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## **PRACTICAL EXPERIENCE TOWARDS DESIGNING WEBSITES FOR PRESENTATION OF STATISTICAL DATA**

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### **Summary**

1. The Internet offers new possibilities for statistical offices to create more sophisticated statistical websites with larger data sets. On the other hand it increases users' expectations. Therefore, it is important to maintain adequate usability and accessibility to the information provided. The ways in which sites are designed can either improve or impede the benefit of users from the vast resources that are available on the web. Many institutions provide guidelines on how to design websites (W3C...). These guidelines are of ten voluminous, vague or common for basic design of various types of websites.

2. This is not new. Statistical institutions have had to adapt to changing circumstances in the presentation of statistical data since their inception. This is highlighted by the dramatic improvement of technologies and their possibilities. New technologies enable institutions to present large amounts of data and metadata more easily, but also make discrepancies more visible. In general, it is very important to decide what information is needed to describe the socio-economic reality and choose appropriate collection methods. It is important that those who are concerned by the statistical information obtain sufficient background data related to the current status and can analyse data and make their conclusions on this status. The presentation on the website with a possibility to export data to various formats can contribute to this goal.

3. The aim of this paper is to present some experiences with how websites can be developed for statistical presentation purposes. This paper focuses on the appropriate design from the user's point of view not on the technical approach to creating websites.

4. The most important aspect to take into account in designing websites are users and their needs. For statistical websites these needs include access to data and metadata, search tools and export of data in various formats.

5. Different kinds of users normally have very different needs of a website. The following is an attempt to create a typology of users according to three different viewpoints:

- (a) according to the frequency of visits:
  - occasional users,
  - regular users who need information for their work or research projects, for example journalists or students and
- (b) according to users' special interests:
  - researchers and scientific institutes who are looking for information for their research work and analyses,
  - businesses or investors who need some information for their decision making about new investments, and
  - governmental and regional bodies who, for their work, have to use information to decide to redistribute financial resources and to govern state and local administration.
- (c) according to professional background and interest:
  - broad audience (lay readers) and
  - professional users (specialists).

6. The web design also depends on the concept of data access. Access to the data can be free or paid. In both cases the metadata are important for:

- searching for data or what kind of data could be presented from the database;
- defining of variables, data classification, data collecting according metadata codes;
- understanding and transparency of the content of data, and
- information about data quality.

7. An information-centric web interface is a combination of text, links, graphics elements, data from the database and design elements. These elements affect the usability, accessibility and quality of websites. A basic recommended structure and a recommended structure for statistical presentation are used. These two basic design blocks are used as a starting point for the design of some statistical websites: MOŠ/MIS (Urban and Municipal Statistical Project and Information System of the Slovak Republic), UA (Urban Audit), INFOREG (INFORmation system for support of REGional development in the Slovak Republic) and for other websites which are under preparation.

8. A good design of the statistical website has the significant advantage of reducing the time consumption for users and reducing the unnecessary burden on the server. Burden reduction on the server side is done by analysing the user's requirements and enabling specific demanding functions only for the appropriate users. In the case of the MOŠ/MIS, the content is paid and the user could obtain it in print or electronic format. In the case of the INFOREG only professional

users who know what they want and do not burden the server with unnecessary requests can access the time-consuming selections from the database and create reports from these selections. In the case of statistical sites for a broad spectrum of users, such as presentation of censuses from 1921 to 2001, the server burden and time-consuming requests are not important for these websites.

**Key words :** websites design, metadata, data, users, statistics

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