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Economic and Social Commission for Western Asia (ESCWA)

REPORT

**OF THE EXPERT GROUP MEETING ON DEVELOPING THE ICT
SECTOR IN THE ESCWA REGION
BEIRUT, 11-12 MARCH 2009**

Summary

An Expert Group Meeting on Developing the ICT Sector in the ESCWA Region was held in United Nations House, Beirut on 11-12 March 2009. The meeting was held to address the obstacles facing the development of a self-reliant and sustainable ICT sector in the region, and to propose solutions that would enable a flourishing ICT sector in the region.

The meeting discussed the development of the ICT sector in the region; ICT financing, venture capital and entrepreneurship; the human and financial resources needed to develop the ICT sector; national ICT strategies and policies and their implementation; regulatory status of the sector in ESCWA member countries; trade considerations for ICT products; the contribution of the ICT sector to the GDP of ESCWA member countries; performance measurement and available tools to sustain the ICT sector.

A set of recommendations and elements of a plan of action for the development of a viable ICT sector in the region were issued during the meeting. The meeting was attended by 27 participants, including Government officials responsible for drafting and implementing national ICT policies and strategies, national and regional ICT experts, experts from the financial sector and some ICT businesses.

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Introduction

1. Before the current global economic crisis, experts projected smaller worldwide growth rates for the Information and Communications Technology (ICT) sector. An industry report¹ shows that worldwide ICT growth figures in the first few years of the 21st century were frequently above 10 per cent, reaching a peak of 12.3 per cent in 2004. The same report predicted that demand for ICT products will fall due to the weakening economies of developed countries and that worldwide ICT growth rates will drop to 3.6 per cent in 2011. ICT investors have been taken aback by the significant slowdown in the ICT sector as they have been accustomed to annual double-digit growth rates.
2. The performance of the still nascent ICT sector in the ESCWA region appears to be closely tracking the downward global trend, and while the fall in growth rates may not match worldwide figures, the conclusions are the same: the regional growth rate of the ICT sector is expected to slow down significantly in 2009 and 2010.
3. ESCWA member countries that have taken double-digit growth rate in the ICT sector for granted will have to come to terms with single-digit growth in the latter part of the current decade. This downward trend seems to apply to the more developed economies of the oil-rich Gulf countries and the economies of poorer countries in the ESCWA region. For example, the growth rate of the ICT sector in Kuwait exceeded 17 per cent in 2004, but may not reach 7 per cent in 2009; in Egypt, the growth rate reached 17 per cent in 2004, but is projected to be less than 10 per cent in 2009. Taken together, these figures do not paint a rosy picture for the ICT sector in the ESCWA region.
4. The worsening global and regional economic conditions will only make it harder for the ICT sector to overcome prevailing difficulties. These difficulties include an over-reliance on the purchase and deployment of technologies created elsewhere; pervasive neglect of policies and strategies aimed at promoting the development of a national and regional ICT sector that is capable of optimizing the use of existing human and financial resources in order to meet the needs and requirements of local and regional markets.
5. ESCWA organized the Expert Group Meeting (EGM) on Developing the ICT Sector in the ESCWA Region (Beirut, 11-12 March 2009), with the aim of addressing the obstacles facing the development of a self-reliant and sustainable ICT sector in the region, and proposing solutions that could pave the way for a flourishing regional ICT sector. The issues addressed include developing the ICT sector as viewed from national and regional perspectives; ICT financing; venture capital and entrepreneurship; the human and financial resources needed for the development of the ICT sector; the formulation and implementation of national ICT strategies and policies; the regulatory status of the ICT sector in ESCWA member countries; trade considerations for ICT products; contributions of the sector to the Gross Domestic Product (GDP) of member countries; measuring sectoral performance; and sustainability of the ICT sector.

I. RECOMMENDATIONS

6. The following recommendations were proposed on the development of a sustainable ICT sector in the region:
 - (a) The deployment of cheaper and faster Internet connections is essential for the success of strategies to develop the ICT sector, and would necessitate priority action to make it widely available in all economic sectors, from education and health to national security;
 - (b) Developing a vision for the ICT sector and making necessary corrections to ICT strategies is essential in order to respond to market transitions and promoting investments which can lead to the creation of new jobs;

¹ World Information and Technology Service Alliance. 2008. *Digital Planet*.

