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**ELECTRONIC COMMERCE AND INFORMATION AND COMMUNICATION  
TECHNOLOGIES FOR DEVELOPMENT: SELECTED ISSUES\***

Note by the UNCTAD secretariat

**Executive summary**

This note presents an overview of selected developments in ICT and issues that have been dealt with by the UNCTAD secretariat as part of its work on research and analysis on e-commerce and ICT. It covers work carried out since the seventh session of the Commission on Enterprise, Business Facilitation and Development. In particular, it covers the following: ICT and its relation to economic performance; ICT policies and strategies; the measurement of the information economy; the application of ICT to business (presenting the particular cases of business process outsourcing services and the online marketing of agricultural products). It also summarizes subjects covered in e-commerce and ICT-related events in which UNCTAD has been involved. The note concludes by identifying key areas which have important policy and/or work implications for the Commission in its endeavour to assist developing countries in their efforts to increase their participation in e-commerce and ICT.

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\* The late submission of the present document is due to the fact that the Expert Meeting on Measuring Electronic Commerce as an Instrument for the Development of the Digital Economy, which serves as a basis for part of this document, took place only in mid-September 2003.

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## INTRODUCTION

1. At its last session, held from 24 to 28 February 2003, the Commission on Enterprise, Business Facilitation and Development recommended to the UNCTAD secretariat that it assist developing countries in identifying international best practices regarding policies promoting and facilitating the adoption of Information and communication technologies (ICT) and e-business practices, including the elaboration of national and regional e-commerce strategies for development, and organizing regional events. It also recommended to the secretariat that it carry out research and analysis regarding e-commerce on issues relevant to the development dimension of developing countries, analyse issues related to the measurement and benchmarking of e-commerce and the use of ICT by enterprises, and continue to make a substantive contribution to the World Summit on the Information Society.

2. Pursuant to these recommendations, the secretariat organized a high-level regional conference on e-commerce strategies in Tunis (19–21 June 2003); it is also planning to hold one in Geneva (20–21 October 2003) and another in Rio de Janeiro (25–27 November 2003). It also organized an Expert Meeting on Measuring Electronic Commerce (8–10 September 2003) under the auspices of the Commission. It published the *E-commerce and Development Report 2003*, and provided substantive inputs into the preparation of the World Summit on the Information Society. Furthermore, it prepared a training course on the legal aspects of electronic commerce, which has been validated and is due to be delivered in the near future. More detailed information on these activities is contained in the UNCTAD secretariat report entitled “Progress report on the implementation of the Agreed Recommendations of the Commission at its seventh session” (TDB/B/COM.3/63), which is before this session of the Commission.

3. The purpose of the present note is to outline selected developments and issues in e-commerce and ICT, focusing largely on those subjects that have been analysed by the secretariat as part of its ongoing research and other activities since the seventh session of the Commission. Most of the topics covered here have also provided background information for the *E-commerce and Development Report 2003*. The selection of these issues should not be seen as an indication of their relative importance when compared with other e-commerce and ICT topics, but simply as part of an ongoing, long-term and wider coverage of e-commerce and ICT issues generally.

4. Part I discusses the following: (a) the impact of ICT on economic performance and the growth of Internet access and use; (b) ICT policy and strategies and online dispute resolution; (c) measuring the information society; (d) the application of ICT to business process outsourcing and to the marketing of agricultural exports; and (e) e-commerce and ICT-related events in which UNCTAD has been involved. Part II contains conclusions. The focus of the discussion is on policy implications for developing countries and also the possible contribution by UNCTAD. The Commission may examine the issues discussed in this note as a basis for its deliberations and recommendations.

## I. SELECTED ISSUES

### A. ICT and economic performance; Internet access; free and open source software

#### *ICT and economic performance*

5. It is now widely accepted by most stakeholders that ICT have exerted a strong influence in the shaping of the process of globalization, in productive, commercial and financial spheres, and also in political and societal processes. The Internet is changing the way in which goods and services are produced, delivered, sold and purchased. There is a growing consensus regarding the positive role of ICT as an enabler of economic growth and development. ICT are credited with making firms more productive and hence more competitive. They enable enterprises to exchange and access more information at lower cost and empower buyers and sellers to reach global markets. ICT also enable enterprises to enter new areas of production, including outsourcing, thus making it possible for economies, including developing ones, to diversify. They also offer special opportunities to enterprises in developing countries, including small and medium-sized enterprises (SMEs), because the technologies involved are relatively cheap and readily transferable, as well as involving low market entry barriers.

