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TOWARDS AN E-STRATEGY FOR THE UNECE

Note by the secretariat [*]

The purpose of the paper is threefold: (1) to provide a strategic direction for future e-activities; (2) to provide an overview of the existing initiatives within each of the sectoral sub-programmes aimed at promoting the use of information and communication technologies (ICTs) across the UNECE region; and (3) to review initiatives aimed at the use of new ICTs in increasing efficiency of the UNECE governance structure including enhancing the secretariat's capacity to better serve and communicate with member States, to reach out to partners and the general public (e-UNECE governance).

Member countries are requested to endorse the UNECE strategic direction towards strengthening the e-approach in its work, to take note of the various e-UNECE initiatives and to request PSBs to develop e-strategies for their fields of work. It is to be noted that the implementation of a UNECE e-strategy is not resources neutral.

INTRODUCTION

(a) Background

1.   Economic activities associated with the production and utilization of information and knowledge have become inherent in everyday life as well as becoming an engine of economic growth. In particular, the 1990s witnessed the emergence of a real technological revolution in new information and communication technologies, incorporating significant advances in telecommunication, computers and electronic networking. Indeed, ICTs are the most rapidly growing and technologically changing component of the world industry and service sector.

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[*] Late submission due to clearance delays.

2.   The uptake of these new technologies however, over the last fifteen years, has been uneven across the UNECE region. The uptake was most pronounced in developed market economy countries. Their rapid spread and adoption was spurred by the strong growth of fixed investment and private consumption during the 1990s, which in turn contributed to strong output growth and improving productivity.

3.   On the other hand, the emergence and initial spread of ICTs in countries with economies in transition was affected by the transition process to a market economy. The rate of uptake was delayed and much slower because countries had to deal with difficult social and economic problems associated with the process of transition. As a result a new digital divide has emerged between the most advanced economies and economies in transition. In due course, however, the newly emerging market economies have also started to take up new ICTs.

4.   In countries of central and eastern Europe and central Asia, the progress made in moving to a knowledge-based economy and in catching up with western standards more or less mirrored the progress achieved by countries in the implementation of overall reforms and the different paths that the transition process took in each country. Those that acceded to the EU in 2004 have advanced the most in this regard, although a significant gap still exists with west European countries. The larger countries in southeast Europe and the European CIS countries, after some delay, are now also increasingly taking up these new ICTs. On the other hand, progress has been slowest in countries of central Asia and the Caucasus as well as some countries in southeast Europe.

5.   Private agents, namely enterprises and households, have driven the worldwide spread and uptake of new ICTs. At the same time, their actions have been complemented by those of the state, which has played a number of roles, such as creating the proper investment climate, promoting competition in ICT, setting the regulatory framework and ensuring accessibility. In some low income countries where the transition process has not been fully completed and where the private sector is still not fully rooted, governments have sometimes taken on an added role and have been the driving force in the spread and adoption of ICTs.

6.   Despite the digital gaps and divides across the UNECE region and within member countries, these are not irreversible. Several countries in central and eastern Europe, emerging from transition, have taken advantage of new ICTs. Other countries, having a well-educated population and well-developed scientific capacity, are poised to make greater use of these new technologies. But there are a number of economies in transition where the framework conditions for the development and use of new ICTs are still lacking and where a special effort will be required to ensure that these countries do not fall further behind.

(b) Outline

7.   This paper is divided into five main sections: (1) an overview of the main UNECE activities or projects at sub-programme level aimed at promoting and mainstreaming the use of ICTs in the UNECE region; (2) subregional activities; (3) a brief description of the initiatives taken by the secretariat to improve communication and exchange of information with stakeholders (e-governance of the UNECE), including enhancing the secretariat's outreach capacity, and programme delivery; (4) actions taken to improve internal communications and management of the ICT function (e-UNECE management); and (5) conclusions with follow-up.

I. E-STRATEGY AT SUB-PROGRAMME LEVEL

8.   For several years an ICT component has been incorporated into a number of UNECE's ongoing fields of mandated activity. In some cases, that component is the core of the activity or project, while in others it may serve mainly as a tool to allow the attainment of project objectives. In order to show more concretely the type and breath of initiatives being pursued by the UNECE, a summary description is presented by sub-programme.

(a) Environment

9.   The commitment to guarantee public access to information lies at the core of the Aarhus Convention. ICT can play a key role in helping Governments to meet that commitment in terms of allowing speedier, broader and more efficient access by the public to information related to environmental issues.

Strategic direction

10.   In the past two decades, electronic tools have been increasingly used to put environmental information in the public domain, e.g. through pollutant release and transfer registers. More recently, cutting-edge ICT applications in the environmental sphere show potential for using ICT not only to provide the public with a window through which to view information but also as a means to facilitate public participation in environmental decision making, e.g. through online public commenting processes in environmental licensing or permitting processes, through electronic dissemination of documents to members of the concerned public opting to be on a list-serve or through community-level environmental web portals. Such developments could indicate a possible future direction for further developments not only in the environmental area but also in other areas.

