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**ICT APPLICATIONS IN THE UNECE WORK PROGRAMME \***

Note by the secretariat

The purpose of the paper is to provide information on the development and use of e-applications in the UNECE work programme since the sixtieth session.

Member countries are requested to take note of the various UNECE initiatives in the field of Information and Communication Technologies (ICT).

**INTRODUCTION**

**A. Purpose**

1. The purpose of the paper is to provide information on the development and use of e-applications in the UNECE work programme since the sixtieth session.

**B. Background**

2. At its sixtieth session, having considered a secretariat report in respect of an E-strategy for the UNECE (E/ECE/1422), the Commission agreed that the UNECE should promote the use of ICT in its work programme with the aim of increasing its efficiency and efficacy on a demand-driven basis. Stressing that ICT was a tool to implement the work programme, the

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\* Late submission due to delay in the decision on the dates and agenda of the annual session of the Commission, pending the conclusion of the ECE reform.

Commission encouraged Principal Subsidiary Bodies to further strengthen their efforts to develop and use appropriate e-applications in a cost-efficient manner and agreed to evaluate progress at the sixty-first Annual Session. This document has been prepared, at the request of the Commission, to enable such an evaluation. In order not to repeat the description of all ICT applications, already listed in document E/ECE/1422, it is limited to detailing only recent developments related to e-applications in the UNECE.

### **C. Outline**

3. This paper is divided into three main sections: (I) an overview of the recent ICT developments at the sub-programme level; (II) a brief description of some ICT initiatives taken to increase efficiency in the secretariat; and (III) a concluding section.

#### **I. E-APPLICATIONS AT SUB-PROGRAMME LEVEL**

4. ICT applications are a fundamental part of UNECE's activities at the sub-programme level. In some programmes the ICT application constitutes the main activity or project, while in others it may serve mainly as a tool to allow the attainment of the objectives of the project. This section details the development during the last year at the sub-programme level.

##### **A. Environment**

5. Electronic tools have been increasingly used to put environmental information in the public domain and ICT applications show potential for using ICT not only to provide the public with a possibility to view information but also as a means to facilitate the participation of the public in environmental decision-making. This can be done 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-server (a server that manages mailing lists for groups of users) or through community-level environmental web portals. In particular, the secretariat has now focussed on Internet-based questionnaires and databases in order to receive information.

6. An Internet based questionnaire was developed in previous years for the Convention on Long-range Transboundary Air Pollution. In order to enable countries to respond to its biennial questionnaire, this mechanism has been further developed. The database facility was improved to provide better retrieval of information from current and previous questionnaire replies, and a better management system has provided the secretariat with easier controls over the system.

7. In addition, a generic version of the system was developed to enable its use by other questionnaire-database projects throughout the Division. Questionnaires are a key component of national reporting to legal instruments, such as the UNECE environmental conventions. Member States have very much welcomed the on-line facilities for completing questionnaires, and for enabling their access to previous responses. The secretariat has benefited from easier management of questionnaire replies through the electronic system and the assistance the database provides for preparing summary reports. Furthermore, the database of past replies can be made available to the public at large on the Internet which provides transparency to the process as well as to the replies received.

(a) Aarhus Clearinghouse for Environmental Democracy

8. This electronic clearinghouse 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 was developed as part of the Aarhus Clearinghouse mechanism as a tool to facilitate the exchange of information between diverse parties and stakeholders. It provides information on demand to a wide range of users, including Parties and Signatories to the Aarhus Convention and other States, IGOs, NGOs, students and researchers, and the general public. The clearinghouse consists of a central portal and of national websites or portals. During its first year (2004-2005), the Aarhus Clearinghouse attracted more than 130,000 visits. During the first three-quarters of 2005, viewership exceeded 165,000 visits. More than 7,000 unique visitors logged onto the site during the same nine-month period. Several thousand visitors use the site on a regular basis to learn how the principles of the Aarhus Convention are being applied in practice. The Aarhus Clearinghouse is managed by UNECE and is funded almost entirely from extrabudgetary sources through the Aarhus Convention Trust Fund.

(b) The PEP Clearinghouse

9. 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 pilot operation phases have now been completed and it was officially launched on 30 November 2005.