(c) Encouraging Governments to build an enabling legislative, regulatory and financial environment for the ICT sector and its components, such as the software and Digital Arabic Content (DAC) industry, and ensuring that Governments provide incentives to small and medium-sized enterprises (SMEs) involved in the ICT industry;

(d) Governments in ESCWA region need to establish a regional fund in partnership with international finance organizations to promote an enabling environment for ICT production rather than only facilitate trade and consumption;

(e) The private sector and Government should partner to assist the ICT sector in overcoming the impacts of the financial crisis, through a formula that gives the majority of ownership to the Government and the lead management to the private sector, and with cost and profit sharing;

(f) Strengthening of national and regional ICT economic planning is essential for promoting and quantifying the contribution of the ICT sector to economic growth, as well as supporting initiatives that create job opportunities in the ICT sector;

(g) Priority should be given to enhancing the quality of education, especially in ICT specializations, in order to keep up with technological developments and international education programmes;

(h) Efforts should be directed at initiating collaboration agreements between the public and private sectors and academic institutions in order to harmonize cooperation mechanisms and strengthening regional capacity to address existing obstacles/challenges to the ICT sector;

(i) Participants called on ESCWA to intensify its research on the current status of the ICT sector in the region and its contribution to economic growth, and address ways to face the challenges and solve emerging issues.

II. PRESENTATIONS AND DISCUSSIONS

7. The sessions covered the regional economic perspectives of the ICT sector; initiatives for the development of the ICT sector; ICT sector measurements; national ICT sector strategies and ICT sector entrepreneurship and capacity-building. Meeting sessions included two panel discussions that addressed the impact of the global financial crisis on the ICT sector, and challenges facing the sector and their envisaged solutions.

A. REGIONAL ECONOMIC PERSPECTIVES OF THE ICT SECTOR

8. The session included four presentations on: (a) the development of the ICT sector in the region within the framework of the implementation of the Regional Plan of Action for Building the Information Society; (b) the ICT sector as a contributor to national economies; (c) risks and opportunities for the Arab ICT sector in the light of the international economic crisis; and (d) financing ICT ventures and the repercussions of the global crisis on the region.

9. The first presentation was on the Regional Plan of Action (RPoA) for Building the Information Society, which includes a programme for developing the ICT sector. A briefing was given on the objectives of the RPoA that was prepared by ESCWA in 2005 within the framework of regional preparations for the World Summit on the Information Society (WSIS). The RPoA is a dynamic and continuously evolving plan comprised of 10 programmes and about 40 regional projects that would be implemented through public-private partnerships (PPPs). Programme 5 of the RPoA seeks to develop the ICT sector in the region, in terms of services, software and hardware, through regional projects that facilitate PPPs among stakeholders in the ICT sector and promote the establishment of ICT incubators and favourable legislative environment for the development of the ICT sector.

10. The second presentation shed light on the future challenges facing organizations and economies, and the role of ICTs in stimulating economic growth. Enterprises increasingly need to work in a dynamic and

borderless manner. This will make it possible for them to make savings and reduce costs and increase investments, thereby unlocking the potential of employees within a creative environment. With the right vision and enabling environment, the ICT sector could contribute to tangible GDP growth through the creation of jobs, enhanced competitiveness and overall efficiency, new business models and transparent Government reforms. Strategies are needed to serve industry clusters and enable the provision of true affordable broadband connections, promote PPPs and ensure an effective business process. In 2011, collaborative workspaces will increasingly be time-shifted and distance independent, and connected through simple devices that enable access to secure networked storage facilities; widely deployed broadband will be available with the emergence of high-speed WiFi and WiMax and 3G cellularity and 700 Mhz auctions. New enterprises will be characterized by human networks connected by real-time communication, mobility and uniformity of experience, security and surveillance, new and evolving regulations and business continuity.

11. The third presentation was on the deepening international financial crisis and its economic impacts on global industrial production and merchandise trade. The financial crisis has affected financial, property markets and national economies in the Arab region and resulted in lower fuel prices, project closures, lower profits and economic performance, loss of jobs and reduced money transfers from migrants. Governments need to provide economic incentives through targeted programmes, particularly to high value added services such as those provided by the DAC industry. The risks during the crisis mainly require good managerial skills, depend on market specificities, and are related to difficult decision-making processes.

