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REPORT

EXPERT GROUP MEETING ON OPEN-SOURCE SOFTWARE SOLUTIONS FOR THE PUBLIC SECTOR IN THE ARAB REGION
CAIRO, 19-20 DECEMBER 2006

Summary

The World Summit on the Information Society (WSIS), in both its first and second phases (Geneva, 2003; and Tunis, 2005), recognized the important role played by free and open-source software (FOSS) in bridging the digital divide and realizing an inclusive information society. The WSIS outcome included statements that support the use of FOSS solutions for promoting access to information and knowledge; increasing competition, diversity of choice and affordability; meeting the needs and requirements of users; and strengthening cultural and linguistic diversity, and local content.

The Expert Group Meeting on Open-Source Software Solutions for the Public Sector in the Arab Region (Cairo, 19-20 December 2006) was organized jointly by ESCWA and the Programme of Information and Communication Technology for Development in the Arab Region (ICTDAR) in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO).

The Meeting aimed to develop strategic approaches, methodologies and modalities for the adoption, implementation and development of FOSS solutions for the public sector, in accordance with the WSIS outcome and with a particular focus on the governmental and higher education sectors for reviewing specific software solutions and deployment methodologies. Moreover, the Meeting, which was attended by 31 experts and policymakers, sought to streamline the process of implementing FOSS solutions in accordance with WSIS goals, thereby facilitating the exchange of information among experts and decision-makers on the challenges of adopting FOSS at the national level, and the industry standard practices for its deployment at the sectoral and/or institutional levels. It brought together experts and policymakers who have undertaken, or are in the process of undertaking, the implementation of FOSS solutions with regional stakeholders contemplating such initiatives.

The Meeting mainly recommended the establishment of a network among existing communities and experts in the Arab region through an online portal as the means of promoting collaboration between stakeholders. The portal will include all participating experts in this Meeting, but more broadly, it will target all formal and informal FOSS communities in the Arab region. The objectives of the portal will be to link these practitioners and communities together, and stimulate cooperation among them on the development of new applications. Possible outcomes could be in the field of education through neutral and sound modular curricula, thereby promoting the Arabization and localization of successful experiences, including through the development of an open courseware in Arabic. ICTDAR has committed in the Meeting to leading the creation of this portal, in collaboration with any of the present parties who have interest.

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Introduction

1.   The World Summit on the Information Society (WSIS) addressed the growing opportunities that free and open-source software (FOSS) provides, and recognized the importance of the role it plays towards bridging the digital divide. Within the context of the first phase of WSIS (Geneva, 10-12 December 2003), the Declaration of Principles and Plan of Action included statements related to the use of FOSS solutions aimed at promoting access to information and knowledge; increasing competition, diversity of choice and affordability; meeting user needs and requirements; and strengthening cultural and linguistic diversity, and local content.[1]

2.   Moreover, the second phase of WSIS (Tunis, 16-18 November 2005) resulted in the Tunis Commitment and the Tunis Agenda that supported the development of active platforms and FOSS in order to reflect the possible uses of software for "education, science and digital inclusion programmes";[2] and promoted the "development of software that renders itself easily to localization, and enables users to choose appropriate solutions from different software models including open-source, free and proprietary software".[3]

3.   The principles behind the FOSS movement relate to the freedom of users to utilize the software, modify it according to their needs, copy it as needed and redistribute it to others who might need it. When disseminating FOSS, there is a need to emphasize the context of those freedoms and their emanating benefits, rather than merely the low cost and powerful features of FOSS products. The benefits of FOSS include, among others, better security, given that bugs in the programme are more easily found and fixed than in closed-source software; and the ability to tailor the software to meet the required standards, and localization to meet cultural and regional needs.