Overview of existing e-applications

11.   *Air Pollution Questionnaire.* Available in English, French and Russian, this is an online mechanism for reporting on strategies and policies for air pollution abatement under the Convention on Long-range Transboundary Air Pollution (LRTAP). It is an internet-based reporting system and database to assist the Parties to report on their obligations under the Convention and its Protocols. The reporting provisions require Parties and encourage Signatories to exchange information and submit reports on national strategies and policies to abate and reduce long-range transboundary air pollution. Information provided by Parties is made available on the Convention's web site, and published in a major review of strategies and policies every fourth year. The online reporting has streamlined the procedure for the preparation and submission of Parties' national reports. Parties to the Convention benefit from the use of a tool that facilitates entry and subsequent updating of previously submitted information. The UNECE secretariat benefits from the easy storing, access and publishing of the received information.

12.   *Online Reporting on Implementation of Aarhus Convention*. The online reporting mechanism is an internet-based database developed to promote user-friendly and transparent reporting on the national status of implementation of the Aarhus Convention. The reporting requirements require Parties and encourage Signatories and other States to submit reports on the necessary legislative, regulatory or other measures they have taken to implement the provisions of the Convention. Available in English, French and Russian, this online reporting tool is expected to streamline the procedure for the preparation and submission of national

implementation reports. Members States benefit from a tool that facilitates entry and subsequent updating of existing records. The UNECE secretariat can use the tool for easy storing and access of received information. In the future, UNECE will be able to use this tool to provide instant access to information on reporting to both governments and the general public. The activity is funded from the regular budget.

13. *Aarhus Clearinghouse for Environmental Democracy.* This electronic clearing-house provides a forum for the collection, dissemination and exchange of information and good practices relevant to the Aarhus Convention and the implementation of principle 10 of the Rio Declaration on Environment and Development. It features an easy-to-use on-line database co-managed by the Aarhus Convention secretariat and designated national focal points. The clearing house also consists of national web sites or portals. Through the sharing of experience and good practice, it is expected that the Parties will more effectively implement the provisions of the Convention, while providing the public with more effective access to national information and resources. This activity is funded almost entirely from extra-budgetary sources.

14. *Environmental information in EECCA countries.* The purpose of this project is to strengthen environmental information and observation capacities in countries of Eastern Europe, the Caucasus and Central Asia (EECCA) by developing electronic tools, such as online access to the Catalogue of Data Sources on environmental information and to the database of networks of officials responsible for environmental data flows and information systems in EECCA countries. Another objective is to develop an internet-based online File Repository to collect information and provide access to national informational periodicals on environmental matters in EECCA countries. Experience with the implementation of the first stage of the project has shown that technical capacities in the countries are not sufficient for the development of widespread electronic tools: a significant part of computer equipment in the Environment ministries is outdated; not every ministry has a local computer network on their premises; and despite the fact that every ministry has Internet access, it is mostly only a dial-up connection rather than a constant on-line connection. This does not allow managing national web sites in a fast and timely mode, particularly to update the contents of the web sites.

15. *The PEP Clearinghouse.* The Transport, Environment and Health Pan-European Intersectoral Programme (PEP) Clearinghouse is an internet-based portal for user-friendly access to and exchange of information in English and Russian on transport, health and environment in the pan-European region. The project is under development with pilot operation phases to be completed by the end of 2005 when full implementation is expected. With an estimated budget of around US$ 400,000 for the period 2003-2005, the UNECE and WHO/Europe secretariats administer this work undertaken by extra-budgetary staff.

(b) Transport

16. The activities of the Transport sub-programme in the ICT area are focused on the storage and dissemination of documentation and information, related mainly to international legal instruments and recommendations on transport elaborated under UNECE auspices, or of information which may be used as an instrument for direct intervention and control in transport operations.

Strategic direction

17. The introduction of IT applications in transport activities aims to improve further the efficiency, safety, environmental performance and security of the transport system. The digital

tachograph to better control driving and rest periods of professional drivers has already been introduced in the relevant legal instrument. Work is under way and will be further strengthened on computerization of the TIR procedure in order to eliminate the use of paper TIR Carnets, on the use of telematics and Intelligent Transport Systems (ITS) for safety and security purposes, not only in vehicles but also in infrastructures, on the widespread use of electronic transport documents and on the impact of electronic trade on transport.

Overview of existing e-applications

18.   *Electronic document storage.* The Division web site provides information and documentation of the Inland Transport Committee and its subsidiary bodies and other bodies serviced by the Division, including the texts, adopted by the bodies, of UNECE legal instruments on transport and amendments thereto, the Depositary of which is the UN Secretary-General. The web site has not only a major documentation dissemination role, but also a key legal role, since the official Depositary Notifications issued by the Secretary-General concerning such legal instruments and amendments refer to the electronic documents stored in the web site.

19.   *TIR Web site.* The aim of the TIR web site is to promote the TIR Convention and distribute TIR related information and documents to all interested parties. It also provides an intranet access to the members of the TIR Executive Board and TIR Focal Points. This is an ongoing activity funded by extra-budgetary resources.