12. The fourth presentation on financing ICT ventures and the repercussions of the financial crisis in the region began with a quote from John D. Rockefeller who lived through the Great Depression of 1929 and who believed that prosperity will always return. The presentation also referred to a recent ESCWA study² which described the relationship between the venture capital industry and entrepreneurship and the financing of early-stage companies. It then described the nature of the current financial crisis from a global and regional perspective and indicated the causes, impact, and when the crisis may end.

B. INITIATIVES FOR THE DEVELOPMENT OF THE ICT SECTOR

13. The following three presentations were made during this session: (a) the Telecommunications Liberalization Roadmap of Lebanon; (b) PPP initiatives for the development of the ICT sector in Lebanon; and (c) opportunities for the DAC industry.

14. The first presentation highlighted the benefits of telecommunications liberalization to customers, the telecommunications industry and the economy at large, and described the current status of the ICT sector in Lebanon and the liberalization roadmap proposed by the Telecommunication Regulatory Authority (TRA). The Lebanese telecommunications market is currently experiencing stagnation and a lack of competition, with monopolies in both the mobile and fixed line markets and limited competition in the ADSL market. The TRA assessed the strengths, weaknesses and opportunities of liberalization and proposed the introduction of competition to telecommunication markets, while allowing Liban Telecom to have exclusivity over some services for a limited period of time. The presentation also covered the broadband roadmap and the planned introduction of two types of licences of the national broadband licence (NBL) and the broadband licence (BL). An international public auction would be launched to establish the best core, metropolitan and access networks across the country, and it is hoped that the planned broadband licences would complement each other to provide competition at all levels of the broadband value chain. To ensure the success of the proposed liberalization process, the TRA adopted a regulatory framework and a public consultation process, and committed itself to a competitive market-driven model characterized by technologically advanced infrastructure and competitive prices and quality.

15. The second presentation described three PPP initiatives in Lebanon, namely the Partnership for Lebanon³ and broadband and cluster initiatives. The initiatives aim at helping the Lebanese people to attain stability and sustained economic growth through solution-oriented PPP initiatives. The implementation

² ESCWA. 2007. *ICT Finance, Venture Capital and Entrepreneurship*. (E/ESCWA/ICTD/2007/12).

³ More information is available at: <http://www.partnershipforlebanon.org>.

process includes addressing: crisis relief and response; support to ICT infrastructure; workforce training and education; private sector revival and connected communities and Government. Fifteen projects related to ICT infrastructure, education and public sector revival have so far been implemented within the framework of the partnership. The broadband initiative developed a manifesto that stresses the right to true broadband connectivity that is affordable and reliable. The Broadband Manifesto⁴ was signed by most companies in Lebanon, and includes ten points, covering true broadband for all; economic and social development; privacy and security; competitive market access to public infrastructure; unrestricted access; local content and online public services. The cluster initiative includes identified activities carried out in collaboration with the Lebanese Professional Computer Association (PCA).

16. The third presentation discussed the role of the DAC industry and referred to its importance in similar terms as broadband for the ICT sector. Producing DAC requires applications, electronic services and Internet websites. The DAC industry is important to the Arab region as it addresses a real need among the increasing numbers of Internet users in the region and helps to provide Arabic language content in the digital environment. The DAC industry in the region does not currently benefit from a holistic vision that identifies the basis for developing and sustaining it. Websites are not adapted for the needs of most end-users, and when they do they often rely on text-based Web pages, with little investment in technology and multimedia; the design and management of these websites should therefore be enhanced and the content made more interactive and directed to the end-user. The rapid growth in the number of online blogs is a positive indication of the thirst for information among Internet users. E-business-related content can mostly only be found in English, particularly on the websites of Arab banks; e-trade is still in its infancy, with information on business-to-consumer (B2C) activities and limited information on business-to-business (B2B) interaction.

17. The DAC market in the region should mostly be based on Arab language media and entertainment, and on e-business, e-trade and public services. However, the media sector is not preparing for the upcoming convergence of television, Internet and telephony. The obstacles facing the media and entertainment sectors are either related to the supply of or demand for its products. Policies to bridge the DAC divide need to address the socio-economic benefits of DAC, and markets need to develop and use DAC production in order to create jobs and other value added benefits.

