current voters lists, used in 1995 elections, bring them to Dushanbe and introduce them into the computer system, directly from the registration books. Later on, in a second phase, a "verification of data" period will be open (as scheduled in the law) and the information will be updated accordingly.

Special cases will need special routines: Military, migrant workers, Foreign Service, refugees and citizens living outside Tajikistan. Special registration places will have to be open outside the country to conduct a new registration, using special forms.

Advantages.

a. The main source of information is ready to use and the construction of the database can start immediately.

b. During the "verification of data" phase, errors and mistakes can be fixed and additional voters can be included.

Disadvantages.

a. This alternative makes the use of an Optical Recognition system not possible, because data must be collected on special forms.

b. It is impossible to predict how many errors are in the current voter list. From the questionnaire I sent to some of the Oblast officers, the voters list information is incomplete and not always reliable. If this is the general case, the difficulty in update the information accurately can pose a risk to the system.

c. The voter list lacks the passport number. Nevertheless it is possible to collect it during the verification of information period and during the voting process, for future elections.

2. TO OPEN A NEW REGISTRATION PHASE.

Using this alternative a completely new phase of voter registration needs to be opened early next year to register citizens from scratch.

Advantages.

a. Information shall be fresh and updated. If the collection of data is well designed and implemented, this will provide a high quality registration database.

b. It is the better way to capture directly all information needed for a voter registration system, such as: passport number, date of birth and correct name, taken directly from the source: the voter.

Disadvantages.

a. Voter registration is, by far the longest, most complex, expensive, time consuming and difficult phase of election systems. A new registration will take at least four months and will be necessary to mobilize all 2,700 Polling Stations Commissions.

b. Control and supervision will be extensive and complicated. Control systems are paramount for the due implementation of this kind of projects. Software applications and manual control systems will need to be implemented to obtain the best results.

3. TO USE THE "PROPISKA" FILES.

The possibility to use the "propiska" files was opened during a meeting in the Ministry of the Interior. The "propiska" is a registry of persons and it is the system used in all former soviet republics to identify and track people.

Advantages.

a) It is highly accurate in quantity, with almost three million registers for all citizens above 16 years old and with all the information necessary to identify people: passport number, names and birthday. Contains the address but that information is not trustworthy because people working outside their places of residence are expected not to give the change to the system. It is also expected that members of the opposition and refugees will not have correct addresses or are not registered at all.

b) The whole information is concentrated in four Oblasts: Dushanbe with aprox.1,000,000 registers, Leninabad with similar quantity, Kurgan Tube and Khorog with another million among them both.

c) It has all the necessary information but can not be used with ICR systems.

d) Despite the information of polling station it is not included in these files, it is possibly to capture it according with the address. During the verification process any error can be amended and the missing information can be captured.

e) It is the natural and most logical source for a permanent voter registration system, since it is always updated and contains all information related with citizens. The passport offices issue passports and thus, define the legal identification of people. In permanent registration systems, the civilian registry office produces the voter list directly from their files. The registration systems become, then, a sub – product of the civilian registry. If it is possible to put this information in a different and independent body, like the CEC (Nicaragua, Guatemala, Peru) or in an autonomous institute (The "Registry of Persons" in El Salvador, the "Civilian Registry" in most of the rest of South American Republics), the duplicity of functions will be avoided and the cost of maintaining a parallel identification system will be spared. Additionally, a database containing information of all Tajik, can become a powerful planning tool and the foundation for a real civilian registry in the near future.

Disadvantages.

a) The "propiska" system it is used for the police to track people. Therefore, people may distrust it. An association of the election system with the "propiska" can produce a negative effect on the registration and bring the discontent of refugees and the opposition.

b) The forms used are not suited for ICR, are all handwritten and in some case are illegible.

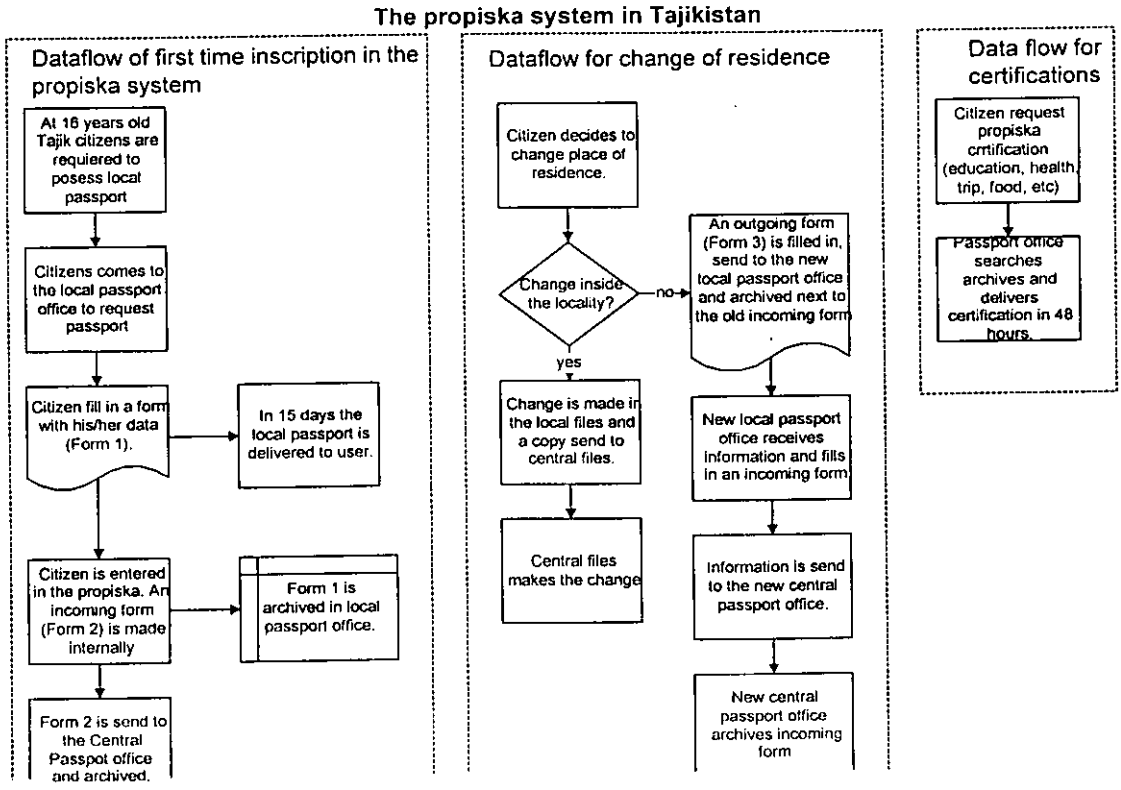
c) The information is used in a daily basis, so it is impossible to bring the information from the other three Oblasts to Dushanbe and it will be necessary to move the computer network.

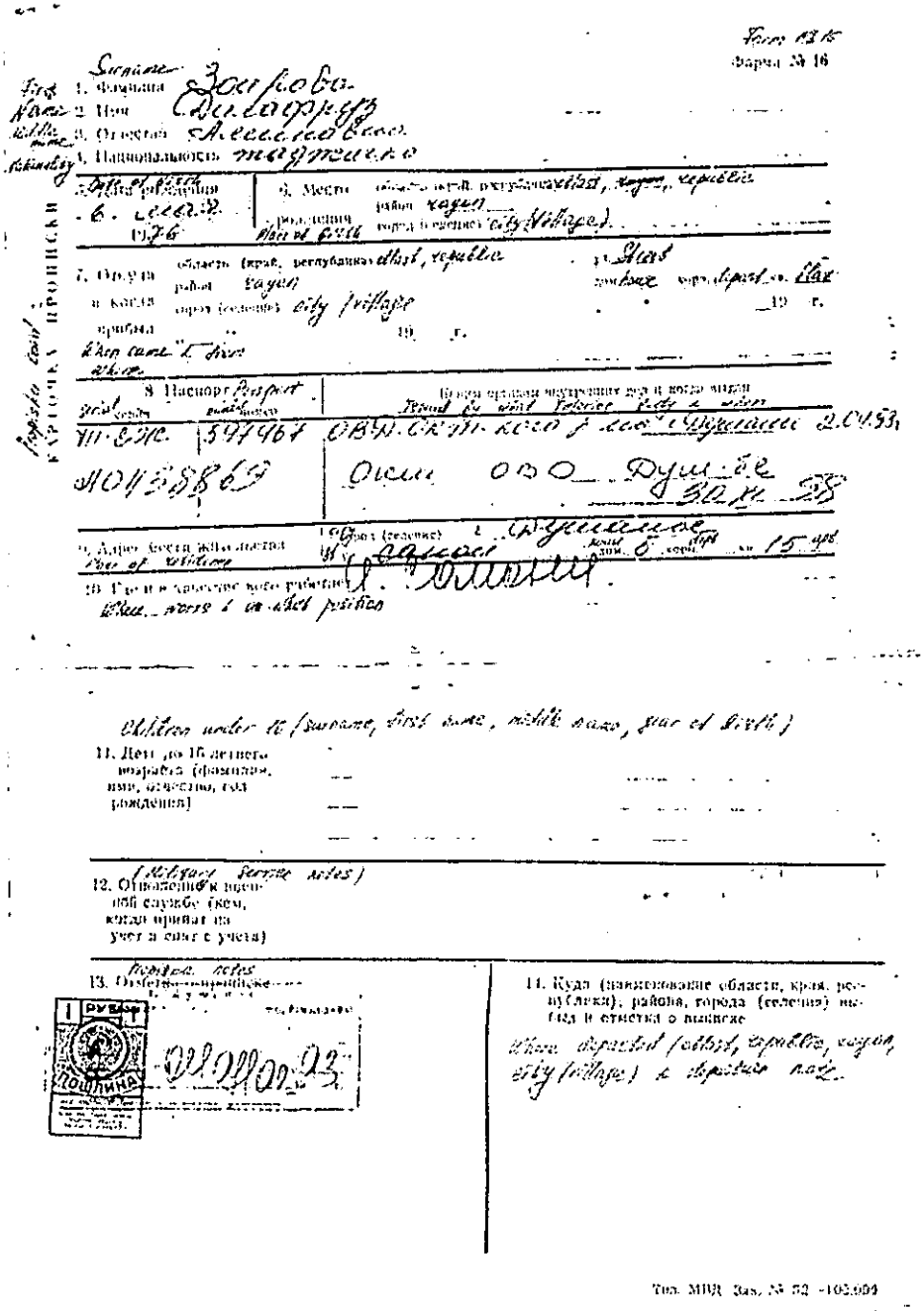
d) A copy of the computerized database will be requested by the Ministry of the Interior as a condition to provide the information (this point was already arisen in our meeting with General Madjar). This will produce an even stronger feeling of mistrust when political parties and the opposition know about it. An identification of the registration system with the government will be inevitable.

e) It will be necessary to work in conjunction with delegates of the Ministry of the Interior. They will want to control the integrity of the information and how it is used, so they will be present during all the data capture process. The only presence of these delegates inside the CEC premises can be dangerous in more than one way, if we want to provide transparency by giving access to all political parties and the opposition.

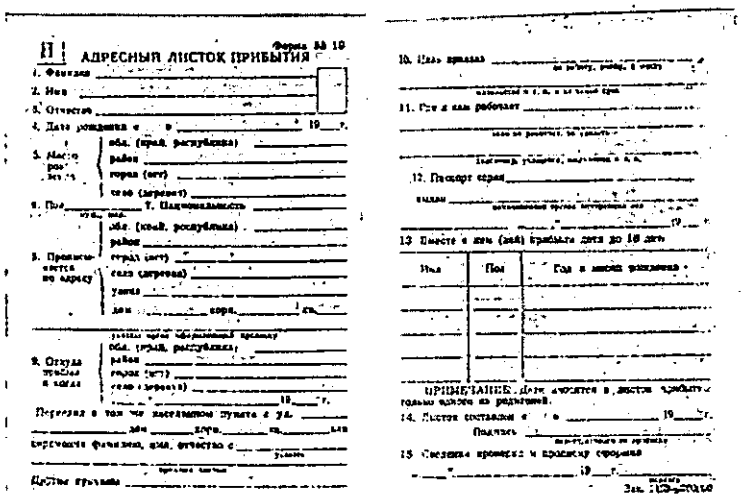
Description of the propiska system.

The propiska system is based in the local passport as an identification document that needs to be properly stamped in the place of residence of the owner to give him/her access to the different services of the socialist system like housing, education, food, health care, transportation and work. The local passport was first introduced by the Tsarist government to control citizens and to fix peasants to the land. The first act of the October revolution was the suppression of the local passport, but it was re-introduced by Stalin in 1932 and its been hence forward the standard identification system for all the former soviet republics, were still persists although debilitated by private initiative and property.

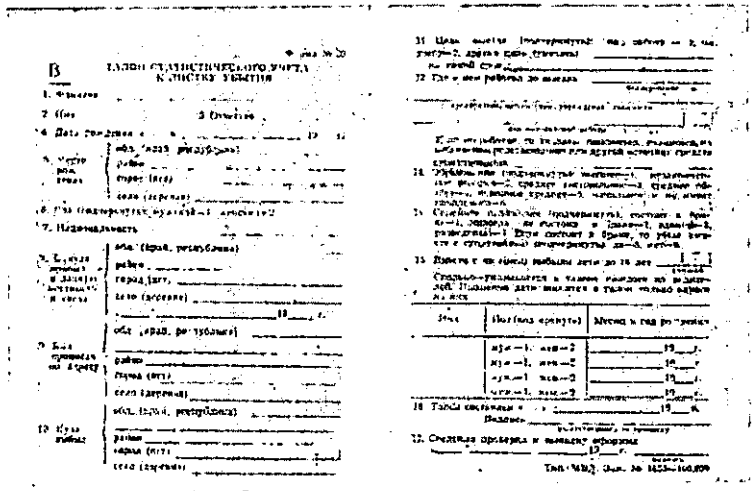




Form 1: Initial form filled in by the user.



Form 2: Incoming form.



Form 3: Outgoing form.

4. To use the registration for the referendum.

This alternative will use the registration that needs to be done, according with the law, previous to any election.

Advantages.

4.1. It will be possible to use new forms, specially designed for data input or ICR, and capture additional information, not included in the current voter list, like passport number and full birthday.

4.2. Data will be updated according with the internal migration that occurred after the signing of the peace agreements.

4.3. The feasibility of such process has been discussed with the CEC and the Railroad Hukumat and both accept to carry it out with the due orders from above.

4.4. It is possible, according with Mr. Bobodjanov of the CEC, to open a new registration phase at any time, before elections.

4.5. If it is possible to obtain the passport number a lot of work will be saved to update data for next elections. Having at least three elections and possibly four (Presidential second round), this should be an operational goal of the system.

Disadvantages.

4.6. There is not accurate date for referendum. If it is decided to carry it out after June, it will be too late for the registration system.

4.7. It is not possible to develop a permanent registration with this option. A new registration needs to be carried out each election, although only for new voters and people who have changed their address.

Analysis of alternatives.

To better understand the best option we will define the most important characteristics of and we will assign a number in a scale from 1 to five, according with a rating. Then it will be necessary to assign a specific weight to each characteristic. It is impossible to avoid a certain degree of subjectivity in the assignation of ratings, but if impartially done could serve as a good mechanism to adopt decisions.

Characteristics

1: Confidence of people. 1:low, 2: regular, 3: average, 4: good, 5: very good.
2: Difficult to collect information. 1: high, 2: regular, 3: average, 4: low, 5: very low.
3: Cost. 1: very high, 2: high, 3: average, 4: low, 5: lower.
4: Time to collect information. 1: very long, 2: long, 3: average, 4: short, 5: very short.
5: Accuracy of data. 1: very low, 2: low, 3: average, 4: high, 5: very high.

Ratings are done in such way that the higher belongs to the best measure, then by adding all values the higher result defines the best alternative.

	Current list	New registration	Propiska	Referendum (ICR)	Referendum (data input)
Confidence	3	5	1	3	3
Collect info	3	1	5	2	2
Cost	3	1	3	3	2
Time	3	1	4	4	3
Accuracy	3	3	4	3	3
Total	**15**	**11**	**17**	**15**	**13**

As it is possible to determine from the table above, the best technical alternative is given by the use of the propiska files, nevertheless the political consequences can override this technical advantages and are not easy to measure.

A very detailed examination was carried out for three of the options: Use of the current voter's list, of the propiska files and the registration for the referendum. I visited all the people involved in each step of these alternatives. It was especially difficult to get access to the propiska files, but at the end we went trough, thanks to the support of the Prime Minister, who requested some Ministries, including the Ministry of the Interior to provide the necessary support. Some of the original information I had from external sources proved to be wrong in the practice and I was able to work with first hand information, directly collected in the source.

At the end of a long period of analysis and ambivalence, I was able to devise the best solution, both political and technical. It is the use of the obligatory referendum registration phase to capture information directly from the citizen's passports using special ICR forms. Due to the limitation of ICR to the Russian language and the low cultural level in rural areas, a mixed system was proposed: To use ICR in the cities and data-input in rural areas. The CEC accepted this alternative rapidly and at the moment all the necessary steps have been adopted to start the work in the field as soon as the referendum is convoked by the parliament. An additional important advantage of this option is that IFES can carry out a pilot project in Dushanbe during the referendum, to test in the practice the new system and correct any loopholes or technical gaps produced by lack of knowledge or deficient analysis.

PURPOSES OF VOTER REGISTRATION

Voter registration is a process, which allows individuals to demonstrate their right to vote and defines the polling site assigned to them for this purpose. Therefore, it is not necessary to argue on the right to vote, although it will be necessary to demonstrate in a positive way the identity of the person and to take the measures for him/her to vote only once.

There are three basic ways in which the right to vote can be registered:

1. *No registration.* Using this method, the citizen arrives to the polling station and votes after a process of positive identification. Some countries in Africa, in rural areas, use this type of voting, giving the elders of the tribe, who knows everybody in the village, the right to determine the identity of the person and his/her right to vote. Voting in Latvia is carry out in any polling station without any requisite except the presentation of the local passport or other identification paper. Finger inking is the only level of security to avoid multiple voting.

2. *Compulsory registration.* In this kind of system all citizens have the obligation to register, whether in a civilian registry or in an electoral registry. In the first case the mandatory electoral registration is a consequence of a legal obligation to register everybody at the moment of birth in a civilian registry. Later, when the person reaches the age of voting, he/she is automatically included in the voter list. In the second case people have to register in an ad-hoc voter registration system. Compulsory registration can be state-initiated, using the civil registry or the door-to-door methodology, or self-initiated installing special registration places.

3. *Voluntary registration.* This type of registration is people driven. Citizens register in special places during the whole year, as in Guatemala or El Salvador in Central America; or only during some months, prior to election day. Voluntary registration is always self-initiated.

4. *Simultaneous registration and voting.* In this kind of voting system, people first register and then, vote immediately. It was the case in the Dominican Republic in 1996. This kind of system is proposed for voting abroad in Tajikistan.

Usually, registration is done before elections. There are two ways in which the right to vote is registered. First, an electoral or ID document is issued to the individual, including the constituency where he/her has the right to vote. Secondly, the name of the individual is inscribed in an electoral register and a list of voters is provided to each polling station, comprising the names of persons allowed to vote in that polling station. When the voter appears, his/her identity can be proved with some rather document (ID card, electoral card, passport, and driver's license). In most countries, both systems are used simultaneously: a card is issued and the name appears on the voter's list.
Another type of classification is given by the technology used to register citizens:

1. *Manual registration*: Voters register in a book personally, manually, in the same constituencies of their residences. This type of registration is often used for first time voter

registration in countries that does not have a civilian registry. This was the case in Nicaragua, Mozambique and Cambodia. After the registration is done, data in the books can be introduced in a computer, to develop a computerized voter list (Cambodia, Bosnia, Eritrea) or can be kept "as it is"; to vote in the same books (Nicaragua 1989, Ukraine and most former Soviet Union Republics). Advantages of the manual registration are its simplicity, a relative low budget necessary to implement it and the immediate knowledge of citizens of the polling station where they are going to vote. Disadvantages are the low level of security, the short lifespan of the system (if it is not updated permanently or data it is not transferred to computers) and, in the long run, a higher cost due to the necessity to build a totally new registration phase each time elections are carried out.

2. *Computerized registration.* Using computer technology, a voter registration database can be built for the first time in different ways:

   2.1. With a special inscription form, which can be taken and deposited in any of several booths or places installed with this purpose. Information in these forms is transferred to computers, verified against itself to detect multiple registration, sorted for place of residence and alphabetical, to distribute voters in polling stations and printed in the form of voter list per polling station.

   2.2. People are requested to register in the place where they want to vote. A special registration form is issued and filled in and information it is transferred to computers. After the usual verification, the voter list is printed using the same address provided by the individuals.

   2.3. People are requested to go to a special place, usually carrying an identification document. Data is then introduced in the computer system directly, in the presence of the individual, who verifies the information, receives, and signs a receipt.

   2.4. Door-to-door. In a State initiated registration system, electoral authorities (Nicaragua) or central/local government authorities (Most countries in Eastern Europe) verify the residence of individuals house by house, using special forms to collect information. Later, data in these forms is introduced into computers.

   When the voting process is over, the registration system can be updated permanently (permanent voter list systems) or discarded, to repeat all steps before next elections (periodical update).

Objectives of electoral registration.

