

UNECE Work Session on Statistical Dissemination and Communication  
(12 - 14 September 2006, Washington D.C., United States of America)

SUMMARY OF ABSTRACTS

Tuesday 12 September

**Topic (i): Communicating effectively on the Web**

**Session Organisers:** Colleen Blessing, United States Energy Information Administration  
Laurie Brown, United States Social Security Administration

**DESIGN EXPERIENCES**

**Usability**

Wendy Yee (UserCentric Inc.)

**Using Paper Prototypes to Test Website Navigation**

Nicholas Johnson and Adrie Custer (US Department of Agriculture)

USDA's Economic Research Service recently used early usability testing with paper prototypes to get preliminary feedback on a new website navigation structure and design. The testing revealed valuable insights that were incorporated into the design process. This paper shares those insights plus an original method for performing early usability evaluation of a website's navigation. Finally, pros and cons of this method are explored.

**IMF's Transition to a New Interface**

Cathy Wright (International Monetary Fund)

The IMF's Statistics Department plans to shift the focus from print publications to online dissemination of its statistical databases and supporting metadata. To help begin this transformation, the IMF engaged two external consultants to help guide the change. The results of these studies have formed the basis of the new program of statistical dissemination. This paper will provide the details of our experience and plans for dissemination.

**Web Dissemination of Statistical Data in an Administrative Web Environment**

Barry Johnson (US – SOI, IRS)

In countries without an official, centralized statistical agency, statistical organizations are often housed within much larger agencies whose missions are primarily administrative. In such cases, the needs of the statistical functions are often at odds with those of the usually far larger administrative functions within a single agency. Tension can be especially great when the statistical function and the administrative function are compelled to share a single web presence, due either to resource constraints or a policy decision. The design of a website primarily intended to assist users in complying with administrative responsibilities is not likely to also optimally serve statistical data users.

Statistics of Income (SOI), a division of the U.S. Internal Revenue Service and the primary source of data on the U.S. tax system, provides an excellent case study of this sort of coexistence. The irs.gov website is designed primarily to assist taxpayers in filing their taxes. It contains tax forms, filing regulations and other resources for answering questions about the myriad tax and information returns that make up the U.S. tax system. It is also home to SOI's web pages, "Tax Stats," which provide public access to a large number of statistical data products. This paper will focus SOI's efforts to serve its growing constituent of web users through the Tax Stats pages on irs.gov. It will discuss recent redesign efforts, present the results of user testing and share future plans, all in the context of the design limits imposed by a multiuse website. The goal is to provide guidance and encouragement for other statistical organizations in similar situations.

## WEB TAPAS

### **Blind Friendly Web**

Helena Kolácková (Czech Statistical Office)

The problem of the content of the web pages and their accessibility to persons with specific needs has been recently increasingly coming to the front of webmasters' and web designers' interest. The Czech Statistical Office, one of the first offices of the Czech Republic's state administration, attempted to make its web pages accessible to persons with a strong visual handicap – those who are partly or completely visually disabled.

The contribution describes rules for making the web pages accessible to persons with a strong visual handicap. Among these users belong not only blind persons for whom it is completely impossible to obtain information with the help of their sight but also users with other visual handicaps – users with a narrowed visual field, with a strong short sightedness, tunnel vision or colour blindness (defects of colour sensitivity – 15% of population), refraction handicap (myopia, astigmatism), cataract, afakie, glaucoma, retinopathy etc. Attention is also given to other handicapped groups: with hearing defects, physically handicapped, persons with concentration problems and others.

### **FedStats' Work on Accessibility**

Marianne Zawitz (US – BJS) and Laurie Brown (US – SSA)

### **Writing for the Web II**

Thom Haller

### **Blogs - are there business applications for statistical agencies?**

Jessica Gardner (UNECE)

Weblogs are fast becoming an important form of online communication. Starting as a way to share personal views with the world, a powerful blogging community has emerged, capable of influencing public opinion and mass media.

So, what is blogging and are there business applications for statistical agencies? This paper will give a simple introduction to the technology and explore some relevant examples of its application. It includes a look at future directions and a summary of resources if you want to find out more.

## Communicating statistics with interactive graphics

Doris Stärk (Germany Federal Statistics Office)

Starting in 2003 with the publication of the **animated population pyramid** (a joint development with the ONS, Netherlands), Destatis has made use of the SVG Format (Scalable Vector Graphics) to communicate statistical results and their underlying methodology with interactive graphics on the web.