C. ICT SECTOR MEASUREMENTS

18. The session on ICT sector measurements covered the following topics: (a) quantifying the contribution of the ICT sector to GDP in Egypt (in Arabic); (b) economic indicators for the ICT sector in Palestine; and (c) the contribution of the ICT sector to building the knowledge economy in the Syrian Arab Republic.

19. The first presentation gave a historic view of the ICT sector in Egypt and its contribution to national accounts, namely to GDP, at both current and fixed prices. It also covered the development of indicators for the sector, namely the 2008 new indicator for measuring the cost of ICT services, future developments in the ICT sector and the envisaged more accurate quantification of the contribution of the ICT sector to the economy of Egypt. Enhancements to the current ICT sector measurement methodologies will make it possible to determine the actual size of the sector and its relative contribution to GDP.

20. The second presentation was on the Palestinian ICT sector – one of the few high-growth economic sectors in Palestine. Since the end of 2007 there were approximately 270 ICT companies operating in the Palestinian territories, these companies are mainly concentrated in Ramallah and Gaza and 88 of them form part of the Palestine IT Association of Companies (PITA).⁵ With sales totalling US\$ 222 million and a GDP contribution of 5.3 per cent, the Palestinian ICT sector has enjoyed promising growth rates. The growth of the ICT sector in Palestine is mostly driven by consumption of telecommunication services rather than information technology products. Today, the IT trade balance value is negative, with higher levels of imports than exports, particularly of hardware products. While there are no accurate statistics for software, PITA estimated that its members spent US\$ 10-14 million per year on software applications. The ICT sector could

⁴ More information is available at: <http://www.broadbandlebanon.org>.

⁵ More information is available at: <http://www.pita.ps>.

enhance the quality of life of Palestinians and create mass job opportunities. Palestinian authorities need to diversify their activities in order to create a knowledge-based economy and develop a vision and strategies based on four key pillars: (a) policy, legislative and institutional reform; (b) business infrastructure for trade and export; (c) financial and investment promotion; and (d) technology parks and ICT accelerators.

21. The third presentation elaborated on Syrian initiatives to develop a knowledge economy, particularly with regard to knowledge management, human resources development, infrastructure and creating an enabling regulatory environment and public policies. It covered the harnessing of ICT tools and the use of knowledge indices, such as the “Knowledge Economy Index” and the “Knowledge Index”. The presentation touched upon the gap that existed between the present-day ICT sector in the Syrian Arab Republic and established goals, particularly in the light of the challenges of unemployment, poverty, migration of skills and talent and weak private and public investments.

D. NATIONAL ICT SECTOR STRATEGIES

22. The session on national ICT strategies covered the following topics: (a) the ICT strategy of Egypt (2007-2012); (b) prospects for the development of the ICT sector in the Syrian Arab Republic in view of the international economic crisis; and (c) the national knowledge-based information society strategy of the Sudan.

23. The first presentation addressed economic progress and reform in Egypt; ICT indicators; the five-year ICT strategy (2007-2012); reform in the ICT sector; the use of ICTs for development and the development of the ICT industry and innovation. The reform of the ICT sector in Egypt sought to engage the country in the global knowledge economy, through national strategies, plans and initiatives, all relying on various PPP modalities. The ICT strategy for 2007-2012 aims to accelerate ICT sector reform, introduce regulations covering the utilization of ICTs for development, and promote innovation in the ICT industry. The reforms are aimed at developing telecommunications infrastructure and services through the expansion of broadband services; reforming the postal sector to enhance its services; increasing private sector participation; enhancing the rules governing the use of ICT in networks and services, enabling access to all citizens; and protecting consumer rights by developing cyber legislation. The presentation also elaborated on the role of PPPs in the use of ICT for development and basic ICT indicators.

24. The second presentation on the prospects for the development of the ICT sector in the Syrian Arab Republic in the light of the international economic crisis described the status of the sector and the vision behind the ICT strategy for socio-economic development that was formulated in 2004 and covers the period ending in 2013. Significant progress has been achieved in implementing some components of this strategy, but progress has been slower than originally planned. The impact of the global financial crisis on the Syrian economy has not been very significant because the country does not have very close links with global markets, especially financial markets; it has limited foreign direct investments (FDI); and is highly dependent on public sector funding, which has been less affected by the financial crisis than the private sector. However, as the crisis persists, indirect negative impacts are expected, including fewer FDI opportunities, reduction in the inflow of money transfers of migrants, reduced exports because of greater international competition, and the return of migrant workers to the Syrian Arab Republic. These negative impacts could be addressed through investments in e-government; automation applications and facilitating the implementation of the ICT strategy initiatives.