1. Registration connects persons and constituencies. Information on the number of voters in each constituency is necessary to ensure fairness in the representation. Elections are not considered free and fair if it is not possible to verify the legitimacy of voters.

2. Multiple voting is prevented and avoided using this mechanism. In computerized systems, this is done using computer programs to verify the whole database against itself to detect similar or identical registers.

3. Permits a simple and cheaper update for future elections, if a permanent key field like the passport number is captured in all registers.

4. Provides some degree of control over "ballot paper stuffing", since the names of voters are crossed out and, at the end of the voting day, the number of names crossed out must coincide with the number of ballots in the box.

5. Streamlines the logistics of the administrative voting process, by providing knowledge of the number of ballots, office supplies and a fair calculation of transportation and human resources needed for the electoral project.

5. Increases the credibility of the whole electoral process.

6. Provides first hand information, at the end of the process, about the turnout of voters and statistical data to improve future elections.

7. Provides information for electoral research for political parties, electoral authorities, international organizations and NGO's.

8. Provides a comprehensive database for verification and auditing of the electoral process, and a mechanism to determine the right to vote in the case of absentee voting (USA) or tender voting (Eritrea).

9. Determines who has the right to vote. Exceptions are done in countries like Nicaragua or in Eastern Europe, where law permits to vote even if the citizen is not registered. In computerized registration systems, voting without registration is the exception and not the rule.

Characteristics of a voter registration system.

1. *Must be integral and not discriminatory.* Must include all people who have the right to vote, according with the law, without any restrictions due to race, religion or any other type of segregation against important groups of individuals.

2. *Must be transparent.* All participants and stakeholders in the electoral process, internal and external, like political parties and international and local observers, should have access to the information gathered by the system, the administrative processes and the computer programs. They should be able to make suggestions and have the right to verify if they were taken in account and implemented or the reason because they were not. The legitimacy of an election lays sometime, more in perception than on facts and figures. Transparency is the way to provide this perception. Transparency it is not opposed to confidentiality, although it is usually necessary to define some rules to balance both concepts.

3. *Must be secure.* It needs to have the necessary physical and logical safeguards to guarantee that data inside the database can not be amended, deleted or added to by anyone but the personnel in charge, and that those changes are in concordance with reality.

4. *Must be effective*. Must be effectual and efficacious. Must be easy to operate, easy to transport and adaptable to the environment where it is going to be implemented.

5. *Must be audit capable and accountable*. Must be liable and able to keep track of all changes made from the beginning of the system and to provide clear information about itself.

6. *Must be feasible*. Must be designed in concordance with the law, be able to be implemented and have all the necessary resources (money, time, people, equipment, etc.) to permit its full implementation on time and space.

7. *Must be reliable*. Must be constant and invariable to provide sustainable citizens confidence.

THE VOTER REGISTRATION PROJECT IN TAJIKISTAN.

The International Foundation for Election Systems - IFES - funded by the USAID, is in charge of the developing of a computerized voter registration system for Tajikistan.

The specific and punctual objectives of this project are:

1. To provide the CEC in Tajikistan with a computer system to permit the registration of all citizens who posses the right to vote, according to the law.

2. To centralize in one database all voters, allowing the use of technology to verify the database against itself, avoiding multiple registration.

3. To provide all citizens, independently of their residence status, with their constitutional right to vote.

4. To install the computer system in the field, according technical parameters accepted by both sides.

5. To specify and program computer applications to serve the purpose of the project.

6. To train local staff to operate the computer system to fulfill the requirements of the project.

7. To define an operational methodology for registration and its activities, timelines, resources and responsibilities.

Mechanics of the proposed system.

The concept of the new system is bounded in three main theses:

1. To use the registration phase, which must be started for the referenda, as the source of information for the new system, with some minor variations in the current

methodology. This approach is allowed by the law and does not introduce major changes in the current system, allowing the gathering of updated information for the initial database.

2. To use ICR technology for urban population – Mahalas and Micro raions - and data input for rural areas – Jamoats and Kholkozes -, where only the Tajik language is spoken and the cultural level is lower than the rest. A considerable reduction in time and budget can be preformed using carefully both technologies.

3. To develop a pilot test in Dushanbe for the constitution referenda. This will permit to measure the system, specially the use of ICR, to train local staff in the managing of the new forms and to test the system with minor risk in a real environment.

Under this specifications, the new voter registration system will be government initiated, compulsory, computerized and with periodic updates for each election.

DESCRIPTION OF THE PROPOSED SYSTEM.

Registration within Tajikistan for civilian citizens.

1. According with the law, the Central Commission of Elections and Referenda requests to the head of the Governmental Hukumat, the President of the Republic, to start the registration process and sends him, for printing, the forms that are going to be used. Instead of the old forms, a new set of forms has been designed, one ICR-oriented and another, data-input-oriented (Forms 5 and 6). This time the official request of the CEC will include a brief description of the new system and its advantages, for a better understanding.

2. The Chief of the Presidential apparatus, Mr. Majmadnazar Salijov, receives the correspondence trough the chief of his entourage, Mr. Emin Sanguinov (Both were briefed on the system) and passes it to the President of the Republic to authorize to start the referenda process. This authorization goes back to the CEC.
3. The CEC takes two actions:

   3.1. The CEC requests the printing house to print data collection forms, both ICR and data-input.

   3.2. Requests to the Hukumats to start the process as soon as the forms are printed and distributed.

4. IFES trains the Hukumats in the correct use of the ICR oriented form. This training is a very basic one, but necessary. Hukumats will train Mahalas, Micro raions and Jamoats. Hukumats trains Mahalas and Micro raions commissions in the use of the ICR form. Jamoats and Kholkozes will use the old form only.

5. Mahalas and Micro raions commissions makes the usual door to door visits, collecting information in the old registration form. Later they transfer information from the old from to the new ICR form. The purpose of this double data registration is to avoid errors, not to bend the new forms and to keep the current system as backup in case the new system runs into implementation problems.

6. Hukumats verifies the integrity and legibility of the information. If it is not adequate, they fill in new forms. If it is not legible at all, they return the form to the Mahala/Micro raion to take the information again.

7. Hukumats sorts consecutively all forms received, make lots of 350 forms each, and label packages and send them to Dushanbe. An alternative delivery system was accorded with OSCE and the Aga Khan Foundation to pick up these documents from the districts, if some delay is produced, if they can not send them by themselves or if the usual transportation is not secure. The routes of collection are the same than in the training plan.

8. In the computer center (CC) in Dushanbe the quality control section (QCS) receives lots of ICR and data-input forms, verifies their integrity and double check th· legibility of each

form. If they are not satisfactory, and can not be amended in Dushanbe, they are returned to the hukumat for correction or completeness. If they are correct, are sent to the scanning or data-input sections, according with the type of form.

9. The CC introduces data into computers according with the designed procedures, outlined in graphic 1.

10. The QCS returns lots to hukumats, using the same delivery system.

11. Hukumats send forms to Polling Stations.

12. Polling Stations produces voter's list as usual. *It is to remember that this process will be carried out before the referenda, so, with exception of the pilot project in Dushanbe, all polling stations in the country will use the same old voting system.*

13. People votes in referenda and the CC produces the initial registration database, to be ready for presidential and parliamentary elections. Missing passport numbers are captured during referendum and send to the CEC to be introduced in the computer system. Voter's list from abroad follows the same procedure.

Once presidential and/or parliamentary elections are convoked, the initial registration database will be ready. At the moment of the public verification phase, 60 days prior to Election Day, old voter's lists are exposed outside the polling stations, skipping the door-to-door visits (because the voter's lists are new and priority will be given to the direct capture of information from citizens). It will be necessary to follow up the draft of the election law closely to see that a mandatory door-to-door registration is not included, leaving to the CEC the decision on how to carry it out.

A intensive voter education and voter information campaign should be launched in order to encourage citizens to come up to the polling station of their residence to register themselves. Some kind of implicit warranties must be given by the government, trough the law, that the registration of these citizens will not imply any future retaliation. All the information captured trough this method will be specially marked to provide additional securities. They will be saved in a different file and put together only in the final voter's lists.

Central Commission of Elections **FORM FOR REGISTRATION OF VOTERS** 1234567

CITY:

HUKUMAT:

MAHALA/MICRO RAION:

STREET: # DPT #:

POLLING SITE #

PASSPORT #:
SURNAME:
NAME:
PATRONIMIC:
BIRTHDAY (D/M/A): 1 9 GENDER (M/F):

PASSPORT #:
SURNAME:
NAME:
PATRONIMIC:
BIRTHDAY (D/M/A): 1 9 GENDER (M/F):

PASSPORT #:
SURNAME:
NAME:
PATRONIMIC:
BIRTHDAY (D/M/A): 1 9 GENDER (M/F):

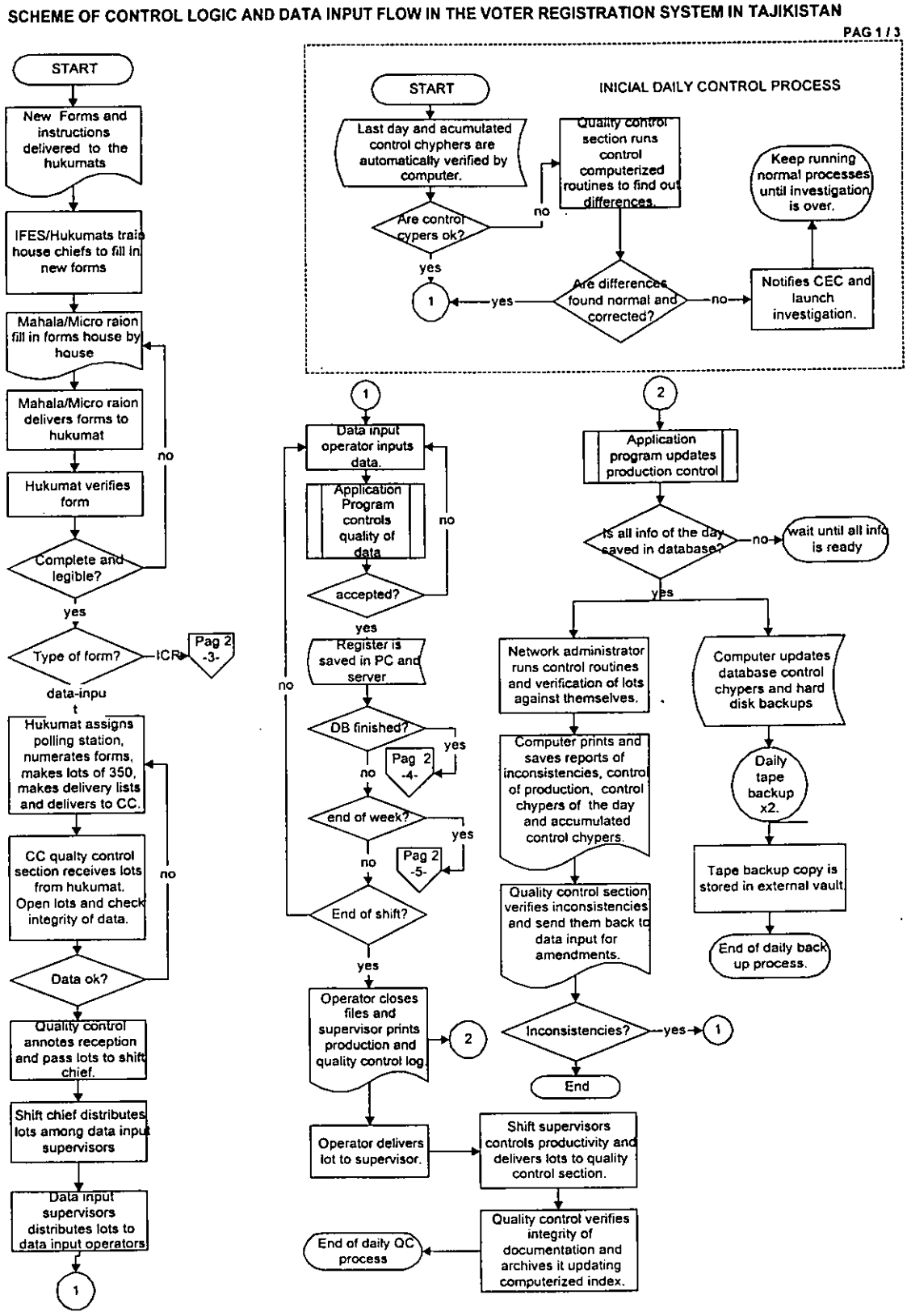
PASSPORT #:
SURNAME:
NAME:
PATRONIMIC:
BIRTHDAY (D/M/A): 1 9 GENDER (M/F):
PASSPORT #:
SURNAME:
NAME:
PATRONIMIC:
BIRTHDAY (D/M/A): 1 9 GENDER (M/F):

PASSPORT #:
SURNAME:
NAME:
PATRONIMIC:
BIRTHDAY (D/M/A): 1 9 GENDER (M/F):

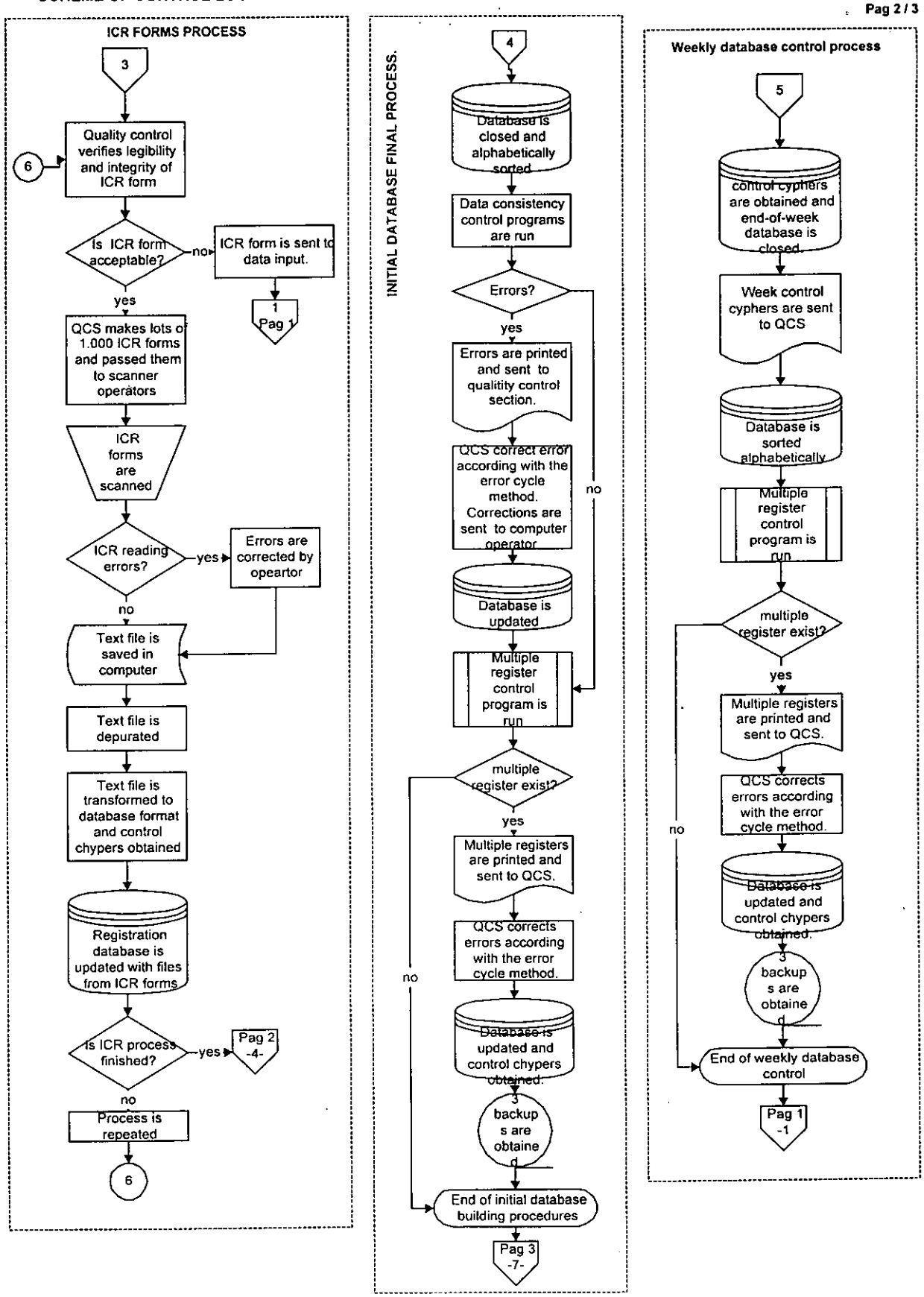
FILLED IN BY(NAME): DATE:

Form 5: ICR citizen's registration form

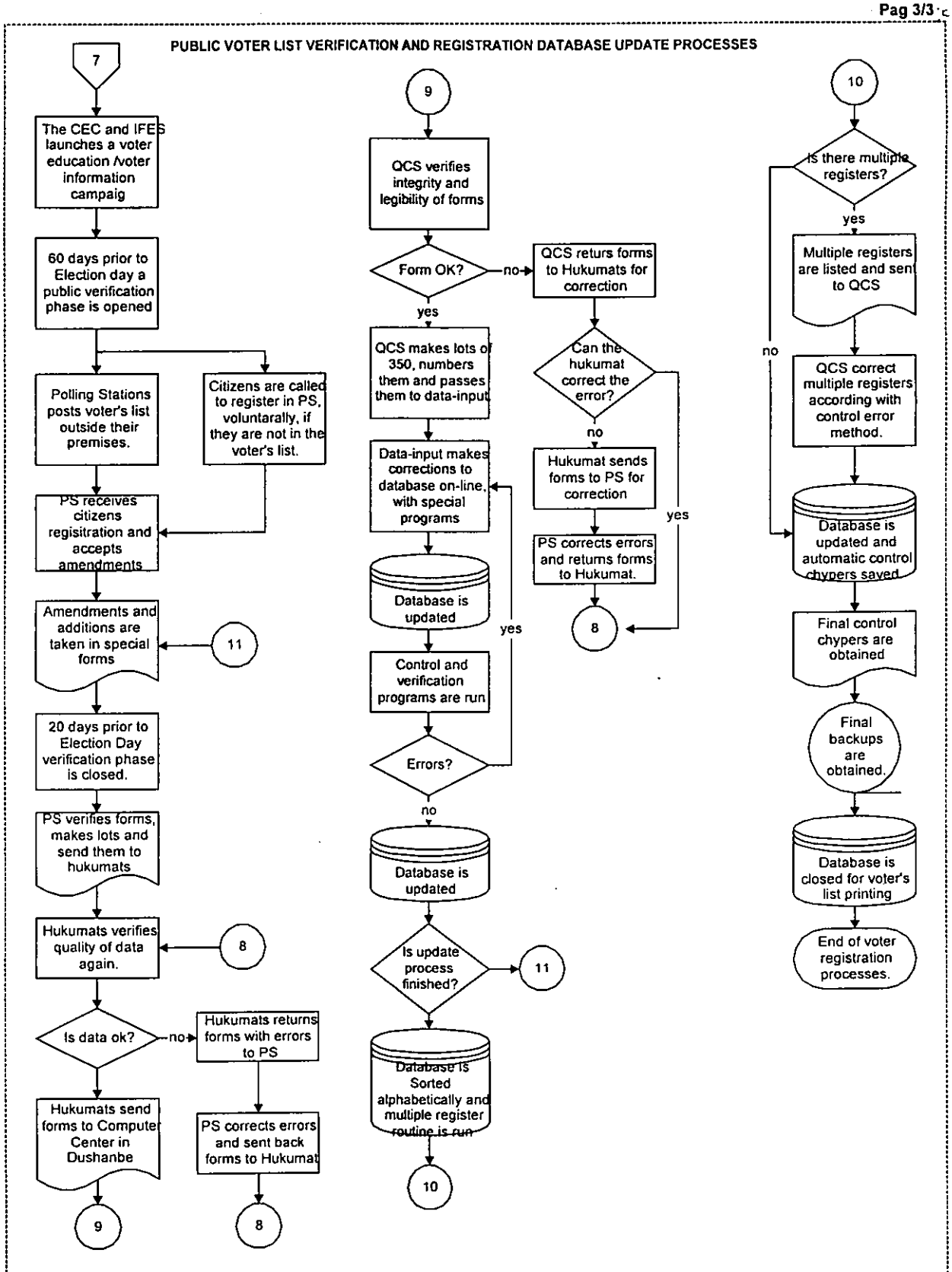
Graphic 1: Dataflow in the proposed registration system.