**B. Transport**

10. In order to improve further the efficiency, safety, environmental performance and security of the transport system, work has focused on: computerization of the TIR procedure in order to eliminate the use of paper TIR Carnets; the use of telematics and Intelligent Transport Systems (ITS) as well as electronic document storage.

(a) eTIR Project

11. The aim of the eTIR project is to fully computerize the TIR Procedure, in particular to replace the use of the paper TIR Carnet. The first phase of the project has been concluded providing a detailed description of the procedures applied using the paper document. The second phase of the project has been initiated with the aim of defining the elements and data required for the computerized system, including the concept of a central database system allowing for the storage and exchange of various data elements and controlling the flows of information for TIR transport between all authorities involved. The question of financing of the development and running of the final product has yet to be determined. The project is financed by extrabudgetary funds.

(b) Intelligent Transport Systems

12. The World Forum for Harmonization of Vehicle Regulations (WP.29) has an informal group which is studying how ITS or intelligent vehicle systems can improve the safety and environmental performance of vehicles. Some intelligent systems have already been

incorporated into UNECE vehicle regulations. For example, in the braking regulation there are provisions on intelligent cruise control which prevent a vehicle from getting too close to the vehicle in front. Likewise, as concerns steering, automatic steering correction has been introduced. This detects cases where the vehicle is veering away from its trajectory and takes corrective action. Other ITS issues which are being studied are an event data recorder and on-board diagnostics systems.

(c) Electronic document storage.

13. The Transport Division website provides information and documentation of the Inland Transport Committee and its subsidiary bodies and other bodies serviced by the Division. This includes the texts, adopted by those bodies, of UNECE legal instruments on transport and amendments thereto, the Depository of which is the United Nations Secretary-General. The website has not only a major documentation dissemination role, but also a key legal role, since the official Depository Notifications issued by the Secretary-General concerning such legal instruments and amendments refer to the electronic documents stored in the website. Similarly, the Division website provides the texts of the bilateral and multilateral Agreements concluded by Member States in the field of transport, notably those related to the transport of dangerous goods by road. In 2005, the Transport Division website started to serve as support of the implementation of the 1998 Agreement on global technical regulations for motor vehicles. From now on, it hosts the Compendium and the Global Registry foreseen in this global Agreement and provides the tool for the electronic dissemination of the Notifications related to global regulations and candidates.

### C. Statistics

14. The Statistics subprogramme is by nature oriented towards information management, and therefore has to investigate all new possibilities of making the information available through the use of modern ICT. The most obvious application is the statistical database [stat@unece](mailto:stat@unece). However the Division is also using two other information services to external users – the Database on International Statistical Activities (DISA-IP) and the web-based documents library.

15. The Statistics subprogramme also undertakes activities that aim at improved use of e-services at the national level. These relate to management of statistical information systems, statistical data and metadata exchange and advice on statistical databases for dissemination.

(a) UNECE Statistical Database ([stat@unece](mailto:stat@unece))

16. The UNECE Statistical Division launched public access to its statistical database in 2005 using the user-friendly tool PC-Axis. PC-Axis combines the experiences of about 20 national statistical offices that have joined forces under the leadership of Statistics Sweden. “stat@unece” has been chosen as the nickname for the database that is intended to increase the publicising and further referencing of statistical data. An updated interface implemented in the course of 2005 helps users to save their queries and tables, and the UNECE secretariat to monitor usage and satisfaction. A centralised external user support service was put in place to respond to requests received in connection with the database, and its content or additional data requests.

(b) Database of International Statistical Activities – an Integrated Presentation (DISA-IP)

17. This database comprises activities of about 50 international statistical agencies and methodological groups active in official statistics in the UNECE region. It is the main management tool supporting the coordinating function of the Statistics sub-programme, and it is primarily used by the Bureau and members of the Conference of European Statisticians, but it also serves as a reference for the staff of national statistical offices and international organizations. The latest improvement consists of a possibility of remote updating by the reporting institutions.

