FINAL PROJECT REPORT

Project number and title: GLO/03/219 "Support to e-government initiatives based on the Free/Open Source Software (FOSS) at the local (municipality) level in the South-eastern Europe"

Project start and completion dates: July 1, 2004 - December 31, 2005

I.   Short description of the project as per the (cover page of the Project Document)

This project assisted countries in the Southeast European region in harnessing the potential of Free/Open Source Software (FOSS) to increase penetration and replicability of successful e-government tools in local governance practices by creating and enhancing grass-roots and national capacities through mutual networking and partnerships with other stakeholders, including research and education sector, IT and telecommunication industry in the sub- region. The primary objective was to help enhance the understanding on how FOSS can be beneficial to local economies. The project's development objective was to strengthen people's participation in local affairs, support democracy, generate savings in local budgets, and provide employment opportunities for local IT sector. This increased effectiveness and transparency of public policy through wider and faster replication of effective e-governance instruments within and among communities. The ultimate objective of the project was to support the European integration processes by bridging the existing "digital" divide between Southeastern European states and the European Union at large, by providing new "digital opportunities" to empower communities politically, socially and economically, in addition to the existing commercial e-government tools, and by further promoting intra- and inter-sub-regional peer-to-peer networking and cooperation. The project also created public-private partnerships with the interested parties as a major strategic implementation instrument.

There were the following three main directions of the project implementation strategy:

1.Open access. Ensure open access to the population through the web. Creation of city portals, with online documentary system that allowed users to interact through the Internet with the municipality.
2. Needs assessment for policy and application requirements. the needs of the municipalities were identified and wherever possible, migration towards open source was enabled. National and regional policy frameworks were examined in terms of supporting FOSS. This also included integration of used software, ensuring usage of e-signatures, working with e-documents – as appropriate through the national and European legislature.

3.<u>Implementation and piloting</u>. The municipalities were assisted through making available open source software, municipal employees were trained and familiarized with the new environment, and assisted in the development of initial applications of a number of types.

Capacity building, training, advocacy and competency development was applied as crosscutting tools at all stages of the project implementation process.

II.   Summary of project achievements by output and assessment of project impact

1. **Output 1 - Piloted FOSS-based e-government and e-democracy applications at the municipal level**

1.1 Increased number of e-government applications created for the use at the municipal level. New e-governance tools and applications facilitating government-citizen interaction and openness in municipal affairs piloted

- The first phase of the FOSS project included migrations to free/open source software applications.
OpenOffice.org was installed on approximately 80% of the computers in the Pilot municipality. On the rest 20%, the office suite was not installed due to very old hardware, or because the workstations were used for specific purposes, running only MS-DOS operating system and programs. On part of the computers, the software was installed in English but on most of them it was in Bulgarian - the employees from the local administration were asked about their preferences and most of them preferred the Bulgarian localization. After the installations, a big number of the employees expressed a positive surprise from the way the product performed - it was loading a few times faster than the commercial office suite they were using until that moment. It was noticed also that the employees did not meet any difficulties in understanding the office suite and did not find any significant differences compared to the proprietary package they were using before. Besides OpenOffice.org, Mozilla Firefox was also installed on the workstations where this was possible. In addition, the project team decided that the GIMP (GNU Image Manipulation Program) should be set up because the users did not have any suitable software for image processing.

    As a final step in the migration to free and open source software, GNU/Linux was installed on the computers that were used mostly as typewriters. In combination with the introduction of Mozilla Firefox, this leaded to a decrease in the number of computer viruses in the municipal network and raised the level of security in the IT infrastructure.

    Other important support action was the upgrade made on eight of the computers in the municipality. The FOSS project financed the purchase of memory for the computers with insufficient RAM. This upgrade allowed the computers to be

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used of full value for the needs of the municipality.

Besides Kardjali, the migration process took place in several more Bulgarian municipalities that demonstrated interest in benefiting from open source - Peshtera, Kostenetz, Vratza, Belovo and Dryanovo. It was noted that the Municipality of Mezdra has already been using OpenOffice.org so they expressed their interest to benefit from the web services portal.