4.   For developing countries with financial constraints that limit the adoption of software solutions and of information and communication technologies (ICTs), the use of FOSS presents an opportunity to encourage innovation and adoption of ICTs as an enabler for social and economic development. Partnerships on FOSS can help to liberate people from the proprietary and costly software solutions, thereby facilitating access to the global network of information and communication. Governments need to be informed and aware of the benefits offered by FOSS in order to be able to consider it as an alternative to commercial software.

5.   In the past two years, a growing number of municipalities and Governments across the world have started to implement FOSS solutions in their information technology infrastructures, especially for e-government, e-learning and e-health applications. Many opportunities exist to benefit from this trend in the Arab region, including reducing costs associated with ICTs, supporting the development of software at the national level and adapting open-source software to local needs, thereby creating jobs in and developing the ICT sector.

6.   On the other hand, the adoption of FOSS in the public sector requires strategic planning at the national and regional levels, building ICT skills and capacities, and the establishment of partnerships between the private and public sectors that sustain the availability of support services for open-source software. This necessitates learning from the existing experiences in terms of adopting and using this software modality.

7.   The Expert Group Meeting on Open-Source Software Solutions for the Public Sector in the Arab Region (Cairo, 19-20 December 2006) was organized jointly by ESCWA and the Programme of Information

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[1]   The World Summit on the Information Society (WSIS), "Declaration of Principles: Building the Information Society – a global challenge in the new Millennium" (WSIS-03/GENEVA/DOC/4-E), para. 27; and "Plan of Action" (WSIS-03/GENEVA/DOC/5-E).

[2]   The World Summit on the Information Society (WSIS), "Tunis Commitment" (November 2005, WSIS-05/TUNIS/DOC/ 7–E), para. 29.

[3]   The World Summit on the Information Society (WSIS), "Tunis Agenda for the Information Society" (November 2005, WSIS-05/TUNIS/DOC/6(Rev.1)-E), para. 49.

and Communication Technology for Development in the Arab Region (ICTDAR) in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO).

8.   The Meeting aimed to develop strategic approaches, methodologies and modalities for the adoption, implementation and development of FOSS solutions for the public sector, in accordance with the WSIS outcome and with a particular focus on the governmental and higher education sectors for reviewing specific software solutions and deployment methodologies.

9.   Moreover, the Meeting, which was attended by 31 experts and policymakers, sought to streamline the process of implementing FOSS solutions in accordance with WSIS goals, thereby facilitating the exchange of information among experts and decision-makers on the challenges of adopting FOSS at the national level, and the industry standard practices for its deployment at the sectoral and/or institutional levels. It brought together experts and policymakers who have undertaken, or are in the process of undertaking, the implementation of FOSS solutions with regional stakeholders contemplating such initiatives.

10.   The nine sessions of the Meeting included case studies from selected countries, and contributions from regional and international organizations that have carried out FOSS projects, particularly the Asia-Pacific Development Information Programme (APDIP) and UNESCO. The topics covered the main challenges facing the use of FOSS solutions at the institutional and national levels in developing countries; experiences and success stories related to the deployment of FOSS in developed and developing countries; FOSS solutions for governmental and higher education sectors; strategic approaches for the adoption of FOSS; and regional needs for deploying FOSS solutions in the Arab region.

I. RECOMMENDATIONS

11.   As a result of the discussions of the Meeting, which were summarized in the closing session, the participants agreed on the following:

(a) To establish a network among existing communities and experts in the Arab region through an online portal as a means of promoting collaboration and aimed at introducing open-source communities in the region to each other; and identifying centres of excellence and, eventually, facilitating the coordination between these players. The portal is expected to compile and provide information on the industry standard practices in the region and on different topics as the basis for building on existing capacities. The management of the portal could be spread regionally with facilitators on a rotational basis, bearing in mind the importance of maintaining the qualities inherent in open-source communities in terms of flexibility and organic growth. ICTDAR had committed to leading the process of creating this portal in the first half of 2007;