(c) Documents Library

18. The Documents Library is a real application rather than a website, supported by a tailor-made content management system. It permits servicing units to upload all working and discussion papers for meetings, task forces and steering groups without any specific training or web-editing knowledge. The documents are presented by subject, date and other criteria in a user-friendly form and with unrestricted access. Only a few specific task forces have their draft documents, which are not ready for public release, password protected. This application does not intend to compete with the Official Documents System (ODS), as it contains many working documents that would not be included on the ODS, and it is specifically prepared for serving technical expert groups.

(d) Management of Statistical Information Systems (MSIS)

19. The Bureau of the Conference of European Statisticians (CES) created, at its October 2002 meeting, a Steering Group on MSIS. This group coordinates the related activities and facilitates the exchange of experience among ICT managers in national statistical offices. According to the participants, this is a unique opportunity to exchange experiences among the ICT managers, as they are usually much less exposed to international contacts than subject-matter statisticians. The Steering Group also maintains a website on leading practices in ICT in national and international statistical agencies.

(e) Statistical Metadata (METIS)

20. Good statistical meta-information systems are the basis for data exchange and dissemination, and automating other processes within the statistical office. Already in the 1980s a group on statistical metadata was created within the UNECE/UNDP Statistical Computing Project. Currently a Task Force established by the Bureau of the CES is working on a draft framework on statistical metadata for national statistical offices. The draft will be discussed at the next METIS meeting, 3-7 April 2006. The meeting will be held in conjunction with the OECD's Expert Group on Statistical Data and Metadata Exchange aiming at bringing experts from national statistical offices to the international standardization of electronic data interchange.

(f) Statistical database for MDG indicators

21. UNECE staff provide advice on statistical databases to national statistical offices. To this end, the Statistical Division organized a training seminar for interested UNECE countries on the DevInfo statistical database system and an advisory mission was undertaken to The

former Yugoslav Republic of Macedonia in order to find an optimal solution based on PC-AXIS and DevInfo that would allow dissemination of national statistics, including MDG indicators.

#### **D. Population Activities**

22. The Population Activities Unit (PAU) is implementing the Generations and Gender Programme (GGP) and the Population Ageing Programme, which both involve work with internationally comparable micro-level data sets. Data entry, processing, harmonization, dissemination and analysis all require the use of ICT, including use of specialised software. The PAU intensively uses its website in communicating with its national partners in both programmes. In addition to making programme documents and news available in a timely manner, the website is also used for online questionnaires for country representatives of both programmes. In the near future, these online questionnaires will be integrated with corresponding databases, which together will form a system of monitoring the country activities in these programmes.

23. Both the GGP and Population Ageing Programme are long term projects mainly supported by extrabudgetary funds.

#### **E. Sustainable Energy**

24. In the sustainable energy field, ICT applications have made it possible to achieve new political objectives and implement new policies. The liberalization of the gas market, for example, has required the detailed tracking and monitoring of natural gas volumes and billing data. Without the new ICTs this would have been very difficult to attain. Similarly, a range of ICTs have enabled managers to identify, develop and implement energy efficiency projects in municipalities, factories and heat distribution systems. These new ICTs have provided and will continue to provide the necessary technical and management solutions to meet sustainable energy objectives. The Sustainable Energy sub-programme has continued to develop ICT applications and plans new ones through electronic publications in the form of e Books with CD-Roms, which have included significant video content and the Internet. These include dedicated websites for the Gas Centre, the Energy Efficiency 21 Project as well as the sustainable energy section of the UNECE website. Careful monitoring of the visits to the three UNECE sustainable energy websites confirms their increasing use.

25. The Energy Efficiency 21 Project website has been used mainly for communication and value-added information exchanges with some 50,000 website visitors each year. The website is funded with extrabudgetary support. New applications are planned for 2006, in particular on-line investment project development templates. 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.

26. The Gas Centre database and website provide the 22 participating companies in the UNECE Gas Centre with information about its 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 extrabudgetary 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.

27. Electronic publishing has continued to develop with a new hybrid CD-ROM/DVD containing the proceedings of the 2005 Energy Security Forum meeting held during the annual session of the Committee on Sustainable Energy. This form of publication has greatly enhanced and extended the impact of the Energy Security Forum. 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.

