

# The Estonian Informatics Centre – Five Years of IT Development

*Imre Siil, director, Estonian Informatics Centre, Estonia*

*The Estonian Informatics Centre (EIC) has reached a major milestone – five years of work in developing state information systems have now passed. The author would like to recall the origins of the EIC and look at what it has achieved.*

Preparations for the establishment of the EIC began in the fall of 1996, when, on November 6, the Estonian government decided to reorganize the way in which the state's information systems were administered. The Estonian Informatics Fund, which had been subordinated to the Estonian Informatics Council, was turned into the Estonian Informatics Centre, which is administered by the State Chancellery. The Estonian Informatics Council, in turn, was restructured into a government committee of experts, and it continues to have the same status today.

When it comes to the purpose for this reorganization, it has to be said that the Informatics Fund mostly dealt with the financing of individual IT projects. It organized public procurement procedures, exhibitions and publishing jobs. The tasks of the EIC, by contrast, were defined with a clear emphasis on the rapid and comprehensive development of state information systems. The EIC had to take a unified look at ways in which the needs of state agencies could be met in a cost-conscious way, it had to elaborate and implement integral solutions, and it had to oversee cooperation projects among government agencies.

We looked at the experience of other countries in this area – Norway, Sweden, Great Britain, etc. Our aim was to learn about ways in which the coordination of IT development and related support activities could be centralized, about ways in which the common elements in agency activities could be defined, and about ways in

which we could determine which activities could be carried out in a centralized way so as to avoid unnecessary duplication of effort. These lessons have helped us to save money while providing high quality services. Support agencies similar to the EIC have been established in a number of countries all over the world – Malta, South Africa and Spain are just a few. The EIC itself has provided an example to a few other countries. The president of Kyrgyzstan, for instance, has said that his country needs a similar agency.

I would also like to look back and note that when the EIC was established, Estonia's national strategy on the development of information systems was already several years old. It focused on the consistent coordination of development financing, and it sought to encourage inter-agency cooperation. The strategy had justified itself. The Department of State Information Systems of the State Chancellery handled the overall coordination issues, but once the EIC was in place, it was defined as the leading structure for joint projects among state agencies. The EIC was to deal with the development of the state's information infrastructure, the elaboration of common standards, the consolidation of public procurement programs so as to save a lot of money, etc.

## THE JOYS AND WORRIES OF THE FIRST YEAR

The EIC launched its work on January 1, 1997. Initially we had some 10 employees, and, unfortunately, the number soon decreased. We

were very sorry to say goodbye to Ustus Agur, the former chief executive of the Informatics Fund. He had wanted to continue his work at the EIC as a deputy director, but he suddenly passed away at the beginning of the year. At first we had to talk about things, gather up our strength, analyze existing practice and plan concrete activities. The Informatics Fund's work in organizing public procurement programs and publishing the journals *Avrutimaailm* (the largest IT and Information Society journal in Estonia) and *Baltic IT Review* had to be carried on. There were several projects aimed at the implementation of national development plans and at working with various state registers that were prepared and carried out. We provided development, maintenance and consultation services to state and local government agencies, and we provided services to the Estonian Informatics Council and several working groups. In 1997 the EIC took part in organizing the "Kompuuter '97" informatics fair.

Soon we began to work on data protection methodologies and relevant standards. We began to provide services to the technical committee on



*The Estonian Informatics Centre is located in the historical environment of Tallinn's oldest region – Toompea Hill*



*Current action plans are discussed with senior specialists at the EIC. EIC director Imre Siil explains the situation and new activities that are to be undertaken*

IT standardization which was launched in the latter half of 1997 under the name EVS TK4. Data protection problems and data protection strategies and methodologies were taken under consideration. In August 1997, we took over the Data Communications Department of the Institute of Cybernetics, and we began to prepare for the establishment of the EEBone backbone network for data communications among state agencies. At the end of 1997, we began to work in the area of information systems statistics, and we worked with the State Chancellery on publishing the "Informatics in Public Administration" yearbook. There was a lot of work, and our staff numbers doubled. The initial year was encouraging in every way, and we enjoyed considerable political support.