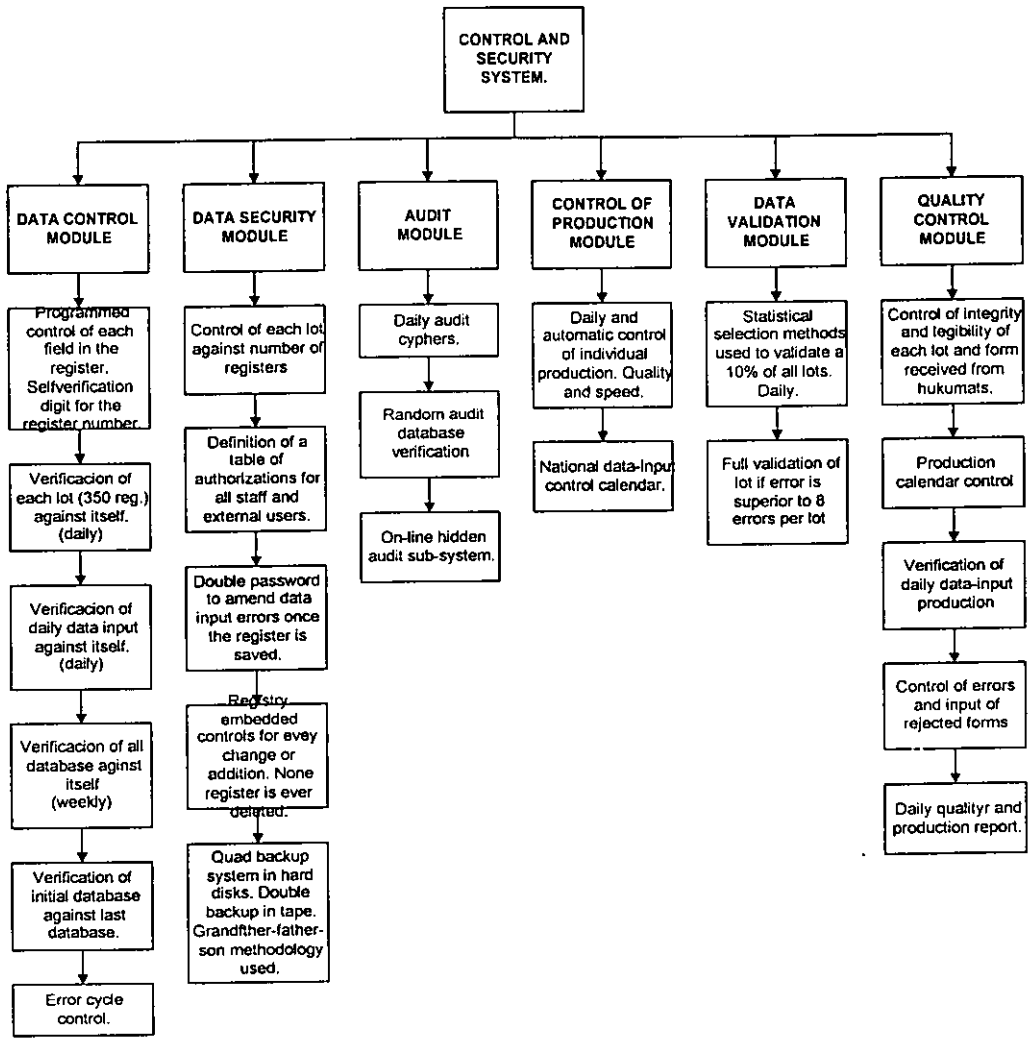
SCHEME OF CONTROL LOGIC AND DATA INPUT FLOW IN THE VOTER REGISTRATION SYSTEM IN TAJIKISTAN



SCHEME OF CONTROL LOGIC AND DATA INPUT FLOW IN THE VOTER REGISTRATION SYSTEM IN TAJIKISTAN



CONTROL AND SECURITY IN THE VOTER REGISTRATION SYSTEM FOR TAJIKISTAN



Military registration.

According with the criteria of the CEC and other opinions (OSCE, Sharq), it is likely difficult that the Army Forces releases information on names and number of their ranks for the new registration system. Hitherto, military vote will follow the same procedures as present.

It is not possible to outline any possibility on military voting until the new election law is ready. If the military release information, to introduce it into the computer system will not pose a problem.

Registration outside the country.

Registration of Tajik citizens living outside the country will have to follow the provisions of the new election law. Suggestions on how to manage this issue are outlined in ~~chapter xx~~, pag ~~xx~~. 44. "The voting abroad"

In resume, these suggestions propose to vote in the same way as today, using new computer-oriented forms, including passport number, captured at registration time. People will register first and then will vote immediately. After-election, voter's lists will be sent to the CC in Dushanbe and the registration database will be updated for future elections. A final verification of the database against itself will be run after all data is introduced, to verify the possibility of multiple registers.

Training plan.

The use of an ICR, although simple, requires to take some precautions and to handle the form in a certain way, to keep it in good shape. Experience shows that people spoils simple forms more than complicated ones; they just start writing and then realize it was not so simple. The new ICR form requires fulfilling the following rules:

1. To use capitals only. ICR can read small letters but when people writes using them have the tendency to write continuously. Using capitals, they are careful.

2. To use the Russian language only. Due to restrictions on the ICR recognition program itself

3. To write one letter per box. For the program to operate without errors and to build the database from a fix structure.

4. To introduce all the information. Passport number is an exception.

5. Not bend edges; not bend the form, not vodka spilling. The form must be in one piece to be scanner-readable. It will be difficult to accomplish this rule in full, but the quality control section will check the form and will be re-written if it is not adequate. Taking an additional measure of control, the form will be filled in only after the information is taken on the traditional form and after the door-to-door visit. This will give an additional task to the Mahalas and Micro raions, but specific instructions will be draft by the CEC in this direction.

Training will be given in two levels, IFES/OSCE/Agha Kan Foundation will train the hukumat chiefs (who will be held responsible by the quality of the information) and they will train the Mahalas and Micro raion commissions.

In order to get support from the OSCE and the Agha Kan Foundation I spoke with them and present them the plan. They accepted immediately and without reserves. UNMOT refused to accept because they have all his staff in Dushanbe due to the killing of four staff members, but may accept to participate in the future. With the participation of these two organizations, each in different region of influence, we can cover Dushanbe city (IFES), the Khatlionski Oblast (OSCE) and the Gorna Badakhshan autonomous Oblast(Agha Kan).

The Leninabad region, where 40% of the voters are concentrated, the Pamir region and the cities and raions of republic subordination will be covered with support of the CEC, gathering all hukumat chiefs in one city for a special training session of one day (Of course, IFES will

have to pay the bill). Additional support from NGO's and International Organizations like the Red Cross should be explored.

The pilot project during referendum.

Besides than providing the source of data for the initial registration database, the referendum provides a good opportunity to test the system in the field, under real conditions. A pilot project in Dushanbe City, with 300,00o voters, 10% of the total population, is proposed to be carried out for this purpose.

The pilot project schematic conception.

The basic idea behind the pilot project is to conduct a real voting system in Dushanbe, or in the Railway hukumat only, with all the characteristics and conditions of the final system, only inside a small environment. To accomplish this goal:

1. A registration database of the sample will be built using ICR forms and one scanner. This will permit IFES to test the versatility of the ICR system and the behavior of the server and application programming.

2. The collection of ICR forms inside Dushanbe will have priority and every step will be carefully monitored for a future analysis.

3. It will not be announced to the public, except at the end, if proved successful. If some phase or procedure can not be performed on time the possibility will exist to withdraw without causing any damage to the election process. The pilot project will be developed in the background and the normal procedures will not be affected.

4. If the registration database is built without any problem, the voter's list in Dushanbe will be printed electronically and distributed instead the standard voter list.

5. The collection and release of provisional results will be part of the pilot project and carried out as part of the exercise. The final counting will be carried out using the computer system.

If it is not possible to carry out one or more of these objectives due to lack of resources, equipment, personnel or time, just some of them can be performed. The whole system has a modular design, which permits to isolate one or several tasks without interfering with the others, if they are not data dependent.

Resources for the pilot project.

1. For the registration database.

1.1. One ICR scanner with automatic feeder and ICR program. Working two shifts of six hours each, seven days a week, the basic database can be ready in two weeks, considering 15% of reading errors.

1.2. Two scanner operators working in turns of 12 hours/day, one from Monday to Wednesday morning and the other from Wednesday afternoon to Sunday afternoon. Local staff.

1.3. Eight computers. One to manage the scanner and the text files; one to transform the text files to database format and to process the database; two for application programming; two for data input and correction of errors; one for secretarial work and one as backup.

1.4. One 40 pmm laser printer.

1.5. One copier machine.

1.6. One senior programmer and one support programmer. Local staff.

1.7. One network administrator. Local staff.

1.8. One secretary. Local staff.

1.9. One translator. Local staff.

1.10. One administrative assistant (maybe two). Local staff.

1.11. One International consultant for ICR data input for two months (highly desirable).

1.12. One representative of the CEC will be requested to be permanently present and the total effort will be officially conducted by the CEC, under IFES supervision.

1.13. Service staff.

1.14. One main International consultant, responsible for the main project.

1.15. One 4x4 vehicle with driver.

1.16. Adequate premises. Nor necessarily the final one.

1.17. Adequate and sufficient office supplies.

Note: *All these resources are part of the main project and nothing additional is requested.*

Additional resources for the printing of the voter's list:

1.18. The network server as specified.

1.19. Two computer operators. Local staff.

1.20. Another 40 ppm laser printer.

All these resources are also part of the network computer system specified for the development of the full system.

The pilot project will be developed parallel to the main effort of to build up the registration database, but it will be managed as a separate sub-project to facilitate its control and implementation.

Pilot project calendar.

Supposition: Referendum will be on Sunday, August 29, 1999.

#	*Activity*	Start date	Finish date	Duration (days)
1	Registration door-to-door	May 1	May 30	30
2	Scanning documents	June 1	June 15	15
3	Data base built up and control	June 16	June 30	15
4	Printing of voter's lists	August 1	August 15	15
5	Distribution of voter's lists	August 20	August 28	9
6	Database programming	May 1	August 15	107
7	Referendum	August 29	August 29	1
8	Provisional results	August 30	August 30	1
9	Definitive counting and results	August 30	September 10	10

Notes:
- All resources must be in place by May 1.
- Only main activities listed.
- Control project activities are included in file "pilot project.mpp" for MS Project 98.

THE LEGAL ENVIRONMENT AND TECHNOLOGY

Law and technology are more close related than people think. Both interact one with each other in a bi-univocal relation. Election laws are a clear example on how the law can enhance or make impossible to accomplish it. In the case of Tajikistan the drafting of the election law need to have in account some important aspects directly related with the registration and voting systems.

1. The identification and voting document.

One of the most important objectives of a registration system is to provide the highest possible level of control against manipulation of the voter list. A "positive identification" must be carried out for this purpose at election time. This concept implies the physical presence of the voter and a document with photography that must match with some data in the voter list, usually a code or number. When the election law permits to vote with several documents (passport, driver license, ID card, etc.), the "positive identification" can be skip and biased, allowing a person to vote several times and thwarting the objectives of the voters list. The best way to introduce a good positive identification is registering the potential voter with only one document and demanding the presentation of the same document at voting time. In Tajikistan the obvious document is the local passport.

In a computerized system, a "key field" is necessary to update the information. This field must be numeric and must match some code in a secure document. Alphabetical fields like names are not adequate for computerized systems, since a single change like a letter or a blank space makes two different registers. The use of the passport number is the key to the maintenance of a successful computerized system in Tajikistan.

Every citizen of Tajikistan have a local passport, whether the old soviet one or the new Tajik one. Some have them both. This includes citizens living abroad, refugees and migrant workers. By the end of 1998 every citizen of Tajikistan should have a new passport, but the cost is very high – around US$10,00 – and most people can not afford it. Theoretically, the old soviet passport is retained, but in some cases, when people pledges to have lost it, the new one is issued without this requisite. To surpass these problems, the new election law could include the following provisions:

1.1. To state that the local Tajik passport is the only valid document for registering and voting.

1.2. To include a sunset provision allowing the use of the old passport for election registration and voting only, until after presidential elections are carried out. Another possibility is an extension of one year to get the new passport.

1.3. Special attention must be given to those persons who obtain the new Tajik passport but have registered with the old one. The only solution In this case is to compare the name and birthday only, omitting the

passport number. This situation must be contemplated in the training of constituency commissions and polling station members and in the training manuals.

1.4. There is still some regions where people does not have passports. They should be treated in identical manner than in 1.3.

1.5. To avoid double registration and voting using two different passports some technical measures like the verification of all the database against itself looking for duplicate names and finger inking can be taken (these kind of measures are fully described later in this same document).

2. The protection of data against misuse and intrusion and the openness and transparency of the election process.

The path of success for the registration system will be given by the confidence that can provide to citizens. They must be assured that information will not be used to track them or to find out their addresses. Especially important for people working outside their places of residence it is to demonstrate that the system does not have any relation with the "propiska".
There is a delicate balance between this confidentiality and the necessity to provide transparency to the process, opening the contents of the database to political parties. Both objectives must be clearly outlined in the law without interfering one with the other. An independent and autonomous CEC is an obvious pre-condition. A special campaign of voter education can be launched to cover this specific purpose.

2.1. Declare the information pertinent to voters as reserved, confidential and to be used for election purposes only.

2.2. The CEC must keep all files related to voters, whether in paper or in magnetic files.

2.3. Information related to the names of registered voters must be given to political parties and international or domestic electoral observation organizations, duly registered by the CEC, along the electoral process. Addresses of individuals can not be given to anybody. A good methodology is to conform a technical commission with all to all registered political parties and to give them access to the information trough computers installed in the CEC and, to special request, in magnetic files containing only name and birthday of people. International Organizations or NGO's involved in elections can have access to the same information previous specific approval of the CEC.

2.4. Political parties, accredited International organizations and NGO's, and mass media must have access to all meetings of the CEC, Constituency Commissions and Polling Station Commissions that are held during the whole electoral process previous to Election Day. They must have access to all documentation, computerized programs, design and

printing of ballots and, in general, to all phases of the process. A complains system should be designed to deal with these grievances during this period.

3. The election calendar.

Specific dates are usually included in election law. The dates to start the political campaign ("Three months previous to Election Day"), to start the registration process (15 days prior to Election Day in the current Tajik law), to carry out elections ("The second Tuesday of November") are some examples. Other election laws even more precise and provides a date like "The 10th of August of 1999" or "Elections will be carried out on September 15th, every four years". Whatever the case, the definition of dates have strong implication on computerized systems, conditioning them or imposing severe restrictions for the correct implementation of the election calendar.

The current election law of Tajikistan, for example, states that a verification period is to be opened fifteen days prior to elections. During this period citizens verify their data and give amendments if they find it is incomplete, contains errors or is wrong. This schedule is feasible only in a manual environment. In a computerized system it is not possible. Amendments given by the citizens need to be collected from all the country and then introduced in the computer to change the database. The database needs to be sorted (this process alone, for 3,000,000 registers can take more than one day) and all controls repeated. Definitive (or additional) voter lists printed and distributed and, just then, elections can be carried out.

Provisions that **need** to be introduced in the new law are:

3.1. To open a registration period *at least* 120 days prior to elections. This measure will permit to call a new registration phase in February or March 1999 to produce the first registration database and in the following elections to open a registration period of one month to update information.

3.2. To open a verification of data period (when people verifies lists outside polling stations and give amendments) at least 60 days prior to Election day and for 15 days. This will give the CEC 45 days to collect data from all over the country, to introduce it in computers, to print voter list and to distribute these voters list to all polling stations.

The calendar will, then, look as follows:

# of days prior to Election Day	Description	Observations
- 120 days (At least)	Registration of citizens	Must be in the law
- 75 days	End of Registration	Must be in the law
- 90 days	Update database	Operational
- 60 days	Open verification period	Must be in the law
- 45 days	End of the verification period. Start of database update	Must be in the law Operational
-20 days	End of database update.	Operational

					1999 Jul	Aug	Sep	Oct	Nov
1	Registration of citizens (- 120 days).	7/1/99	8/14/99	45d					
2	Database update (I)	8/1/99	8/31/99	31d					
3	Verification of information period. (- 60 days).	9/1/99	9/15/99	15d					
4	Database update, voter's list printing, etc.	9/16/99	10/30/99	45d					
5		11/1/99	11/1/99	1d					

Note: This example supposses that elections will be carried out on November 1st

	Start of quality control, print of voter's list, distribution, etc.	
0 days	Election Day	All must be in place.

4. Registration and voting.

Registration should be mandatory to vote. Some amendments need to be done in the election law for this purpose:

4.1. It must be stated that only registered voters can vote, inside the country. This is to avoid multiple voting and control results after elections. Some exceptions could be done for this first time, via a sunset provision, specially in rural or conflictive regions or for the case that the electoral material is lost, damaged, destroyed or does not arrives on time.

4.2. To facilitate the voting abroad, additional exceptions may need to be done. For instance, to register and vote simultaneously. This way it is not necessary to call the citizens twice, once to register and another to vote. The distance, the fact that only one polling station (Embassy or Consulate) is going to be opened and the relative small amount of Tajik citizens living in one city can provide the necessary level of security. If several polling stations are opened, stamping the passport and inking fingers should be sufficient. After the voting, those lists will be sent to Dushanbe to be entered in the registration database.

4.3. For the ill and elder registration could be accepted to vote with the mobile ballot box up to two days previous to elections. These voters will be added manually to the special voter list. On Election Day only those registered will be able to vote. An exact number of ballots will be provided, with the mobile voter's list signed by the polling station commission immediately after the last name, to avoid last minute inclusions. These lists will be sent to the CEC for verification and to add new voters.

4.4. Absentee voting and tender vote can be allowed under special circumstances.

4.5. Surveys should be allowed to publish until ten or fifteen days prior to Election day.

4.6. Quick counts and parallel tabulations should be allowed to political parties, international observation groups and domestic observation groups duly accredited, previous the presentation of a formal request and the approval of the CEC. None electoral observation group will be allowed to announce results based on quick counts. All results based on quick counts will be send, in a sealed envelope, to the CEC, who will decide if the information is released or not, and at what time.

4.7. Exit Polls should be allowed to the mass media and other organizations previous request and approval of the CEC. No results based on exit polls should be announced before the closing of polling stations.

5. The voting abroad.

The possibility to register and vote abroad must be stipulated in the law. It is necessary to open the voting abroad in two different schemes:

5.1. The regular voting in Embassies and Consulates. This kind of voting presents no problem and can be carried out normally. The process will be the same than today but using different forms to collect information on passport number, names and birthday. It is proposed to be a "registration and voting" system. Once the voting is done the voter list will be sent to the CEC to be introduced in computers for next election. Using this method people will not be called twice to the Consulates, one for register and another to vote. A certain amount of money will be also spared since there will be no necessity of two voter education and voter information campaigns.

5.2. Voting in cities were there is not territorial representation is a different problem. The possibility to vote abroad in these conditions is bounded up in three requisites:

5.2.1. The use of national territory. This difficulty can be skipped by opening temporal consulates or by using international territory like OSCE or UN premises (If the Tajikistani law permits it).

5.2.2. The nomination of Tajik citizens as polling station members. This should not pose a problem if the CEC nominates these citizens directly or if the law permits the delegation of authority in the Ambassador, Consul or any other authority.

5.2.3. The acceptance of the host government. This may be the major problem, especially in the case of refugees, if the host government its not allowed by his law or if political reasons arose.

5.3. For parliamentary elections an important issue is to define is where are the votes going to be counted. In elections of 1994 they were counted in Dushanbe, the Railway hukumat. Another possibility is to count votes in the raion where the passport is stamped.

THE NEW REGISTRATION SYSTEM IN TAJIKISTAN HARDWARE AND SOFTWARE

Hardware and software are the tools that any system uses to work. Computerized voting systems needs a lot of database power because they storage process and print millions or registers in short time. In Tajikistan three million registers will be processed and printed in no more then three weeks.

The hardware has been designed for two options: Use of data input and use of a combined data input and scanners system. The final decision on which one to use will be done after the completion of the pilot project in Dushanbe, scheduled for the constitutional referendum.

The following specifications were delivered to different providers in Russia, Kazakhstan and Tajikistan. Bidding is included as annex to this report.

The server and software is the same in both options, when there is a change for the second option, the item is split to present this possibility. So far any offer has been presented for the special ICR scanners.

SPECIFICATIONS FOR A COMPUTER NETWORK SYSTEM TO BE INSTALLED IN THE CENTRAL ELECTION COMMISION IN DUSHANBE, TAJIKISTAN, CENTRAL ASIA.

SERVERS

The system will include two servers, one main server and an additional backup server, interconnected with the main server trough a network bridge.

Item 1: Main server.
Quantity: 1

1.1 Quad Intel Pentium II Xeon, 400 Mhz, 1 Mb cache processors.
1.2 2 Gb RAM memory. Upgradable to 4 Gb minimum.
1.3 RAID controller for four hard disks, 32 ECC cache. Smart array 2DH controller card.
1.4 4 x 18GB Ultra SCSI 3, 7200 RPM hard disks, hot swap. 36 Mb available for use, one backup disk and one redundant emergency disk
1.5 High performance, dual channel network controller(Intel Pro 100+ PCI Ethernet NIC, similar or better).
1.6 12/24 Gb SCSI 3 Internal tape backup.
1.7 Backup software (ARC server for NT from Computer Associates, Cheyyene ARC server or Seagate Backup Exec. 7.0 for NT/NW). Russian version desirable.
1.8 14" SVGA color monitor.
1.9 Microsoft Intellimouse or similar.

1.10 IDE 32XCD ROM or better.
1.11 1.44 Mb diskette drive.
1.12 Rack mount style case. Three pluggable redundant 240 volt, 750 watts at 8 amperes power supplies. Four 64 bit PCI and 32 bit PCI expansion non-shared slots minimum. Possibiliyu to mount 4 or more additional hard disks.
1.13 2 KVA, 240 volt network UPS.
1.14 Windows NT 4.0 server edition, 50 users license, Russian version.
1.15 MS Office 97 professional edition, Russian version.
1.16 Antivirus software for networks, Russian editon.
1.17 Frontend: Visual Studio 6.0 (Visual Basic, Visual Foxpro, etc.) or similar, 32 bits ODBC.
1.18 Database manager (Backend): Informix.
1.17 Warranty : one year labor, three year parts, minimum.