20.   *International TIR Databank (ITDB).* The project consists of the establishment and maintenance of a database storing information on all transport operators allowed to use the TIR Procedure. The ITDB represents the international and final part of the TIR authorization procedure, one of the pillars of the TIR Convention. The ITDB project aims not only at the storage of this information but also at its collection and distribution. It consists of a number of sub-projects dealing with the database itself as well as applications allowing consultation of certain information by authorized users, applications for the management of the database at various levels such as the National Associations, Customs Administrations and the TIR secretariat. The database and its various applications are continuously updated and a feasibility study is underway to provide access through a centralized web application (extranet) to all parties involved in the authorization procedure. The project is ongoing and funded by extra-budgetary resources. It has shown how difficult it can be to develop standalone software applications for various countries. Centralized solutions like web-based applications are easier to control and to manage. Also, the collection of reliable data has proven to be a challenge.

21.   *eTIR Project.* The aim of the eTIR project is to computerize the TIR Procedure, in particular replace the use of the TIR Carnets. It is at its initial phase and is financed by extra-budgetary funds. The short run objective is a detailed analysis of the various steps that will be required to develop and implement a fully computerized TIR system. This includes the development of a central database system allowing for the storage and exchange of various data elements and controlling the flows of information for TIR transport.

(c) Statistics

22.   The activities of the Statistics sub-programme in the ICT area are focused on improving the collection and dissemination of statistics and the management of statistical systems.

Strategic Direction

23.   Through the use of advanced ICT tools, the statistics subprogramme will aim at improving public information regarding official statistics. More statistical information will be available in a more user friendly form, and with comprehensive descriptions supporting the correct interpretation of statistics. ICT will support the new approach in dealing with external users' requests for statistical information, which will also be used to provide performance data on satisfaction of clients' requests.

24.   The ICT will permit more efficient, timely and reliable collection of data from national and international sources of official statistics. The statistics subprogramme will increase the use of ICT for coordination of international statistical work in the UNECE region, involving major players, like Eurostat, OECD, IMF, and others. Future development will focus on more efficient remote updating and easier retrieval of the contents. Data management, through the use of ICT, will be standardized for all data managed by the Statistical Division.

Overview of existing e-applications

25.   *Data Collection and Use.* The UNECE on its own or (more frequently) in cooperation with other international organizations has constantly stressed and fostered the use of electronic tools and media as a means of improving the collection, transmission and manipulation of statistics and metadata. The sub-programme also aims at making available more data and in a more user-friendly way to users of statistics over the UNECE web site; to replace a major part of the traditional publications by electronic and web-based products; and to develop a more optimal distribution between printed and electronic publications.

26.   *Management of Statistical Information Systems.* UNECE promotes cooperation and exchange of experience in the management of statistical information systems between national statistical offices (NSOs) in order to accelerate the use of ICT for their work. The leading practices are identified and brought to the attention of NSOs, when ICTs help to improve data collection, processing, analysis and dissemination. Typical examples are on-line surveys, on-line census questionnaires, and Internet dissemination of statistics. This project also contains a database on leading ICT practices in national statistical offices, maintained by the UNECE.

27.   *e-statistics.* The UNECE organized a pilot survey aimed at getting an overview of the e-Government dimension in statistics (e-Statistics). The results are being analysed, and discussed by the heads of ICT services in the NSOs. Recommendations for the 2010 Round of Population and Housing Censuses will contain recommendations related to electronic data collection and other ICT support. The work programme on statistical business registers, mainly focused on requirements vis-à-vis timely compilation of economic statistics, also contains aspects to facilitate the maintenance access to business registers using modern ICT tools.

(d) Economic Analysis

28.   The ICT projects of the Economic Analysis sub-programme relate to the collection, analysis and dissemination of data on gender and aging as well as soliciting feedback on Divisional activities.

Overview of existing e-applications

29.   *Population Activities.* The Population Activities Unit (PAU) implements two programmes as part of its work in demographic analysis: the Generations and Gender Programme (GGP) and

Population Ageing Programme (PAM). Both aim at collecting comparable micro-level data, and the entry, processing, harmonization, dissemination and analysis of national data all use ICTs. The PAU web pages provide access to databases maintained elsewhere. As follow-up to the Ministerial Conference on Ageing, a survey on national implementation of the documents adopted at the conference is being conducted, partly administered through an online questionnaire.

30.   Both GGP and PAM are long term projects that include training of programme participants to take place between 2005 and 2007. These activities now being planned will draw on the experience gained as part of the promotion of ICTs during the implementation of the Fertility and Family Survey project and the Microdata Census Sample project during the 1990s.

31.   *Economic and Policy Analysis.* A new readership survey has been conducted to solicit feedback on the contents and structure of the Economic Survey for Europe. This readership survey can be downloaded or filled out electronically. Similarly, a call for papers for the upcoming 2005 UNECE Spring Seminar is being handled electronically on EAD's web pages, has been disseminated via e-mail and has been published on several external electronic networks, as well as on the web sites of several national economic associations. Submissions of papers and correspondence with authors are done by e-mail. A restricted-access web site has been created for the members of the Post-transition Economic Policy Forum.

(e) Sustainable Energy

32.   The ICT projects of Sustainable Energy include two separate web sites in addition to maintaining web pages on the main UNECE web site, and the publication of e-Books with CD-ROMs, which have included significant video content.