(b) To raise awareness of Governments on the values of open-source software as an alternative to proprietary software through meetings, workshops and case studies; to provide decision-makers in the public sector with adequate information on open-source software solutions and their uses in different activities, thereby enabling them to consider it as an option among available alternatives. When informed of the opportunities provided by open-source software solutions and the process for benefiting from them, Governments could make their own choices according to their programmes, strategies and priorities;

(c) To build the capacity for the use of open-source software in education by promoting a vendor neutral curriculum for university education, with emphasis on general concepts, and working with different templates; by developing the culture of open-source software among potential users; and by supporting a modular curriculum on ICT for development within which FOSS could be a component. Moreover, increasing practical learning in addition to theoretical learning could increase the skills of students, which represents a vital asset for future development. A well-prepared modular curriculum could be adopted by universities in the region;

(d) To promote the Arabization and localization of successful experiences, including developing open courseware in Arabic; and to support efforts aimed at providing Arabic versions, in one modular package, of all the software that small- or medium-sized businesses could need. This concept is sometimes referred to as "enterprises in-a-box".

II. DISCUSSION TOPICS

12. The subjects addressed during the Meeting are summarized in the sections that follow.

A. GLOBAL PERSPECTIVES AND STRATEGIC DIRECTION FOR FOSS

13. The first session presented an overview of the needs and opportunities of FOSS, with a focus on the needs of developing countries and the most important benefits from using FOSS, and the opportunities arising from FOSS applications for socio-economic development that make it an attractive alternative to proprietary software.

14. The most important benefits from using FOSS include the following:

(a) Reducing costs, given that FOSS can either be downloaded free of charge or costs substantially less than proprietary software;

(b) Improving security, given that the source code can be checked by a large number of developers and the stringent multi-user security features of the UNIX operating system;

(c) Reducing reliance on imports, while avoiding political pressures and delays in updates;

(d) Encouraging vendor independence through open standards;

(e) Reducing software piracy, thereby avoiding penalties by the World Trade Organization (WTO) on intellectual property rights (IPRs);

(f) Increasing technical skills of the software development community.

15. Moreover, the opportunities resulting from using FOSS are as follows:

(a) Promoting the development of local software capabilities, thereby improving the growth of ICT industry and developing a knowledge-based economy;

(b) Improving the localization of software such that it meets local needs and develops local expertise in providing support services in a timely manner;

(c) Expanding applications aimed at satisfying the basic needs in the large socio-economic sectors of education and Government;

(d) Developing partnerships and expanding collaborative work, thereby leading to international networks and capacity-building.

16. Additionally, in the first session, ICTDAR presented the perspective of the United Nations Development Programme (UNDP) on the use of FOSS as a tool for development, and FOSS initiatives around the world, stressing those objectives for the Arab region that are within the framework of ICTDAR.

17. UNDP views FOSS as a catalyst and a driver for truly harnessing the power of ICTs as a tool for development. Building local capacities and encouraging national research and efforts in relation to FOSS

requires a gradual strategic shift for developing countries from mere consumers of technology and knowledge products that are created elsewhere, with the huge associated costs of importing and localizing that sometimes aggravate the developmental gap, to contributors to the development of such tools and knowledge that directly and more effectively target local developmental objectives. Such a strategic shift also implies economic stimulation and new job opportunities through the creation of new businesses that produce and support FOSS solutions.

18.   The significant role of the United Nations was addressed within the context of a presentation on FOSS, particularly in terms of promoting open-source at the global level and within the organization itself. In that light, the United Nations continues to advocate policies for the promotion of the information society in developing countries, which includes a strong focus on open-source software. In addition, the United Nations is implementing open-source software in several regional and global initiatives. Moreover, this presentation examined the institutional policy of the United Nations towards open-source development, including the experience of the organization in implementing open-source products; reviewed and discussed specific software packages; and highlighted the resources that are freely available and that are currently being provided by the United Nations.

B. FOSS SOLUTIONS FOR GOVERNMENTS

19.   The second session addressed FOSS solutions for Governments, with a number of presentations that are summarized below.