- With the assistance of UNDP Kosovo, the municipality of Klina was also included in the project. The high level of illegal software, lack of funds to legalize it and the relatively low level of computer literacy in the municipality were a premise to execute the FOSS project activities there. Following the model applied in the pilot municipality of Kardjali, in Klina OpenOffice.org; Mozilla Firefox in Albanian language and GIMP were successfully installed on approximately 70% of the municipal computers. GNU/Linux (Debian distribution) was installed on 20% of the computers as a desktop operating system. The installations were made dual-boot, keeping the other installed operating systems.

  The second non-Bulgarian municipality that joined the project was the municipality of Gevgelija in Macedonia. The process of migration to open source software was done with the assistance of UNDP Macedonia. Installations of OpenOffice.org and Mozilla Firefox were made in the Municipal Computer Center.

- The main e-Government tool, developed specifically for the needs of the municipalities and providing possibilities for interactive communication between the authorities and the citizens was a web services portal that provides certain e-services online and improves the process of creating an effective e-government. In the Balkans region, mainly the central administration is developing e-government solutions that are not applicable in most of the cases at municipal level. Before this project there were no freely available e-government applications (web systems) that could be replicated at little or at no cost in other administrations. The web services portal developed allowed easy and cheap (or even free) multiplication in all municipalities that declared interest to use it, as well as, it is easily customizable, both in terms of web interface and functionality. It is also multilingual which allows to be customized for other countries or targeted to specific ethnic minorities. Currently the web services portal is installed in 5 municipalities under the project and it offers six services online. Additionally, seven services more were developed, that require the usage of digital signature.

  The web services portal complied with the following specifications:
1. to be platform independent – which includes both the client and the server side (e.g. different browsers compatible; all operating systems compatible, etc.). This could be guaranteed only by using free and open source software products.
2. To be multilingual – in order to be easily replicated in municipalities not only from the pilot country, and to be able to offer services in the language of certain ethnic

minorities. New languages can be easily added by translating a simple language text file, containing all the strings that are used. Each language can be switched on and off, so one customized web services portal can offer either several language interfaces, or one, or as many as the end-user (the municipality) wants.

3. To be with modular structure – as long as it has a wide range of functions like offering e-services online, news publishing, frequently asked questions sections, etc. it was necessary to allow each municipality to decide which functions to use. It appeared that not every municipality had a website, so the web services portal could be easily used as a primary municipal web page, or as a complement to an existing one, integrating only the functionality that is missing.

4. Easily extensible – based on the modular structure, and providing that only few services were launched initially, the web services portal has to possess the ability new services to be added relatively easy.

5. Customizable web design – as long as each municipality with an existing website has its own design of the interface, the web services portal has to offer the ability to be easily redesigned in order to be used and to look as an integral part of the municipal website.

6. Easy installation/Easy transferable – to be installed without having to make specific configurations, nor changing security or other components.

7. Open source components usage only – as long as the project is treating the implementation and migration to FOSS, it is inadmissible to use proprietary or closed software components.

8. Regarding the interface, the web services portal had to have three types of interfaces – for the citizens, for the municipality staff and for the administrator of the system. Each interface provides different privileges and options, that are necessary only for the specific users. For example, the municipal employees have the functionality to receive, process and change status of documents that are sent or requested by the citizens but in order to send a request to the municipality, the employees have to be logged in as 'citizen' and not 'employee'. The employees have the possibility also to reply to the citizens, requesting more information, changes, or notifying that a service has been accomplished. Only the system administrator has administrative privileges to create, modify and delete users, as well as, maintain or improve some system features. In order to use the services, the citizens have to register with some personal data which is necessary for several purposes – to decrease at minimum fake inquiries; to auto complete the application forms, and to be able to check the person's identity with the municipal database that is not connected to the Internet (such a check may become necessary in certain cases). Data is stored for statistical purposes also.