In 2004 this was followed by an **Online Atlas for Regional Statistics** and in 2005 we introduced an **Indexcalculator** for a personalised inflation rate, so that users could better understand the weighting patterns in the basket of goods.

Three years into these interactive graphics taught us several lessons:

- Interactive graphics finally make real use of the web as a dynamic medium and the ability for users to consume our data in a playful manner.
  - However, not all of our applications have the same efficiency in terms of this success and there are still technical drawbacks.
- 1) The animated population pyramid is still the most popular of the three offerings. This is partly due to the high attention that the demographic change attracts in an ageing population but also because the message can be very easily understood just after starting the animation. In addition it is an eye-catcher at trade fairs and similar occasions.
  - 2) The Online Atlas shows another experience: Here the technological effort was the biggest and the statistical tools it offers are the most sophisticated you can get. But the Atlas in itself doesn't tell a story, it is a tool that could tell a thousand stories but only with the help of a skilled narrator. Interestingly we are using the same tool for recent election data and it is this second Atlas with a more focused content that got more attention.
  - 3) The Index Calculator - our most recent example - became quite famous because we could sell it as a tool to understand why individuals are sensing a much higher inflation rate than the officially published one. Introduced together with a printed publication at a press conference we were receiving a lot of press coverage and directly linked hits to the index calculator. However this attention could not be sustained because people tried it out only once. This is in strong contrast to the population pyramid which even three years after introduction still gets a continuous stream of attention.

After all the lesson is not surprising here: Similar to other ways of publication our information gets most attention if it is directly linked to people's problems and if there is only one clear message.

Some technical aspects:

The SVG technology is still in its early stages and so far we had to rely on the installation of a plugin that would allow the browser to display SVG content. Starting with Firefox 1.5 in November 2005 (non ie) browsers are now starting to support the SVG format without the need of a plugin. Pre-release versions of Opera\_9 and Safari are already showing that support for SVG will be made available in those environments.

Firefox has a 10% market share in the US and reaches 25-33% in some European countries (end of 2005). A growing user community will support the development of new SVG-applications.

During the presentation the latest version of the German population pyramid on the basis of the 11th coordinated population projection will be demoed with regard to how it works in different environments, including mobile phones.

## Rich Internet Applications (paper only) - Laurie Brown (US – SSA)

### SUCCESS STORIES

#### Chez INE (our way for 'serving' and 'presenting' data)

Fernando Villa (Spain INE)

This paper aims to use an informal tone to present our particular approach on how to make our site more popular, pleasant and, in summary, how to improve its efficiency. We have decided to compare it with a Restaurant, since 'images speak louder than words' (in this sense referring to written images), using comparative metaphors.

By using the creativity provided by a varied combination of persons and personalities (Internet contents team), and very simple ideas that are sometimes very simple to implement for improving our 'menu' and the attention provided at our 'Restaurant,' so that the data that are meticulously 'prepared' in our Computer reach our customers, as precisely as possible, hoping that they will return to visit us again at our special 'Restaurant' (website).

Wednesday 13 September

**Topic (ii): Statistical literacy: Is what we have here a failure to communicate?**

**Session Organisers:** Rick Devens, United States Bureau of Labor Statistics  
Colleen Flannery, United States Census Bureau

**The Dimensions of Statistical Literacy: Conceptual and Practical evaluations**

Jussi Melkas (Statistics Finland)

The presentation first analyses the components of statistical literacy on the basis of relevant literature. The next step is to introduce concrete services developed in Statistics Finland's training activities. The idea is to point out how different aspects of statistical literacy need different kind of instruction. The third step is to connect the aforementioned aspects to the needs of different target groups. Different groups have different uses for statistics and they do not need all the same qualifications. The paper ends with a synthesis that aims to find concrete ways to help the understanding of statistical information of different groups. In this phase it is not only the training which is seen as a tool for better use of statistics, but statisticians must also be able to communicate the content of statistics as clearly as possible.

**Communication and Perception: which world do Official Statistics live in?**

Sibylle von Oppeln-Bronikowski (German Federal Statistics Office)

How does the general public perceive our statistical figures? How do people react to statistical information which is contrary to their expectations? To what extent are individuals able to distinguish between averaged data and the observations they make in their own personal environment? The author claims that the public perception plays a major role in the successful communication of statistical results – a role which is broadly underestimated in Official Statistics.