20.   In the area of understanding and overcoming obstacles to implementing FOSS, a presentation addressed the barriers facing open-source software (OSS) and reviewed the successful experiences and the lessons learnt. While the public sector's interest in OSS is intensifying, with many Governments turning to freely available software in the belief that it is quick and inexpensive to implement and can be tailored to their needs, OSS still faces barriers and obstacles. In many regions of Europe, including mostly Associate Candidate Countries (ACC) and New Member States (NMS), the barriers are even more pronounced as a result of various social, political, economical and technical factors. The barriers faced in Europe and the experiences that were successful in the adoption of OSS in the public administration enabled the establishment of lessons learnt. Governments have a unique opportunity to promote the adoption of open source. Specifically, the large-scale adoption of applications at the local level and the influence of favourable procurement can come together to make OSS Government applications a viable option during the next five years.

21.   The Intranet of the Government of Iraq was presented, focusing on the experience built during the past two and a half years to develop the first Intranet to serve the public administration of that country. The project is being implemented with project counterparts from the Government of Italy, and OSS was chosen as a platform for the server farm under the administration of the Ministry of Science and Technology in Iraq. Within that context, the Italian counterparts built the capacity of staff within the Ministry through an intensive training of trainers programme, who in turn provided training to staff in other ministries in Iraq. The OSS based network is currently serving some 12 ministries and is set to expand.

22.   A presentation on the open solutions for the public sector in Sudan focused on the activities of the FOSS research and development task force, which was initiated by the National Information Centre, and whose objectives include raising awareness and designing a national comprehensive plan. Moreover, workshops were organized for information technology managers of Government ministries and for librarians of the Sudanese National Electronic Library, which has resulted in the adoption of FOSS products in the teaching and administration of some universities.

C. EXPERIENCES AND SUCCESS STORIES RELATED TO THE ADOPTION OF FOSS
BY DEVELOPED AND DEVELOPING COUNTRIES

23.   The third session included experiences and success stories from Saudi Arabia, Morocco and Tunisia. These are summarized below.

24.   This presentation, entitled "Towards an OSS in Saudi Arabia", highlighted efforts by Saudi Arabia aimed at localizing OSS and proposed the development of a national initiative that includes a centre to act as a point of reference for OSS, thereby facilitating the development, coordination and implementation of OSS for the public sector. In the light of the many concerns faced with implementing propriety software in the region, including licensing fees, vulnerabilities and possible vendor lock-in, the King Abdul Aziz City for Science and Technology (KACST) has encouraged the development and localization of OSS in Saudi Arabia. In 2000, KACST and the Computer Society worked on their first joint project for Arabizing Linux, and developed an Arabic email client and editor for Linux users. Following that project, KACST has conducted several OSS projects through which it has contributed to the localization of such international OSS products as K Desktop Environment (KDE), OpenOffice and Fedora. Additionally, KACST developed its open-source fonts for Linux; and is currently developing an Arabic spelling checker and a maths editor for OpenOffice, and working on Arabizing educational OSS for children.

25.   In the area of free software, a presentation addressed the experience and efforts of Morocco aimed at benefiting from the opportunities of FOSS. Most of the current software is proprietary, with a low percentage of use of the functions and a high cost of licensing and update, which has encouraged the administrations in Morocco to raise the issue and take the first steps for using various FOSS solutions, including Redhat, PHP, MySQL and Apache. Consequently, the first seminar on FOSS, which was organized by the Ministry of Economic and General Affairs, resulted in the establishment of an ICT laboratory, and the preparation of a feasibility study aimed at establishing a free-software centre to benefit other administrations.