9. The used database should be either MySQL or PostgreSQL – currently MySQL is used.

10. Application forms – there were designed online application forms for each service, identical to the available on paper ones. The application forms contain all attributes and fields necessary to request the concrete service. The end user (citizen, employee or administrator) has the options to generate a print preview of the filled in document, to print it, or to export it as a pdf. From another point of view, the end user has the option while filling in the application forms to save it, or to generate a preview, or to send it to the municipal employee. After that, the citizens can trace the progress of processing the service, as well as to receive an online copy of the answer from the municipality. As mentioned above, the citizen can receive requests from the municipal employees in

order to provide additional information, or to change some data from its application if it was not submitted properly.

The general idea of the system design was the web services portal to be of maximum usage for maximum number and types of municipalities allowing them to use the solution for free and to customize it according to specific needs.

- The other important task accomplished during the last month of the project, was the development of the additional e-government services with digital signature. Development of services, requiring digital signature was not part of the project document, but the Implementing agency decided to extend the scope of the project. For the additional 7 (seven) services, included in the Municipal web services portal Kardjali Municipality, an IMAP/SMTP Server has been set up and tested, in order to accept forms for the digital signature signed services which can be requested through the we services portal.

1.2 Scope and richness of local content increased

- Web site for the project has been created and filled in with relevant information and news for the project development. The website can be found at http://www.foss.bg
All the information on the website is licensed under Creative Commons "Attribution" license, which allows everyone to freely copy, distribute, display, perform and modify the content.

- The FOSS project produced CDs, containing free/open software applications, same versions as the installed in the municipalities covered by the Project. Printed in October 2004, the CDs are free of charge and targeting the general public. The CDs were printed both in Bulgarian and English languages and the contained software is bilingual too. These CDs were freely distributed in the municipalities and as a part of the PR events for the popularization of the FOSS project.

1. 3 Pilot municipalities selected

- The pilot municipality of Kardjali has been chosen for the Project for several important reasons. First of all, the municipality of Kardjali is mainly populated with ethnic turks, the project is addressing the integration of ethnic minorities, enhancing their opportunities to communicate in electronic ways with the municipalities. In the Balkans region, the ethnic minorities are not paid much attention regarding improving their IT skills and integrating them into the e-society. There are more than 20,000 people that emigrated from Bulgaria (in particular, from the Kardjali region) in the last fifteen years and currently live in Turkey. They are with double or Bulgarian only citizenship and they need to communicate with the municipality of Kardjali to receive certain documents (such as, copy of Birth Certificate, copy of marital status certificate, etc.). For each of these tasks, they need to go to Bulgaria (in Kardjali municipality) to obtain these documents. With the identification of the municipality as a pilot, the project tried to help

these citizens to save time and money, and to make their communication with the municipality easier.

1.4 Replication in at least three countries is completed

- The project took place in 9 municipalities from the Balkans region (Bulgaria – Kardjali, Vratza, Mezdra, Peshtera, Belovo, Dryanovo, Kostenetz; Macedonia – Gevgelija; Kosovo - Klina).
  As a total, OpenOffice.org and Mozilla Firefox were installed on 200 workstations which formed a percentage from at least 50% to 100% in every municipality that took part in the project.
  Linux was installed on 45 client workstations, which formed between 16% and 25% in a municipality (depending on its size).
  The web services portal was installed in 4 municipalities (Kardjali, Vratza, Mezdra and Peshtera) from which the Kardjali one is hosted on Internet Society – Bulgaria's server, and the rest – on their own municipal servers. A higher number of municipalities expressed their wishes to deploy both the web services portal and GNU/Linux operating system, OpenOffice.org and Mozilla applications, but the project budget did not allow their inclusion due to insufficient travel and personnel funds. The total number of such municipalities that could not be included in the project is approximately 20 which leads to the conclusion that a prolongation of the project could have a major impact and bigger effect.
  In addition, the Municipality of Bahchelievler in Istanbul, Turkey has sent a letter of intent to participate and benefit from the Project at the last moment. The migrations and training are planned to be accomplished with local consultants' help during the first quarter of 2006.