Strategic direction

33.   While the Energy Efficiency 21 Project web site has been used mainly for communication so far, it will be used for more substantive purposes in the next phase of the project: on-line investment project development templates and renewable energy resources "mapping". The first application is planned to provide standardized terms, definitions, units of measurements and procedures on templates in the three UNECE working languages that can be submitted to investment fund managers electronically for initial screening and possible financing. Renewable energy sources for eastern Europe and the CIS may also be assessed for possible "mapping" using the methodology of the UNEP-GEF Solar and Wind Assessment (SWERA) project. These maps would indicate particularly attractive geographic regions for the deployment of renewable energy technologies especially for wind, solar and hydro resources.

34.   The ICT will make it possible to achieve new political objectives in the gas market. The liberalisation of the gas market requires detailed tracking and monitoring of volumes and billing data. Without the new ICT this would have been very difficult to attain. The new ICTs have provided and will provide the necessary technical solution to serve industrial objectives.

Overview of existing e-applications

35.   *Energy Efficiency 21 Project*. The aim of the web site is information dissemination and exchange. It provides EE21 Project participants with information about activities, documentation, project outputs, hot links to related web sites, archives to past activities, web-cast conferences, a search engine for project material, an exchange forum for project participants, and

information on new ICT based tools for implementing energy efficiency policies and promoting energy efficiency investment project finance. It is funded through extra-budgetary resources. The web site has a daily average of 40 visitors consulting some 300 files rising to a peak of 600 files consulted proceeding and during the Project Steering Committee meetings.

36.   *Gas Centre Database and Web site.* These provide the 22 participating companies in the UNECE Gas Centre with information about Gas Centre activities, electronic publishing of Gas Centre reports, a forum of information exchange and a database on the legal, policy, regulatory and structure of national gas markets and the European gas market as a whole. The activity is managed and maintained by Gas Centre staff with the participation of selected company experts as required. It is funded through extra-budgetary resources provided by the European gas industry. The application of web based electronic communications and data handling has streamlined documents preparation and dissemination by keeping these to electronic publications during the last four years.

37.   *CD-ROMs.* The three CD-ROMS include the filmed proceedings of two Energy Security Forum sessions and the Emissions Trading Handbook of the Energy Efficiency 21 Project. This form of publication has greatly enhanced and extended the impact of the Energy Security Forum and the Energy Efficiency 21 Project. The Forum has developed rapidly and coherently at least partly because Forum members can see, read, review and consider the filmed statements of their colleagues and counterparts on key energy security issues. In addition, these electronic publications have had an important impact on conveying the message of the Forum to the media, policy makers, energy industry counterparts and the financial community attracting the committed participation of leaders in these fields. The Carbon Emissions Trading Handbook of the EE21 Project is an attempt to develop a new work method in remote or distance learning. The CD-ROM based e-Book contains a filmed introduction, a UNTV film on the EE21 Project, filmed instruction on financing energy efficiency investment projects with the potential of monetized carbon emissions reductions, software for calculating carbon emissions projects, documents and examples of financed investments.

(f) Trade Development

38.   ICTs form an integral part of the Trade Development sub-programme at the level of both outputs and work programme support . ICT outputs consists of standards, norms and recommendations for electronic business and administration that simplify and harmonize procedures and information flows and technical assistance to countries for their implementation. In a supporting role ICT is used to collect information as well as provide support for promotion, distribution and implementation.

Strategic direction

39.   The increased globalization and competition increases demand for more sophisticated information in trade for new innovation opportunities, reduced transaction costs, and information sharing. In support of this process, the Trade Development Programme will continue to develop norms, standards and recommendations for electronic business as well as policy frameworks for their use. The programme will provide active support to Governments as they look to use ICT in support of trade, administration, and public-private partnerships. In addition, its norms, standards and recommendations support the use of digital technologies to enhance the role of enterprises as learning organizations, promoting entrepreneurship, accumulation of knowledge and upgrading

of skills. These are all critical elements for increasing the competitiveness of enterprises and the economies in which they operate.

Overview of existing applications

40.   *UNeDocs Project.* The UNeDocs project aims to automate supply chains in a way that balances the needs for trade facilitation, greater efficiency and greater security while creating an on-line trading environment that is friendly to SMEs and allows them to move seamlessly between the use of paper and electronic documents. To date, the definitions for 12 international trade documents have been made available. In addition, the project has cooperated with leading software providers to demonstrate implementations of UNeDocs documents. Cooperation with the Electronic Post Mark (EPM) project of the Universal Postal Union has demonstrated the feasibility and complementarity of EPM signatures in UNeDocs trade documents and a Web Service has been developed for the automated validation of UNeDocs trade documents and EPM signatures, which was demonstrated at the World Summit for the Information Society.

41.   *Multiplier Point Network.* Since April 2001, over 60 organizations from 27 countries in transition have joined the UNECE electronic information network, through which the UNECE cooperates with local, regional and national governmental and private organizations. These "UNECE Multiplier Points" are regularly provided with information on the work of the UNECE Committee for Trade, Industry and Enterprise Development and are expected to promote, distribute and translate publications, recommendations, norms, guidelines, documents and other sources of information in local and national languages. The secretariat has developed practical tools to support this initiative including a multilingual web site and e-mailing list for the distribution of information. The next steps in the development of the web site will include an interactive forum for the provision of information of the multiplier points as well as a webpage version of the UNECE Trade Development CD-ROM.