26.   The experience of Tunisia was raised in a presentation on the national plan for free software. Stemming from the potentials of ICTs to support sustainable development, a number of interrelated factors were considered of importance for realizing its benefits, including deploying ICT infrastructure, building human capacity, establishing a transparent and inclusive policy process, creating incentives for enterprise and developing appropriate content. In order to attain development objectives through ICTs, decision-makers need to define a strategic framework for designing, prioritizing and implementing development activities. This requires formulating adequate national strategies, agendas and policies aimed at meeting the special local needs.

27.   In order to disseminate the culture of FOSS and promote its use in Tunisia, a national plan on open source was agreed on in June 2003. This plan focuses on the education and research sectors that represent a challenge for building the local experience, and that can mobilize awareness about the benefits and limitation of the deployment of open-source tools in the public sector. According to this plan, solutions based on FOSS must be perceived as complementary to the implementation of information systems, rather than be imposed.

D. FOSS IN EDUCATION

28.   The fifth session addressed the use of FOSS in the education sector. The presentation, entitled "From open source to open educational resources: challenges and opportunities for the Arab world", reviewed the challenges and opportunities of the Arab region, and the potential policies and their implementation requirements. History has proved that education and discovery are best advanced when knowledge is shared openly. The idea of open courseware is an opportunity that the Arab region needs to seize during the next decade. While open courseware can seem counterintuitive in a market-driven world, knowledge must be freely available to those who want it. In the long term, it can speed up development by constantly widening access to information and by inspiring others to participate. However, open courseware by itself does not

meet the education development requirements, and there are many gaps in the open educational resources in the areas of design, delivery and distribution.

29.   A presentation on the sharable content object reference model (SCORM), entitled "SCORM and open systems to develop collective intelligence: a case study on 'Moodle Plus' e-learning platform" reviewed the way to develop collective intelligence by implementing a project by the Faculty of Engineering of the Antonine University in Lebanon, namely, "Moodle Plus". This project helps students, tutors, instructors and professors to develop and experiment online learning environments and collaborative learning. Moodle Plus is based on the course management system, Moodle, and a FOSS package and advanced software, ChartDirector, in addition to other open-source components. Using, among other benefits, video stream technology, Moodle Plus improves the students programming performance and productivity, by encouraging them to think globally and to integrate heterogeneous solutions.

30.   Another presentation addressed the importance of learning management systems (LMS), particularly in the light of learning technologies and the increase in demand for e-learning solutions. The features and advantages of sound LMS were reviewed, highlighting the status of open-source LMS in this process, and the reasons for considering it for various educational institutes.

31.   The enhancement of LMS at the Arab Open University (AOU) in Jordan was presented, highlighting the transformation of the University from a manual to a fully automated, integrated and interfaced system that encompasses human resources and payroll system, an archiving system and financial systems. This was achieved by installing and implementing a comprehensive and integrated management information system. The presentation reviewed the features of the LMS, including the enhancements made to it as a result of its integration to the student information system (SIS), thereby making it a good learning environment for students in line with the overall regulations and management process of the University. That system, which is used for student accounts, courses and groups, resulted in reducing time wastages; automatically generating accounts; and minimizing faults, mistakes and errors. The system is currently being used as a standard by the headquarters and branches of the University, and includes a large number of activities, including as follows: applications, course packages, academic plans, basic information, admission and registration, tuition fees, student information, semester timetable, staff tutors, academic results and quality assurance procedures.

E. FOSS POLICIES

32.   The sixth session centred on two presentations. The first focused on FOSS policy and presented the experience of the Asia-Pacific region in the use and development of FOSS. The over-protection of software, particularly proprietary data-storage formats, was considered the cause of many of the software problems of the future. Software is protected by three laws under IPRs, namely: the copyright patents, trademarks and trade secrets. The software patent systems are a burden for writers who need to check all the patents to see any infringing patent. On the other hand, the free software, with its freedoms to use, study, modify and share, FOSS allows sharing of research and development costs and does not exclude the existence of proprietary software. The key motivations are reflected in the benefits accrued in the following areas: total cost of ownership, national security, localization, local software industry, vendor negotiations, copyright infringement, institutional agility and data longevity.