2. **Output 2 – Improved awareness/understanding about the use of FOSS in public affairs and regional networks (among FOSS advocates and developers). Increased competency and skills**

2.1 Knowledge about FOSS benefits in developing e-government applications increased among respective national and local authorities in at least three participating countries.

2.2 Knowledge about opportunities to use FOSS for e-government applications increased among local software developers in at least three participating countries.

- Under activities 2.1. and 2.2, the FOSS project made a significant number of presentations at different international and national events. The FOSS project was presented at events of the public administrations in Bulgaria, at multiple administrative, educational and business events in the world. Among the major events are:
  2004 - series of press-conferences in Kardjali, Vratza, Peshtera, Vratza; official ceremony of "John Atanassov Awards" at the Presidency; at the forum "E-municipality, E-Government" organized by the Institute of Public Administration and European Integration; Round Table "Strategic priorities in the development of Bulgarian education", organized by the Open Society Institute in Bulgaria; at the official launch of the Center for Law of the

Information and Communication Technologies Presentation; at the Information exchange exhibition, aiming to promote Internet sources of information about the European Union, organized under auspices of the Minister of European Affairs, Ms. Meglena Kuneva; presentation about the e-government services and FOSS in front of regional BSP youth regional leaders in Varna, December 2004; FOSS project took part at the IST2004, in Hague, Netherlands. The event was part of the program Information Society of the European Commission;at the conference Open Standards and free software in the Government under the FLOSSPOLS, where FOSS project represented Bulgaria.

The most important participation in 2004 was at the "Open Fest 2004" which is the major annual event for the Bulgarian organizations, supporting the popularization and development of free/open software. The FOSS project was invited by the organizers of the event to make a presentation about the initiatives based on the Free/Open Source Software (FOSS) at the local (municipality) level in the South-eastern Europe and to present the activities in the pilot municipality of Kardjali. The project was presented in front of more than 150 people from all areas of IT and representatives of the Parliament. After the presentation, a representative of the Macedonian Free Software Community contacted the FOSS project and expressed interest for future cooperation.

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   - Presentation at the Ministry of Education about the benefits of free software usage and opportunities related to it. The presentation covered the potential of the free/open source software and the benefits both for the teachers and students, if used in the schools.

   - Participation at the "International conference on e-government and e-management" in Ust-Kamenogorsk, Kazakhstan, where a presentation was made on "UNDP projects supporting e-Government initiatives at local (municipal) level through Free and Open Source Software in South-Eastern Europe. Bulgarian experience. Free and Open Source Software in Public Administrations in the Balkans region." The Bulgarian experience related to the implementation of free and open source software was presented, as well as e-government solutions based on FOSS in Public Administrations at municipal level. The presentation was valuable in terms of the plans of the Kazakhstan Government to start the development and implementation of a National Secure Operating System based on Linux;

- Presentation within the seminar "Munich Municipality experience in the implementation of open source for e-services";
- Participation at the ICANN's Luxembourg meeting, where the FOSS project was introduced to key internationally known experts;
- Participation with presentation at the "Open Access for Social Inclusion and Sustainable Development" Open Day during the APC (Association for Progressive Communications) council meeting in Varna, Bulgaria;
- Participation at the international e-government forum on building local projects through public private partnerships in Romania, where FOSS presented the Bulgarian experience in improving Citizen participation at the local level.
- Presentation of the concept for E-municipality and available solutions, including the ones provided by ISOC-Bulgaria under the FOSS Project in the

Bulgarian City of Lovech, to a wide group of Bulgarian Municipal Officials. Among the attendees was the Mayor of the city of Lovech, the Deputy-Governor of Gabrovo district, as well as a number of municipal advisers from all over the country;
- Presentation at the [International Conference "e-Society.MK" (www.e-society.org.mk)](www.e-society.org.mk) where the FOSS project presented its experience in two of the conference thematic panels: e-Government and Copyrights and privacy;

- During the whole period of the FOSS Project, the progress of the activities and achievements were covered by the media. Articles have been published in the local newspapers of the included municipalities, as well as at the national newspapers - in "Dnevnik", "Dnevnik online", electronic bulletin of the State administration, in specialized IT newspapers - "Computerworld", "Info week", "eWeek", "Computers", "IT Forum", "Portal.bg", "Duma", "24 Chasa" and more.