### THE INFORMATION SOCIETY LOOMING AHEAD

In 1998, Estonia's parliament launched a series of projects that were aimed at the development of the Information Society in Estonia. The EIC took control of the first E-service that was aimed directly at residents – the functioning and development of "forms on the Internet". The EIC was ordered by the government to maintain the state register of databases in

the latter half of 1998. Our main attention, however, remained focused on the development of the information infrastructure without which the Information Society could never function.

The EEBone data communications network was launched in all of the country's counties in the autumn of 1998. By the end of the year, more than 200 agencies were using it. The expedient topology and economical nature of the EEBone network helped to ensure the success of the project. The EEBone project has become an

outstanding example of the way in which state information systems can be organized rationally. The project also speaks to state administration in general, because a number of complicated organizational and financial problems had to be tackled during the implementation of the EEBone project. The EIC also began to maintain the data communications networks of other state agencies, and it engaged in extensive data communications development projects at the request of ministries and agencies. In the following years, the EEBone network was expanded. Today it connects more than 750 state agencies and agency units, with a total of more than 11,000 computers that are connected to it. The speed of data transmission has improved, as has the capacity for transferred data. Nearly 80% of connections proceed at a rate of 2–10 Mbit/s or more. Work has also continued on a number of other multilateral projects, including the development of the Estonian Library Information System, the creation of geographical information systems, and the identification of Estonian language resources for information technology applications.

The EIC moved into new offices in the Toompea Hill area of Tallinn at the end of 1998, which allowed it to bring together its various sub-units. Special premises were set up for the state's central servers, and the EIC took over administration of the state's



*Visits by foreign delegations are an everyday part of the EIC's work. Here director Imre Siil chairs a seminar with officials from the Vietnamese Trade Ministry*

Web center. The idea of establishing a common support agency for state information systems – one which would administer the information infrastructure in a centralized way – was thus carried out.

It seems to me that 1998 was the year when there was a breakthrough in the development of the Estonian Information Society. The media began to develop more interest in the implementation of IT projects, and there was also a notable change in public attitudes. People began to talk about the Information Society in a serious way.

### KÜLATEE – A BRANCH OF EEBONE

The success of the EEBone project encouraged us to plan for a broadband network for Estonia's rural areas. The country data communications target program that became known as *Külatee*, or Village Road, was the result of this. We worked with country governments and the State Chancellery, and by the end of 1999, almost two-thirds of local governments had been provided with fixed connections to the network. In 2000, nearly all of Estonia's 247 local governments were hooked up. The EIC has coordinated the implementation of the program, participating in the planning and installation of country-based broadband networks and by organizing national cooperation. The key to the program's success certainly lies in the working groups which are in place in all of the counties.

With instructions and financing from the Ministry of Culture, the EIC has launched the Internetization of public libraries all over Estonia, as well as the establishment of public Internet access points – some 150 in all in the country. This has allowed the organizers of new, privately financed projects such as the "Vaata Maaailma" (Look into the World) Internetization scheme to get a leg up in their work.

### REINFORCEMENT OF THE STATE'S IT BASE

The EIC has continued to conclude agreements with international soft-



*The EIC has good cooperation with colleagues from Malta. From the left: EIC director Imre Siil and the CEO of the Malta Information Technology and Training Services, David Spiteri Gingell. They are seen here at the last E-government conference in Brussels*

ware corporations for preferential procurement for state agencies. Major joint procurement projects have been launched on this basis. The first (and so far only) framework contract with IBM concerning hardware resulted in discounts of up to 28% for state agencies. The framework contracts which have been negotiated so far will allow the national budget to save up to EEK 10 million. Approximately the same amount of money has been saved in public procurement projects in the area of IT resources, as organized by the EIC. The first noteworthy consolidated software procurement project involved Microsoft software, with licenses for 40 state agencies.