6. Studies based on aggregate national data show that ICT have had an important impact on the economic performance of some developed countries. This has been achieved through capital deepening, improvement in labour productivity and total factor productivity, and better organization and management of production processes. These studies, however, should be regarded as preliminary, particularly in relation to the situation in developing countries, where there is a need for more detailed studies and surveys that would focus on the experiences in those countries.

#### *Internet access*

7. Alongside the widespread recognition of the positive role of ICT, there has been an impressive expansion in Internet access and application. For example, the number of Internet users worldwide reached 591 million in 2002, representing a 20 per cent growth from 2001. In terms of distribution by country, at the end of 2002 developing countries accounted for 32 per cent of total world Internet use, while North America and Europe accounted for as much as 89 per cent of the world's Internet hosts. Estimates of e-commerce activity also show continued domination by developed countries, such that in 2002 total online retail sales were \$43.47 billion in the United States, \$28.29 billion in the European Union, \$15 billion in the Asia-Pacific region and \$2.3 billion in Latin America. In Africa, online retail sales were apparently negligible in 2002 but were projected to increase significantly in 2003. Estimates also show the dominance of business-to-business online sales in total e-commerce, accounting for example for 93.3 per cent of all e-commerce in the United States. These figures should be read bearing in mind that the expansion in Internet access and use does not necessarily correlate with an expansion in e-commerce.

8. The continued gap in Internet access and use between developed and developing countries reinforces the need to take measures to support the development of ICT in those countries, bearing in mind that increasingly ICT is becoming an important determinant in the competitiveness and overall economic performance of countries.

*Free and open source software*

9. Computer software plays a key role in the development of ICT, and therefore its cost and the systems under which it is produced and distributed have an important contribution to make to ICT development generally. The introduction and growth of free and open source software (FOSS) changes the whole system of production and distribution of software and thus has far-reaching implications for ICT development as regards cost, availability and opportunities offered to the user. Developments in FOSS were outlined in the background paper prepared for the Commission for its seventh session (TD/B/COM.3/49).

10. This topic continues to attract the attention of policy makers around the world, and many Governments in both developed and developing countries are taking measures to promote the use of FOSS. For instance, some Governments encourage government departments and government-owned institutions to use FOSS where these represent suitable alternatives to proprietary software, and in order to avoid being bound to software-hardware upgrade requirements.

11. Developing countries should therefore be encouraged to promote the use of FOSS in both the public and the private sector as a possible avenue not only for increasing the adoption of ICT but also for opening export opportunities related to software production, keeping in mind the growing market share of FOSS-based computer systems. Such efforts should include education and training to ensure the existence of technical expertise for the adoption of FOSS. Also, they should include in-depth studies to determine the most appropriate systems to be adopted, having regard to the relative benefits and costs of FOSS vis-à-vis proprietary software.

**B. Approaches to ICT policy and strategies**

12. While the impact of ICT on economic performance is widely recognized, developing countries continue to lag behind developed ones in e-readiness and e-business. This is mainly due to constraints such as low levels of ICT-related investment, low per capita income, and lack of supportive payment systems, requisite human resources and the right digital culture. Recognizing the benefits that arise from ICT, many developing countries have launched a range of policy initiatives and e-strategies in order to obtain those benefits. The design and the implementation of national policies and e-strategies are an essential component of the process of promoting the growth of ICT. Experience has demonstrated that the Government needs to play an active role in policy formulation, although for the most part ICT activities are left in the hands of the private sector. In particular, the Government needs to play a leading role in establishing ICT activities for relatively disadvantaged groups and SMEs.

13. The lack of awareness about ICT and its applications is still widespread in many developing countries, and thus awareness-raising at all levels of society has been recognized as a priority area in ICT policy and strategy. The development of ICT requires the availability of a skilled workforce that can apply the available technologies, thus giving rise to the demand for training and education. It also requires physical infrastructure, including Internet and computer connectivity, which many developing countries lack. Some developing countries have made efforts to overcome this constraint through, for example, community telecentres, Internet cafés and other schemes to expand Internet access. For the future, the possible expansion of mobile technology for Internet use and also the promotion of free and open source software could be among the avenues that developing countries could use in their e-strategies. Other areas of national e-strategies that need to be addressed include the adoption of appropriate legal and regulatory frameworks in order to ensure the security and confidence of enterprises and buyers and sellers in the use of the Internet. Furthermore, the availability of finance, including foreign direct investment, is essential for the successful implementation of e-strategies.