Note: This server can be the COMPAQ Proliant 7000 Xeon, Compaq Proliant 6500 Xeon, DELL PowerEdge 6300 Xeon, Hewlett Packard HP Netserver Lxi 8000 or similar.

Item 2: Backup server.
Quantity: 1

2.1 Dual Intel Pentium II Xeon, 400 Mhz, 1 Mb cache processor, scalable to 4 processors.
2.2 2 Gb RAM memory, 4x512 EDO simms or SDRAM. Upgradable to 4 Gb minimum.
2.3 RAID controller 4 hard disks, 32 ECC cache with Smart array 2SL controller card.
2.4 4 x 9GB Ultra SCSI 3, 7200 RPM hard disks, similar or better.
2.5 High performance, dual channel, network controller (Intel Pro 100+ PCI Ethernet NIC, similar or better).
2.6 12/24 GB. Internal SCSI 3 tape backup.
2.7 14" SVGA color monitor.
2.8 High performance Ethernet bridge to interconnect both servers. Server recovery options with optic fiber channels and MS cluster server software, if necessary.
2.9 Microsoft Intellimouse or similar.
2.10 IDE 32XCD ROM or better.
2.11 1.44 Mb diskette drive.
2.12 Tower style case. Three pluggable redundant 220 volt power supplies. Four 64 bit PCI and 32 bit PCI expansion non-shared slots minimum.
2.13 2 KVA, 240 v, 750 Watts at 8 amperes network UPS.
2.14 Warranty : one year labor, three year parts, minimum.

Note: This server can be the COMPAQ Proliant 7000 Xeon, Compaq Proliant 6500 Xeon, DELL PowerEdge 6300 Xeon, Hewlett Packard HP Netserver Lxi 8000 r similar.

Item 3: NETWORK COMPUTERS
Quantity: 45 NETWORK COMPUTERS. (Option 1)

3.1 300 Mhz. AMD K6 2 processor(similar or better throughput), 64Mb RAM.
3.1 CD ROM 24X or better.

3.2 3.2 Gb. Ultra ATA HDD. Average access time of 9 ns, or less, 3,5" size.
3.3 Floppy disk 3,5".
3.4 MS keyboard or similar, for data entry purposes.
3.4 15" SVGA color monitor.
3.5 CD ROM 32X
3.6 Video card, 2 Mb RAM.
3.7 Network card, 32 bits. 10/100 Mbs.
3.6 Microsoft mouse or similar.
3.7 Tower or box style case, 220 volt, 200 Watt power supply.
3.8 Windows NT Workstation software, installed, with CD, manuals and license.
3.9 Typing tutor software, Russian version.
3.10 UPS 400 VA. 240 Volts.
3.11 Surge protector, 240 volts.
Warranty : one year labor, three year parts, minimum.

Item 3: NETWORK COMPUTERS
Quantity: 15 NETWORK COMPUTERS. (Option 1)

3.1 300 Mhz. AMD K6 2 processor(similar or better throughput), 64Mb RAM.
3.1 CD ROM 24X or better.
3.2 3.2 Gb. Ultra ATA HDD. Average access time of 9 ns, or less, 3,5" size.
3.5 Floppy disk 3,5".
3.6 MS keyboard or similar, for data entry purposes.
3.8 15" SVGA color monitor.
3.9 CD ROM 32X
3.10 Video card, 2 Mb RAM.
3.11 Network card, 32 bits. 10/100 Mbs.
3.6 Microsoft mouse or similar.
3.7 Tower or box style case, 220 volt, 200 Watt power supply.
3.12 Windows NT Workstation software, installed, with CD, manuals and license.
3.13 Typing tutor software, Russian version.
3.14 UPS 400 VA. 240 Volts.
3.15 Surge protector, 240 volts.
3.10 Warranty : one year labor, three year parts, minimum.

Item 4: Printers.
Quantity: 7 printers.

4.1 3 network enabled printers, 40 ppm or faster, 600 dpi resolution, continuous paper capable, 240 volts.
4.2 2 network enabled printers, 12ppm, 600 dpi resolution, 240 volts.
4.3 2 inkjet color printers, 600dpi x 600 dpi resolution minimum, 5ppm black minimum, 240 volts.

Item 5: Graphic workstations.
Quantity: 2 graphic workstations.

5.1 450 Mhz. Pentium II processor(similar or better throughput), 128Mb RAM.
5.2 CD ROM 32X or better.
5.3 6.4Gb. Ultra ATA HDD. Average access time of 9 ns, or less, 3,5" size.
5.4 Floppy disk 3,5".
5.5 17" SVGA color monitor.
5.6 Windows accelerator, 2D/3D, 128 bits, 8 Mb RAM, video card.
5.7 33600 baud external modem.
5.8 Syquest Sparc 1, 1Gb backup unit or similar.
5.9 Network card, 32 bits. 10/100 Mbs.
5.10 Microsoft intellimouse mouse or similar.
5.11 Tower or box style case, 240 volt, 200 Watt power supply.
5.12 Windows 98, Russian version installed.
5.13 Corel Draw 8.0, Russian version.
5.14 Adobe Pagemaker 6.52, Russian version.
5.15 Adobe Illustrator 8.0, Russian version.
5.16 Surge protector.
5.17 UPS 400 VA. 240 Volts.
5.18 Warranty : one year labor, three year parts, minimum.

Item 6: Network devices.
Quantity: Various.

6.1 3 dual speed(10 Mb, 100Mb) hubs, 24 ports. Autosensing, stackable, segmentable and manageable Fast Ethernet.
6.2 1 high speed network bridge.
6.3 2 switches Layer 3 (L3).
6.4 500 mts. network cable, UPT category 5.
6.5 300 connectors for cable-computer.
6.6 1 set of tools, to make network connections.
6.7 3 patch panel, 24 ports, category 5.
6.8 3 rack organizers.
6.9 72 patch cord to link patch panels with hubs and face plate.
6.10 Face plate.
6.11 Patch cord, 3mts, to link workstations with face plate.

Item 7: Scanner. (Option 1)
Quantity: 1

7.1 SCSI color scanner, 36 bits, 600x1200 dpi optical, 9600x 9600 interpolated. 240 volts, A4 page automatic feeder.
7.2 OCR/ICR software, Russian language recognition included, Cyrillic alphabet.

Item 7: Scanner. (Option 2)
Quantity: 4

7.3 Specialized ICR (Intelligent Character Regognition) scanner. Page automatic feeder. High speed.
7.4 ICR software, Russian language recognition included, Cyrillic alphabet. Various engines for handwriting recognition.
7.5 Computer to manage the scanner.

Item 8: Spare parts.
Quantity: Various

8.1 CD ROM 24X: 4.
8.2 Tapes for backup units, servers: 10.
8.3 Color monitors, 240 volts, 14", SVGA: 3.
8.4 Ultra ATA hard disks, 2 GB : 4.
8.5 Video cards, 2Mb: 4
8.6 Keyboards: 6
8.7 External modem, 33600 bauds: 1
8.8 Power suply units, 240 v: 10

Item 9: Supplies
Quantity: Various.

9.1 Toner cartridges for 24/32 ppm laser printers: 12
9.2 Toner cartridges for 12 ppm laser printers: 12
9.3 Color cartridges for color inkjet printers: 24
9.4 Black cartridges for color inkjet printers: 24
9.5 Cartridges for Syquest Sparc 1 : 6.

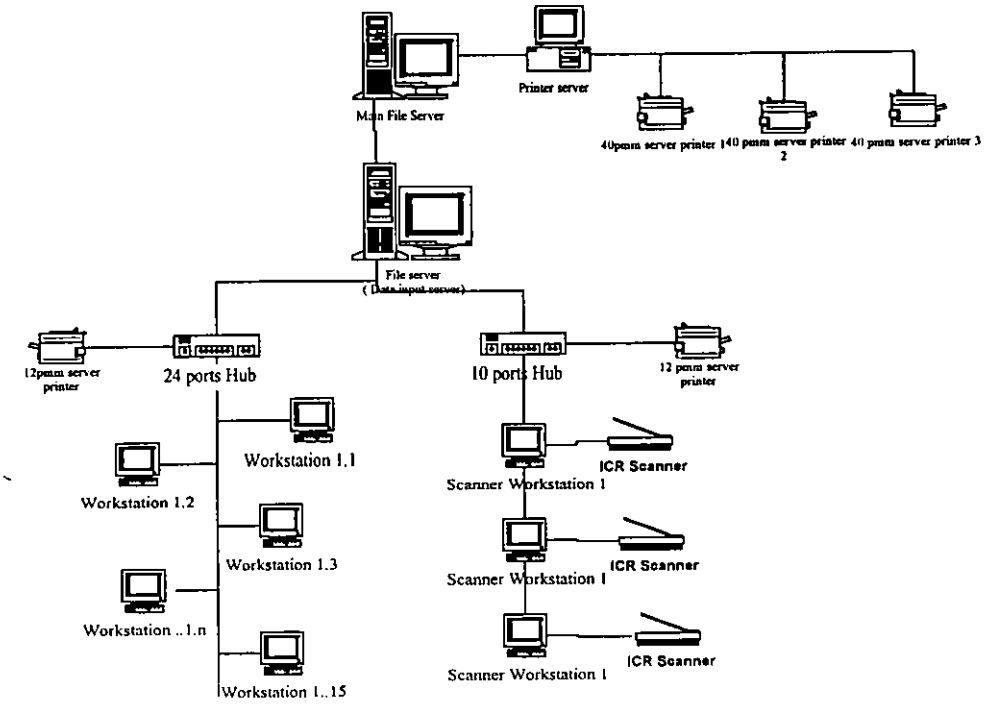
IItem 10: Instalation in Dushanbe, Tajikistan.

Software.

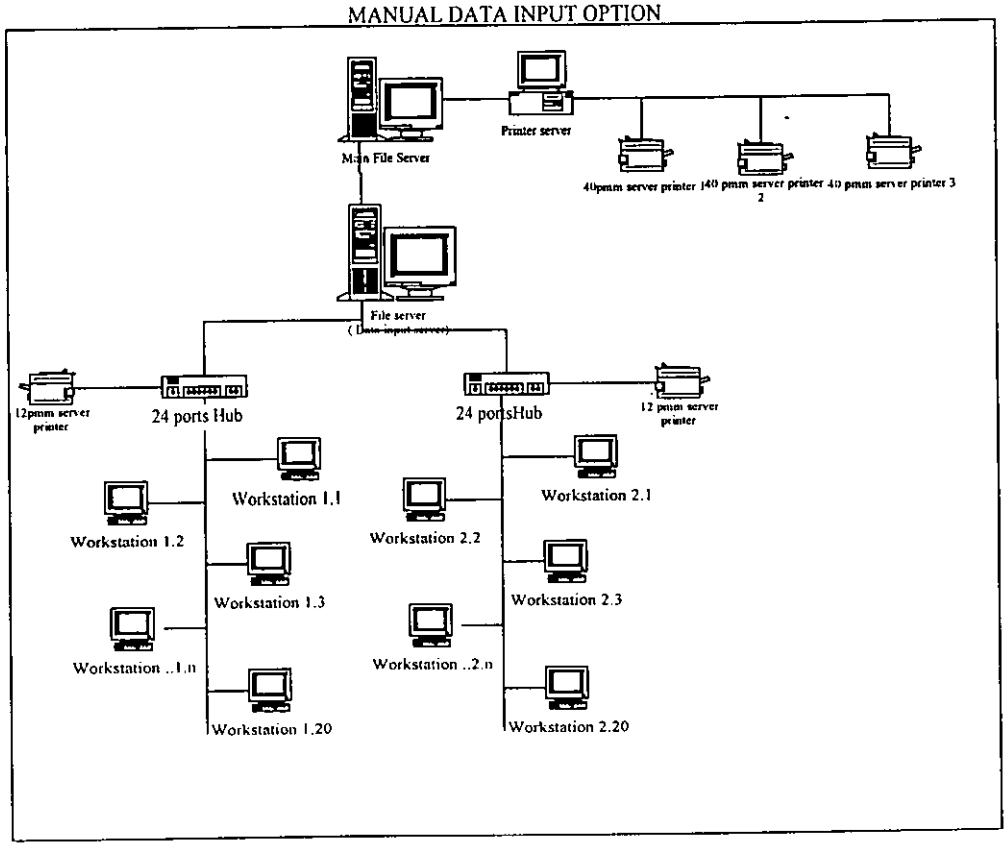
The system will be programmed using Visual Basic 6.0 as front-end and Informix as back-end and database manager.

It was impossible to find programmers (sometimes called system developers) in Informix in Tajikistan, although adequate support was found in the Central Bank. It will be necessary to hire a system developer outside Tajikistan (Kazakhstan, Kirgizstan, Poland or Russia) for six to eight months. Since the quality of the programming is essential for the project is recommended to adopt this approach instead of hiring non-experienced programmers. At the moment Informix Kazakhstan is preparing an offer to cover this possibility. Another option is to advertise the post in Kazakhstan and Kirgisztan.

IFES TECHNICAL ASSESMENT: VOTER REGISTRATION HARDWARE LOGICAL CONFIGURATION
ICR AND DATA INPUT OPTION



IFES TECHNICAL ASSESMENT: VOTER REGISTRATION HARDWARE LOGICAL CONFIGURATION
MANUAL DATA INPUT OPTION



The Computer Center.

The CEC of Tajikistan does not have a computer center at the moment. To install the computer network adequate premises are necessary. Especial adequations are necessary for this purpose.

SPECIFICATIONS FOR THE COMPUTER CENTER.

1. Areas of the computer center.

The computer center should contain the following areas for an optimal operation:

1.1. The *computer room*, where the main server, back up server and their peripheral devices will be installed.

1.2. The *data input room*. This is the room where all data entry computers are going to be located. A *quality control section area*, in charge of the conformation of lots and control of incoming and outgoing information must be included within this room (5 to 8 persons, desks, chairs and a table).

1.3. The *information analysis and programming room*. This room will be used for programmers and will keep their computers. It must have room for five persons, desks and computers.

1.4. A *warehouse for paper and office supplies*. This warehouse is used to save computer paper in metallic shelves. Due to great amount of printing, a lot of paper will be necessary. Special characteristics of paper will require a dry and safety environment to prevent fire and humidity.

1.5. A *temporal warehouse for paper and computer supplies*. This is a small room, next to the computer room, where the computer parts and supplies are kept, along with computer paper for one day.

1.6. One *visitor room* with chairs, where employees can receive visits. This room must be located next to the entrance.

1.7. One *meeting room*. Highly desirable, although not compulsory.

1.8. One data-verification room. Three or four computers will be installed in this room for political parties and international organizations to verify information on registered citizens.

1.9. Two *bathrooms*, one for woman and one for men. At least one bathroom for the EDP chief, consultants and technical staff.

1.10. One office for Chief EDP.

1.11. One office for additional consultants.

1.12. One *security booth* located at the entrance of the computer center, to verify ID documents, control weapons and keep a log of visitors.

2. Technical components of the computer center.

The following technical components should be installed in the computer center, to provide the necessary warranties of security for equipment and data:

2.1. *Power and electricity component.* The provision of stabilized power is the most important component of the center. It is composed of a main source of power and a secondary and backup source.

2.1.1. The main power system it is composed by the transformer provided by the Electricity Company, the cabling and outlets. It will be necessary to contact the Electricity Company to warranty the provision of power for all the computer system. The transformer and meters must be verified. Ground must be connected to every single outlet, especially those of computers. Cabling must be done using pipes and installing paired floor outlets with ground.

2.1.2. One generator acting as a backup source of power, to provide electricity to the main server, data entry computers and room. The capacity of this generator needs to be calculated once the final design is done, but it will fluctuate around the 25 KVA.

2.1.3. If the possibility of electric storms exists in Dushanbe during the summer, a lighting rod should be installed to protect critical equipment like servers. Modems are especially sensitive to electric lightning, because they can be burnt with small charges.

2.2. *Communications component.* Computer communications will not play a major role during the registration phase, but they will become critical during the voting phase, especially if Internet is available. The telephonic company should be contacted to install the necessary lines to the premises and to the computer. At least one direct and dedicated line should be requested.

A technical study on local communications facilities should be done for local technicians, whether especially hired by IFES or done by the telephonic company for the CEC. Only doing this we will be able to determine the possibilities of installing a provisional results communication system and to calculate times to provide results to the public.

2.3. *Security component.* There are two sub-components in a security system: Physical security and logical security. The first affects to persons, equipment and premises and the second to data and information.

2.3.1. Physical security.

2.3.1.1. *Audible alarm*. A manually-activated audible alarm network interconnected with all rooms in the computer center.

2.3.1.2. *Fire extinguishers*. Halon 2 type fire extinguishers for the computer room and the data input room. Dry powder or other paper-type of extinguishers for the warehouses.

2.3.1.3. *Smoke detectors*. Smoke detectors connected to the audible alarm system in the computer room, according with its volume.

2.3.1.4. *Security doors*. Security doors in the main entrance, computer room and exit door.

2.3.1.5. *Security booth*. A booth or place for a security guard at the entrance of the premises.

2.3.1.6. *Allocation of premises*. The best allocation for a computer center should have the following characteristics:

2.3.1.6.1. Two floors, administrative offices and warehouse in the first and computer and data entry room in the second.

2.3.1.6.2. To have security exit doors in case of fire or attack from all areas.

2.3.1.6.3. Not to be close to any government, industrial or political premises.

2.3.1.7. *Cabling*. All electrical and network cabling should be done using pipes and not wiring directly trough floors or walls.

2.3.1.8. *Control logs*. Permanent control logs of who enters and leaves the premises.

2.3.1.9. *Forms and inventory control*. All forms, paper, office supplies and computer parts must be carefully inventoried.

2.3.1.10. Other type of securities according with the specific purpose of the computer center and the sensitivity and value of data.

2.3.2. Logical security.

2.3.2.1. *Redundant databases*. A database must be able of recuperation at any time. For the registration system in Tajikistan a quad-redundancy has been designed. Files will remain in each computer hard disk to have the possibility to collect information to this level if both servers fail. One hard in the main server will have consolidated information mirrored in another disk in the same server and another two disks in the backup server. A

grandfather-father-son system of backup will be used to have the possibility to recover any register lost in any step of the process.

2.3.2.2. *Storage for backup copies*. Backup copies will be produced in a daily basis and stored in a vault, outside the computer center, in charge of the CEC.

2.3.2.3. *Databases access control*. A hierarchic system of passwords and control access will be installed, so only selected persons can have access to all data. Data input operators can add information, but they will have access only to the current daily information. They will not be able to modify a registry without a higher level of authorization. Only those persons designated by the CEC and law will have access to see the information saved in the databases. A double password-double person system will be used when information must be updated after the data input process.

2.3.2.4. *Accountability and audit trails*. The database must be capable of verify if any register was modifies, when and by who. I will program a permanent audit sub-system for this purpose personally. Nobody outside selected persons will have knowledge that this system exists.

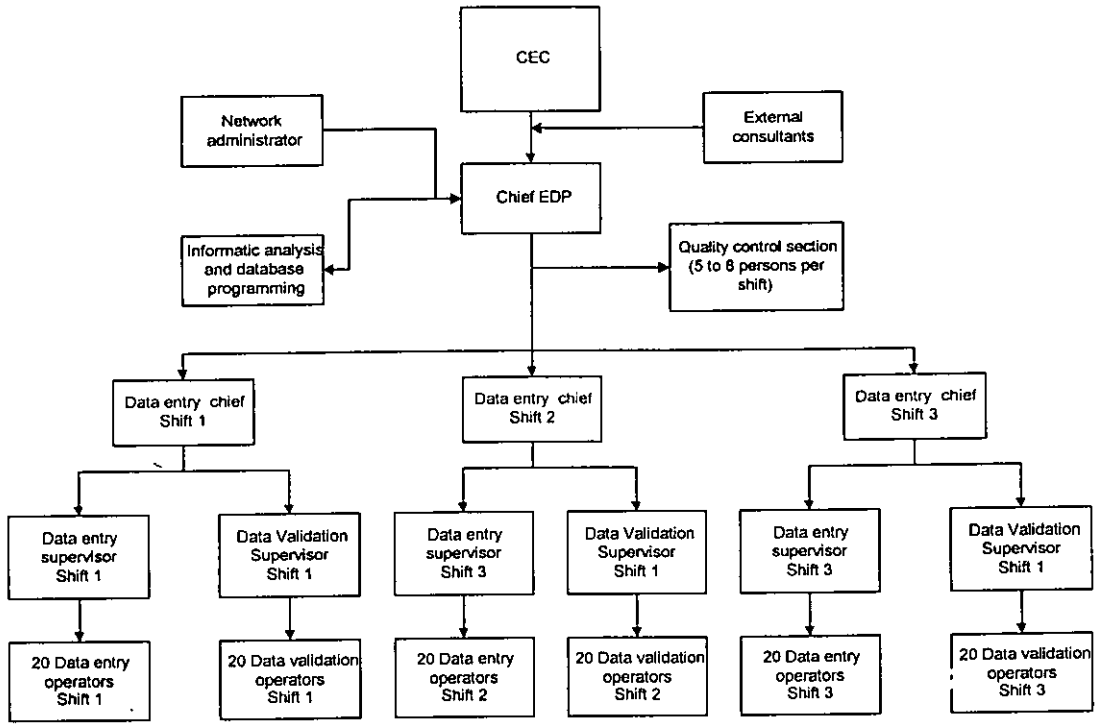
2.3.2.5. *Control ciphers*. The database must be compared against a copy every day, as the first operation in the day, for the network administrator. This is to verify if registers were added, modified or eliminated for data input operators or other persons. Control ciphers will be in the hands of the Computer Center Chief and consultants and verified everyday.

