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Panel Discussion: prospects and Risks for the Future: How to manage Uncertainties?

Visual technology unveils the beauty of statistics and swaps policy from dissemination to access.

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Accurate, accessible and understandable geographical, meteorological and statistical information constitute the fundament for public, corporate and civil society. TV, digital technology and the Internet are transforming the ways in which societies make best use of these information systems. The rate and degree at which new technology can be used in each country largely depends on economic development, but the new Information Technology are creating new opportunities for all countries. It is difficult to foresee the penetration of new technology. The Norwegian software company Opera provides free web browsers for mobile telephones. To their surprise they find their highest rates of download per mobile phone in Africa. In many low income contexts the first way to access the internet seems to be through mobile telephones. The cell phone in it self, especially with low cost text messages is bringing modern communication technology also to remote and resource poor areas.

The visual animation of weather forecasts in TV is since long a well established mass communication of public information. Geographical information is presently making a breakthrough on the Internet where printable maps are provided simultaneous with search results regarding telephone numbers. On line maps are also provided in cars through combined GIS and GPS software's.

The technology change swaps services from the public to the private sector like in telecom. And presently the private sector swaps from fee for service to telecom service without cost for those that have Internet access. But we also see surprising swaps from private sector to the civil society; like the shift from British Encyclopedia to Wikipedia. This information service is growing into the most prominent examples of the concept Web 2.0 where the customer is replaced by a user. We wittiness how new and better technology continuously change the way the Internet is used for exchange of information.

Where does public statistics stand in change that affects all sectors of society? My impression is that the National Statistical Systems stands out as the first and leading users of IT in the public sector, but as lagging behind in the use of the Internet.

How are the Internet and the potential of Information Technology used to improve the use and understanding of statistical information? As a frequent user of public statistics and as a daily user of e-mail, cell phones, Internet, search engines, blogg and skype I would say that the provision of statistical information has not changed as much as technology could have allowed. National statistical systems were often the leading services to make use of the computers, but are today far from leading in the use of the Internet.

The assumption that the potential of new information technology is under utilized by present National Statistical Systems is based on limited observations and experiences of Gapminder Foundation. We grew out of a need to make university students use and understand International statistics to acquire a fact based world view. Our approach was simple; let's apply the animation concepts from computer games on statistics! Our interactive moving graphics have been surprisingly well received in spite of our difficulties in providing software solutions that enable a scaling up of the use of Gapminder´s interactive Flash animations. Our intention has been to web based 2-click services for search and animation as can be seen in a beta version available as Gapminder World at http://tools.google.com/gapminder

Many of the visualization tools developed within National Statistical Systems, such as data ferret http://www.thedataweb.org/download_ferrett.html , has many more features but also requires some more patience and skill. New examples of free visualization services for statistics are presently emerging on the Internet, http://www.swivel.com/ http://services.alphaworks.ibm.com/manyeyes/home . The later are to my knowledge the first two web 2.0 applications for visualization of statistics as the user both upload data and generate their graphics in the web site.

Visualization and animation services that unveil the beauty of statistics for wide user groups may induce a paradigm shift from dissemination to access. Such a policy shift in National Statistical Systems may unleash a range of creative solutions for different types of statistics and user groups. The collection, processing and compilation as well as documentation of metadata a quality certification remain the task of the National Systems, as well as the provision of data to the conventional user groups. A policy for increased access to the data in different formats from bulk download to visualization and interactive animations can multiply the number of users and increase the understanding. Data provided in animation format is well suited to tell stories in TV and webcats.

The production of the numbers will remain in public hands but the services that render understanding my partly be provided by public and private as well as through wikie´s managed by the civil society. This would add users and value to public statistics. "Many eyes", "Gapminder" and "Swivel" are some of the first examples of new technologies and services that emerge between the producers of statistics and large number of new user groups.

A unified format for time series greatly facilitates comparability across sector, countries and administrative levels by a click of the mouse. This has so far been achieved by collection and compiling efforts rather than by uploading. The major international statistical databases remains underutilized due to the maintained policy of more or less costly and complicated charges for access. The present methods for maintaining international databases may be replaced by uploading functions or linking of databases. Such provision in uniform formats for accss without cost may greatly enhance the benefits of the billions of dollars that the world annually invests in production of statistics. This will require the provision of data as public goods and technologies for linking and tracing sources and metadata.

It can be assumed that new technology for visualization and animation in combination with new ways of achieving uniformed format for large amounts of statistics will soon induce considerable changes in the use and understanding of public statistics. A close linking of statistical information with geographical information will enhance the value of both systems. The best way to plan for the future is thus unclear. However, these uncertainties are probably best regard as opportunities.