- FOSS project representatives participated in public radio discussions and inter-views at the National radio – for the "Horizont" and "Hristo Botev" emissions.

2.3 Partnership agreements established with relevant associations of IT industry and muni-cipalities

- Working closely with the regional UNDP offices, major UNDP projects in the ICT field, local municipality authorities and National and International ICT organizations, the UNDP FOSS project positioned itself as a catalyst of important processes in the ICT field and proved itself as a trusted partner and expert body that bridges municipal and civil ICT interests.
A number of Memorandums of Understanding have been signed between Internet Society – Bulgaria and organizations, involved with the free/open source software and ICT. The signed MoUs are with the following organizations:
 - Bulgarian Free Software Association;
 - The Internet Society of Luxembourg ASBL;
 - BlueLink Information Network.

A proposal was made at the FOSS Steering Committee meeting, held on 09 December 2004 for the signing of a MoU between the two UNDP projects - FOSS (GLO/03/219), implemented by the Internet Society - Bulgaria and E-Government in Bulgaria (BUL/02/004), implemented by the Coordination Cen-ter for Information, Communication and Management Technologies (CCICMT). The MoU was not signed, due to lack of initiative from the CCICMT.

Mutual partnership with the Turkish public body organization TUBITAK/UEKAE was established, which demonstrated will to cooperate with the Municipality of Kardjali.

Internet Society Bulgaria became a member of the Bulgarian ICT Cluster.

2.4 Higher quality and wider thematic scope of FOSS-based e-government applications

- The FOSS Project issued a number of certificates for the employees who passed the relevant trainings for the usage of Linux, OpenOffice.org, Mozilla and GIMP. The certificates were bestowed to the municipal employees from each Municipality, participant in the Project. Certificates were presented to the employees in the municipality of Klina in Kosovo and Gevgelija in Macedonia. The certificates were signed by H.E. Mr. Neil Buhne, UNDP Bulgaria RR and Mr. Veni Markovski, Chairman of Internet Society Bulgaria.

2.5 Organization of summer schools, trainings, workshops for the local administration.

- Provoked by the results of the migrations and trainings provided at the included municipalities, a training course on LINUX was officially included by the Institute for Public Administration and European Integration, aiming to train state and municipal employees on how to work with Linux operating system. Due to the demonstrated interest after the first training, a second one was provided for the municipal system administrators. Currently, these trainings continue to be performed every three or six months.

- The statistics for the provided training under the FOSS project is:
  Trained 200 municipal employees to work with OpenOffice.org and Mozilla Firefox.
  Trained 45 municipal employees to work with GNU/Linux.

  The training program for OpenOffice.org, Firefox and GIMP was:
  1. What is a free software and why OpenOffice.org should be installed?
  Introductory lecture, that will describe the significance of the use of free software and OpenOffice.org in particular.
  2. Presentation of the fundamental programs in OpenOffice.org
  Overview of all components in the office pack. Beside the common programs (Calc and Writer), presentation programs (Impress), print-preview program (Draw) and Internet-site construction program will also be introduced to the audience.
  3. Text editing with OpenOffice.org Writer – Microsoft Word's equivalent
  The main program in the office pack – Writer will be presented with an overview of its capabilities and the basic principles of its use.
  4. Spreadsheets with OpenOffice.org Calc – Microsoft Excel's equivalent
  The main program for creating spreadsheets in the office pack – Calc will be presented with an overview of its capabilities and the basic principles of its use.
  5. Browsing web sites with Mozilla Firefox – Internet Explorer's equivalent
  During this session Mozilla Firefox ill be presented with an overview of its capabilities and the basic principles of its use.