2.3.2.6. *Error control cycle*. During data input some registers are usually rejected because of illegibility, absence of vital information or obvious errors (a person of 400 years, a surname like "blackbeard", etc.) Those original forms have to be sent to further verification in the field. But is necessary to keep track of all forms send out of the main stream of the process to be able to re-integrate them later. The error control cycle system (detection, fixing of the error and re-entry) will be used for this purpose.

2.3.2.7. *System control cycle*. Each phase of the system must be controlled to avoid good will and deliberated errors. Six different phases will be closely controlled:

2.3.2.7.1. Quality of data source.
2.3.2.7.2. Design, programming and testing of programs
2.3.2.7.3. Data input
2.3.2.7.4. Communications.
2.3.2.7.5. Data process.
2.3.2.7.6. Data output.

COMPUTER CENTER STRUCTURE



Note: If a new registration is done, data validation will be done at the PS level, thus eliminiating data validation and transforming data validation operators in data input operators.

Physical specifications for the computer center.

The computer room.

The computer room needs to be separated from the data input room. It will hold all the servers necessary for the registration and election systems. Special installations needs to be done in this room:

1. Smoke detectors. One smoke detector connected to the system of audible alarms, needs to be installed in the roof, every xxx m2 (according with the volume of the room). These detectors will be connected to the power supply of the building and to a battery system, to provide backup power in case it is needed.

2. Fire extinguishers. Two fire extinguishers, halon2 type, ready and loaded, will be installed for the service of the computer room. One inside the room and another outside the room, next to the main entrance door. All computer operators and data input staff would be trained in the operation and use of fire extinguishers.

3. No smoking, no eating, no drinking inside the computer room.

4. Security door. A special security door will be installed to enter in the computer room. Only computer operators and selected people will be allowed to enter in this area. There will be only two sets of keys, one with the computer operators and another with the Chief EDP (Electronic Data Processing). A logbook will be kept to know who entered the computer room, when and how long. Everybody, including computer operators will sign this book.

5. Inflammable materials will be avoided inside the whole computer area. All desks for computers, chairs and shelves will be preferentially metallic.

6. No carpets inside the computer room. Plastic made elements will be avoided.

7. No arms will be allowed inside the computer room. To carry arms will be forbidden in all the computer premises.

8. Two sets of lights will be located in the middle of each wall. They will be connected to a battery system to provide light if the main power is off. Automatic and manual switches will be provided.

9. A system of manual audible alarms will be installed. One alarm, siren type, different from the police or fire department, will beep inside the computer area and in the security booth outside the computer area. Manual switches to activate the alarm will be installed inside the computer room; the data input room and the analysis and programming area. The use of the alarm will be defined in the security measures and contingency manual.

10. Escape security door. One escape door will be installed in the computer room. Keys of this door will be permanently present in a glass compartment, next to this door, to be broken if the situation requires opening it. A second set of keys will be with the EDP Chief. The specifications of this door will be the same than the main door.

11. The location of the computer room will be set preferably in a second floor, with no bar, kitchen or warehouse adjacent to the room.

12. All electric outlets will be located according to a specific design, according with the structure of the room in walls and floor. All outlets will have ground.

13. One dedicated telephonic line, preferably analog, will be connected to the backup server for communications.

Security booth.

- One special security booth will be installed outside the computer area. One guard will be available permanently, 24 hours a day in this booth. These guards are different from the police or army and will be specially hired or part of a security company.

- One telephone line will be available to the security booth.

- The audible alarm system will be connected to this booth.

- The guard in this booth will verify the right of access to the computer area and will request some identification to visitors, exchanging it with a special visitor tag.

Data input room.

The data input room must be able to contain a minimum of 40 computers with their correspondent operators, computer desks and chairs. Each 20 operators will have one supervisor and there will be a chief of shift. Functions of these staff are detailed in the organizational chart of the computer center.

Each computer/operator needs approximately 6sq. Mts., including passing area. To contain 40 computers an area of 240 sq. Mts. is needed. Including supervisors a total of 300 sq. Mts. to 340 sq. Mts. will be adequate. An example of physical plant is detailed below. Instead of one data input room two different areas of 150 sq. Mts. to 170sq. Mts. can be considered. Three or more rooms will not be adequate because supervision and control functions can not be carried out optimally.

The quality control section must be supplied with a table to work with documents and separate them in lots, according with the daily production of each operator. This section also encodes, if necessary, the data input documents. This means to put 1 instead of Dushanbe, for instance, because databases work better this way, input errors are avoided and the number of characters is reduced. A great part of the success and quality of the final database relies in this section.

Securities that should be included in this room:

1. Fire extinguishers. As many fire extinguishers halon2 type, as necessary (according with the volume of the room), ready and loaded, should be installed for the service of the data input room. Several inside the room and at least outside the room, next to all doors. All data input staff must be trained in the operation and use of fire extinguishers.

2. No smoking, no eating, no drinking inside the data input room.

3. Security door. A special security door will be installed to enter in the room. Only data input staff and selected people will be allowed to enter in this area

4. Inflammable materials will be avoided inside the whole area. All desks for computers, chairs and shelves should be, preferentially, metallic.

5. No carpets inside the room, they carry static electricity. Plastic made elements will be avoided.

6. No weapons will be allowed inside the room.
7. Two sets of lights will be located in the middle of each wall. They will be connected to a battery system to provide light if the main power is off. Automatic and manual switches will be provided.

8. A system of manual audible alarms will be installed. One alarm, siren type, different from the police or fire department, will beep inside the data input area and in the security booth outside the computer area. Manual switches to activate the alarm will be installed inside the room in strategic places. The use of the alarm will be defined in the security measures and contingency manual.

9. Escape security door. One escape door will be installed.

10. No bar, kitchen or warehouse adjacent to the room.

11. All electric outlets will be located according to a specific design, according with the structure of the room in walls and floor. All outlets will have ground.

BEYOND REGISTRATION

A computer system is a multi-purpose tool and can be used to perform and improve many tasks once the main objective is fulfilled. In the case of the registration database in Tajikistan, additional sub-systems, all election related, can be implemented including small additions and budget to the same basic hardware.
The most relevant election sub-systems that can be implemented are:

Medium complexity sub-systems.

1. *Creation of polling stations and definition of boundaries for election districts.*

   The registration database includes the address of all citizens and, therefore, it is possible to sort it by city, street and number and count the number of voters within an electoral district. Using a certain criteria, defined by the CEC and the District Commissions a very accurate distribution of voters can be done.

2. *Distribution of seats in parliamentary elections.*

   Once the system of distribution of seats is ready the formula can be introduced in the computer to be used automatically at the moment of the final counting.

3. *Definitive counting for all elections and distribution of definitive results to all political parties and international community in an electronic media.*

   A program that adds the votes in each polling stations can be introduced in the computer to sum all results to the polling station leval. At the end a copy in floppy disk can be deliverd to each political party and independent candidate to compare the official results against his own results, obtained directly in the polling stations.

4. *Political parties and candidates registration.*

   In multiple elections a political party and candidates registration program can be developed, including photo, logo and political program. This provide a very good system of information to the press, political parties and International Organizations. Distributing this file permits to add personal comments and analysis to external stakeholders.

5. *International and domestic observers registration.*

   Usually, electoral authorities produce official registration cards. A program to register domestic and international observers can help the CEC to reduce administrative efforts and to know the name and nationality of every observer.

6. *Control project of the election calendar for the CEC.*

Using a computerized tool like MS Project it is possible to define activities, resources, times and precedents and matain a close control of the election calendar, permiting to the electoral authorities to make decisions on time. Training should be provided to the person in charge on the programme and Distric Commissions must be also trained in the way to provide information to the system.

7. *Control of election logistics.*

Having knowledge of the number and location of polling sites and polling stations it is possible to estimate the budget adequately, to buy only the neccessary amount of items and to distribute it on time. This process can be done centralizaed in Dushanbe to estimate the resources and then distributed to the District Commissions for the buying of election items. This is an endemic problem in descentralized voting systems in the forme soviet republics and it is the cause of many complaints from the polling stations commissions who have to work in the field and with limited resources.

8. *Memories and CD of the development of the registration system activities.*

IFES will develop an important effort in Tajikistan, building a basic computerized system from ground up. It would be interesting to keep the memories of this endeavor in a CD or at least in paper, step by step. In order to organize this objective it is necessary to take notes, photographs and interviews of the facts as soon as they are being produced. At least one person is necessary to work half time performing all these tasks. Directions must be given to all the staff to provide information immediately.

High complexity sub-systems.

9. *Voter education and voter information for the registration system.*

The voter education sub-system is an important component of the registration system. Its objective is to encourage people to register freely during the public verification phase of the election calendar. During this pahse is expected to capture information on all citizens who were not registered during the door-to-door registration or that avoid it because they do not have their passport correctly stamped.

This component needs special preparation and it is here only mentioned due to his relevancy.

10. *Transmission of provisional results during Election Day.*

This sub-system is usually an important part of all elections. Must be designed specifically in the field and was not part of the current assessment mission. Resources showed in the correspondent chapter are estimations based in previous experiences, but they need to be adjusted later. It is also dependent on the communications system in Tajikistan. Internet was introduced only in January 1999, and its development will mark where computers can be installed. In order to define computer equipment 12

nodes are estimated to be possible. Support from UNTMO and ths OSCE will become invaluable to develop this sub-system efficiently.

11. *Quick count for the CEC.*

IFES, as advisor to the CEC should not be involved in election observation. The quick count is something International Organizations like the United Nations always carry out as a final process of electoral observation. In this case IFES can propose the CEC to conduct this exercise to provide the electoral authority with statistical projections of the definitive results as a control tool to verify the progress of the counting at the polling station level. Some kind of warraties must be given that results will not be delivered to the government only and that, if results are released, will be for all participants and stakeholders. Resources for the objective are only estimated and must be adjusted once the final decision is taken.

Electoral systems have a peak every two or four years, when elections are carried out. Then, a great amount of computer power is necessary to process several millions of registers in short time. But when this time is over the whole system relaxes until next elections, reducing operations almost to zero. In tajikistan, once parlimentary and presidential elections are finished a period of four or five years will pass before next elections. The computer network will become obsolete n such period of time and it is necessary to find an adequate use for it, in benefit of the country and its people.

Several possibilities exist for the use of a powerful system like the network IFES is going to install in Tajikistan. The population and habitational census that is going to be carries out in the year 2000 is one of them, although the UNDP is involved as advisor to the census office. The registration database itself will provide as an immediate effect a basic census of population. Using statistical projections the rest of variables can be estimated. By having addresses, a good guide can be provided for the initiation of the habitational census. The information gathered by the system can be used also as a planning tool because the density of population per region can be easily estimated. Places and regions where routes, communications, schools, hospitals and other state services needs to be build or reinforced will be deducted from a correct process of the information. The registration system will transcend this way, its initial political and technological objectives.

FINAL RECOMMENDATIONS.

I. To use the combined scanner – data input approach, using ICR for urban areas, where the Russian language can be used and data input for those regions were only the Tajik language is used.

II. To use as source of information the registration that the CEC needs to perform by law for the Constitution Referenda. It is possible to start this phase at any time, subject only to the request of the CEC, who is ready to do it.

III. To develop a pilot project during referenda in Dushanbe only, with 184 polling stations and a total population of voters, projected to the year 2.000 of 303.000. This will permit us to test the ICR technology, the quality of the handwritten, the speed of scanners and the application's programming. If time comes short, we can reduce the pilot project to only one raion hukumat, the Railway hukumat in Dushanbe, with 32 Mahalas, 4 Micro raions, 34 Polling Stations and a total population of voters of 57.000, projected to the year 2.000.

IV. Some provisions on the election law are fundamental for the new registration and voting system. If those are not taken in account, the system will render useless or at least inadequate. On the other side, if the law is drafted according with IFES suggestions and it is not possible to implement the system, for lack of funding, Tajikistan will have an ineffectual law for the current manual system. We are, then, facing a circular, self-referenced set of events, difficult to break in the time. The proper path would be to introduce the necessary amendments in the law only after funds are available, to wait for the law to be enacted and only then start the implementation phase. The dead end to accomplish these conditions is seven months prior to Election Day; otherwise, the expectations of the system should be reduced to a pilot project or set aside for next elections.

V. All activities in an election system are closely related and the registration of voters is just one of them. A benchmark of electoral activities to be fulfilled according to international standards by Tajikistan could be used as a guide for all the international community to make decisions on time. Such important decision will booster up the support of the government and CNR for the registration system and will provide the framework for the final decision to implement it or not. If basic conditions like freedom of press and campaigning, an adequate election law and freedom of political parties to register and participate without segregation by religion or race are not fulfilled in a certain period of time, decisions should be made by all international participants before the system goes to far to step back. IFES should not go alone in this effort, the risk is too high.

Translated by IFES / Tajikistan, Feb. 1999

REPUBLIC OF TAJIKISTAN
ELECTORAL LEGISLATION AND PRACTICE

Author: Abdulodjan Khamidjanovich Babadjanov.
Head of the working apparatus of the Central Commission of Elections and Referenda.

1. Republic of Tajikistan is a sovereign, democratic, rule of law, secular and unitary state. Form of board in Republic of Tajikistan is semi-presidential. The President is the head of the state and the executive power (Government). The President's edict on nominating and conformation of the Prime Minister and other members of Government, the chairman of National Bank and his deputies, on military and extraordinary situation are subject to conformation of Majlisi Oli (Parliament). With the agreement of Parliament President forms and abolishes Ministries and State Committees, nominates and dismisses General Prosecutor and his Deputies. President has no right to dismiss Majlisi Oli.

Election system of Tajikistan as an aggregate of principle of right to vote regulates participation of citizens in elections and referendum, defines the procedure of the election and referendum , its provisions are set and hold on Constitutional base of the Republic of Tajikistan, the Law on " Election to Majlisi Oli of RT ", on "Election of Deputies to Local Majlises of People's Deputies" and on "Referendum of RT".

There is no special article or section about the election system in the Constitution of the Republic. Though different aspects of election and referendum are regulated in some articles. The citizens of the Republic of Tajikistan "upon attainment of 18 year old age has the right to vote and to be elected. A person who is deemed by court as an incapable or serves punishment has no right to participate in elections and referenda. Elections and referenda are held on basis of general, equal, direct right to vote under secret ballot. The Article Three says that Majlisi Oli is a supreme representative and legislative body of the Republic of Tajikistan. Majlisi Oli is elected for five years term, persons not younger than 25 years old can be elected to Majlisi Oli; Majlisi Oli establishes the Central Commission on Election and Referenda, nominates the referendum and election of President of the Republic, the deputies to the Supreme and Local Majlises, Central Commission on election and referenda convokes the first session of Parliament one month later after the election of public deputies. The main requirements for the election of the President are set in Chapter Four; the procedures of the election of President are defined by Constitutional Law, President has no right to be a deputy of the representative bodies, the procedure of establishing local authority bodies is regulated by Constitutional Law.

Appropriate Districts are formed for the election of President and representative bodies of all levels as well as referenda. Constitution does not discuss these issues. They are reflected in the appropriate laws on elections and referenda.

Central Commission on Elections and Referenda, district polling stations on the election to city, oblast, rayon Majlises are in charge of establishing the district election stations for the elections of President and Majlisi Oli.

Elections to all representative bodies are held under majority system. Majlisi Oli is a one chamber Parliament. According to the Law " On Election to Majlisi Oli of RT," 181 district polling stations are formed on the territory of Tajikistan. The Parliament sets the standards of voters for each election, but for Gorno-Badahshanskaya Oblast district polling stations it is done by the GBAO Majlis. Law "On Elections of Deputies to the Local Majlises of People's Deputies" sets that no more than 70 Electoral District (ED) should be formed for the elections to Oblast and Dushanbe Majlises, and not more than 40 District for the elections to city and rayon Majlises. Relevant oblast, rayon or city Majlises define a concrete number of ED within these norms for each election. Only one deputy is elected on ED.

In compliance with the legislation on election and referendum all the preparation and conducting the elections of the President, Majlisi Oli and local Majlises of people's deputies as well as referendum is the responsibility of the Central Commission on Elections and Referenda. State and social bodies, enterprises, institutions and organization render an assistance in work of that commissions without interference to their activity. That's why the resolving of all issues concerning the establishment ED and Referendum District (RD), setting up its boundaries, working out and maintenance of the voters list and organizing the voting are the responsibility of that commissions only.

As it was mentioned above, the Constitution of RT regulates that Parliament forms Central Commission on Elections and Referenda, forming of any other administrate election and referendum bodies is not foreseen.

Central Commission on Elections and Referenda is independent body and follow the Constitution and relevant laws in their activity.

2. Central Commission on Elections and Referenda consists of Majlisi Oli of RT, that is the Presidium of Majlisi Oli in the person of the Chairman and 14 members of the commission. Terms of powers of the Central Commission is 5 years, that means that it is a permanently working body and heads the entire system of Election Commissions of the Republic of Tajikistan. All the members of the Central Commission, except for the Chairman of the Commission, fulfil their responsibility on social commencement (without being paid), not breaking off the main industrial or official activity.

For the elections of the President, deputies to Majlisi Oli and for holding referenda the Central Election Commission forms the district commissions. The District Election Commission for the election of President is established not later than 45 days before election and includes the Chairman, his deputy, secretary and not less than 4 members of commission. District EC for election to Majlisi Oli is formed not later than 2 months prior to elections and includes the Chairman, his deputy, secretary and not less than 6 members of commission. District commission on holding referendum is formed not less than 20 days after nominating the referendum.

For organizing of the voting during Presidential and Parliamentary elections and Referenda the district commission forms polling stations or referendum station on the territory of each district with the number of voters no less than 20 and no more than 3000 voters to create maximum comfort for citizens to participate in the election. This process is done according to the city and rayons chairmen' requests. In foreign countries polling station can be formed under the delegation of RT. CEC forms that polling station according to the requests of the Ministry of Foreign Affairs of RT. CEC establishes

polling station commissions which consist of 5 –19 persons not later than 45 days before the election. In some cases, if necessary, numerical structure of polling station commissions can be increased or decreased.

Oblast, city, rayon election commissions consisting of the Chairman and 7-14 members are formed for election to local Majlises, public deputies and oblast, city, rayon Majlises no later than on the 10th day after the nominating of election. These territorial election commissions are responsible for establishing ED and polling stations, DEC, polling station commissions for the election to corresponding Majlises. DEC is formed no later than two months prior to elections including 9-11 persons, and polling election commissions - not later than 45 days before election including 5-19 persons. In some cases, if necessary, its structure can be increased or decreased. In Tajikistan the elections to Parliament and local representative bodies are held simultaneously, that's why polling station commissions for election to Majlisi Oli carry out the functions of polling station commissions for the election to local Majlises. When elections and referendum are held simultaneously these commissions are responsible for polling station for referenda. Selection of members for the Election and Referendum Commissions is not regulated by the legislation. It was formed by lasting tradition that candidates for the commissions are selected by executive bodies, members of which are representatives social organizations and labor collectives.

The system of Election Commissions is decentralized in Tajikistan. Central Commission for election and referendum is the head of that system. It controls the carry out and equal employment of electoral legislation on all the territory of the Republic of Tajikistan, interprets the regulations of law on election and referendum, provides the realization of citizen's rights, labor collectives' and political parties' rights to vote. CEC directs the activity of subordinate election commissions for President and Parliament election as well as Referendum. Election commissions for the election to local Majlises of public deputies render a consulting and orderly assistance.

Territorial election commissions for the election to local representative bodies work separately; that is oblast election commission is at the head of the activity of subordinate commissions only for the election for oblast Majlises, city - for city Majlises, rayon – for rayon Majlises, oblast election commission is not authorized to be at the head of city or rayon election commissions activities. All territorial, district and polling station commissions are temporary, and selected only for election and referendum period. Power of district and polling station commissions for the President election ceases when President take his office; district and polling station commissions for election for Majlisi Oli - when Parliament deputies start their power, district and polling station commissions for the election to local Majlises - when the relevant Majlises deems the deputies, territorial election commissions - after deputies election for relevant Majlises in all districts.

It is provided for by the law that with the decision of that commission the Chairman, his deputy, secretary or any other commission member can be released from the main production or official duties with preservation of an average earnings from fund accounts for election or referendum.

Governmental bodies have no right to interfere activity of election commissions, they have to render an assistance and provide proper conditions to work. All disputes

concerned election or referendum, candidates to President and deputies are resolved by commissions themselves and if it is necessary - by the court.

3. In Tajikistan political parties are formed with objectives of participation in political life of community, to organize and carry out state power through influence the forming of citizens' political will, participation in election and activities of state power bodies. Objectives and tasks of political parties are reflected in its Charter and Programs, which are published for general information. Only Republic wide parties can be formed in Tajikistan; activity of political parties and its structures of the other judiciaries is prohibited. The participation of not less than one thousand members of its party is necessary to establish a political party. The membership is individual. Only citizens, attained 18 year old age, can be members of parties. Establishment and activity of political parties, which objectives and activities aimed to forcible overthrow of constitutional system and creation of armed groups or other groups which propagandize revenge, national, social and religious hostility are prohibited. Ministry of Justice authorized to register political parties. Political party attains the right of a legal entity since it is registered.