33.   The different policy approaches include mandating FOSS, preferring FOSS, mandating open standards, value for money, no policy on FOSS and/or open standards, and Government interoperability frameworks. Moreover, this presentation highlighted such key obstructions to FOSS as vendor bias resulting from legacy systems, non-existent ecosystem for FOSS, the pirate economy and technology transfer, tied donor money, and usability and maturity levels of FOSS applications.

34.   The second presentation reviewed governance, architecture and procurement (GAP) principles in e-government projects both globally and in the United Kingdom of Great Britain and Northern Ireland. The

presentation identified a set of principles covering ICT governance, architecture and procurement that have been driven by strong economic imperatives and advances in technology, and that have been developed by leading private sector organizations in recent years. Most, if not all, of these organizations have global operations, which benefit when governance is improved in developing countries. Each of these companies has therefore a vested interest in seeing the GAP principles applied by Governments across the world.

35. Currently, Governments are facing a set of global economic challenges that require solutions, particularly in the provision of such basic services as clean water, food, health care, shelter and economic opportunity for all citizens. While ICT is not a cure to all the development challenges of emerging-market economies, it can play a significant supporting role. When effectively implemented with good governance and architecture, ICT can support and speed up the achievement of development objectives with the broadest benefits for society. However, poorly implemented and governed ICT only wastes valuable resources that benefit no one. This presentation asserted that GAP principles can and should be adopted by the Governments of developing countries, thereby increasing the success of their e-government projects, and delivering significant efficiency and economic gains for their local constituents.

F. OPEN-CONTENT INITIATIVES

36. The subject of open-content initiatives was addressed at the seventh session of the Meeting. The first presentation, entitled "Towards open content and social networking", identified that participation was the key to the achievement of cultural diversity, safeguard of the Arab identity and creation of common initiatives for knowledge production. There is a strong case for open content and an evolution towards collective improvement of knowledge through collaborative tools, thereby leading to the integration of distributed knowledge throughout social networking. This is illustrated by the advent of Web 2.0, the second generation of Internet-based services. Faced with this rapid evolution, many questions related to the status of the Arab region arise, primarily in terms of the barriers inhibiting Arabic content and tools, the incentives to create knowledge in Arabic, and the extent to which Arab people are included in the process.

37. The second presentation, entitled "Open standards and Government interoperability frameworks", covered the open standards that are controlled by a collective or corporation, involving availability; maximum end-user choice; no discrimination, extension or subset; no predatory practices; and no royalty licensing. Interoperability involves the ability of a given product to work with other products without special effort on the part of the user, thereby reducing vendor lockin and the cost of technology, lowering obsolescence and increasing data longevity. This makes it easier to develop, maintain and use applications; ensures accessibility for the aged and disabled; and fosters the growth and adoption of FOSS.

38. The key motivations for the use of open-standard policies lie in the following: the State owns its data; citizens do not have to pirate or purchase software in order to interact with the State; and vendors are neutral with regard to Government tenders, curricula, security, privacy and local innovation. The architecture of business functions needs to be service-oriented in order to improve interoperability, flexibility and reuse. The preparation of Government Interoperability Framework (GIF) can be the official document that includes the agreed policies, technical guidelines and standards that increase interoperability between governmental agencies. This framework complements FOSS and open-standards policies, promotes a pragmatic policy position, allows each Government to articulate its own definition of open standards, and presents a clear mandate and means of monitoring and enforcement.

G. REGIONAL DIMENSION FOR FOSS

39. A presentation, entitled "A regional strategy for promoting the use and development of FOSS", addressed the regional dimension for FOSS and highlighted various major needs, namely: (a) promoting and developing FOSS in the Arab region; (b) raising awareness among the public and decision-makers concerning the seriousness of the issue; (c) building human capacity to support the development and use of FOSS; (d) presenting practical FOSS solutions as alternatives to proprietary software; (e) establishing sound

management for the implementation plan of the strategy; (f) encouraging cooperation among all parties involved in FOSS activities at the local, regional and international levels; and (g) preparing a proposal that seeks to finance the plan.