25. The third presentation covered the strategy to create a knowledge-based information society in the Sudan. This strategy was formulated in 2002, updated in 2007, and is intended to attain its objectives by 2015. The strategy supports ICT use in the Sudan through initiatives and projects involving PPPs and targets sustainable development. The framework of the ICT strategy includes three interacting pillars: (a) connection and access to information and knowledge, covering ICT infrastructure, industry and capacity-building; (b) electronic services, including e-government, e-education, e-health, e-business and e-society; and (c) policies and strategy implementation, including Government policies that support the components of the national ICT strategy and promote the creation of an information society and the legal and legislative requirements for an enabling environment, as well as the institutional framework.

E. ICT SECTOR ENTREPRENEURSHIP AND CAPACITY-BUILDING

26. The session addressed entrepreneurship and capacity-building through the following presentations: (a) A case study from Lebanon – the Berytech Fund; (b) The Jordanian Research and Development (R&D) Strategy for ICTs; (c) Preparing ICT graduates for the workplace in Jordan; and (d) Yemeni public universities working towards the development of a national ICT sector.

27. The presentation on the Berytech Fund model and ICT start-ups in Lebanon described how the fund was initiated and how it adopted a bottom-up approach through the Berytech incubator, which aimed at meeting equity financing needs during the early-growth stages of ICT companies. The presentation presented data on the number of companies that had been studied by the fund, their profiles, areas of interest and their strengths and weaknesses. In addition to addressing the various issues faced during the incubation period, participants were briefed on how entrepreneurs could be encouraged to seek equity financing.

28. The presentation on the Jordanian R&D strategy for ICTs indicated that the ICT industry in Jordan contributes 10 per cent of the GDP of Jordan. However, despite promising future prospects for the sector, the issue of R&D in ICT has not received the attention it deserves. Jordan needs a national ICT research policy which would involve all stakeholders. The EU-Mediterranean partnership and other existing projects offer a number of opportunities to Jordan but gaps are still apparent.

29. A presentation addressed the contributions that have been made by public universities in Yemen towards achieving the sustainable development of the ICT sector in the country. Universities assisted in the deployment of ICTs through their cooperation on the national ICT project for higher education that has a timeline from 2004 to 2010. The project and its components were reviewed, together with its impact on higher education in Yemen, together with developing the skills of end-users. The financial resources allocated to the project are insufficient and more funding is still needed to complete implementation.

F. DISCUSSIONS

30. Panel discussions held during the meeting addressed the impact of the global financial crisis on the ICT sector, the challenges facing the sector and possible solutions to these challenges. The deliberations of participants are summarized below.

31. The challenges facing the ICT sector at both the national and regional levels include: (a) the unavailability of cheaper and faster Internet; (b) the absence of an enabling legal environment due to limited attention to laws and regulations governing the sector; (c) lower financing and investments in the ICT sector, resulting in reduced demand for software applications, and curtailment of the work of the software industry, thereby forcing many companies out of the market; (d) lack of cooperation and trust between the private and public sectors; and (e) absence of ICT specialization is constraining the development of companies.

32. These challenges are considered to be of limited significance to the growing telecommunications sector in the region, which is expected to remain resilient in the near future. Other ICT sectors, especially those related to software and ICT services linked to foreign markets, may face limited expansion. Also, lower national spending might affect local companies.

33. The importance of FDI was stressed, within the context of joint ventures between local and international companies, while following the right standards that result in directing revenue to the market.

34. Addressing the issue of redundancies, participants favoured a more equitable distribution of salaries within companies rather than laying off employees. Programmes which support employees to create their own businesses could provide a solution, particularly as the company could eventually draw benefits through outsourcing. Government institutions could support and collaborate with companies who could introduce measures for more equitable salaries rather than make them redundant.

35. The ICT sector in the region faces many challenges related to finance, investment, human capital, political, strategic and planning issues, and partnerships between stakeholders; each of these challenges needs to be addressed in the search for solutions. Pooling of efforts and resources through the creation of partnerships and initiating collaboration in and across the region could result in benefits for all.