Parties has the right to nominate candidates for election of President and state authority bodies of all levels, to participate in preparation and holding the election and referendum campaigns, to unify in permanent or temporary groups of deputies and to form other unions in representative bodies, to spread information on its activities freely in oral, written or any other form, to propagandize its objectives and tasks, to found private publishing houses and mass media resources, to use state mass media, to hold meetings, demonstrations and other public activities according to the current legislation of RT; to establish and support international relations, etc.

Movable and immovable properties (real estate), which used only for realization of oral objectives and tasks of the party can be owned by political parties. Monetary resources of political parties form from introductory dues, if it's foreseen in the Charter of the party, from voluntary donations, from incomes of publishing and any other activities, which is not prohibited by the legislation. Financial assistance for political parties from charity or religious organization, state enterprises and organization of international physical or legal entities, anonymous entities is not allowed. The head-body of the party should publish financial reports about sources, amount and expenses of means, received by the party fund during the reported year, as well as properties and paid taxes.

State authority bodies render support to political parties, ensuring the equal access to state mass media resources, providing with premises and means of connection, which are the state property, based on maintenance of equal principles, ensuring equality of opportunities for holding election campaigns. In compliance with the electoral legislation political parties has the right to nominate candidates to President and to deputies to Majlisi Oli and local Majlises.

Candidates to President can be nominated by political parties during their congresses and conferences; decision on nominating is adopted under the majority of ballots among total number of delegates. Each political party can nominate only one candidate. Nominated candidate for President should be supported by five per cent of the number of citizens of the republic, who has right to vote. Nominating of candidates for

President should be done 50 days prior to elections and should be completed 30 days prior to elections. Nominating of candidates for deputies from political parties is held by its city and rayon bodies during the conferences and plenary session, where only one candidate is nominated for the deputy to Majlisi Oli, oblast, city and rayon Majlises of people's deputies at any districts, located on the relevant territory of city or rayon.

Besides political parties following institutions has the right to nominate candidates for President and Majlisi Oli:

For the election of President of the Republic of Tajikistan – the Federation of Professional Unions of RT, Union of youth of RT, oblast and city Majlises, council of representatives of deputies of city and rayon Majlises, cities and rayons of republican subordination. If no any candidates for President was nominated or all the candidates withdrew their candidatures, in this case candidate for President is nominated by Majlisi Oli.

For the election to Majlisi Oli of the Republic of Tajikistan - by city, rayon Majlises of public deputies and labor collectives, candidates for election to city and rayon Majlises -- by local authority bodies or labor collectives.

4. Voters list are prepared before election by each polling station commissions and signed by its Chairman and Secretary. Bodies of local executive authority arrange the registration of voters and submit the information about voters, who live on the relevant territory, to polling station commissions. This information is necessary to produce the voters list. If the polling stations were formed on the territory of representations of Tajikistan in Foreign countries, rest houses and sanatoriums, hospitals and other military hospitals - voters list are prepared by the Heads of the organizations and commander of that military divisions.

Only citizences who attained 18 year old age by the election day and who live temporarely or permenantly on the territory of the relevant station and who has the right to participate in elections can be included into the voters list. Voter can be included to the list only in one polling station. Voters list are presented for public information 15 days prior to election. All the issues concerning missing names, incorrect inclusion and exclusion from the list, as well as correction of mistakes and inaccuracies when indicating the voters' datas are solved by polling station commissions. If the decision of the commission[illegible]

[illegible] ing the list, in most cases it is done by the secretary of the commission. After the elections are carried out the voters lists are sent to the relevant local executive bodies where they are kept till the next election.

For the Referendum the lists of citizens, who has right to participate in Referendum, are prepared, announced, amplified, appealed and kept in the same order as a voters lists. Unified lists are prepared for simultaneous referendum and election.

Central voters list on national level is not prepared.

5. All the preparations and holding the election of the President of RT and people's deputies at all levels and Referendum of RT are carried out by the election commissions openly and publicly.

Commissions inform all citizens about its activity, establishing districts and polling stations, commission's staff, location and period of work; present the list of political parties, which participate in elections, the list of candidates for President and deputies to the voters; inform about issues raised for Referendum and results of voting in district and in entire republic.

Only one representative from each political party, representative authority bodies, labor collectives, which nominated candidates for deputies have right to be present on the sessions of election commissions, inside the premises for voting at the election day, referendum and during the process of counting ballots. Trusted friends, representatives from mass media, observers from other countries and international organizations also have right to be present on the sessions of election commissions, inside the premises for voting at the election day, referendum and during the process of counting votes.

Their power should approved with relevant documents. Interference of mentioned above representatives and observers in the process of voting and activity of election commissions is prohibited. Though they can raise different issues and request explanations, draw attention of the commissions members and those who present to violations of Law on Election and Referenda.

In accordance with Law of the Republic of Tajikistan " On Press and mass media", press and mass media are free in the republic. Each citizen of the Republic of Tajikistan has the right to express his believes and opinions, to expand them in all the forms in the press and mass media. Censorship of mass media is not aloud. At the same time abuse of the freedom of speech is not aloud by the law, i. e. to use mass media for giving away confidential data, appeal to the overthrow of the government, war propaganda, appeal to the violence, brutality, race, national or religion intolerance and e. t. It's not aloud and pursued by the law to use mass media in order to interfere to the private life of the citizens, encroachment on their honour and dignity.

Mass media of the Republic of Tajikistan elucidate the preparation to the election and referendums.

The Central Election Commission and Referendums publishes the results of the meetings, discussed questions and approved solutions; local mass media publishes informational bullets of the local commissions on registration of the candidates for the deputies and the results of the election in the region, information of the regional and urban election committees on the formation of regional commissions and the results of the election of the deputies to the relevant Majlis, the results of registration of the elected deputies.

The reports on the results of the election of the President of the Republic of Tajikistan, of the Parlement and local Majlises in the entire republic and the list of elected deputies to the Majlisi Oli with the indication of their full names, date of birth, party membership, position, place of work and place of living, number and the title of the election district and the results of the referendum are published by the Central Election Commission in the press to the term established by the legislation.

In the course of the pre-election agitation the candidates to the Presidency and candidates to the deputies has equal rights to make a speech in the press and mass media, for instance each candidate to the deputies to the Majlisi Oli can broadcast a speech and make one on the television once free of charge. Time for broadcasting a speech for the

candidates to the Presidency and the order of the speeches is established by the Central Election Commission with the help of Commission on television and radio. Mass media representatives, who light on the preparation and holding the election and referendum, are guaranteed free entrance for all the meetings on the election and referendum and getting appropriate information.

As it is mentioned above the election legislation system of the Republic of Tajikistan specifies the control of the preparation and conducting election and referendums. In the course of conducting the election of the President one representative of each political party, a representative of the Federation of the Professional Units, a representative of the Youth Unit, representatives of each executive authority nominating their candidates for the Presidency, and confidential persons are aloud to be in the meetings of the election commissions, during the voting and calculation of the ballots on the polling stations. Requests to attend should be submitted to the district election commissions not less than ten days prior to election.

In the course of election to the Majlisi Oli one representative of each political party nominating their candidates to the deputies, the representative of the executive authority, labor collectives and confidential persons can participate in this control. Requests to attend should be submitted to the district election commissions not less than five days prior to election.

In the course of referendum one representative of each political party, a representative of the Professional Unites and other social units, a representative of labor collectives and mass media have right to participate on the meetings of the commissions in the rooms for voting, in the course of votes calculation and defining the results of the referendum; requests to attend should be submitted to the district commission on referendum not less than five days prior to the referendum. Foreign observers have right to participate in the same control of the election and referendums and their rights should be confirmed by the appropriate documents. Direct or indirect interfering of the representatives or observers into the process of voting during the election and referendums is prohibited.

In the course of election of the President of the Republic of Tajikistan and the referendum in 1994 and election to the Parliament of the Republic in 1995 the control of the election and summing up the results were carried out by numbers of the observers from other countries and international organizations.

According to the legislation on election and referendum the election should be carried out in the electoral districts from 6 a.m. till 8 p.m. local time. The district commission should inform the citizens about the time and place of voting not less than ten days prior to the election or referendum.

In the polling stations formed under the representation of the Republic of Tajikistan in the foreign countries, in the sanatoria, rest houses and hospitals the district commission have right to cancel the voting at any time when all the citizens mentioned in the list voted.

Voting should be conducted in the special rooms where there is enough number of polling-boxes or rooms for ballot. The district commission is responsible for voting

organization, for providing the secret of will of the citizens, for rooms equipping and keeping them in order.

Before the beginning of the election the ballot-box should be sealed in the presence of all the members of the commission, the representatives and observers. Each citizen votes personally, voting for other people is not aloud. Ballots-paper should be distributed according to the list of voters at the submission of the passport or other documents certifies the bearer. Each voter put the signature against his full name in the list of the voters. In the case when some voters can't come to the rooms for ballot for some serious reasons, the election commission makes a group of the members of the commission to organize the voting at the places and the fact should be noted in the list. Voters for some reasons are not included to the main list should be included to the additional list to the main list based on their documents.

At the end of the voting time the ballot-boxes should be unsealed in the presence of all the members of the commission, the representatives and observers. To unseal the ballot-boxes before the end of the voting time is not aloud.

For many years of experience the legislation is established the procedure and order of the voting, the work of the citizens and the work of polling station commissions with the ballots, calculation of the ballots and the results of the work of districts commissions and the CEC; the legislation established the procedure of publication of the results of the election and referendum in mass media, the order of conduction of the repeated voting, repeating election and election for the replacement of the quitted deputies; the legislation prescribes to seal and transfer the rooms for keeping the ballots to security services for safe guidance. The procedure of appealing against the action of the election commission and referendum commission of all the levels is also established by the Law. The Central Election Commission of the Republic of Tajikistan establishes the procedure of delivery of the election documents to the higher organization and keeping there.

Abbreviations
Electoral District - ED
Referendum District – RD
Central Election Commission – CEC
District Election Commission - DEC

Translated by IFES / Tajikistan, Feb. 1999

RESEARCH-AND-PRODUCTION FIRM "CONNECT"

Moscow, Russia

SPESIFICATION
FOR A COMPUTER NETWORK SYSTEM TO BE INSTALLED IN THE CENTRAL ELECTION COMMISION IN DUSHANBE, TAJIKISTAN, CENTRAL ASIA

Jan. 12, 1999

HARDWARE				
1	Description	USD	Q-ty	Amount USD
1	**Main Server**			
1.1	DELL PowerEdge 6300/400 Redundant 3 hotplug power supply, 7 hotplug PCI slots 4 x 64 bit, 3 x 32 bit 4300/6300 RackMount Orientation mod for Floppy/CD (9711C) 4300/6300 RackMount kit field Install (1460E) QUAD CPU Pentium II Xeon 400 MHz w/1Mb cache 4300/6300 (1 x 6) Active BackPlane 6 x 1.6" hotplug for HDD RAM 2Gb (8 x 256Mb DIMM) PowerEdge Expandable RAID controller (PERC) 32 Mb ECC cache 4 x HDD 18Gb LVD 1.6" 7200rpm 80 pin SCA 12/24Gb DDS-3 DAT unit (internal BackUp Device) Seagate BackUp Exec - Enterprise Duralink Dual ANA-6922 PCI 10/100BaseTx Network Card 14/32 Cd-ROM SCSI FDD 3.5" 1.44Mb Microsoft Intellimouse with MousePad Keyboard Rus/Lat Monitor 14" SVGA color LG 44i or similar , 0.28dp	$60911.00	1	$60911.00
1.2	APC Smart-UPS 2200INET	$1721.00	1	$1721.00
1.3	Surge protector APC E10-G	$45.00	1	$45.00
Total USD pos. 1.1 - 1.3				**$62677.00**
2	**BackUp Server**			
2.1	DELL PowerEdge 6300/400 Redundant 3 hotplug power supply, 7 hotplug PCI slots 4 x 64 bit, 3 x	$45567.0	1	$45567.00

	32 bit DUAL CPU Pentium II Xeon 400 MHz w/1Mb cache 4300/6300 (1 x 6) Active BackPlane 6 x 1.6" hotplug for HDD RAM 2Gb (8 x 256Mb DIMM) PowerEdge Expandable RAID controller (PERC) 32 Mb ECC cache 4 x HDD 9Gb LVD 1.6" 7200rpm 80 pin SCA 12/24Gb DDS-3 DAT unit (internal BackUp Device) Duralink Dual ANA-6922 PCI 10/100BaseTx Network Card 14/32 Cd-ROM SCSI FDD 3.5" 1.44Mb Microsoft Intellimouse with MousePad Keyboard Rus/Lat Monitor 14" SVGA color LG 44i or similar , 0.28dp	0		
2.2 2.3	APC Smart-UPS 2200INET Surge protector APC E10-G	$1721.00 $45.00	1 1	$1721.00 $45.00
Total USD pos. 2.1 - 2.2				**$47333.00**
3	**Network Computers**			
3.1	Medium Model K6_3xx CPU AMD K6-2 333MHz RAM 64Mb DIMM Cache 512Kb HDD 3.2Gb (IDE, UDMA, RPM 5400, 256Kb Cache) Seagate Medalist, 3.5" size FDD 3.5" 1.44Mb CD-Rom Drive 24 x Speed IDE VideoCard PCI, VRAM 2Mb Network Card 3C905-TX PCI 32 bit, Fast EtherLink XL, 10/100Base Keyboard Rus/Lat MS Mouse or similar with MousePad Monitor 15" SVGA Color LG 57i, 0.28dp Windows NT 4.0 Workstation 4.0 RUS	$1367.00	45	$61515.00
3.2 3.3	APC Back -UPS300 Surge protector APC E10-G	$212.00 $45.00	45 45	$9450.00 $2025.00
Total USD pos. 3.1 - 3.3				**$72990.00**
4	**Graphic Workstation**			
4.1	Medium Model PII_4xx CPU Pentium II 450MHz w/ 512Kb cache RAM 128Mb DIMM Cache 512Kb HDD 6.4Gb (IDE, UDMA, RPM 5400,128Kb Cache) Seagate Medalist, 3.5" size	$3197.00	2	$6394.00

	FDD 3.5" 1.44 Mb CD-Rom Drive 32 x Speed IDE VideoCard AGP 8Mb SGRAM XPERT98 2D&3D accelerator Network Card 3C905-TX PCI 32 bit, Fast EtherLink XL, 10/100Base Modem FM200 CineAction 33.6 data/ 14.4 fax external SyQuest SparQ or SyJet 1Gb Keyboard Rus/Lat MS Mouse or similar with MousePad Monitor 17" SVGA Color LG 57DT5, 0.25dp			
4.2	APC Back -UPS500	$233.00	2	$466.00
4.3	Surge protector APC E10-G	$45.00	2	$90.00
Total USD pos. 4.1 - 4.3				**$6950.00**
5	**Printers**			
5.1	OKIPAGE20n/dx, 20ppm, 600dpi, Net, duplex unit	$2950.00	2	$5900.00
5.2	OKIPAGE16n, 16ppm, 600dpi, Net	$2290.00	2	$4580.00
5.3	Epson Stylus Color 800, A4, 7ppm black, 1400dpi	$485.00	2	$970.00
5.4	APC Line-R1250	$459.00	2	$918.00
Total USD pos. 5.1 - 5.4				**$12368.00**
6	**Network devices**			
6.1	3C16611 Dual speed (10/100MBit) hubs, 24 ports, Autosensing, stakable, segmentable and manageable Fast Ethernet	$1632.00	3	$4896.00
6.2	3C8532 high speed network bridge	$3172.00	1	$3172.00
6.3	3C16910 Swithes Layer 3 (I3)	$4025.00	2	$8050.00
6.4	Network Cable UTPPT category 5 (mts)	$0.80	500	$400.00
6.5	Connectors for Cable-computer	$1.20	m	$360.00
6.6	Tools, to make network connections	$75.00	300	$75.00
6.7	Patch panel, 24 ports, category 5	$129.00	1	$387.00
6.8	Rack organizers	$56.00	3	$168.00
6.9	Patch cord to link patch panels with hubs and face plate	$2.50	3	$180.00
6.10	Face plate	$15.00	72	$15.00
6.11	Patch cord, 3mts, to link workstations with face plate	$5.00	1	$5.00
			1	
Total USD pos. 6.1 - 6.11				**$17708.00**
7	**Scanner**			
7.1	Hewlett Packard 6100c, color, A4, 600 x 1200 dpi optical, 30bit	$1785.00	1	$1785.00
7.2	OCR/ICR software, Russian language recognition included	$685.00	1	$685.00

Total USD pos. 7.1 - 7.2				**$2470.00**
8	**Spare parts**			
8.1	CD-Rom Drive 24 x Speed IDE	$65.00	4	$260.00
8.2	Tapes for backup units	$69.00	10	$690.00
8.3	Monitor 14" SVGA Color LG 44i or similar, 0.28 dp	$287.00	3	$861.00
8.4	HDD 2Gb UDMA	$175.00	4	$700.00
8.5	VideoCard PCI, VRAM 2Mb	$35.00	4	$140.00
8.6	Keyboard Rus/Lat	$23.00	6	$138.00
8.7	Modem FM200 CineAction 33.6 data/ 14.4 fax	$93.00	1	$93.00
8.8	external Power suply	$38.00	10	$380.00
Total USD pos. 8.1 - 8.8				**$3262.00**
9	**Supplies**			
9.1	Toner cartridges for HP LJ 8100	$213.00	12	$2556.00
9.2	Toner cartridges for HP LJ 4000N	$185.00	12	$2220.00
9.3	Color cartridges for Epson Stylus Color800	$39.00	24	$936.00
9.4	Blackr cartridges for Epson Stylus Color800	$31.00	24	$744.00
9.5	Cartridges for SyQuest SparQ or SyJet 1Gb	$69.00	6	$414.00
Total USD pos. 9.1 - 9.5				**$6870.00**
	SOFTWARE			
10				
10.1	Windows NT 4.0 Server, 50 users license	$2650.00	1	$2650.00
10.1	Windows 98, RUS	$198.00	1	$198.00
10.2	MS Office 97 Prof, RUS	$585.00	1	$585.00
10.2	Antivirus software, RUS, NET	$465.00	1	$465.00
10.3	Visual Studio(MS Visual BASIC Prof 5.0, MS Visual FoxPro 3.0)	$1850.00	1	$1850.00
10.4	Corel Drow 7.0, RUS	$685.00	1	$685.00
10.4	Adobe Pagemaker 6.5, RUS	$578.00	1	$578.00
10.5	Adobe Illustrator 7.0, RUS	$598.00	1	$598.00
10.6				
10.7				
10.8				
Total USD pos. 10.1 - 10.8				**$7609.00**
TOTAL USD pos. 1.1 - 10.8				**$240237.00**

11	Installation in Dushanbe, Tajikistan	5-10% from cost of the equipment of poses (1-7,10)		

CIF - in Dushanbe, Tajikistan
Warranty period - 3 years

Chief of firm
Alexander Denisov

RESEARCH-AND-PRODUCTION FIRM "CONNECT"

Moscow, Russia

SPESIFICATION

FOR A COMPUTER NETWORK SYSTEM TO BE INSTALLED IN THE CENTRAL ELECTION COMMISION IN DUSHANBE, TAJIKISTAN, CENTRAL ASIA

Jan. 12, 1999

HARDWARE				
	Description	USD	Q-ty	Amount USD
1	Main Server			
1.1	DELL PowerEdge 6300/400 Redundant 3 hotplug power supply, 7 hotplug PCI slots 4 x 64 bit, 3 x 32 bit 4300/6300 RackMount Orientation mod for Floppy/CD (9711C) 4300/6300 RackMount kit field Install (1460E) QUAD CPU Pentium II Xeon 400 MHz w/1Mb cache 4300/6300 (1 x 6) Active BackPlane 6 x 1.6" hotplug for HDD RAM 2Gb (8 x 256Mb DIMM) PowerEdge Expandable RAID controller (PERC) 32 Mb ECC cache 4 x HDD 18Gb LVD 1.6" 7200rpm 80 pin SCA 12/24Gb DDS-3 DAT unit (internal BackUp Device) Seagate BackUp Exec - Enterprise Duralink Dual ANA-6922 PCI 10/100BaseTx Network Card 14/32 Cd-ROM SCSI FDD 3.5" 1.44Mb Microsoft Intellimouse with MousePad Keyboard Rus/Lat Monitor 14" SVGA color LG 44i or similar , 0.28dp	$60911.00	1	$60911.00
1.2	APC Smart-UPS 2200INET	$1721.00	1	$1721.00
1.3	Surge protector APC E10-G	$45.00	1	$45.00
Total USD pos. 1.1 - 1.3				$62677.00
2	BackUp Server			
2.1	DELL PowerEdge 6300/400 Redundant 3 hotplug power supply, 7 hotplug PCI slots 4 x 64 bit, 3 x 32 bit DUAL CPU Pentium II Xeon 400 MHz w/1Mb cache 4300/6300 (1 x 6) Active BackPlane 6 x 1.6" hotplug for HDD RAM 2Gb (8 x 256Mb DIMM) PowerEdge Expandable RAID controller (PERC) 32 Mb ECC cache 4 x HDD 9Gb LVD 1.6" 7200rpm 80 pin SCA 12/24Gb DDS-3 DAT unit (internal BackUp Device) Duralink Dual ANA-6922 PCI 10/100BaseTx Network Card 14/32 Cd-ROM SCSI	$45567.00	1	$45567.00