In the paper, this aspect of perception is examined using several examples from social statistics as well as statistics of prices, income, retail trade and labour forces. The role that public perception plays has often been neglected in German Official Statistics. This can seriously harm the credibility of the Statistical Agency – noticeable in price statistics after the Euro Cash Changeover for example.

What conclusion are we to draw? Important aspects of the quality issue are relevance and coherence. If we want to improve these aspects, then we have to rely on what the recipients actually receive – and not on what we are sending them. The users do not perceive our statistical results as isolated facts. They will always more or less put the statistical findings into their personal context and they will match the figures to their own experiences and expectations. Is it really a match or sometimes more a case of mismatch? Should we leave our users alone with their “cognitive dissonance” or should we help them to dissolve it?

It would appear crucial for Statistical Agencies to gather more knowledge on phenomena such as public perception, possibly in cooperation with research institutes or universities. In the paper, the author presents the results of a very challenging cooperation with Prof Brachinger from the University of Fribourg, Switzerland. Brachinger invented a new model based on the “prospect theory” (introduced in 1979 by Kahneman and Tversky), helping statisticians to explain the gap between the official Consumer Price Index results and perceived inflation in Germany.

How do we communicate? The process may be seen as a triangular relationship between the Statistician, the users and the media. The press, television and other media are the main sources of information for most of our users on their social and political environment. In this way, the media builds up the context that we have to account for if we want to reach our recipients. Our figures are relevant, if the users are able to interrelate them to the other things they hear from the media. Our figures should be “policy relevant”, which should not be confused with “policy driven”. They should exist in a traceable relationship with other information reaching the recipient – without aiming at supporting other conclusions.

On the other hand, Official Statistics can use the media for better communication with the public. Using these powerful information channels, a gap between public perception and statistical findings may be dissolved by explaining possible reasons for the puzzle. If this is done early enough, possible crises of credibility may be prevented. Risk management should be a part of our communication strategy.

**Developing Statistical Literacy in the case of Macedonia**

Mira Todorova (State Statistical Office of the Republic of Macedonia)

In order to achieve an increasing use of statistics it is of crucial importance to educate a wide array of users about how to use and interpret statistics correctly. The State Statistical Office of Macedonia has implemented a few actions in this field, and results encourage us that there is a need to foster these actions. The main actions included: -initiating development of CODED data base with Macedonian statistical terminology; wider dissemination of statistical definitions for various statistical terms; meetings with students at the premises of the State Statistical Office; State Statistical Office staff as guest speakers about statistics, working on some faculties in Macedonian University; and recently changing the writing style of our Press Releases and other publications in the State Statistical Office. In the forthcoming period we intend to intensify the activities on CODED database and ensure its public dissemination, as well as organise a set of actions for educating the young population about statistics.

### **Panel: Bringing Numbers to Print**

Paul Overberg (USA Today) John Berry (Bloomberg) and Ken Meyer (US Census Bureau)

Panel discussion about how journalists use national statistical data in story development and how NSOs make interesting data readily available for the media.

### **News releases published on special occasions**

Ida Reprovz-Grabnar (Statistical Office of the Republic of Slovenia)

Statisticians more often than not anticipate that users of statistics have the ability to understand statistical terminology and concepts of methodologies, and also that the users should be familiar with using statistical thinking concerning the statistical data, data-related argument and that percentage, average, index, coefficient etc. are part of common-sense approach in understanding and interpretation of statistical data. User-oriented statistics, however, is expected to make the use and understanding of statistical information widely appreciated and understandable, easy and interesting for the general public, and so statistics can become the description of “real life”, broadening the knowledge of us.

Although official statistics can offer to users an enormous amount of information, structured in the well-known fields, journalists, who are almost always pressed for time, can find themselves before an insurmountable obstacle, especially in gentle and soft themes that unpretentious people, i.e. general public, are interested in. Instead of our demand that journalists master substantial literacy, statistical offices, more precisely public relations departments, should make the first move in publishing the apprehensible texts which accompany statistical data – when something in the country is taking place: for special occasions, at holidays, for national or international days which are devoted to a specific group of people or some activity, phenomena or appearance. Therefore, statistical office’s press-releases are to be published not only when the results of statistical surveys are prepared, but they are also highly appreciated when the media and the public need statistical information. It is obvious that such a storytelling press-release should cover more fields of statistics.