36. Specialization, comparative advantage and the mechanisms that lead to strengthening cooperation, integration and partnerships are of significant importance. Cooperation needs to be harmonized in order to facilitate regional ICT initiatives and projects. In order to ensure that the skills and talents of returning expatriate workers could be usefully employed in the economy to reverse the brain drain, a plan is needed to incorporate the returning expatriates in the economy.

37. ESCWA was asked to conduct a harmonized study to survey the ICT sector in the region and assess and quantify its progress, and set the research and development needs for the region. The study could be conducted within the framework of the initiative to establish a regional ESCWA Technology Centre for Development. As the principal mandate of the Centre will be to coordinate regional efforts in R&D.

38. All available means to enable creativity and for promoting cooperation and integration in Arab countries need to be pursued. It is essential to ensure that the political will exists in order to strengthen cooperation at the national level and to ensure that ICT can be enabled at the regional level.

III. ORGANIZATION OF WORK

A. OPENING

39. Mr. Yousef Nusseir, Chief of the Information and Communication Technology Division (ICTD) at ESCWA, welcomed participants and the keynote speaker Mr. Dimyanos Kattar, Dean of Management of St. Antonine University and former Lebanese Minister of Finance, Economy and Trade. In his speech, Mr. Dimyanos Kattar addressed the key questions related to developing the ICT sector in the ESCWA/Arab region, particularly those relating to minimal internal rates of return and profit margins.

40. With viable shifts from public to private initiatives in the telecommunications industry, it is essential to maintain a continuous and quality service at a socially affordable price, and to accompany technological innovation with constant content management to sustain growth. The collapse of the telecommunications industry and loss of 2.8 trillion dollars in market value highlighted the need for prudent financing in order to avoid the ICT sector following the same experience as the telecommunication industry. The ICT sector needs to be considered as essential to the national economies of ESCWA member countries, and efforts need to be made to develop and attract investments to the sector, particularly as ICTs play an important role in education and in a region with a young population that is eager to connect to the world.

41. The challenges facing the development of the ICT sector in the Arab region are related to education, culture and politics. Information requires education that in turn involves ICTs. The way information, expression and freedom are handled in the region need to be taken into consideration, and scientific research could be enhanced to advance from a consuming to a sustainable productive society. Effective risk management is essential for investments and requires the right data and matrices to allow a clear analysis of interacting market factors. The common mistakes of sector players is to focus on narrow measures that underestimate the risk exposure of the ICT sector, and failing to communicate transparently to both the public and the private sector.

42. The business enabling environment and the role of Governments are key in developing the ICT sector. Governments could, for example, roll out initiatives and support innovations through special funds; enable the ICT sector to be an engine of economic growth through the production of knowledge; partner with the private sector and civil society in the policymaking process and support SMEs related to ICT services and solutions. The development of the ICT sector could enhance productivity and impact economic growth. The financial resources for promoting the ICT sector should come mostly from Governments (59 per cent), international organizations (26 per cent), from the business sector (11 per cent) and civil society (4 per cent). The Arab region is lagging behind other regions of the world in establishing national regulatory authorities. The debate on whether the ICT sector could increase productivity, reduce poverty and enhance the quality of life of citizens is still ongoing.

43. In the aftermath of the financial crisis, private sector companies around the world, particularly banks and telecommunication firms, called on their respective Governments for bail-out funds. In the Arab region, private sector companies need to call on their Governments to take a majority stake in their companies; however, the private sector could retain control of management functions, research budgets need to be shared

equally and the profits split according to a ratio of 80-20. A fund for each region could be created with institutional partners (60 per cent equity and 40 per cent soft loans) in order to promote ICT production rather than facilitate trade and consumption. The regional fund could partner with SMEs and universities and be listed on a secondary market on the Arab stock market. This would create an enabling environment that attracts knowledgeable workers and motivated Arab youth.

B. PARTICIPANTS

44. The meeting was attended by 27 participants, including Government officials responsible for drafting and implementing national ICT policies and strategies, together with national and regional experts. Experts from the financial sector who work closely with ICT businesses also attended the meeting. The list of participants is contained in annex I of this report.

Annex I*

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