### **E. Trade Development**

28. In the trade area ICT is used extensively both to develop norms and standards in order to facilitate trade and also for knowledge sharing and dissemination of information.

#### (a) UNeDocs

29. United Nations electronic Trade Documents (UNeDocs) is a UNECE project for integrating and automating information exchanges in international supply chains – while at the same time allowing individual information exchanges to take place using either paper or electronic means. Using the latest Internet technologies and software products UNeDocs has implemented, as a first step, a proof of concept which is available on the UNeDocs website [www.UneDoc.org](http://www.UneDoc.org). In responding to the success of UNeDocs and the increased international demand for paperless document solutions, UN/CEFACT has decided to further develop UNeDocs as the next global standard for international trade documents in paper and electronic format.

#### (b) Roadmap for paperless trade

30. In cooperation with all the other United Nations regional commissions, UNECE organized, in June 2005, a “Global Forum on paperless trade in international supply chains” which was attended by more than 300 experts from over 65 member countries. The Forum developed a Roadmap for the implementation of paperless trade, which provided a thematic input into the WSIS meeting in Tunis.

31. Also in cooperation with the other regional commissions, the UNECE has developed two other important projects. The first is a draft Toolkit for the development of national series of trade documents in PDF format that are fully aligned with the international standards for documents developed in the UNECE. The second is an Internet Repository to make available on the Internet the national trade documents for import and export procedures from a wide range of countries. The Toolkit and the Repository will help countries to meet their obligations under GATT Articles VIII and X and are a first and important step towards the implementation of paperless trade.

(c) UN/EDIFACT and UN/LOCODE

32. The Internet is the primary channel for disseminating the results of the work of UN/CEFACT (recommendations, standards, best practices). The secretariat carried out an analysis of downloads from the UN/CEFACT website for two standards. The global downloads of the UN/LOCODE rose from 17,092 in 2003 to 23,108 in the first eight months of 2005. Those of UN/EDIFACT standards rose from 83,635 in 2003 to 373,177 in 2005, largely because a new message was included in the UN/EDIFACT directory in early 2005.

(d) Web Log (Blog)

33. The secretariat has also developed an interactive website/web log known as a “blog” on “Regional Trade Agreements (RTAs) in the ECE” which can be consulted at <http://ecetrade.typepad.com>. The blog has created a collaborative space that can be used by international organizations, universities and research institutes, civil society and government agencies to share and pool information about RTAs, especially in Eastern Europe and Central Asia.

(e) The Multiplier Point Network

34. The network was established in 1999 to disseminate information about the UNECE’s work in Trade, Industry and Enterprise Development to potential users in the private and public sectors. Information is delivered to the network partners through an electronic mailing list, which can also be used as a forum to exchange information among the network partners and UNECE. The multiplier partners use the network to address the Trade Development and Timber Division with their questions on the Division’s work and publications. As part of activities of the Committee on Trade, Industry and Enterprise Development on information dissemination, a 2006 version of the CD-Rom on Norms, Standards and Practices for Trade Facilitation and International Business is being developed. It will be sent to all Multiplier Point Network partners and its contents will be also available on the Division’s webpage.

## **G. Timber**

35. The UNECE is working through the Collaborative Partnership on Forests, comprising 14 international organizations, in order to provide forest sector information through a Global Forest Information System (GFIS). The UNECE has been requested to be on the steering committee of the European element of this project. 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. Further, in order to facilitate the rapid exchange of information during serious emergencies such as windstorms and fire damage, the UNECE maintains a website for specialized information exchange. Recently, the Swedish and other Governments around the Baltic used the website to circulate authoritative information on the consequences of a major storm in the region.

36. In cooperation with the Global Fire Monitoring Centre (GFMC) the UNECE/FAO publication, International Forest News, and other information related to wildfires, is published through its website FIRE-GLOBE.

## **H. Human Settlements**

37. The Environment and Human Settlements Division maintains an interactive web 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. Following the decision on the reform of UNECE, the collection of data will be streamlined to serve the purpose of the country profiles programme and at the same time for the HS database. To this end it is also envisaged to revise the questionnaire to member countries.