14. Experience also shows that to be effective, ICT strategies need to be holistic and form part of the overall national development strategy. The success of a national ICT strategy is closely linked to a country's broader development policy framework inasmuch as ICT strategies will depend on the environment of the national economy concerned. For example, by linking ICT policies to other development policies such as education, trade and investment, synergies may result and thus ensure a broad-based diffusion of ICT. The development of ICT also requires strong coordination and cohesion of the various ICT-related activities and initiatives.

15. While national policies and strategies are a central part of ICT development, the contribution of international initiatives plays a decisive role as well. Thus, a number of such initiatives aimed at promoting the development of ICT in developing countries have been taken. The G8 Dot Force (Digital Opportunity Task Force), the UN ICT Task Force and the World Summit on the Information Society (WSIS) are important examples, together with many other regional ICT programmes. The UN ICT Task Force, for example, gives priority to the provision of assistance to developing countries in formulating ICT strategies, while in the WSIS draft Plan of Action the implementation of national e-strategies is one of the key areas for policy action to advance the information society in developing countries. The WSIS draft also calls for the promotion of development-oriented ICT applications and particularly the use of ICT by SMEs to foster innovation and enhance their productivity and competitiveness. In part, many of the initiatives reflect the important role of ICT in realizing the Millennium Development Goals (MDGs), particularly regarding poverty alleviation.

16. UNCTAD, within the framework of its work programme, has contributed to efforts by developing countries to formulate and implement ICT policies and strategies. Its research has focused on the analysis of ICT developments that can provide policy makers in developing countries with a basis for ICT and e-commerce policy formulation and implementation. In collaboration with other international organizations, UNCTAD can provide valuable

assistance to developing countries by continuing to identify and analyse developments in e-commerce and ICT, particularly as regards their application to e-business in sectors that contribute to export performance and the overall productivity of the economies concerned. The analysis should be complemented with continued awareness raising and training in various aspects of e-commerce and ICT.

17. Furthermore, UNCTAD can help developing countries to enhance their capacity to participate in international discussions and negotiations on ICT development, including the governance of institutions that regulate the use of ICT, for example the Internet. Particular attention may be given to the work being undertaken by organizations such as WTO, OECD, WIPO, ITU and UNCITRAL, as well as continuing UNCTAD's participation in global initiatives such as the UN ICT Task Force and the WSIS, with a view to making certain that the development dimension is ensured.

#### *Online dispute resolution*

18. A factor that has strongly influenced the pace of the adoption of e-commerce is the lack of suitable and supportive legal and regulatory framework. Of particular significance is the lack of a suitable dispute resolution mechanism for e-commerce. Online dispute resolution (ODR) is assuming increasing importance owing to the special nature of e-commerce operations. It builds trust in the relationships between contractors. Over the years ODR has spread to new environments such as e-government, where it helps solve multi-party disputes.

19. Although electronic trade disputes can be resolved by traditional means, solutions such as the referral to a State court may encounter additional challenges: distance between parties, linguistic and cultural differences, difficulties in determining the applicable law and competent jurisdiction, and practical problems in the enforcement of judgements. Moreover, traditional dispute settlement mechanisms may not provide effective redress in e-commerce transactions, as proceedings are normally long and costly. By contrast, alternative dispute resolution (ADR) mechanisms can provide speedy, low-cost redress for claims arising from online interactions. When ADR takes place using computer-mediated communication in an online environment, it is referred to as online dispute resolution. ODR mechanisms can apply to both online disputes and offline disputes.

20. The three main forms of ADR used to solve online disputes are arbitration, mediation and negotiation. They are all less formal than litigation in court and their use in commercial disputes has increased to such an extent that the ADR processes are used much more often than court litigation.

21. The specificities of e-commerce transactions give rise to the need for alternative dispute resolution approaches, with the new ways of interacting online in e-commerce operations generating a great number of disputes. At the same time the online environment provides an infrastructure with an array of dispute resolution options that take into account the special qualities of cross-border transactions in which much of the exchange is electronic in nature and the disputants are at a great distance from one another.

22. ODR achieves rapid solutions to disputes; it does so at a lower cost, thus opening up opportunities for new dispute resolution options in cross-border transactions of lesser value. Moreover, ODR processes are particularly needed in situations where new relationships are being formed and existing institutions for legal recourse are lacking or are inefficient.

