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Topic (ii): Challenges and opportunities for statistical offices working in a network environment

**USE OF NETWORK TECHNOLOGY IN THE CZECH STATISTICAL OFFICE:
CURRENT STATUS AND FUTURE PLANS**

Submitted by Czech Statistical Office ¹

CONTRIBUTED PAPER

SUMMARY

1. In 1991 the Czech Statistical Office (CSO) commenced the gradual transition from a mainframe to a network structure. The last mainframe was dismantled in 1996 and fully replaced with a network of interconnected workstations. The CSO started to use permanent data communication lines, whose data transfer rates were increasing gradually.
2. The current methods of processing in the CSO can be characterised by data collection and processing in regional departments, from where the data are transmitted via WAN network to Prague to be centrally treated in a database system (statistical surveys and filed surveys). The outputs on paper, Intranet and Internet are available to local and remote users.
3. The technology used in 2001 Population Census has to rely on optical recognition of characters in

¹ Prepared by Jan Matejcek.

over 15 million forms. The technology will use a network environment at both the input stage (a network of workplaces established to make checks and rectify errors in the forms and the optical character recognition) and the output stage (where dissemination of the results by means of Internet and CD-ROMs is a priority).

4. The CSO also assumes full responsibility for the processing of electoral results since 2000. Partial results are brought mainly on floppy disks from constituencies to local authorities. The data are transmitted along a temporary FR/ATM network from local authorities to Prague for processing. The whole course of the real-time processing is available on Internet.

5. Changes under preparation related to network technology:

a) Growing volume of questionnaires completed electronically - the expected cut down on Internet-connection costs will make it possible to move from today's mode of pre-defined completion of questionnaires and their subsequent e-mailing to an interactive mode.

b) Abolition of the CSO's district units - technology of field surveys will have to be modified so that the statistical structure based on old districts can be abolished physically (offices, local PC networks, data transfer lines). Statistical surveys of consumer prices are being adjusted to the technique of handhelds, labour force sample surveys will be fully equipped with notebooks, optical character recognition or mobile computer technology is under consideration for household budgets processing, and censuses will be processed by means of either optical character recognition or by keeping constant registers. All transmissions to central databases are supposed to be effected via mobile telephone networks. Pilot projects put in place for these statistical surveys in the field will also include full harmonization with the EU and new requirements for regional data structures.

c) Growing share of outputs on Internet - almost all outputs produced in the CSO are already available on Internet and CD-ROMs. In 2001 the structure of the CSO Website will be adjusted to the common government backbone gate which standardizes the form of communication of the public and the central and local governments throughout the Czech Republic.

d) Establishment of the state administration communication infrastructure - the intention of the state information policy is to build up communication network for the Czech state administration as a whole (Extranet). This will make it possible to mutually use administrative sources within public administration, while respecting the principle of entering each item of information only once. Of crucial importance for the work of a statistical office are basic nation-wide registers such as the population register, business register, real estate register and territorial identification register.

e) Regionalization of statistical information - the requirement to provide information at all NUTS levels calls for the need to dispose of regional cross-sections for most statistical surveys. This task is not too difficult to cope with from the technical viewpoint. More difficult to solve are the subject-matter and funding problems. Individual data protection becomes increasingly important at NUTS4 and NUTS5 levels, as these territorial units are comparatively small in the Czech Republic.

f) Connection to international institutions - individual connections of the CSO to international institutions such as Eurostat, ECE, OECD, ILO, UN and the like are not planned. A solution based on the interconnection of the Czech Republic's state administration network with these supranational institutions seems to be more effective. Until such a system is implemented, Internet will be used.