H. GROUP DISCUSSIONS

40.　Group discussions took place during sessions four and nine, each of which included a panel discussion on a subject area, namely: (a) FOSS solutions for the public sector in a regionally customized and culturally appropriate model; and (b) challenges facing developing countries in adopting FOSS and ways to overcome them.

41.　The participants focused on the value of FOSS and the different solutions it can provide in education, and considered the needs versus costs that need to be emphasized during the decision-making process. Specifically, imbalances between the needs and costs could either promote or obstruct the use of FOSS. The solution for this imbalance could be to keep the options open and focus on general directives in university education.

42.　In terms of promoting FOSS as an option and facilitating its use for development at the national level, participants stressed on the need for an enabler in each country to provide information and support services on FOSS. Furthermore, they emphasized the need to foster partnerships and collaboration between the private and public sector aimed at mobilizing the available opportunities and resources in order to use and benefit from FOSS.

43.　Governments can play a significant role in the use of FOSS in the public sector, within the framework of the relevant legislation. However, the software community, which does not wait for appropriate legislation, needs to be encouraged to play a more active role, thereby promoting awareness on FOSS.

44.　A network for disseminating FOSS that is driven by its community could connect the active players on FOSS and, moreover, could sustain itself through the collective efforts of its members, and enable the provision of information and support services while developing FOSS. Starting the network could include the mapping of the FOSS community in the Arab region and connecting them. By connecting the software development players, the network could help to empower them, and promote the dissemination of FOSS and raise awareness on its use and potential benefits.

45.　Identifying centres of excellence to be focal points for the region could be the way to support and strengthen those bodies that excel in FOSS, who could be the reference point for support services or information. Furthermore, participants raised the issues of financing the FOSS network and awareness activities, and emphasized the importance of involving a consortium of stakeholders and of diversifying the financing resources.

III. ORGANIZATION OF WORK

A. VENUE AND DATES

46.　The Meeting was held at the Nile Hilton Hotel in Cairo, from 19 to 20 December 2006.

B. OPENING

47.　Acting on behalf of Mr. Yousef Nusseir, Chief of the Information and Communication Technology Division of ESCWA, Mr. Mansour Farah, Leader of the ICT Policies Team, delivered the opening speech of the Meeting in which he highlighted FOSS as a significant tool in the field of ICT at the international level, particularly for developing countries. While the use of FOSS is almost equally spreading in both industrialized and developing countries, the increase in its use in developing and Arab countries has a special

aspect in the light of its association with a wider use and distribution of modern technologies that can drive the development process. Mr. Farah underscored the recommendations of the Arab meeting on FOSS, namely, the call to support the efforts aimed at using FOSS in the different national institutions of the Arab region; the need to collaborate on the development of this software in Arabic; and the need to promote capacity-building by employing FOSS towards development.

48. The Meeting exchanged information and existing experiences in the adoption, development and deployment of FOSS in an attempt to arrive at a common ground for cooperation and partnership aimed at making better use of modern technologies for development. While FOSS is free in terms of access, its use and subsequent maintenance is not free. Benefiting from the use of FOSS requires high skills and qualifications that are sometimes lacking in developing countries. Moreover, there is a significant need to build capacity and invest in the development of knowledge and skills of the work force at the national and regional levels. This requires financial resources, commitment and collaboration in order to ensure the sustainability of the process.