Writing press releases at special occasions involves the statistician and public relations officer: indispensable patience is required for both of them to achieve in the end the compromised result with which three parties can be more or less satisfied – media, statistician and public relation department. After having published them on the web, such press releases have to be sent by e-mail to the vast number of journalists.

Press releases at special occasions in the Slovene statistical office have a two-fold aim; in the first place by all means to promote official statistics among the general public via media and also to encourage the statisticians to write commentaries in a more easily understood way, with pleasing and simplified language – which is usually more difficult work for them than hiding behind the heavy methodological terms. However, whenever press-clipping results demonstrate great interest in the media for our press releases at special occasions, statisticians are rewarded with satisfaction and self-promotion.

### **Taking a horse to water.... and giving it a bottle**

David Marder (Office for National Statistics, United Kingdom)

A curious title, you might think. But let it paint a picture in your mind. We’ve all heard the saying that you can ‘take a horse to water, but you can’t make it drink’; well imagine leading your horse along and then providing the water in a bottle. To most horses this is pretty useless. The water’s there; it’s in a fine receptacle; and we’ve brought our thirsty horse along the path. But somehow or other we’ve fallen at the final fence and not achieved our purpose . . . to give the horse what it wants – a drink of water.

This analogy could be used of some of our attempts to communicate our statistics to users. We have the information they want and we can take them most of the way to accessing it but then somehow we contrive to serve the information up in such a way as to make it difficult for the user to use properly.

A common reaction then is to blame the user for their inability to make sense of something which to most of us is quite straightforward. To use that analogy again, we humans can manage fine with a bottle of water, why can’t the stupid horse?

So given that we have good material and given that we have good systems to deliver it (publications, internet, websites, seminars and conferences etc) what goes wrong?

This paper will look at process and what we might do to overcome some of the barriers and turn the unsuitable ‘bottle’ into a more fit for purpose ‘trough’!

### **The Top 10 Blocks to Statistical Writing**

Rick Devens (US Bureau of Labor Statistics)

There are reasons that writing a clear communique about statistical data is difficult. This presentation discusses some of the most common.

Thursday 14 September

**Topic (iii): How to present metadata**

**Session Organiser:** Vicki Crompton (Statistics Canada)

**What we know about users of metadata and their display requirements**

Carol Hert (University of Washington)

It is understood that metadata availability can enhance retrieval processes, improve online information organization and navigation, and facilitate user understanding of online objects. Our work focuses on developing an understanding of how and when users utilize metadata in order to model the resultant metadata requirements to support electronic access to and use of statistical information. Over the last several years, we have conducted a series of users studies on which we report here.

**Keeping WWW.STATCAN.CA visitors in the loop**

Louis Boucher (Statistics Canada)

We know that our website clientele includes diverse constituencies and we know that their information needs are equally diverse. While the content on our website continues to expand as new information becomes available, the challenge articulated by client feedback is to organize and link this growing information store in a manner that facilitates user access to the information they seek.

When our website users find specific data, they often require other related information from Statistics Canada. They often need to know more about its availability, its applicability or its related context. Such information usually resides in various databases and requires some, if not extensive, knowledge of Statistics Canada's information from the users. This paper outlines the importance of creating, maintaining and disseminating comprehensive metadata commonly used by different applications systems and databases from our website. The strategy seeks to accomplish three things. First, improve the consistency and quality of metadata across surveys and data. Second, make cross-referencing richer and more useful to users. And finally, lower the maintenance overhead in maintaining such links.

**Presentation of statistical information on the ABS website**

Mano Georgopoulos (Australian Bureau of Statistics)

The Australian Bureau of Statistics (ABS) has been publishing statistical information on paper since its inception in 1905.

In 1995 the ABS commenced publishing information on its web site. Initially the on-line products were copies of those published on paper. However over time the emphasis has shifted from paper focused formats to formats optimised for on-screen reading.

In order to make the most of this change in focus the ABS has been investigating methods of presenting descriptive metadata

- a) maximising the on-screen communication of information from statisticians to a variety of end users; and
- b) assisting these users to apply the information for informed decision making.

This paper will outline the design principles and strategies identified to present descriptive metadata and their implementation on the ABS web site.