### **I. Other**

#### **(a) SPECA Project Working Group on ICT for Development**

38. The UNECE actively supports member States, in particular the countries with economies in transition, to transform their economies into knowledge-based economies. To that end the UNECE played a primary role in the creation of the SPECA (UN Special Programme for Economies in Central Asia) Project Working Group on ICT for Development in 2005. The group aims to facilitate transformation of SPECA countries into efficient knowledge-based economies through: (i) facilitating cooperation on initiatives related to knowledge-based economy development, in particular on ICT for Development; (ii) supporting and coordinating capacity-building activities and programmes; (iii) serving as a forum for discussion of issues on ICT for Development; (iv) promoting the Public-Private Sector Partnership (PPP) and multi-stakeholder approach. The project starts implementation of activities from December 2005, in cooperation with UNESCAP using extrabudgetary resources.

#### **(b) Digital economy**

39. The UNECE assists digital economy development in the transitional economies by working with specialists from member States. This includes awareness-raising seminars on issues of digital economy development such as e-government, international outsourcing in the ICT industry, online dispute resolution, national e-strategies and adoption of new technologies. Extrabudgetary resources support the initiative.

#### **(c) ICT Access Points**

40. In cooperation with the other regional commissions, the UNECE participates in a UNDA project on ICT Access Points. The aim of the project is to facilitate transformation of existing ICT access points located in disadvantaged communities into knowledge hubs of global knowledge networks. The project will promote sharing of best practices and will organize capacity-building events in selected Central Asian countries. Final approval of the project plan will be made in early 2006.

## **II. E-APPLICATIONS IN THE UNECE SECRETARIAT**

41. The diffusion of information through Internet has increased dramatically over the last six years. While in January 1998 only 9,187 visits were counted on the UNECE site, by October 2005 this figure had been multiplied by more than 50 to reach 517,654 per month, that means an increase of two thirds over the previous 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.

42. 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.

43. ICT services support applications aim 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 “Crystal Report” software. Within the UN Secretariat as a whole several major applications are now used (e.g., for programme planning (IMDIS), documents tracking (DRITS), and performance appraisals (PAS)).

44. Both the Contacts Database and Financial Tracking system are now finalized in terms of design and software. The contacts database among other things has an automated upload interface with UNOG Security and Safety Section, which eliminates the previous cumbersome re-entering of data for the accreditation of delegates. It also contains advanced statistical reports, which will allow more consistent monitoring of all UNECE meetings with regard to participation and other criteria. The financial tracking system is an indispensable tool for regular or extrabudgetary activities and programmes to monitor expenditures, obligations and disbursements of the various object codes.

45. The secretariat is in the process of redesigning and migrating its Intranet platform. It will use the iSeek environment as made available free of cost from UN Headquarters. Content feeding can be more decentralized and the Intranet site will have a similar look-and-feel to other Intranet sites in the UN Secretariat.

46. 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;
- 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 updates and maintain the UNECE website.

### **III. CONCLUSIONS**

47. An E-strategy for the UNECE needs to comprise elements aimed at supporting the development and use of ICTs in member States and in particular the transitional economies. Similarly, the secretariat has made, and will continue to make, efforts to increase its own efficiency and to apply the new ICT techniques where appropriate.

48. The wide range of ICT-activities at the sub-programme level seems to confirm that UNECE's comparative advantage lies in linking ICT know-how with its sectoral activities. This includes the development of technical norms and standards, and the development of procedures, protocols and applications for specific purposes for use by member countries.

49. In other cases, ICTs are being used as tools to allow speedier, broader and more efficient access to specialized information and databases, the improvement of the collection, transmission and exchange of information, online questionnaires and feedback solicitations as well as the development of interconnected networks for the exchange of information.

50. The current review of activities shows that this dual approach has proved to be a successful strategy and it is suggested that the secretariat continue to strengthen these efforts taking into account available resources.

51. Finally, the efforts of the UNECE should also be seen in the light of the WSIS process and a UNECE E-strategy should be developed consistent with and supportive of the conclusion of the Tunis Summit as decided in the Outcome documents, Tunis Commitment and Tunis Agenda for the Information Society.

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