42.   *Capacity-building activities in Trade Facilitation and Electronic Business in the Mediterranean.* During 2003 and 2004, the UNECE implemented a UN Development Account capacity-building project in Trade Facilitation and Electronic Business in the Mediterranean region. It focused on trade among the non-EU Mediterranean countries that are members of UNECE, the Economic and Social Commission for Western Asia or the Economic Commission for Africa, and was undertaken jointly with these other regional commissions. The objective was to increase the competitiveness of companies in the Mediterranean region in regional and global markets. It aimed to simplify and harmonize trade procedures; implement automated processes and information technology for administration and commerce; and facilitate the participation of SMEs in electronic business. The project organized seminars and workshops on trade facilitation, electronic business, the e-Med business project and supply chain management. These events were strongly supported by Internet-based information and learning tools in the form of a CD-ROM. Under the project, UNECE also developed e-learning tools for trade facilitation. They will also be available for training in other areas and projects.

43.   *The Trade Directory.* Another recent initiative, aimed at bridging existing information gaps and stimulating trade and investment within the region, was the development of a reference guide for SMEs seeking institutional information in support of their export or investment activities. This on-line directory provides, for each of the 55 UNECE countries, lists of organizations covering areas such as information for investors and enterprises, government organizations and other supporting organizations, trade facilitation, corporate governance (including regulatory agencies), trade and enterprise financing, chambers of commerce, and

business associations as well as sectoral business associations. This public and freely available Directory contributes to increasing transparency in regulations and trading requirements at both national and international level.

44.   *CD-ROMs.* The CD-ROM on "Norms, Standards and Practices for Trade Facilitation and International Business" is a reference tool intended for a wide range of users from both the private and public sector, interested in procedures for facilitating trade and in industry or enterprise development. It gives an overview of the activities, best practice recommendations, norms and standards drawn up by the Committee for Trade, Industry and Enterprise Development and provides over 500 supporting documents representing the actual results of the work.

(g) Timber

45.   ICT activities in Timber provide member countries with the information and services needed, within the context of sustainable development, for policy- and decision-making regarding their forest and forest industry sector, including the trade and use of forest products.

Overview of existing e-applications

46.   *Global Forest Information System (GFIS).* The purpose is to improve accessibility of forest sector information through a Global Forest Information System (GFIS) based on a structured use of metadata. UNECE is participating with many partners in a global project to improve radically the quality of information availability about the forest sector. UNECE implements this by providing a list of its outputs (publications and databases) with metadata descriptors and advising on future development for global information systems. This is a regular budget project with an expected outcome of contributing a (mostly) complete listing of forestry information worldwide using standardized descriptors The scope of the project will become more significant as GFIS becomes a central reference point. It is important for UNECE to be closely involved in emerging global projects, contributing its expertise and ensuring the final system is compatible with its needs. This will require commitment of resources over a multi-year period.

47.   *Web site specialized information exchange.* The purpose is to facilitate the rapid exchange of information during serious emergencies such as windstorms (becoming more frequent with climate change) and fire damage to forests when large quantities of timber are involved. This is implemented when necessary using the UNECE web site with frequent updates using official national estimates. It is an on-going activity with infrequent work using regular budget resources. Among the lessons learned have been that reliable information is essential under these circumstances as misleading information or the absence of information has a negative impact in the markets. The benefit to member countries has been to encourage information exchange using e-tools. The scope of the work is limited as it is only rarely implemented but it may be critical in an emergency situation as no other organization has this mandate.

48.   *Global Fire Monitoring Centre.* The purpose is to show real-time satellite imagery of global fire danger ratings systems and vegetation fire outbreaks as well as electronic dissemination of the UNECE/FAO publication, International Forest Fire News. This is implemented using FIRE-GLOBE, the web site of the Global Fire Monitoring Center (GFMC). This is an on-going activity using resources supplied by a member country. The benefit has been to increase visibility of this valuable service. The work of the GFMC contributes to all aspects of the sustainable development of forests, environmental, economic and social.

(h) Human Settlements

49.   ICT is used mainly to collect, store and disseminate data.

Overview of existing e-applications

50.   *Interactive web database.* The Environment and Human Settlements Division maintains the database, with specific reference to data on housing and building. Data are collected for the UNECE Bulletin of Housing and Building Statistics and through the Country Profiles on the Housing Sector from a number of both national and international sources.

(i) Industry and Enterprise Development

51.   The ICT activities under this sub-programme are varied, ranging from promoting enterprise development through adoption of ICTs, preparation of e-readiness reports and special projects, such as the e-Business repository project.

Strategic direction

52.   As the region's future economic competitiveness will depend on its ability to develop a knowledge-based economy, transformation to this economy is at the centre of the programme of work. The main aims are: to assist UNECE countries (particularly the lower-income countries) in adopting new ICTs in their business and government practices, as well as in their citizens' day-to-day lives; and to discuss and transmit best practices of government policies, programmes and regulations that foster the advancement of countries towards knowledge-based economies. This is implemented through seminars, symposia, workshops, other forums and analytical publications. Extra-budgetary resources support the initiative.