23. The cost-effectiveness of ODR is not the only reason for its success. It has become apparent that the presence of dispute resolution is an asset that users will also consider as they assess the risks of participating in a new market place or environment, especially when the location or identity of the seller is unfamiliar or the item being sold lacks a well-known brand. This is why developing countries need to pay particular attention to dispute resolution.

24. To assess the impact of ODR in developing countries the UNCTAD secretariat circulated a questionnaire to 46 organizations that offer ODR services around the globe. The survey confirmed that although ODR is still in its infancy and/or non-existent in the vast majority of developing countries, it has the potential to grow and to provide fair and inexpensive adjudication of disputes arising out of online transactions.

25. On the basis of the above observations, developing countries are encouraged to promote and facilitate ODR as an alternative to national litigation. In this connection, they should consider on a priority basis the question of education and awareness-building among merchants and consumers regarding the impact and increasing importance of ADR/ODR in resolving commercial disputes. They should also ensure that national legislation recognizes the validity and enforceability of electronic transactions and facilitates the use of out-of-court dispute settlement schemes. In addition, they should be encouraged to promote voluntary adherence by e-businesses to trust marks and reliability programmes.

### **C. Measuring the information economy**

26. An area gaining increasing attention in the debates on the emerging concept of an information society is monitoring and measuring access to, and use of, new ICTs and the Internet. While a number of countries have started to collect information on certain e-readiness indicators related to ICT infrastructure and access, such as the number of personal computers and Internet users or the rate of Internet penetration per country, little is known about how ICTs are used by companies or individuals, how much business is carried out online and the main barriers to using the Internet. This information, however, is crucial in assessing the current and potential impact of the new technologies, evaluating the impact of national e-strategies and deciding on future policy measures.

27. The monitoring and evaluating of ICT developments, and the need for statistical indicators, have been put high on the agenda, for example of the WSIS draft action plan, as a requirement for assessing the progress made between the two phases of the summit, the first of which will take place in Geneva in December 2003, and the second in Tunis in 2005.

28. Given that ICTs are considered to be an important tool for eliminating poverty, which is one of the key MDGs, the ability to monitor ICT developments using reliable and



internationally comparable data is an important element in the process of monitoring progress towards achieving the MDGs.

29. Currently, there are very little reliable and internationally comparable data available on the use of ICT in enterprises or households. Available data are largely produced by private sector companies, and figures differ considerably between the data providers given that they use different methodologies, definitions and indicators, and that the data are produced on an irregular basis.

30. Because of the importance of producing quantitative information on ICT and e-business, the UNCTAD secretariat started to address the subject in the *E-Commerce and Development Report 2001*. At the last session of the Commission on Enterprise, Business Facilitation and Development (February 2003), member States decided to hold an Expert Meeting on Measuring Electronic Commerce as an Instrument for the Development of the Digital Economy. The Expert Meeting, which took place from 8 to 10 September 2003 in Geneva, generated considerable interest among members, reflected by the participation of 100 experts from 40 countries. The interest shown in the meeting, by both developed and developing countries' experts, confirmed that it addressed a pressing need, which has so far been very much neglected by the international community – namely, the need for better information about the emerging information society, the need for hard data and facts about the use of ICT and the Internet by individuals and companies, and the need to start work to produce the required information and data.

31. So far, discussions on ICT and e-commerce definitions, data and methodologies have largely taken place within the framework of the OECD, which has been leading the discussion on developing indicators for the information society, and in particular e-commerce. As a result, during the past five years, a number of national statistical offices – mainly from OECD countries – have started to collect data on e-commerce and, more generally, on the use of ICT and the Internet by businesses and households. These statistical offices have the advantage of guaranteeing the confidentiality of the data collected, since they take a more neutral position regarding collecting and interpreting the data, and are able to use their existing methodologies and infrastructure for data collection, processing and analysis.

32. However, very few developing countries are represented in the relevant working groups and forums and have thus not participated in the development of the definitions, indicators or tools for measuring ICT. Therefore, the UNCTAD Expert Meeting, for the first time, provided a forum where both developed and developing country practitioners came together to discuss information society and economy measurements, indicators and tools. The meeting thus allowed experts from developing countries to become active participants in such debates and to share their experiences or constraints. Building on previous work by the OECD, the meeting provided an opportunity for experts from all regions to discuss existing and future work at the international level – which had not been the case before.