  Specific program was prepared for the Linux trainings. The course was split in two parts – the first targeted to the end users, and the second – to the system administrators.

2.6 Development of advocacy and awareness publications.

- Brief case study on the UNDP FOSS project was included as best practice in Deliverable 10, produced by the EU 6th Framework Program funded project TOSSAD (http://www.tossad.org).

- The most important publication about the FOSS Project in Bulgaria was the case study about the project on the IDA Open Source Observatory website. The article was published both in the case study section and in the news section, and it was considered as big success, receiving very good evaluation from the Observatory project coordinator.
http://europa.eu.int/idabc/en/chapter/470
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2.7 Development of FOSS manuals and guidelines.

- It was developed a table, comparing the main features of Microsoft Word and OpenOffice.org Writer. The comparative table was organized in the following way: it compares how one and the same function can be performed in the two programs. In this way users experienced to work with Word can easily find the similarities with OpenOffice.org and use their experience on the new software. This comparative table was also used as a list with the most frequently asked questions and as a tool for quick help for the employees during their everyday work.

- During the FOSS project, it was localized a comprehensive GNOME 2.6 User Manual. The manual is an introductory guide for the GNOME desktop, dedicated to beginners in using the Linux GUI .The localized manual covers the Linux distribution installed in the municipalities, but can also be used as initial training material for persons with low or no computer literacy.
The manual is available online at http://gnome.cult.bg/learn/

2.8 Organization of training programmes for the local administration and software developers.

- Special trainings were provided for the System administrators from the Pilot municipality and for the joined to the project municipalities. The trainings were made according to each municipality's specifics. The FOSS project experts provided full and detailed training, so the administrators were prepared to fix problems and to support the users in case of need.

- Trainings have been provided for the municipality employees from the document flow department and the IT department on how to work with the e-services website and how to administer the e-services website. The trainings were conducted in the Municipalities where the e-services website was implemented, except in the municipality of Mezdra, where the IT staff decided to do the setup

and trainings on their own.

3. Proposed national policies enabling wider application of FOSS in e-governance

3.1 Development of policy recommendations for national government for enabling wider FOSS application.

- Thanks to the popularity that the FOSS project demonstrated, the Internet society turned again to the question about the role of the free/open source software in the public administration. For this reason, Internet Society – Bulgaria, as the Implementing agency of the FOSS project was invited to participate with expert opinion in the development of a draft amendment to the "Access to Public Information" Act. The amendment's provisions are faced to adoption of open standards in the structures of the Public Administration and in the State portals and websites. State authorities should be obligated to use open file formats in their computer information systems, says the draft amendment. A definition of open format was given in the new article 5 of the amendment: "a description of the methods of preservation and exchange of data, accessible for each person, who wants to observe, use and implement; which does not commit the user with any software producer, or provides commercial advantages for certain software producers; which gives equal usage opportunities to the public, without payment of license fees; which allows modifications and development of derivative forms under the above mentioned terms". More information :   http://www.computerworld.bg/index.php?mode=call&n=11151
  The draft amendment was tabled by the MPs Mr. Ivan Ivanov and Eugeny Chachev on October, 28, 2005, and officially supported by the Bulgarian Chamber of Commerce. The full text of the Amendment is available at the official page of the Parliament:
  http://www.parliament.bg/?page=app&lng=bg&aid=4&action=show&lid=1334

3.2.Organization of policy advocacy events.