The EIC has also worked to harmonize the software that is used in state agencies in Estonia. The PERSONA program, which has worked on developing a common system for staff registration in state agencies, has been the most successful. This software is now used in 150 state agencies.

The EIC works in a lot of areas, and some deserve special mention – data protection, for instance. The EIC played a leading role in drawing up an overall concept of data protection, and it has helped to set up protection measures that apply to various classes of

security. The EIC has drawn up instructions and organized training in this area.

When it comes to IT standardization, numerous new standards have been drafted in cooperation with many experts. A voluminous set of IT-related standards has been issued, and the EV S8 standard, "Information technology rules in the environment of the Estonian language and culture", has been renewed. At the same time, a great deal of attention has been devoted to the application and observing of standards. The EIC has particularly been concerned about the use of the Estonian language in computer software and documentation. The language preferences of Estonian users have been studied, and a thorough plan for the development of work in the area of language technology has been drawn up. Language materials and special computer programs have been created for the localization of software. There have been fairly successful negotiations with Microsoft about the "Estonianization" of software.

We have devoted a lot of energy toward the promotion of informatics and toward the dissemination and explanation of ideas about the Information Society. We not only pub-

lish journals and other publications in Estonian and English, but we also have worked with television channels to produce a variety of TV broadcasts. These have all been useful efforts, helping Estonians to develop innovative ideas, and promoting the image of Estonia as a country which is open to the ideas of the Information Society.

The EIC was an active participant in the establishment of Estonia's Information Society development strategy and relevant legislation. The EIC took part in drafting the fundamental documents of the state's information policy. Our specialists have been key in the elaboration of the Digital Signatures Act and the Public Information Act, both of which have passed into law. The EIC can bring together experts for various undertakings that are part of developing the Information Society. As needed, it has also worked as an incubator for development projects. Preparatory work on ID cards and digital signature time stamps is an example of this.

### THE EIC IN THE INTERNATIONAL ARENA

The EIC has done a lot to introduce Estonia's IT developments abroad, and it has participated in the work of a number of international organizations. The EIC has cooperated with the Information Society development structures of the European Commission, and it has participated in several EU projects. The United Nations Development Program has engaged EIC specialists as experts on ICT development activities in a variety of countries, and it has even proposed that a regional competence and training center in the field of ICT be set up on the foundation of the EIC, with help from the World Bank and other donors. The "region" in question would be the vast territory from Central Europe to Central Asia. The EIC has developed working contacts with its counterparts in other countries. A cooperation agreement with Malta is presently being implemented. The EIC represents Estonia in a cooperation agreement in the field of IT which Estonia has concluded with Ukraine. Its joint working commission recently held its first meeting in

Estonia. The country's IT development model has received extensive international interest. We tell everyone that the key to success is, first and foremost, clear political will, along with a stable national development organization, the presence of a coordinating and financing mechanism, and hard work in the development of the relevant infrastructure.

### CONCLUSION

Estonia's investments in the implementation of information technologies have played a serious role in the development of IT in Estonia. The money that has been allocated by the government since 1994 has not been vast when compared to spending in many other countries, but the allocations have been stable, and the sums have been used reasonably and expeditiously. Some of the money has been used for joint inter-agency projects through the budget of the Estonian Informatics Center, and this has yielded very good results. Indeed, support agencies such as the EIC – ones which organize inter-agency work – have acquitted themselves very well in many other countries, too.

Funding for the EIC's projects, it must be said, has begun to decrease. Money from the Ministry of Transport and Communications and from other ministries has allowed us to continue some of our more important jobs, but the ghost of reforms and reorganization continues to hang over us – a specter which jeopardizes even well elaborated structures and financing mechanisms that have proven themselves. It would be a pity if reorganization did not involve a thorough analysis of the present situation, along with economical and rational solutions. I think that it would not be reasonable to divert work to the private sector at any cost, although outsourcing of that kind must certainly be done if a high quality service is received for a reasonable price. The state must maintain sufficient competence in the field of ICT, and it should not allow unnecessary expenditures. A highly capable national support structure helps the state to keep on the right path when it comes to complicated development processes. □