33. The experts discussed previous work at the international level, analysed national and regional experiences and proposed best practice and guidelines in the area of measuring e-business, especially from a developing country perspective. They also examined the scope for

further work on the establishment of an international database on ICT use in enterprises and assessed the technical assistance needs of countries as regards ICT statistics.

34. A proposal was made regarding a set of core indicators for ICT measurement that could be collected by countries, focusing on e-readiness and use indicators for businesses and households. Such a set of indicators, which could be collected in developing countries without major resource implications, would be the first internationally comparable data set.

35. The meeting resulted in a number of suggestions on how to advance the work on e-measurement, and in particular the development of indicators on the use of ICT and the Internet by business. The experts suggested that UNCTAD continue providing a forum for experts to further develop conceptual and methodological work on ICT statistics and share best practice. UNCTAD could play the role of a catalyst for developing e-business statistics further at the global level. To this end, it was proposed that an online forum be created to foster the exchange of information and tools between statistical offices from developed and developing countries, and to share models of national and regional e-business surveys. As a result, UNCTAD has established a Web portal on ICT indicators. The site provides information on measuring ICT and allows experts to continue their discussion and work towards an agreement on a list of priority indicators for ICT and e-business.

36. In addition to a report to this session of the Commission, the outcome of the Expert Meeting will be reported to the WSIS, during an event organized jointly by UNCTAD, UNECE, OECD, UNESCO, Eurostat and ITU. The event, called "Monitoring the Information Society: Data, Measurement and Methods", will take place on 8 and 9 December 2003 and cover two sessions dealing with measuring e-business, jointly organized by UNCTAD and OECD. On that occasion, the Chairperson of the Expert Meeting will present the results of the meeting, which will then be conveyed to the WSIS. The results of both the Expert Meeting and the WSIS-related event will be reported to the UN Statistical Commission at its next session in 2004.

37. The work on measuring the information economy should be considered to be an important part of the Commission's agenda on ICT development in developing countries. The assessment of developing countries' e-readiness and of the impact of ICT adoption would depend on the ability to measure and compile ICT indicators.

#### **D. Application of ICT to business**

##### **1. Business process outsourcing services**

38. Business process outsourcing (BPO) is an example of an activity where the application of ICT is increasing and provides new business opportunities for developing countries. BPO is a business model by which companies or institutions contract out some of their functions, mainly their non-core functions, to a service provider who manages and delivers the outsourced services. Services can be outsourced to domestic companies or to foreign companies (offshore BPO). BPO has grown as a result both of the development of

ICT in developing countries allowing the latter to provide certain services at low cost, and of an increase in demand in developed countries to outsource services as a means of cutting costs.

39. The importance of BPO, however, goes beyond simply cost cutting. BPO also allows corporate executives to reduce some of their routine process management functions and hence devote more time to other strategic executive functions and projects. Outsourcing also permits enterprises to introduce improvements and efficiencies in the outsourced services since the services can be handled by specialized, skilled experts that the parent enterprises themselves would normally not have access to. The introduction of efficiencies also means that the enterprises can expand their core products or services at little additional cost since the expansion can be readily supported by the outsourced services. To the countries supplying the outsourced services, the benefits of BPO include expansion of employment opportunities and diversification of the national economy.

40. Initially, BPO involved technical information technology (IT) outsourcing, since IT management is not the core business of most enterprises and also tends to be a complex function the provision of which is complicated by difficulties in finding and retaining staff. However, BPO has now spread to a wider range of services such as insurance, banking, mortgage, asset management and customer services. The types of outsourced services vary and include basic administrative services such as data entry and more complex ones involving decision-making. In launching BPOs, companies use different business models, including using third-party vendors who set up the service and run the operations, and partnering by creating a new venture, for example an offshore company with which ownership is shared. Another model is to create a wholly owned offshore subsidiary that handles the business processes.

41. The volume of BPO is quite large. Some sources project that the value of BPO worldwide will range from \$300 billion to \$585 billion in 2004/2005, although other sources give different projections. Also, it is expected that many large corporations in the United States and in Europe will be expanding their use of BPO. It is estimated that currently almost half of Fortune 500 companies make use of outsourced services.