Overview of existing e-applications

53.   *Internet enterprise development.* This programme covers a wide range of issues such as e-government, international outsourcing in the ICT industry, online dispute resolution, national e-strategies, adoption of new technologies in transition economy countries, and Internet enterprise development. A number of events have been organized for the lower-income countries of the UNECE region in an effort to provide for policy advice and best practices.

54.   *Readiness assessment of East European and CIS countries for the knowledge-based economy.* The aims of this initiative are to assess the progress of different countries in adopting new ICTs and in implementing the required regulatory and policy framework, and to evaluate the state of development of other aspects of the knowledge-based economy, particularly education, research and development and innovation. Country experts implement the programme through the preparation of regional and sub-regional summary reports by the UNECE secretariat; and through coordination and supervision of the preparation of national country studies and reports. Extra-budgetary resources support it. UNECE has already published 14 national assessment reports and a preliminary regional report in the series "Towards a Knowledge-Based Economy". A further national study and a comprehensive regional assessment report are due for publication in early 2005.

55.   *E-business repository project.* The purpose is to strengthen trust in and sustainability of e-business by fostering the transfer of standards, methods, knowledge and good practices among the countries of the UNECE region. This is to be achieved by putting in place technical means for the collection, storage and dissemination of reliable commercial information on companies

by presenting disparate and already existing information bases as an "e-Business repository". The project will be carried out in successive stages: (1) carry out surveys on current practices of business registration in UNECE countries; (2) implement pilot projects of the proposed e-business repository in selected countries; (3) assist in the transfer of best practices, experience and knowledge in this field among UNECE countries. This will be carried out mainly with extra-budgetary resources. Preliminary results of a survey of current practices of business registration in a selected number of UNECE region countries will be available shortly.

II. SUBREGIONAL ICT ACTIVITIES

56.   In keeping with the Commission's 2004 decisions to help organise meetings to promote the implementation of the information society, the UNECE co-organised the Bishkek Conference on Information Society and Regional Cooperation in Information and Communication Technologies for Development (16-18 November 2004). The Conference adopted a Concluding Document containing commitments and recommendations aimed at speeding up the development and application of ICT and promoting international cooperation for securing progress towards knowledge-based economy and information society in the Central Asian countries. In particular, the participants committed themselves too give highest priority to the development of information society, to strengthen ICT infrastructure; ensure affordable access to ICT services, promote the application of ICT, especially e-government, e-health, e-education, e-business and e-tourism; use ICT to strengthen civil society and encourage e-democracy applications; and create the enabling ICT policy and legislative environment and promote integration of e-strategies into national economic and social development plans with the broadest participation of all stakeholders. In 2005 a second subregional meeting along similar lines is envisaged in South-East Europe.

57.   The e-SEE (e-Southeastern Europe) Initiative is a regional initiative within Working Table II (Trade liberalization and development) of the Stability Pact for Southeastern Europe to which the UNECE has provided input and support. It comprises Albania, Bosnia and Herzegovina, Croatia, the Republic of Moldova, The former Yugoslav Republic of Macedonia, and Serbia and Montenegro. Its ambition is to keep the sub-region abreast with the developments in the Information Society in Europe and in particular support the development of Information Society in South Eastern Europe, develop strategies and measures which promote the region as a whole and to promote benchmarking, best practice and cooperation within the region. The success of this regional initiative is demonstrated by the publication of Common Guidelines for National Strategies on the Development of Information Society and Unified Terms of Reference for the Establishment of Cabinet Level Bodies for Information Society Development as well as ongoing activities related to benchmarking. In addition, the Council of Europe Convention on Cyber Crime has been ratified.

III. INTERACTIONS WITH STAKEHOLDERS (UNECE E-GOVERNANCE)

58.   This section describes the main communication processes or tools used by the UNECE secretariat to communicate and reach stakeholders, particularly through electronic means. It also identifies the next steps to be taken by the secretariat to improve the effectiveness and efficiency of its communication with internal and external stakeholders.

59.   The UNECE services "clients" who use, in varying degrees, the different available instruments of communication. For the sake of simplicity, two types of "clients" can be identified: (1) the institutional ones, which include missions both in Geneva and New York,

contact points or desk officers in Ministries of Foreign Affairs in capitals, the Chairpersons and Bureaux of intergovernmental bodies, delegates to intergovernmental meetings and other official functions, UN Headquarters, the other regional commissions and other intergovernmental organizations; (2) the non-institutional "clients" namely NGOs, journalists, the business sector and the general public.

60.   The instruments used to communicate with them are the Internet, e-mail, hard copy (e.g., letters, publications, documents), telephone and video conferencing. While the telephone remains a very useful tool when it comes to responding rapidly to specific requests, as well as, in certain circumstances, communicating with missions, bureau members and headquarters, the Internet and e-mailing are now the communication tools of choice. While the use of video conferencing is still relatively limited, its use is expanding.

(a) Internet

61.   The diffusion of information through Internet has been increasing dramatically over the last six years. While in January 1998 only 9,187 people visited the UNECE site, by September 2004 this figure had been multiplied by more than 30 to reach 310,927 visitors per month (it reached over 400,000 in March 2004) which means an increase of about 70 per cent per year. This number does not include visits to web pages located on sites other than the main UNECE site, for example the UNECE Gas Centre and the Energy Efficiency 21 Project sites.