49. Ms. Najat Rochdi, Regional Coordinator for ICTDAR, highlighted the impact of the digital revolution during the past decade on the various sectors of the economies, including lowering costs; and fostering closer links between Governments and citizens, suppliers and consumers, thereby achieving progress towards meeting their needs. Stemming from the importance of this influence in a networked world and on market competitiveness, Governments seek to modernize their public administration and improve its services in order to meet the needs of citizens and advance towards socio-economic development. In addition to acting as tools for the modernization of public administrations, ICTs form part of the institutional reform process and act as key components for institutional competitiveness. Consequently, rather than being limited to a choice in the area of technology, ICTs become a political choice whose innovative systems can provide efficient, optimal and transparent services, and apply values of good governance.

50. Networked communities of users invented and shared code that instruct various pieces of hardware to work together, and new operating systems and software have been developed and are being increasingly used. Given that the code is available to all end-users, who in turn can make modifications and add to the code, FOSS is a natural term to describe such software. Currently, users have the choice between existing commercial solutions and FOSS, and are able to make more informed choices with respect to possible software solutions and the merits of each solution. Furthermore, sharing the experiences on FOSS enables the establishment of best practices and feeds into a fair and open dialogue among all stakeholders for the development of the information society in the region.

51. Mr. George Awad, Communication and Information Programme Officer at the Regional Office for Education in the Arab States, UNESCO, reviewed the relatively long experience of UNESCO and its partners to incorporate FOSS in the education and science sectors. However, given the existing infrastructure, laws and lack of up-to-date plans, FOSS does not fall in the priority list of UNESCO Arab region member countries. Hence there is an urgent need to lay the groundwork for a new strategy that could be implemented gradually, and to overcome collectively the challenges forced by the region from educational, social and cultural points of view.

C. PARTICIPANTS

52. The Meeting was attended by 31 participants, from eight ESCWA members, namely, Egypt, Iraq, Jordan, Lebanon, Palestine, Saudi Arabia, Syrian Arab Republic and Yemen; and from three Arab countries in North Africa, namely, Morocco, Sudan and Tunisia. The participants comprised mainly experts from the academic sector, public sector, business community and international organizations (the list of participants is contained in annex I of this report).

D. AGENDA

53.   Presentations and discussions over nine sessions covered a number of themes. The agenda of the meeting is summarized and set forth below.

1.   Opening;

2.   Global perspectives and strategic direction for FOSS;

3.   FOSS solutions for Governments;

4.   Experiences and success stories related to the adoption of FOSS by developed and developing countries;

5.   Challenges facing developing countries in FOSS adoption and ways to overcome them;

6.   FOSS in education;

7.   FOSS policies;

8.   Open-content initiatives;

9.   Regional dimension for FOSS;

10.   FOSS solutions for the public sector in a regionally customized and culturally appropriate model;

11.   Closing.

E. DOCUMENTS

54.   A list of the documents submitted to the meeting is contained in annex II of this report and is available on the ESCWA website at: http://www.escwa.org.lb/divisions/ictd/events/19dec06.asp.

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1. Background documents:

   Free/open source software: a general introduction

   The Malaysian public sector open source software master plan

   Decision by the Prime Minister: Approving the master plan "Applying and developing open source software in Vietnam for the 2004-2008 period"

2. Presentations and papers:

   FOSS: needs and opportunities

   The UNDP perspective: FOSS as a tool for development, and the FOSS initiative in the Arab region

   Free and open source software and the United Nations

   Understanding and overcoming obstacles to FOSS implementation

   Iraqi Government Intranet

   Sudan open solutions for the public sector

   Towards an OSS in Saudi Arabia

   Government initiatives on free and open source software in Morocco

   National plan for free software in Tunisia (in Arabic)

   From open source to open educational resources: challenges and opportunities for the Arab world

   SCORM and open systems to develop collective intelligence: A case study on "Moodle Plus" e-learning platform

   Open source learning management systems

   Enhancement of learning management system at the Arab Open University

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   GAP principles in e-government projects globally and in the United Kingdom

   FOSS status quo and the remaining technical effort for mainstream adoption in the Arab world

   Open standards and Government interoperability frameworks

   A regional strategy for promoting the use and development of FOSS