42. On the supply side – that is, countries that provide the services – the leading offshore BPO provider is India, while other important providers include Bangladesh, Brazil, China, the Philippines, Romania, the Russian Federation, Singapore, Thailand, Venezuela and Viet Nam. The major factors that enable these countries to attract BPO are a combination of low-cost labour, a large highly educated, skilled and motivated labour force and political stability. Also important are the availability of adequate and reliable Internet infrastructure and access, strong government support, adequate ICT investment resources and familiarity with the client's primary language and culture.

43. The growth of ICT and in particular Internet use and access are likely to increase the opportunities for an increasing number of developing countries to provide outsourced services. However, BPO providers face increasing competition and therefore countries wishing to attract BPO need to take measures to ensure that the factors that support BPO are

put in place. These measures would include investment in ICT infrastructure, technical education and training, expansion of Internet connectivity and improvements in telecommunications and logistics services. Others would include the establishment of a supportive regulatory and legal framework that facilitates foreign investment and the adoption of high standards and best practice in employment and working conditions.

## **2. Online marketing of agricultural exports**

44. The marketing of agricultural commodities exported by developing countries has attracted much attention because these commodities play a central role in the economies of many of those countries. In addition, the prices of the commodities and the earnings accruing to producers have been facing a long-term decline. The UNCTAD secretariat has examined the marketing of coffee and tea as case studies in order to determine the opportunities that ICT and particularly the Internet can provide in addressing the marketing and pricing problems that developing country producers face in relation to these commodities.

45. In part, the decline in the prices of the two commodities is due to oversupply arising from increasing production that has not been matched by increasing demand. It is also largely due to fundamental changes in the marketing structure in that the influence of national statutory bodies and international arrangements in setting prices has been replaced by a liberalized marketing regime.

46. The use of the Internet to market commodities can potentially reduce the number of intermediaries on the commodity supply chain. By improving market information, producers can bypass some intermediaries and arrange direct marketing with buyers. They can also access more buyers in the global markets at lower cost. The Internet is being used quite extensively for marketing in the agricultural sector in certain developed countries, for example in the United States where commodities such as meat and dairy products, grain and cotton are traded via the Internet. A number of developing countries have taken initiatives to market coffee and tea via the Internet. This has been done through e-markets and online auctions, the latter being the more widely used model so far. Notable examples include the online marketing of coffee in Brazil and also in Kenya, Guatemala and Nicaragua, and of tea in India and Sri Lanka.

47. Initiatives in this area that have been examined by the UNCTAD secretariat so far are at their preliminary stages and have involved only a small share of the total exports of the commodities concerned, namely coffee and tea. It is, however, evident that online marketing alongside the widespread use of ICT provides a window of opportunity to coffee and tea producers in developing countries. This opportunity can be more fully realized if producers can be assisted in organizing themselves so as to achieve the capacity to arrange online auctions and make the other marketing arrangements, and also to develop a framework for accessing buyers more directly through improved commodity information systems.

48. Given the central role of agricultural exports in the economies of developing countries, measures that offer an opportunity for improving prices and producers' earnings should be encouraged. More insight into the application of ICT and the scope of existing

opportunities can be established through a wider investigation covering more agricultural commodities as well as non-agricultural commodities of interest to developing countries. Such an investigation should be carried out taking into account other types of initiatives undertaken to address commodity problems of developing countries.<sup>1</sup>

#### **E. E-commerce and ICT-related events in which UNCTAD has been involved**

49. A regional high-level conference for Africa on e-commerce strategies for development was held in Tunis (19–21 June 2003). It was organized by UNCTAD in cooperation with the Ministry of Tourism, Trade and Handicraft of Tunisia, and was attended by over 100 participants from 29 African countries and by representatives of various international and regional organizations.

50. The conference discussed many issues concerning policy and strategies that are crucial to the development of e-commerce and ICT in the African region. These included ICT infrastructure, connectivity, legal and regulatory issues, capacity building, payment systems for online transactions, FOSS and the application of ICT to business. The conference adopted a declaration in which the African countries made a political commitment to formulate and implement e-commerce and ICT strategies. These strategies include the raising of public awareness at all levels about e-commerce and ICT, promoting international and regional cooperation in the development of ICT, addressing specific areas such as legislation, measurement of the information economy and supporting the adoption of FOSS. The conference also called on the international community to give support to the international initiatives, particularly the WSIS, that aim at promoting ICT in developing countries.