- In May, 2005 it was organized a major Public Awareness event with the presence of Prof. Lawrence Lessig (www.lessig.org), a world known free culture and free software supporter, Member of the Bord of Directors of the Free Software Foundation. On the 16th of May, professor Lessig had the following lectures in Sofia: „Relations between freedom, copyrights, intellectual property" at the New Bulgarian University; „Free culture/free software" at Red House Center for Culture and Debate; Official launch of Creative Commons Bulgaria (www.creativecommons.org/worldwide/bg) and the portal Open Culture (www.open-culture.net) at the Technical University of Sofia. During his visit, prof. Lessig met the UNDP Resident Representative in Bulgaria, H.E. Mr. Neil Buhne, as well as representatives from the UNDP local office of Macedonia. During the second day of his visit, Lawrence Lessig had meeting with political officials, and legal experts from the Bulgarian Center for Law of the Information and Telecommunication Technologies, journalists. The visit and lectures of Prof. Lessig has received wide media coverage in the leading daily

newspapers and specialized IT press, which activated the existing FOSS supporters, but also influenced many people, organizations, authorities. The Internet society recognized the efforts, supported by UNDP Bulgarian Office to stimulate Bulgaria to be part of the world's ICT tendencies. A video recording of Prof. Lessig's lectures is available at http://ludost.net/20050516lessig/

- As a part of the FOSS Project, ISOC-Bulgaria became a co-organizer of the Annual Open Fest Initiative, which took place on 29-30 of October 2005 in the Inter Expo Center. FOSS supported also the organization of the OpenArt Conference held within the OpenFest, which was the first conference of this kind. OpenFest Bulgaria is annual event, dedicated to free/open source software, its supporters, friends, developers and fans. The OpenArt Conference was inspired by the idea of Creative Commons – to recreate culture and use others' creativity for innovation and progress. Software freedom and free culture were the main topics on this year conference. More information about the program is available here: http://openfest.org/openartcon/

The implementation of the FOSS project assured a platform for higher cooperation between the Local administrations and the businesses, in particular with non-government organizations and SMEs. The public-private partnerships model was enabled efficiently through Free and Open Source software. As long as the initial support for the applications installed was provided by Internet Society – Bulgaria and several consultants, currently the administrations can choose their own support which, practice shows, is frequently done by young students from Universities or students from the Mathematical high-schools. The other common established practice is that municipalities often receive help from local companies, located in the municipal city, in order to support and possibly to expand/change some features of an implemented solution.
This results in enhanced local cooperation at business level and the level of local IT skills is continuously raising.
As long as the project is implemented within a wider UNDP initiative - "Capacity development through knowledge sharing and development: Free/open source software for developing countries", the deployment and the project activities can be used as a case study where migrations to FOSS are expected to be made in more than one country, either part of the Balkans, or in regions with similar economical and cultural conditions.
Furthermore, according to recent information published at Slashdot.org, 5000 computers in Macedonian schools will migrate to Linux and the initiative is initiated by the movement "Free Software Macedonia". An important to mention is the fact, that this news appeared 2 months after the presentation of the FOSS Project in Macedonia, and the approach that will be used is the same that the FOSS team discussed with "Free Software Macedonia".
In summary, besides the direct impact resulting in better partnerships and cooperation between local administrations and the local private sector, there can be found many indirect effects from the project, which are hardly to be estimated, but set the basis for further FOSS adoption in the region.

III.   Lessons Learned

(Briefly describe key lessons learned during the implementation of the project)

- The main factor for success of Free/open source software initiatives and project is the development of policy and legislation towards it. Without political support, the processes and adoption are slowed.

- The low level of computer literacy among the municipal employees over 30 years could be a serious problem, due to the lack of understanding of the benefits from the migration. The recommended steps are to present first the idea of the migration to FOSS to the system administrators, as they are able to understand fully the potential benefits. Then the economical benefits should be presented to the decision makers. The migration should be followed immediately by relevant trainings.

- It is recommended to perform testing and certification after the training – it may be just a diploma for the passed trainings, or better a certification tests for the level of knowledge of the products. People would be much more motivated to use software, for which they have an official document, certifying they are capable and skilled to use.

- Public awareness aspect is very important for the implementation of the project, media coverage of the activities and the work done is of high importance. As of the specific moods in Bulgaria, organizing public awareness events with internationally known figures receives much more media attention and public response.