62.   All UNECE Divisions have web pages on the UNECE web site and in some cases on other web sites as noted above. The main objectives of these web pages or sites are:

- To disseminate information concerning the activities, meetings and other events of the UNECE Principal Subsidiary Bodies and their subsidiary bodies, including providing on-line registration;
- To make available in all relevant working languages the documentation related to meetings, including pre-session documentation and reports;
- To provide a general description of the work of the various sub-programmes, overall policy objectives and the strategic directions of work;
- To disseminate the results of analyses, studies and publications, sometimes with restricted access in order to receive pre-publication feedback;
- To provide, where appropriate, updated information about legal instruments and recommendations, and provide information on whether a country accepts a UNECE standard and if it applies or is in the process of applying the standard;
- To make available online economic and other statistical data.

63.   The information is updated on a regular basis, sometimes daily. On some Divisional sites, closed links have been established to Government, IGO and NGO sites.

64.   The most visited directories on the main UNECE site are those of transport, trade, statistics and environment. More specifically, in transport, visitors look at the regulations related to dangerous goods and vehicle standards. In trade, the most consulted directory is the UN/EDIFACT coding systems. In statistics, data on-line, "Trends in Europe and North America" and "links" with statistical offices are consulted. In the environmental field, the Public Participation as well as the Air Convention sites are the most read.

65.   According to statistics the most downloaded and consulted pages are the UNECE norms and standards. This interest comes, to a large extent, from the private sector. General

information about the UNECE, such as press releases, list of publications, history and overall view of the UNECE, is mainly consulted by specialists, mission experts and the general public.

66.   Lessons on the use of the Internet and web pages are largely positive. Documentation and information is being better disseminated as demonstrated by web site statistics (constant increase of hits and downloaded files). Delegates and mission staff are generally better informed; they receive documentation much more quickly than in the past; they need not disseminate it themselves to others since it is publicly available on the sites; and they can better prepare meetings and implement decisions and recommendations as well as legal instruments of intergovernmental bodies.

67.   While important progress has been made during the last few years, some aspects of the UNECE web site still need improvement. Regular budget IT personnel resources are limited and the involvement of other Professional staff members, to the detriment of their normal functions, is necessary in order to maintain and update the site. The "on-line" electronic registration for delegates does not function properly. Delegates that "register" on-line must still bring the original copy of their on-line registration form to the UNOG Security and Safety Section to register for a meeting. The procedure also has no connection to any other database for mailing documents, correspondence or any other application.

68.   At present, the UNECE web site does not have a proper search engine. If delegates or visitors need a document they have to search for it on the home page. A more pro-active system could be developed. In other words, a client coming on the UNECE site would be asked to indicate what type of information he/she is interested in and to give his/her e-mail address. Thereafter they would be provided automatically with the information required. This would also have the advantage of building up networks and knowing who is interested in UNECE activities. Systems that do this exist but it would have resource implications.

69.   Currently, the UNECE site is located on a server that is used by many organizations. A UNECE devoted server would speed up the system. The resource implications for the UNECE budget are obvious. Likewise, the problem of language is an issue for government officials but one that may be difficult to fully resolve, once again given resource constraints.

70.   A completely trilingual site would require: the possibility of having translations done overnight; a devoted editor, and a person in charge of checking whatever is placed on the Internet; and a Webmaster. Under present resource constraints, this is difficult to envisage. The concern about language comes primarily from Governments and to a lesser extent from the public at large, technical experts or the private sector. A feasible solution at this time is to have only the major entry pages, which give broad indications on UNECE activities, translated. It may also be possible to have a data base which would list all available documents by sector with available language. Whenever a document is posted on the UNECE site, it would appear in this list. Such a summary table would make the search more systematic and easier.

(b) E-mail

71.   E-mail has become the most important communication tool. Currently, the UNECE receives 20,088 messages every week through Internet (excluding spam and other "junk" messages, and messages coming from within the UN). If this latter type were to be counted, the figure would be at least double. In other words, each staff member receives an average of 20 messages per day from "outside clients" – double this number if internal messages are included.

72.   Some Divisions use listservers for communications with people outside and within the Palais des Nations. A listserver (sometimes referred to as an "e-mail exploder") allows participants on the list to send a message to one address and then have the message automatically forwarded to everyone on the list. One of the principal advantages is that senders can be sure that everyone on the list receives the message (i.e. they did not forget a name) and that the e-mail addresses are all up-to-date (because they are regularly updated by a "listserver manager").

73.   The explosion of e-mail messages overburdens staff members who spend a lot of time opening, reviewing and answering these messages. The introduction of a new filtering system has at least diminished the time used by staff to sort out spam and other "junk" messages. However, the problem of the large quantity of messages remains and is getting worse. Moreover, because of the volume of messages and insufficient investment in the system, it is not always reliable and periodically collapses.

74.   In the past, most letters received were registered and kept. The usefulness of such archiving is not always obvious, but it had the advantage of retaining for the record what happened. With e-mailing, such a tracking system has completely disappeared. Moreover, even if all messages were to be centrally archived, tracking would still be difficult in view of the volume of messages sent and received. Notwithstanding this, some form of electronic archiving will be necessary.