	FDD 3.5" 1.44Mb Microsoft Intellimouse with MousePad Keyboard Rus/Lat Monitor 14" SVGA color LG 44i or similar , 0.28dp			
2.2 2.3	APC Smart-UPS 2200INET Surge protector APC E10-G	$1721.00 $45.00	1 1	$1721.00 $45.00
Total USD pos. 2.1 - 2.2				$47333.00
3	Network Computers			
3.1	Dell OptiPlex G1L+, Low-profile, Intel Pentium II 350MHz w/512Kb cache RAM 64Mb DIMM HDD 4.3 Gb Ultra/ATA AGP video card 2Mb ATI RAGE IIC(max 4Mb) Integrated 3COM Etherlink 10/100BaseTX, 14/32 - Speed CD-ROM IDE, FDD 3.5" 1.44Mb Keyboard Rus/Lat Microsoft Mouse with MousePad Monitor 15" SVGA Color LG 57i Windows NT Workstation 4.0 RUS	$2463.00	45	$110835.00
3.2 3.3	APC Back -UPS300 Surge protector APC E10-G	$212.00 $45.00	45 45	$9450.00 $2025.00
Total USD pos. 3.1 - 3.3				$122310.00
4	Graphic Workstation			
4.1	Dell Workstation 210/450, MiniTower Intel Pentium II 450 MHz w/512Kb cache RAMM 128Mb DIMM HDD 6.4 Gb Ultra/ATA AGP Integrated 3410T Intense Graphics card Integrated 3COM Etherlink 10/100BaseTx 14/32 x Speed CD-ROM IDE FDD 3.5" 1.44Mb FaxModem USR Courier V.Everything Ext., 33.6 Internal SyQuest SparQ Keyboard Rus/Lat MS Mouse with MousePad Monitor 17" SVGA Color LG 57DT5, 0.25dp	$5471.00	2	$10942.00
4.2 4.3	APC Back -UPS500 Surge protector APC E10-G	$233.00 $45.00	2 2	$466.00 $90.00
Total USD pos. 4.1 - 4.3				$11498.00
5	Printers			
5.1	Hewlett Packard 8100, 32ppm, 600dpi, Net	$6793.00	2	$13586.00
5.2	Hewlett Packard 4000N, 16ppm, 600dpi, Net	$2890.00	2	$5780.00
5.3	Epson Stylus Color 800, A4, 7ppm black, 1400dpi	$485.00	2	$970.00
5.4	APC Line-R1250	$459.00	2	$918.00
Total USD pos. 5.1 - 5.4				$21236.00

6	Network devices			
6.1	3C16611 Dual speed (10/100MBit) hubs, 24 ports, Autosensing, stakable, segmentable and manageable Fast Ethernet	$1632.00	3	$4896.00
6.2	3C8532 high speed network bridge	$3172.00	1	$3172.00
6.3	3C16910 Swithes Layer 3 (l3)	$4025.00	2	$8050.00
6.4	Network Cable UTPPT category 5 (mts)	$0.80	500m	$400.00
6.5	Connectors for Cable-computer	$1.20	300	$360.00
6.6	Tools, to make network connections	$75.00	1	$75.00
6.7	Patch panel, 24 ports, category 5	$129.00	3	$387.00
6.8	Rack organizers	$56.00	3	$168.00
6.9	Patch cord to link patch panels with hubs and face plate	$2.50	72	$180.00
6.10	Face plate	$15.00	1	$15.00
6.11	Patch cord, 3mts, to link workstations with face plate	$5.00	1	$5.00
Total USD pos. 6.1 - 6.11				$17708.00
7	Scanner			
7.1	Hewlett Packard 6100c, color, A4, 600 x 1200 dpi optical, 30bit	$1785.00	1	$1785.00
7.2	OCR/ICR software, Russian language recognition included	$685.00	1	$685.00
Total USD pos. 7.1 - 7.2				$2470.00
8	Spare parts			
8.1	CD-Rom Drive 24 x Speed IDE	$65.00	4	$260.00
8.2	Tapes for backup units	$69.00	10	$690.00
8.3	Monitor 14" SVGA Color LG 44i or similar, 0.28 dp	$287.00	3	$861.00
8.4	HDD 2Gb UDMA	$175.00	4	$700.00
8.5	VideoCard PCI, VRAM 2Mb	$35.00	4	$140.00
8.6	Keyboard Rus/Lat	$23.00	6	$138.00
8.7	Modem FM200 CineAction 33.6 data/ 14.4 fax external	$93.00	1	$93.00
8.8	Power suply	$38.00	10	$380.00
Total USD pos. 8.1 - 8.8				$3262.00
9	Supplies			
9.1	Toner cartridges for HP LJ 8100	$213.00	12	$2556.00
9.2	Toner cartridges for HP LJ 4000N	$185.00	12	$2220.00
9.3	Color cartridges for Epson Stylus Color800	$39.00	24	$936.00
9.4	Blackr cartridges for Epson Stylus Color800	$31.00	24	$744.00
9.5	Cartridges for SyQuest SparQ or SyJet 1Gb	$69.00	6	$414.00
Total USD pos. 9.1 - 9.5				$6870.00
SOFTWARE				
10				
10.1	Windows NT 4.0 Server, 50 users license	$2650.00	1	$2650.00
10.2	Windows 98, RUS	$198.00	1	$198.00
10.3	MS Office 97 Prof, RUS	$585.00	1	$585.00
10.4	Antivirus software, RUS, NET	$465.00	1	$465.00
10.5	Visual Studio(MS Visual BASIC Prof 5.0, MS Visual			

	FoxPro 3.0)	$1850.00	1	$1850.00
10.6	Corel Drow 7.0, RUS	$685.00	1	$685.00
10.7	Adobe Pagemaker 6.5, RUS	$578.00	1	$578.00
10.8	Adobe Illustrator 7.0, RUS	$598.00	1	$598.00
Total USD pos. 10.1 - 10.8				$7609.00
TOTAL USD pos. 1.1 - 10.8				$302973.00
11	Installation in Dushanbe, Tajikistan	5-10% from cost of the equipment of poses (1-7,10)		

CIF - in Dushanbe, Tajikistan
Warranty period - 3 years

Chief of firm
Alexander Denisov

ROMAN – Group Company
Krymsky Val 8, 117046
Moscow, Russia
Tel: (095) 454-10-95
Tel. In Dushanbe: (3772) 36-38-30

Commercial Offer

for computer network system to be installed in the Central Election Commission in Dushanbe

for IFES

Item 1: Main server - ALM Computers

Quantity: 1 **$25'497**

The Server's Platform

Platform	Intel "**Sitka**", 82450NX chipset, 100MHz FSB,
	4 memory banks, 4-way interleaving, 7 PCI + 1 ISA slots,
	2 channels Ultra-2 Wide SCSI controller (Symbios 53C896),
	Narrow SCSI controller (Symbios 53C810),
	Video Cirrus Logic GD5480 **2MB** SGRAM,
	Server Management Features, **I2O** ready
RAID	Mylex **AcceleRAID 200, 8Mb** EDO/ECC cache RAM
Chassis	Intel **Cabrillo** (HxWxD - 46x31x64 cm),
	Pedestal version (**Rack-Mountable** optional),
	3 Power supply units **400W** with **Hot-Swap**,
	6 external 3.5"x1" bays for **Hot-Swap HDD,**
	3 external 5.25" bays, **11** system fans

4 * CPU Intel Pentium-II Xeon 450 MHz 1 MB BOX w/cooler
8 * DIMM 128 MB SDRAM w/SPD 100 MHz
32MB ECC Cache for RAID controller
4 * HDD 18.3 Gb UW SCSI Seagate Barracuda (118273 W)
CD-ROM 40x ASUSTeK (CD-S400) (Interface IDE, UltraDMA)
FDD 3.5" 1,44MB (HD, DD) Alps
Express PRO100+ Dual port Server Adapter (PILA8472)
Hewlett-Packard (HP) C1554A Internal DAT (Analog SureSt DAT 03.02) 24i)
UPS 2200VA Smart APC with PowerChute Win95, NT <SU2200INET>
SVGA 14" 0.28 LG Studioworks 440Si High-Resolution NI LR MPRII, digital
Keyboard BTC 5121 Serial Windows 95
Microsoft Mouse PS/2 2.1A
Rack Mount Kit
Warranty: one year, three year parts.

Item 2: Backup server – ALM Computers

Quantity: 1 $17'675

The Server's Platform

Platform	Intel "**Sitka**", 82450NX chipset, 100MHz FSB,
	4 memory banks, 4-way interleaving, 7 PCI + 1 ISA slots,
	2 channels Ultra-2 Wide SCSI controller (Symbios 53C896),
	Narrow SCSI controller (Symbios 53C810),
	Video Cirrus Logic GD5480 **2MB** SGRAM,
	Server Management Features, **I2O** ready
RAID	Mylex **AcceleRAID 200, 8Mb** EDO/ECC cache RAM
Chassis	Intel **Cabrillo** (HxWxD - 46x31x64 cm),
	Pedestal version (**Rack-Mountable** optional),
	3 Power supply units **400W** with **Hot-Swap**,
	6 external 3.5"x1" bays for **Hot-Swap HDD**,
	3 external 5.25" bays, **11** system fans

2 * CPU Intel Pentium-II Xeon 450 MHz 1 MB BOX w/cooler
8 * DIMM 128 MB SDRAM w/SPD 100 MHz
4 * Western Digital SCSI (7200rpm) HDD 9,1 GB WD Enterprise
WDE9100-AV0016 Ultra WIDE SCSI-3, Buffer 1Mb, 68-pin, 7.9 ms
CD-ROM 40x ASUSTeK (CD-S400) (Interface IDE, UltraDMA)
FDD 3.5" 1,44MB (HD, DD) Alps
Express PRO100+ Dual port Server Adapter (PILA8472)
Hewlett-Packard (HP) C1554A Internal DAT (Analog SureSt DAT 03.02) 24i
UPS 2200VA Smart APC with PowerChute Win95, NT <SU2200INET>
SVGA 14" 0.28 LG Studioworks 440Si High-Resolution NI LR MPRII, digital
Keyboard BTC 5121 Serial Windows 95
Microsoft Mouse PS/2 2.1A
Rack Mount Kit
Warranty: one year, three years parts.

Item 3: Network Computers – ALM Computers

Quantity: 45 **$1311*45= $58'995**

CPU Intel Celeron 366 MHz 128KB BOX PPGA
6LR7 slot 1 to socket 370 converter
Gigabyte MB Slot 1 GA-6EA Intel 440LX AGPset, AGP, Baby-AT
DIMM 64 MB SDRAM w/SPD
HDD 3,2 GB IDE Western Digital (AC13200) UltraDMA
CD-ROM 32x LG (Interface IDE)
FDD 3.5" 1,44MB (HD, DD) Alps
SVGA PCI Card 4 MB EDO S3 VIRGE/DX
EtherExpress Pro/100+ PCI Adapter (PPILA8460)
Keyboard BTC 5121 Serial Windows 95
Microsoft Mouse PS/2 2.1A
Minitower case
SVGA 15" 0.28 Hyundai DeluxScan 5870, Horiz. freq. 30-70 kHz, TCO'95
Surge protector
APC UPS Back 500MI
Warranty: one year, three year parts.

Item 4: Printers
Quantity: 6 **$13'440**

2 * Xerox Laser Printer N40, 40 ppm, from labels to A3, 600x600dpi, RAM 24Mb (up to 128Mb), PCL 6+Adobe PostScript Level3, Interface Parallel, Ethernet, Rus., cartridge for 23000 pp.	3840*2=7680
2 * HP LaserJet 5000N (C4111A) A3 16ppm network 8Mb, 240V	2580*2=5160
2 * HP Desk Jet 890c (C5876A) inkjet A4, 600dpi x 600dpi, 9 ppm black ,240V	300*2=600

Item 5: Graphic Workstation
Quantity: 2 **$2'703*2= $5'406**

CPU Intel Pentium-II 450 MHz 512KB BOX w/cooler
MB Slot 1 BXi98-ATX Intel 440BX, AGP, ATX
HDD 6,4 GB IDE Western Digital (AC26400) UltraDMA
3,5 1,5 Gb SYQUEST SCSI int
DIMM 128 MB SDRAM w/SPD 100 MHz
CD-ROM 32x LG (Interface IDE)
FDD 3.5" 1,44MB (HD, DD) Alps
SVGA AGP Card 8 MB SDRAM A-Trend ATC-2740 (intel i740)
EtherExpress Pro/100+ PCI Adapter (PPILA8460)
FaxModem US Robotics Sportster 33.6 Voice ext./rus
PL-02 ATX minitower case w/ 250W ATX PSU
Keyboard BTC 5121 Serial Windows 95
Microsoft Mouse PS/2 2.1A
SVGA 17" 0.28 LG Studioworks 77i High-Resolution LR NI MPRII, digital
Surge protector
APC UPS Back 500MI
Warranty: one year, three year parts.

Item 6: Network Devices
Quantity: Various — $4'767

3 * Express 10/100 Stackable Hub - 24 Port (EE110TX24W)	$780*3=$2'340
500 mts UTP 5	$230
300 * RJ-45	$115
RJ-45 tools	$27
3 * patch panel, 24 port	$180*3=$540
3 * rack organizer 19" 2.20m 45U	$330*3=$990
72 * patch cord	$315
45 * patch cord	$210

Item 7: Scanner
Quantity: 1 — $898

Mustek ScanExpress 12000 SP (Color, plain 600*1200dpi)	$186
OCR Software FineReader 4.0	$446
A4 page automatic feeder	$266

Item 8: Spare Parts
Quantity: Various — $2'172

4 * CD-ROM 32x LG (Interface IDE)	$4*50=$200
10 * Hewlett-Packard DDS 3 Data Cartridge, 24GB/125m	$31*10=$310
3 * SVGA 15" 0.28 Hyundai DeluxScan 5870, Horiz. freq. 30-70 kHz, TCO'95	$215*3=$645
4 * HDD 3,2 GB IDE Western Digital (AC13200) UltraDMA	$144*4=$576
4 * SVGA PCI Card 4 MB EDO S3 VIRGE/DX	$23*5=$115
6 * Keyboard BTC 5121 Serial Windows 95	$12*6=$72
FaxModem US Robotics Sportster 33.6 Voice ext./rus	$84
10 * PSU 200W 240V	$17*10=$170

Item 9: Supplies Various
Quantity: Various — $8'874

12 * Картридж Xerox N40	$400*12=$4800
12 * Тонер-картридж HP C4129X для LaserJet 5000/N/T/TN	$135*12=$1620
24 * Картридж HP C1823AE Color для DeskJet 7xx/8xx/1120	$38*24=$912
24 * Картридж HP 51645AE Black для DeskJet 7xx/8xx /11xx/1600C	$33*24=$792
6 * SyQuest Сменный диск SQ1500	$125*6=$ 750

Total hardware cost: $137724

Software:	**$15379**
45 * Microsoft Windows NT Workstation 4,0 DSP	$7'700
2 * Microsoft Windows 98 Russian, DSP	$144
Microsoft Windows NT 4.0 Server edition 50 user	$5'430
Office Pro 97/CD Rus (269-01611)	$415
Corel Draw 8.0	$590
Adobe Publishing Collection for Macintosh/Windows (including Illustrator 7.0, Pagemaker 6.5, Photoshop 4.0, Acrobat 3.0, Streamline 4.0 and Dimensions 3.0) Russian version	$1100

Prices indicated under DDP Moscow terms. Installation of the equipment in Dushanbe is included in price. Transport expenses are as follows: delivery by 20 tons railroad container Moscow-Dushanbe. Amount of transport expenses will be defined on the delivery.

From: PARASANG-PLUS, Ltd.
Tel./Fax: 42-55-54, 43-15-09

To: IFES
Tel./Fax: 61-82-96, 60-85-12

SPECIAL COMMERCIAL OFFER

Dear sirs!

We offer for the decision of your tasks to use new servers HP: LXr 8000, LH4 (LH4r) or Dell. On servers is offered three variants. Instead of Seagate Backup is offered more widespread and well itself recommending Cheyenne ARCserve. For work with memory in 2GB is offered Windows NT Server - Enterprise edition 4.0. The Russian versions NT Server do not happen.

1. MAIN SERVER:

1.

	Qty.	Product description	Product Nr.	Price USD / unit	Subtotal USD
	1	LXr 8000 PII/400 (1MB Cache) Upgrades to four Intel Pentium II Xeon processors	D6022A	19646,55	19646,55
	1	Pentium II Xeon400MHz 1MB L2 Cache Processor Upgrade	D6119A	6346,15	6346,15
	1	HP TopTools Remote Control Card	Standard	0	0
	1	HP NetServer Navigator for LXr 8000	Standard	0	0
	1	HP NetServer Keyboard 104 keys, 12 function keys seperate numeric and cursor keypads, mini-DIN cable	D4950B	128,90	128,90
	2	HP1GB 50ns EDO DIMM Kit Up to 8GB ECC memory with memory scrubbing	D6114A	6782,74	13565,48
	1	HP NetRAID-3Si Disk Array Controller PCI card with 3 internal and 3 external Ultra2/Wide SCSI connectors,Provides RAID data protection, See ordering instructions for required cables,	D5955A	3217,25	3217,25
	1	HP 2,5m SCSI Cable with Offset Connector 68-pin male ultra-high-density offset connector to 68-pin male high-density connector. 90 Ohms. Single ended SCSI only. Do not use for differential SCSI.	D6020A	132,00	132,00
	1	HP NetServer Rack Storage/8 Includes rack-optimized storage cabinet (3U high) with 8 hot pluggable bays, dual SCSI backplane, redundant hot-swap power supply and fans.	D4902A	2967,77	2967,77
	4	HP 9GB Hot-swap Ultra SCSI Disk Module For NetServer LH, LH+, LH Pro, LS, LX, & Storage System /6. Compatible with Fast SCSI; Ultra SCSI functionality on LH+, LH Pro, and LX only.	D4289A	1392,93	5571,72

	1	HP NetServer 10/100TX PCI LAN Adapter High performance LAN adapter that supports both 10Mb/s 10Base-T Ethernet and 100Mb/s 100Base-T operation.	D5013A	104,99	104,99
	1	HP SureStore DAT24i 24GB Int Tape Drive 24GB typical DDS-3 drive w.DC.TapeAssure TapeAlert, with manual, backup SW for Win.3.x & Win 95, diagnostics for MS-DOS & NLM, 125m tape & cleaning tape.	C1555C	1608,11	1608,11
	1	HP 50 15" Color Monitor (13.7" V.I.) Supports 640x480 and 800x600 res. at 85Hz; 1024x768/60Hz. Supports power mgmt. (EPA, VESA). Supports VESA Plug&Play. Meets MPRII guidelines.	D2826A #ACB	295,22	295,22
	1	HP Mouse for Vectra PCs	C3751B	37,42	37,42
	1	HP Slim Line IDE 24X Max CD-ROM Drive	Standard	0	0
	1	1.44MB Slim Line Floppy Disk Drive	Standard	0	0
		6 hot-swappable redundant fans, individually removable	Standard	0	0
		Power Supply Three N+1 750W, 200/240V, hot-swap, redundant	Standard	0	0
				***TOTAL**	**53621,56**

2.

	Qty.	Product description	Product Nr.	Price USD / unit	Subtotal USD
	1	HP NetServer LH 4 Rack Pentium II Xeon 400MHz/1MB Upgrades to four Intel Pentium II Xeon processors	D7095A	15020,10	15020,10
	1	Pentium II Xeon400MHz 1MB L2 Cache Processor Upgrade	D6119A	6346,15	6346,15
	2	1GB 50ns EDO DIMM Kit (4 x 256 MB) 4GB maximum capacity	D6114A	6782,74	13565,48
		Integrated dual-channel HP NetRAID disk array controller with 120	Standard	0	0
		Integrated dual Ultra2 SCSI controllers	Standard	0	0
	4	HP 9.1GB Hot-swap Wide Ultra2 SCSI Disk Low profile (1") disk module. 7200 rpm. For HP NetServer LH3 and LH3r	D6106A	1392,93	5571,72
	1	pre-installed 10/100TX NIC	Standard	0	0
	1	HP SureStore DAT24i 24GB Int Tape Drive 24GB typical DDS-3 drive w.DC.TapeAssure TapeAlert, with manual, backup SW for Win.3-x & Win 95, diagnostics for MS-DOS & NLM, 125m tape & cleaning tape.	C1555C	1608,11	1608,11
	1	HP 50 15" Color Monitor (13.7" V.I.) Supports 640x480 and 800x600 res. At 85Hz; 1024x768/60Hz. Supports power mgmt. (EPA, VESA). Supports VESA Plug&Play. Meets MPRII guidelines.	D2826A	295,22	295,22
	1	HP Mouse for Vectra PCs	#ACB	37,42	37,42
	1	HP NetServer Keyboard 104 keys, 12 function keys, seperate numeric and cursor keypads, mini-DIN cable.	C3751B	128,90	128,90
	1	CD-ROM – 24X	D4950B	0	0
	1	1.44MB Slim Line Floppy Disk Drive	Standard	0	0
		12 front-accessible hot-swap shelves	Standard	0	0

		Six low-profiles standard (also supports 4 half-height Standard or mixed low-profile and half-height)	Standard	0	0
		Six additional low-profile (or 4 half-height) with Standard optional cage for full duplex capability)	Standard	0	0
		8 total full-length PCI (two 64-bit, one occupied by pre- installed 10/100TX NIC, 1 shared with 2/3 length ISA)	Standard	0	0
		Hot-Swap Power Supplies • 3 hot-swap power supplies standard Add optional 4th supply for N-+-1 redundancy	Standard	0	0
				***TOTAL**	**42573,10**

3.