- Collaborative work with the local FOSS supporting organizations and international ones is a must.

- It is not recommended to limit the development and implementation of the FOSS Project strictly to the initially planned outputs. If there is an opportunity for wider the impact of the Project, or if there is important functionality to embed into the developed tools and applications, this opportunity should not be missed.

IV. Recommendations
(Recommend activities and steps as a follow-up to the project)

- To continue awareness on the F/OSS project in the neighboring countries. The Municipality of Bahchelievler in Istanbul, Turkey sent a letter of intent to participate and benefit from the Project at the last moment. The Municipality stated that it would like to take advantage from and adopt free and open source software. Therefore, it is scheduled for 1Q of 2006, the FOSS Project in cooperation with UNDP Turkey to extend the initiative, by providing the relevant migrations and trainings and to prepare a requirements analysis and draw a deployment plan how to migrate their computational infrastructure, write a "good practices" report, adding good/bad experiences.

- To continue sharing the knowledge. The main developed application under the FOSS Project – the web services portal – can be freely obtained by anybody who wishes to use it. The source code and installation instructions can be requested by email

  (foss@isoc.bg) or phone from the Internet Society - Bulgaria, and soon it will be available also for download under GNU/GPL license. The web services portal can be provided as an archive file and it can be customized either by the user or by Internet Society – Bulgaria.

- To continue cooperating and work with UNDP. As a result of the experience gained during the FOSS Project, Internet Society Bulgaria will continue working to popularize usage of free/open source software, especially at the administration level. Given that local municipalities usually have very reduced budgets and cannot invest in the development of such Information Society initiatives suggests that the focus needs to be to most-effective, replicable and adaptable systems. Increasing the computer literacy is obvious and a must not only for the success of such an approach but also for citizens to be better prepared for job requirements in the new information society. The newly started project's main goal is to develop a web services portal in order to serve the needs of the local labor bureaus. This portal aims to create collaboration with three key stakeholders: job seekers, employers and SMEs. The initiative is to be implemented as a part of the existing municipal web services portal in the target pilot municipality. A collaborative and coordinated approach of this kind being proposed here accompanied by training and job enhancement for local municipality personnel can not only improve service delivery but reduce the element of bureaucracy for common citizens. The main benefit is the realization of the opportunity to contact and exchange information with the local labor bureau through the Internet. This will affect in increasing the level of Internet usage as overall, but in long term this web-portal could be a base for more comprehensive e-government services, including e-payments. As a whole, at local level in Bulgaria, electronic communication with the authorities is both not well developed and not very popular. At some places, municipal web presence is missing at all. The project aims to bridge this gap by both creating a web-based application, which will serve online the need of authorities and citizens, but also to train certain categories of people how to use the technologies and Internet in particular. Given the need for a modular set of tools which are also replicable, adaptable and cost effective, an open source and open-content approach would seem to be in order and would also allow for building on existing municipal ICT infrastructure and info-structures. The use of open standards and free/open source software (FOSS) is expected to have a positive impact in many directions, with benefits for the government, citizens and local SMEs that can potentially provide maintenance, development and training support. In the longer -term, this approach is expected to lead to the generation of huge budget savings. More specifically, the following are some of the expected benefits from the development and implementation of FOSS based platform:

  - increase in the transparency of the social department's work and generation of savings in local budgets;

  - reduced costs and dependency on imported software and skills;

  - support to the European integration processes by a quicker and potentially

more effective bridging of the existing "digital" divide between South-eastern European states and the European Union at large;

- ability to customize software for local languages and cultures provide opportunities to software developing SMEs to collaborate with the administration;

- ensure open access to the population through the web.

Once the free/open source (FOSS) tools are developed they can be easily replicated in other municipalities in Bulgaria and/or in other parts of the Eastern Europe. Moreover, the tools can be modified, allowing supplementation of additional functionality and add-ons, continuous development and localization for other countries.