(c) E-Publications and related materials

75.   Increasingly publications are being posted on the Internet, and the hard copy either discontinued or reduced in quantity. This approach should be continued. An alternative to the Internet is CD ROMs, which are increasingly being used. These permit users to have information readily at hand; they are easier to carry than published material and, in some cases, quicker to access than the Internet. For public relations, the Internet is the best media to use although a limited number of paper handouts and brochures will continue to be necessary.

IV. E-MANAGEMENT OF THE UNECE SECRETARIAT

(a) Present Situation

76.   Ever since the e-mail and Internet entered each UNECE office around 1995, the secretariat dependence on well-functioning ICTs has grown rapidly. It has also made it possible for the UNECE secretariat to increase its efficiency and productivity and to facilitate internal and external communications. Currently, the secretariat uses a range of ICT services – desktop services, mobile computers, file sharing, e-mail, Internet and Intranet.

77.   ICT services support applications aimed at facilitating various administrative processes within the UNECE secretariat: (e.g., Contacts Database). To improve and facilitate financial control, an " Internal Financial Tracking System" has been developed with the help of "Crystel Report" software. Within the UN Secretariat at large several major applications are now used (e.g., for programme planning (IMDIS), documents tracking (DRITS), and performance appraisals (PAS)).

78.   The UNECE Intranet has become an important instrument for communication between management and staff as well as between staff members. It includes information related to the activities of the various internal working groups (IT, ICT and Web working groups), the

Executive Secretary's communications (UNECE Directives, Directors' meeting reports, reports on UNECE retreats etc.), administrative procedures, and news from Divisions.

(b) Future Developments

79.   In the near future, the UNECE secretariat will have to consider taking the following actions:

- Introduce some form of electronic documents and archiving systems to handle documents originating from electronic media as well as digitalized (scanned) documents arriving by traditional mail;
- Simplify procedures, and acquire new equipment, in order to make better use of audio and video conferencing;
- Introduce new portable devices, with combined computing and telecommunication features, for staff on missions;
- Establish a more sophisticated technological base for the future expansion of electronic publishing, permitting parallel publishing on on-line and off-line media (for example, Internet and CD-ROMs);
- Introduce a web content management system to more efficiently update and maintain the UNECE web site.

(c) Internal E-management Structure

80.   The internal ICT management of the UNECE secretariat aims to ensure the substantive requirements of the intergovernmental bodies and to provide adequate services to internal ICT users. The Information Systems Unit (ISU) is the substantive unit in the secretariat providing services and advice to internal users. In addition, in order to provide strategic direction and feedback from users, an ICT Management Group and a Network of ICT Focal points have been established.

V. CONCLUSIONS

81.   For the countries of central and eastern Europe and the CIS, the issues of economic transition after 15 years of reforms are gradually superseded by challenges of catching up with innovation and development. Within this new agenda, the restructuring of economies towards knowledge-based ones has become of primary importance. Likewise, the European Union itself has taken up the challenge of becoming one of the most competitive knowledge-based economic regions in the world. For North America, the challenge is to maintain its current competitive edge. An E-strategy for the UNECE therefore needs to reflect this new orientation of economic development policy in North America, Europe and Central Asia. While multifaceted, the strategy needs to comprise elements aimed at supporting the development and use of ICTs in member States and in the UNECE region as a whole.

82.   The regional level is proving to be very appropriate for assisting member countries in their national efforts, and at the same time creating common grounds for international, and ultimately global processes. Further, since the UNECE has a broad mandate in regional economic integration, it can promote an integrated approach to the many and different aspects of the IS policies, ranging from environment to transport and trade.

83.   The comparative advantage of UNECE lies in linking ICT know-how with its sectoral activities. This has already proven a successful strategy and there is a wide range of existing and new activities at the sub-programme level in this field.

84.   With this in mind the UNECE should :
- Assist the emerging market economies (EMEs) in developing a knowledge-based economy
- Promote the efficient use of ICT for development in EMEs
- Promote the use of ICT in the UNECE work programme with the aim of increasing its efficiency and efficacy.

85.   **Member States are therefore asked to request the PSB's to further strengthen their efforts to increase e -applications at the programme level and contribute to the preparation of an UNECE E-strategy and Action Plan.**

86.   In recent years, UNECE has used ICT in its programme of work in improving the efficiency of programme delivery, in improving communication and decision-making of its stakeholders and in increasing the efficiency of managing its human and financial resources. Hence, it is paradoxical that the UNECE ICT budget has fallen in recent years and the UNECE budget per capita is one of the lowest within the UN Secretariat. **Advantage has therefore been taken of the 2006-2007 programme budget submission to request an increase in the ICT budget for UNECE, and it is hoped that member States will support this increase.**

87.   In the context of the World Summit on the Information Society (WSIS) process, the UNECE can add value: firstly, because of its wide variety and depth of activities in the ICT field; and secondly, because of its capacity to provide a forum for dialogue between countries at very different stages of digital development. The aim of UNECE should be (1) to use the WSIS process to further strengthen the use of ICT in its core activities, and (2) more importantly, work to bridge the digital gap at the UNECE region-wide level.