51. UNCTAD is organizing two other high-level regional conferences on e-commerce strategies, one in Geneva (20–21 October 2003) for transition economies and the other in Rio de Janeiro (25–27 November 2003) for Latin America and the Caribbean. The conference for transition economies will focus on the development of ICT and particularly its application to e-business, and consider policies and strategies that can be adopted in order to increase the capacities of these countries to use ICT as well as to produce ICT-related technologies. The conference is expected to adopt a declaration similar to the one adopted by the African countries at the conference in Tunis referred to above. Among other things, the declaration is expected to provide support and input to the WSIS.

52. Similarly, the conference for Latin America and the Caribbean will deal with the application of ICT to e-business, focusing on the enhancement of the export competitiveness of the region's economies. In addition to considering policies and strategies for ICT and e-business, it will discuss issues related to trade facilitation, transport and logistics. It is expected that as its outcome the conference will adopt a common position on international initiatives on ICT particularly in relation to the WSIS. It is also envisaged that the conference will contribute to the preparatory process for UNCTAD XI.

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<sup>1</sup> See the report of the Meeting of Eminent Persons on Commodity Issues, held in Geneva on 22–23 September 2003.

53. In describing the three regional e-commerce conferences above, the importance of the WSIS has been highlighted. The declarations adopted at the regional conferences are expected to be brought to the attention of the WSIS. In addition, UNCTAD has continued to provide direct input to the preparatory process for the WSIS as a member of the High-Level Organizing Committee, through which it has contributed texts and comments on the draft WSIS plan of action and draft declaration. UNCTAD has placed particular emphasis on the need to include in the drafts the economic and e-business aspects of the information society. Also, as mentioned earlier, UNCTAD as part of the WSIS will be organizing on 8 and 9 December 2003, jointly with other organizations, the event called "Monitoring the Information Society: Data, Measurement and Methods".

54. Another event in which ICT for development is expected to feature prominently is the Marrakech high-level conference on South-South Cooperation (15-19 December 2003). The substantive part of the agenda for that conference includes an interactive roundtable on ICT for development that is organized by UNCTAD. The conference will also include an UNCTAD event on ICT for capacity building that will focus on South-South partnerships in the areas of training (e-learning/distance learning) and e-tourism. It is expected that the conference will adopt a report, which will be the G77's contribution to the WSIS and to UNCTAD XI.

55. These events have an important common feature, namely that they provide an opportunity for representatives of different stakeholders in the international community to share their views on ICT and its impact, particularly on developing countries. They also provide a broad-based framework for making commitments concerning policies and strategies to be adopted in order to promote ICT and the benefits of the Information Society in all countries, including developing ones.

## II. CONCLUSIONS

56. This paper has presented selected developments in ICT and issues that have been studied by the UNCTAD secretariat since the seventh session of the Commission. Some of the topics provide greater insight into areas that were outlined in the background paper prepared for the seventh session.

57. The developments and issues discussed in the paper point to a number of key elements that the Commission may address in its deliberations. These are as follows:

- (a) The formulation of e-strategies by developing countries should continue to be emphasized. The Commission's consideration of this topic should advance further by focusing on specific policy areas, as has been done in the case of measuring the information economy, that have an important bearing on ICT for development.

- (b) Awareness raising on e-commerce and ICT is still a key area that the Commission may continue to address, in part because there is still a need for it among many stakeholders in developing countries, and also because ICT issues tend to change rapidly. The Commission may consider ways of enhancing the effectiveness of the methods used so far in awareness raising, in particular the annual *E-commerce and Development Report* and regional e-commerce seminars and workshops. It may consider mechanisms for achieving a systematic assessment of the effectiveness of the methods being used for awareness raising.
- (c) Education and training appear to be central requirements for the effective adoption of ICT generally and in specific areas such as business process outsourcing and FOSS. The Commission may wish to support the development and delivery of training courses on e-commerce and ICT by UNCTAD in cooperation with other institutions that specialize in particular subject areas and training activities.
- (d) While the role of e-commerce and ICT is intuitively understood, many policy makers in developing countries need to be provided with concrete information on the use and impact of ICT. The Commission may consider ways of demonstrating the importance of ICT for development, in particular through detailed studies and surveys on the application of ICT to specific sectors, enterprises and economic activities of interest to developing countries.
- (e) International ICT initiatives, including the WSIS and the UN ICT Task Force provide an important framework for the international community to exchange views and experiences about ICT development. They also allow countries to jointly make political commitments concerning ICT policies and strategies in order to help developing countries to participate in the Information Society. Through its deliberations and work, the Commission may contribute to these initiatives.