	Qty.	Product description	Product Nr.	Price USD / unit	Subtotal USD
	1	Dell PowerEdge 6300/400 (1M cache) Redundant Quad processor capable	P100721	22628,55	22628,55
	1	Pentium II Xeon400MHz 1MB Cache Processor Upgrade	P150124	8838,90	8838,90
	8	Memory 256MB DIMM Upgradeable to 4Gb	P110525	1276,50	10212,00
	1	Raid Controller 32MB ECC memory	P110410	1251,20	1251,20
	4	1" LVD 9Gb 7200 RPM 80 PIN SCA	P130117	1645,65	6582,60
	1	Intel Pro/100 10/100Mbs PCI TX	P170338	138,00	138,00
	1	12/24Gb DDS-3 DAT unit (internal) Backup device	P140612	1270,75	1270,75
	1	Monitor 15" Ultrascan D825 with TCO	P120205	573,85	573,850
	1	Microsoft mouse	Standard	0	0
	1	Dell 105-key keyboard	Standard	0	0
	1	14/32 Speed SCSI CD-ROM	Standard	0	0
	1	3.5" 1.44Mb diskette drive	Standard	0	0
	1	6300 Rack mount kit (Shelf)	P160324	478,40	478,40
				***TOTAL**	**51974,25**

2. BACKUP SERVER:

1.

	Qty.	Product description	Product Nr.	Price USD / unit	Subtotal USD
	1	Dell PowerEdge 6300/400 (1M cache) Redundant Quad processor capable	P100721	22628,55	22628,55
	8	Memory 256MB DIMM Pedge Upgradeable to 4Gb	P110525	1276,50	10212,00
	1	Raid Controller 32MB ECC memory	P110410	1251,20	1251,20
	2	1" LVD 9Gb 7200 RPM 80 PIN SCA	P130117	1645,65	3291,30
	1	Intel Pro/100 10/100Mbs PCI TX	P170338	138,00	138,00
	1	12/24Gb DDS-3 DAT unit (internal) Backup device	P140612	1270,75	1270,75
	1	Monitor 15" Ultrascan D825 with TCO	P120205	573,85	573,85
	1	Microsoft mouse	Standard	0	0
	1	Dell 105-key keyboard	Standard	0	0
	1	14/32 Speed SCSI CD-ROM	Standard	0	0
	1	3.5" 1.44Mb diskette drive	Standard	0	0
		Standard Hardware Warranty: 3 Year, On-Site, Next Business Day	Standard		
				***TOTAL**	**39365,65**

2.

	Qty.	Product description	Product Nr.	Price USD / unit	Subtotal USD
	1	Dell PowerEdge 2300/400 (512K cache)	P100410	5226,75	5226,75
	4	Memory 256MB DIMM Pedge 1Gb memory max	P110707	1345,50	5382,00
	1	Raid Controller 32MB ECC memory	P110410	1251,20	1251,20
	2	1" LVD 9Gb 7200 RPM 80 PIN SCA	P130117	1645,65	3291,30
	1	Intel Pro/100 10/100Mbs PCI TX	P170338	138,00	138,00
	1	12/24Gb DDS-3 DAT unit (internal) Backup device	P140612	1270,75	1270,75
	1	Monitor 15" Ultrascan D825 with TCO	P120205	573,85	573,85
	1	Microsoft mouse	Standard	0	0
	1	Dell 105-key keyboard	Standard	0	0
	1	14/32 Speed SCSI CD-ROM	Standard	0	0
	1	3.5" 1.44Mb diskette drive	Standard	0	0
		Standard Hardware Warranty: 3 Year, On-Site, Next Business Day	Standard	0	0
				***TOTAL**	**17133,85**

3.

	Qty.	Product description	Product Nr.	Price USD / unit	Subtotal USD
	1	HP NetServer LH 4 (Pedestal) Pentium II Xeon 400MHz/1MB	D7095A	14500,35	14500,35
	2	1GB 50ns EDO DIMM Kit (4 x 256 MB)	D6114A	6782,74	13565,48
	1	Integrated dual-channel HP NetRAID disk array controller with 120	Standard	0	0
	1	Integrated dual Ultra2 SCSI controllers	Standard	0	0
	2	HP 9.1GB Hot-swap Wide Ultra2 SCSI Disk Low profile (1") disk module. 7200 rpm. For HP NetServer LH3 and LH3r	D6106A	1392,93	2785,86
	1	pre-installed 10/100TX NIC	Standard	0	0
	1	HP SureStore DAT24i 24GB Int Tape Drive 24GB typical DDS-3 drive w.DC.TapeAssure TapeAlert, with manual, backup SW for Win.3-x & Win 95, diagnostics for MS-DOS & NLM, 125m tape & cleaning tape.	C1555C	1608,11	1608,11
	1	HP 50 15" Color Monitor (13.7" V.I.) Supports 640x480 and 800x600 res. at 85Hz; 1024x768/60Hz. Supports power mgmt. (EPA, VESA). Supports VESA Plug&Play. Meets MPRII guidelines.	D2826A	295.20	295,20
		4 front-accessible (half-height) shelves	Standart	0	0
	1	Localized keyboard and two-button mouse	Standard	0	0
	1	One CD-ROM-Two open common tray (non-hot- Standard swap) shelves, suitable dor drives or tape backup (DLT, DDS, or autoloader)	Standard	0	0
	1	One 3.5 inch flexible disk drive	Standard	0	0
		12 front-accessible hot-swap shelves	Standard	0	0
		Six low-profiles standard (also supports 4 half-height Standard or mixed low-profile and half-height)	Standard	0	0
		Six additional low-profile (or 4 half-height) with Standard optional cage for full duplex capability)	Standard	0	0

		8 total full-length PCI (two 64-bit, one occupied by pre- Standard installed 10/100TX NIC, 1 shared with 2/3 length ISA)	Standard	0	0
		Hot-Swap Power Supplies * 3 hot-swap power supplies standard * Add optional 4th supply for N+1 redundancy	Standard	0	0
		Standard Hardware Warranty: 3 Year, On-Site, Next Business Day	Standard	0	0
				***TOTAL**	**32755,00**

UPS

	2	APC Smart 2200VA RM		2251,12	4502,24
				***TOTAL**	**4502,24**

SOFTWARE

	1	Cheyenne ARCserve 6.5 for Windows NT – Enterprise Edition Support Microsoft Windows NT 3.51 & 4.0 Installs on Windows NT Server or Workstation	1883,25	1883,25
	1	Windows NT Server - Ent 4.0 English Int'l CDRom 50 Client	7383,45	7383,45
	1	OfficePro 97 32-Bit Windows Russian CDRom Corn	581,58	581,58
	1	Norton Antivirus 4.0 Server 10 station Rus CD	1150,20	1150,20
	1	SQL Server 6.5 English Int'l CDRom 50 Client	12315,23	12315,23
			***TOTAL**	**23313,71**

***Prices without VAT.**

3.NETWORK COMPUTERS:

Product description	Price USD / unit	Q-ty	Subtotal USD
• AMD K6-2-300MMX 3D/ RAM 16Mb / HDD 3,2Gb Quantum / FDD 3,5" / CD-ROM 32-speed / VCard 2Mb / ECard, 32bit / pad /	550,00	40	22000,00
• Keyboard MS	18,00	40	720,00
• Keyboard MS, original	94,00	40	3760,00
• Mouse MS	5,00	40	200,00
• Mouse MS, original	37,00	40	1480,00
• Monitor Samsung 500s, MPR-2, 15"	249,00	40	9960,00
• UPS-400	215,00	40	8600,00
	****TOTAL1**		**41480,00**
	****TOTAL2** (mouse orig.+kbd orig.)		**45800,00**

4. PRINTERS:

Product description	Price USD / unit	Q-ty	Subtotal USD
• LEXMARK OPTRAS2450, A4, 1200x1200 dpi, 24ppm, 4Mb RAM	4077,00	2	8154,00
• LEXMARK OPTRAS1250, A4, 1200x1200 dpi, 12ppm, 4Mb RAM	1617,00	2	3234,00
• LEXMARK Color JetPrinter2050, 600x600 dpi, 5ppm in b & w.2ppm in color	370,00	2	740,00
	****TOTAL**		**12128,00**

5. GRAPHIC WORKSTATION:

Product description	PriceUSD/ unit	Q-ty	Subtotal USD
• PENTIUM II 450MHz / RAM 128Mb / HDD 7,6Gb Quantum / FDD 3,5" / CD-ROM 32-speed / VCard Xpert & Play AGP 8Mb / IOMEGA JAZZ, 1Gb, int. / ECard, 32bit / pad /	2486,00	2	4972,00
• MS Keyboard	18,00	2	36,00
• MS Keyboard, original	94,00	2	188,00
• MS Mouse	5,00	2	10,00
• MS Mouse, original	37,00	2	74,00
• Monitor Samsung 700s, MPR-2, 17"	556,00	2	1112,00
• US/Robotics Sportster, 33600, ext. с кабелем	114,00	1	114,00
• UPS-400	215,00	2	430,00
• Software, license:			
Corel Draw 7.0 (rus.)	630,00	1	630,00
Adobe Pagemaker 6.5 (rus.)	590,00	1	590,00
Adobe Illustrator 7.0 (rus.)	598,00	1	598,00
MS Windows-98 (rus)	195,00	1	195,00
**TOTAL1			8687,00
**TOTAL2 (mouse orig.+kbd orig.)			8903,00

6. NETWORK DEVICES:

Product description	PriceUSD/ unit	Q-ty	Subtotal USD
• Intel EE220TX24W Express 10/100 Stackable 24-port HUB (10/100 per PORT)	1700,00	3	5100,00
• Remote BRIDGE, local D-LINK DI-1140	2696,00	1	2696,00
• Switches layer 3	2990,00	2	5980,00
• Network cable	0,70	300m	210,00
• Connectors for cable-computer	2,00	300	600,00
• Tool Kit CXA 14004	65,00	1	65,00
**TOTAL			14651,00

7. SCANNER:

Product description	PriceUSD/ unit	Q-ty	Subtotal USD
PRIMAX, SCSI and Single Pass 30bit flatbed scanner, A4, 600x1200 - optical resolution, 9600x 9600 - S/W resolution, OSR included	340,00	1	340,00
**TOTAL			340,00

8. SPARE PATS:

Product description	PriceUSD/ unit	Q-ty	Subtotal USD
• CD-ROM 24-speed	55,00	4	220,00
• COMPAQ 12/24 DAT	198,00	10	1980,00
• Color monitor Samsung, 14", 400b	174,00	3	522,00
• HDD 3,2Gb Quantum	155,00	4	620,00
• Video Card, 2 Mb, Virge	20,00	4	80,00
• MS Keyboard	18,00	6	108,00
• MS Keyboard, original	94,00	6	564,00
• US/Robotics Sportster, 33600, voice, ext. with cable	114,00	1	114,00
**TOTAL			4208,00

9. SUPPLIES:

Product description	PriceUSD/ unit	Q-ty	Subtotal USD
• Toner cartridge for Lexmark Optra Sxxxx	111,00	24	2664,00
• Color Ink cartridge for Lexmark JetPrinter 2050	55,00	24	1320,00
• Black Ink cartridge for Lexmark JetPrinter 2050	43,00	24	1032,00
• Cartridge for IOMEGA JAZZ	108,00	6	648,00
		**TOTAL	5664,00

**Prices included VAT.

IFORMATION from Usbekistan Airlines:
1) Transport expenses - 0.55USD/1kg. and overhead expenses - 5USD.
2) Insurance - 0.1%-0.2% by total price.

INFORMATION from Tajikistan Airlines:
1) Transport expenses - 1.2USD/1kg. and overhead expenses - 20USD.
2) Insurance - 0.5%-1.0% by total price.

Best regards,
manager of " PARASANG-PLUS, Ltd. " Raikhan Khakimzhanova

Западная Техника
Компьютеры и информационные технологии
DELL COMPAQ 3Com GENICOM

Россия, 123363, Москва,
ул. Фабрициуса, 13
Тел.: (+7 095) 795-3100 (многоканальный),
Факс: (095) 795-3109
E-mail: contact@zt.ru
Internet: http://www.zt.ru

Коммерческое предложение

№	Спецификация	Цена(р)	Скидка	Цена(д)	Кол-во	Сумма
Main Server						
	DELL PowerEdge 6300/400 Redundant 3 hotplug power supply,	$59,911	20%	$ 47,928.80	1	$47,929
	7 hot plug PCI slots 4 - 64 bit, 3 x 32 bit					
	4300/6300 RackMount Orientation mod for Floppy/CD (9711C)					
	4300/6300 RackMount kit Field Install (1460E)					
	QUAD CPU Pentium II Xeon 400Mhz w/1Mb cache					
	4300/6300 (1x6) Active BackPlane 6 x 1.6" hot-plug for HDD					
	RAM 2Gb (8 x 256Mb DIMM)					
	PowerEdge Expandable RAID contr. (PERC) 32Mb ECC cache					
	4 x HDD 18Gb SCSI LVD 1.6" 7200 rpm 80 pin SCA					
	12/24Gb DDS-3 DAT unit (internal BackUp Device)					
	Seagate Backup Exec - Enterprise					
	Duralink Dual ANA-6922 PCI 10/100BaseTx Network card					
	14/32 CD-ROM SCSI, FDD 3.5", Microsoft Intellimose					
	Keyboard Rus/Lat, DELL Server Assistant CD,					
	Monitor 15" (13.7" vis) Dell Mainstream D828FI	$319	10%	$ 287.10	1	$287
	(SU2200RMI3U) APC Smart-UPS 2200 RM (3U Rack Mount form)	$1,589	10%	$ 1,430.10	1	$1,430
	MS Windows NT Server 4.0 English +5 Client License.	$904	10%	$ 813.15	1	$813
	WinNT CAL 4.0 WinNT English Intl MLP	$45	10%	$ 40.72	5	$204
	WinNT CAL 4.0 WinNT English Intl MLP 20	$885	10%	$ 796.07	2	$1,592
	Microsoft Office Pro 97 Win32 Russian CD Com	$478	10%	$ 430.56	1	$431
	VStudio Pro 6.0 Win32 English Intl CD	$1,323	10%	$ 1,190.70	1	$1,191
	Informix Dinamik Enterprise Server with 10 user licence for Win NT	$20,900	0%	$ 20,900.00	1	$20,900
BackUp Server						
	DELL PowerEdge 6300/400 Redundant 3 hotplug power supply,	$41,484	20%	$ 33,187.20	1	$33,187
	7 hot plug PCI slots 4 - 64 bit, 3 x 32 bit					
	DUAL CPU Pentium II Xeon 400Mhz w/1Mb cache					
	4300/6300 (1x6) Active BackPlane 6 x 1.6" hot-plug for HDD					
	RAM 2Gb (8 x 256Mb DIMM)					
	PowerEdge Expandable RAID contr. (PERC) 32Mb ECC cache					
	4 x HDD 9Gb SCSI LVD 1" 7200 rpm 80 pin SCA					
	12/24Gb DDS-3 DAT unit (internal BackUp Device)					
	Duralink Dual ANA-6922 PCI 10/100BaseTx Network card					
	14/32 CD-ROM SCSI, FDD 3.5", Microsoft Intellimose					
	Keyboard Rus/Lat, DELL Server Assistant CD,					
	Monitor 15" (13.7" vis) Dell Mainstream D828FI	$319	10%	$ 287.10	1	$287
	(3C16981) 3COM SuperStack II Switch 3300 (12 switched 10BASE-T/100BASE-TX ports, matrix port, expansion slot)	$2,038	10%	$ 1,834.20	1	$1,834
	(SU2200INET) APC Smart-UPS 2200 VA + Network Bundle	$1,045	10%	$ 940.50	1	$941
Network Computers						
	Dell OptiPlex G1L+,Low-profile, Intel PII 350Mhz w/512Kb cache,	$1,873	25%	$ 1,404.75	45	$63,214
	RAM 64Mb DIMM's,					
	HDD 4.3Gb Ultra/ATA,					
	AGP video 2Mb ATI Rage IIC (max 4Mb),					
	Integrated 3COM Etherlink 10/100BaesTx,					
	14/32-x CD-ROM IDE, FDD 3.5", Ketboard Rus/Lat					
	Microsoft Mouse, Windows NT Workstation 4.0 Rus					
	Monitor 15" (13.7" vis) Dell UltraScan D825 with TCO	$499	20%	$ 399.20	45	$17,964
	(BK500MI) APC Back-UPS 500 VA	$128	10%	$ 115.20	45	$5,184
	(E10-G) APC Surge Arrest	$25	10%	$ 22.50	45	$1,013

Graphic workstation						
	Dell Workstation 210/450, Mini-tower Intel Pentium II 450MHz w/512Kb cache (max 2 CPU) RAM 128Mb DIMM's HDD 6.4Gb Ultra/ATA AGP Intergraph 3410T Intense Pro Graphics card Integrated 3COM Etherlink 10/100BaesTx, 14/32-x CD-ROM IDE, FDD 3.5", Ketboard Rus/Lat Microsoft Intellimouse	$4,971	20%	$ 3,976.80	2	$7,954
	Monitor DELL 17" (15.7" vis) UltraScan D1025-HE with TCO 95	$850	10%	$ 765.00	2	$1,530
	Internal SyQuest SparQ 1000 EIDE	$390	5%	$ 370.50	2	$741
	Fax-modem USR Courier V.Everything Ext.; US version; Russian manual (81-411224-00)	$213	5%	$ 202.35	2	$405
	MS Windows 98 Russian CD	$178	5%	$ 169.10	2	$338
	CorelDraw 7.0 Rus	$520	5%	$ 494.00	2	$988
	Adobe PageMaker 6.5 Rus	$488	5%	$ 463.13	2	$926
	Adobe Illustrator 7.0 Rus	$494	5%	$ 469.30	2	$939
	(BK500MI) APC Back-UPS 500 VA	$128	5%	$ 121.60	2	$243
	(E10-G) APC Surge Arrest	$25	5%	$ 23.75	2	$48
	24-Port 10/100 Autosensing Fast Ethernet Hub	$1,595	0%	$ 1,595.00	3	$4,785
	Catalyst 2908-XL 8-Port 10/100 Autosensing FE Switch	$1,795	0%	$ 1,795.00	1	$1,795
	Cat2926 Fixed Switch w/ NetFlow,24-10/100 RJ-45,2 1000BaseSX	$14,995	0%	$ 14,995.00	2	$29,990
	1000ft, slate	$135	0%	$ 135.00	2	$270
	Вилка RJ-45, 1 шт.	0,40	0%	$ 0.40	300	$120
	телеф. разъемов проф.	$140	0%	$ 140.00	1	$140
	PatchMax, 19inch modular Patch Panel with 24 x RJ45	$255	0%	$ 255.00	3	$765
	Intrabay patch cord organizer for routing patch cords in 19-in.frames	$71	0%	$ 71.00	3	$213
	Cat 5, RJ 45 to RJ 45, stranded 4 pair cordage, 3 ft(1 м)	$8	0%	$ 8.00	72	$576
	Face plate	$14	0%	$ 14.00	1	$14
	Cat 5, RJ 45 to RJ 45, stranded 4 pair cordage,10 ft(3 м)	$10	0%	$ 10.00	1	$10
	HP ScanJet 6250C	$534	0%	$ 534.00	1	$534
	ABBYY FineReader 4.0 Standart Win/95/NT	$163	0%	$ 163.00	1	$163
	Горыныч - система распознавания русской речи	$66	0%	$ 66.00	1	$66
	CD-ROM Drive 32X IDE ALL	$87	0%	$ 87.00	4	$348
	4.0-Gigabyte DDS2 DAT Cartridge	$23	0%	$ 23.00	10	$230
	Compaq V45 MPR, NH Monitor	$171	0%	$ 171.00	3	$513
	4.3-GB Ultra-ATA Hard Drive	$226	0%	$ 226.00	4	$904
	Matrox Mill G200 AGP ALL	$113	0%	$ 113.00	4	$452
	Compaq Keyboard	$39	0%	$ 39.00	6	$234
	Courier V.Everything Ext.; US version; Russian manual	$223	0%	$ 223.00	1	$223
	CRU - N24, N32, N40	$303	0%	$ 303.00	12	$3,636
	Cartridge - 4517, N17	$154	0%	$ 154.00	12	$1,848
	Colour print head - XJ6c	$51	0%	$ 51.00	24	$1,224
	High capacity black cartridge - XJ4c, XJ6c	$48	0%	$ 48.00	24	$1,152
	Iomega Jaz 2 Gb disk	$127	0%	$ 127.00	6	$762
	Xerox DocuPrint N40base	$3,484	0%	$ 3,484.00	2	$6,968
	Xerox DocuPrint N17	$1,542	0%	$ 1,542.00	2	$3,084
	Xerox XJ6C	$176	0%	$ 176.00	2	$352
					Итого:	$273,881