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Economic and Social Council

**STATISTICAL COMMISSION and
ECONOMIC COMMISSION FOR EUROPE**

**COMMISSION OF THE EUROPEAN
COMMUNITIES (EUROSTAT)**

CONFERENCE OF EUROPEAN STATISTICIANS

Joint ECE/Eurostat Meeting on the Management of Statistical Information Technology
 (Geneva, Switzerland, 14-16 February 2001)

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

REPORT FROM ISRAEL

Submitted by the Central Bureau of Statistics, Israel[1]

CONTRIBUTED PAPER

SUMMARY

1.   Communications network technologies, which are developing at a very high speed, occupy a most important position in the world of computers. With their offer of challenges and opportunities to the IT manager, these technologies have changed the whole approach to information processing which, in the past, was beyond the bounds of imagination.

2.   Technological progress in all facets of computers, and particularly in the field of communications networks, has accelerated the current trend towards decentralization of processing operations. At the statistics office, the term "decentralization" has a somewhat different connotation than the accepted meaning.

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[1] Prepared by Israel Wiener.

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In other frameworks, it is considered to mean the decentralization of computer operations, but in the statistics office, decentralization begins at the development stage.

3.   A work environment that includes communications networks and decentralized processing operations must integrate files and systems. This is all the more true when the files may be located on different networks and servers. It is the responsibility of the IT manager to coordinate and integrate these systems. In addition, IT managers must also concern themselves with developing subjects that have been decentralized to various departments, but which cut across the organization. Whereas in the past, the IT department at the Bureau of Statistics dealt with the subjects of development and implementation, in the new situation that has arisen, a great deal of the department's time is spent in the role of overseer and coordinator between the subject-matter departments.

I.   TECHNOLOGICAL ADVANCES

- Computing power and storage media capacity
- Fast communications networks
- Exposure to the Internet
- Portable computers

4.   These factors open up a world of opportunity for the IT managers. They are significant challenges with bearing on the further advance of work in the most important subjects dealt with at the statistics office:

   (i)   **Data collection**. Interviewers can be supplied with a computer, conduct a survey and transmit the data collected in the field directly to the data collection center.

   (ii) **Data processing**. Work done by several different departments at the Bureau using decentralized databases can be integrated and information sourced in real time.

   (iii) **Information dissemination**. Rapid transition from paper to use of the Internet and other computerized means of communication.

5.   Improved communications have created many opportunities to improve the work of the statistics office. However, the IT manager must also deal with the new problems that have arisen:

- Management and monitoring
- Data protection
- Systems integration
- Real-time support
- Personnel updated on the latest technologies

- ♦ Data quality control
- ♦ Redundancy prevention
- ♦ Metadata
- ♦ Budgetary constraints
- ♦ The IT manager's professional expertise.

II. CONCLUSION

6.   Without a doubt, communications systems and PC servers are less reliable than the tried and trusted mainframe. However, today we cannot relinquish the many advantages gained through using the communications networks.

7.   In 1999, the Central Bureau of Statistics in Israel moved from its old site to a new building. The move afforded the Bureau IT manager new opportunities and challenges in working within a communications network environment.

8.   The communications system in the new Bureau of Statistics building has brought the bureau work forward by at least a full technological generation. All the end-users have at their fingertips a computing system that enables them to communicate with each other while sharing files. The command and control system is a tool that the support manager has on hand for real time intervention and problem solving.

9.   These are the great challenges now faced by the IT manager in the Central Bureau of Statistics in Israel (as in every other statistics office):

- ♦ To develop organization-wide systems
- ♦ To maintain the communications system at a high level of excellence
- ♦ To introduce data collection via portable computers in direct communication with the data collection center
- ♦ To integrate new technologies into the computing array.