**Metadata Requirements for a BLS Reports Archive**

Scott C. Berridge, John J. Bosley, and Daniel W. Gillman, U.S. Bureau of Labor Statistics

The Office of Publications staff at the U.S. Bureau of Labor Statistics (BLS) are building an archive of economic reports dating from the late 1800s. The archived material will be available on-line through the BLS web site as PDF files created by scanning paper copies of the reports. We recognized early in the project the potential for using metadata to help people use the archive. Candidate metadata elements were selected from the DDI. User studies were performed to elicit descriptions of documents that users want to see associated with the archive. We compared those choices with the candidate DDI elements and revised the metadata element set as appropriate. Then, users tested the revised metadata set in realistic scripted searches of the archive. The paper describes the project, the selection process for the metadata elements, and the methods and results of the user studies.

**Creating a User-Friendly Glossary and Other Metadata Makeovers**

Melinda Hobbs (US Energy Information Administration)

**Publishing Metadata with Data - XML based dissemination process of statistical information (COSSI)**

Harri Lehtinen

Statistics Finland has been developing XML-based data dissemination for a couple of years now. The dissemination system is based on the model of common structure of statistical information (CoSSI), and the dissemination is based on XML documents compatible with it. The CoSSI model covers different ways of statistical data organisation (statistical data matrix and statistical table), statistical publications (monthly and quarterly publications, press releases, etc.) and quality declarations. The structuring of the metadata connected to statistical data is also implemented within this system.

## **Topic (iv): Managing revisions and version control to maintain credibility**

**Session Organiser:** David Marder (Office for National Statistics, United Kingdom)

### **How to Use Mistakes to Improve Credibility**

Leon Østergaard (Statistics Denmark)

Unexpected revisions are called mistakes by our users - and rightly so! Statistical institutions often feel embarrassed by correcting previously published figures and think that it detracts from the credibility of the institution, which may be true. Hence, statisticians tend to hide mistakes under terms such as “revisions”, “updates” or the like. This, however, does not add to credibility - on the contrary.

The paper argues that a new policy on the handling of mistakes is called for. A mistake should be seen as a possibility for the institution to demonstrate that mistakes are taken seriously, corrected at the earliest opportunity and corrected figures displayed very visibly to the users. Furthermore, information on the cause(s) of mistakes should be systematically collected in the organization and used for development purposes.

A new policy on handling mistakes has been in force at Statistics Denmark since 1 January 2006. The first results and reactions are reported in the paper.

### **Managing Revisions at Statistics Sweden**

Anna Östergren (Statistics Sweden)

Unfortunately, incorrect information is sometimes published. It is then important that users as soon as possible get access to the correct data. To make this as convenient as possible it is important that everybody who is taking part in publishing knows how to make corrections and are aware of the working process. The corrections should be made for different channels and types of publishing (reports, press releases, tables etc.). There are also considerations for how long information about the corrections should be published on the website, who is responsible for doing the corrections and who should be informed about the corrections etc.

Statistics Sweden is working on guidelines for how corrections should be handled and those are presented in this paper.

### **Informing the User about updates and corrections: the policy of Statistics Netherlands**

Huib Van de Stadt (Statistics Netherlands)

Statistics is about information. However, informing the users on scheduled and unscheduled revisions in official statistics is less common than it should be. National statistical institutes have a long tradition of treating their results as the fixed outcome of the statistical process. But in fact revisions in official statistics are not uncommon in many countries. Some revisions are scheduled and others are not. Scheduled revisions are based on a pre-announced release policy consisting at least of provisional results and final results. Unscheduled revisions or corrections are the results of errors within the statistical process or, for economic statistics, business data which are unexpectedly received too late to be included in the first estimates.

In 2005 Statistics Netherlands has started a project to improve the information on our website on corrections in statistics. The starting point is that statistical institutes should promote transparency on corrections. We started a new heading on our website [www.cbs.nl](http://www.cbs.nl) which was specifically devoted to corrections. Our website contains about 1500 multi-dimensional tables, comprising all core statistics of Statistics Netherlands. Every month there are about 200 regular updates for a new time period and about 25 corrections on previously published results. Every correction is shown separately. For internal purposes a management summary of all corrections is compiled, showing the number of corrections per organizational unit.

### **Correcting mistakes on the Internet: A case history at Statistics Canada**

John Flanders (Statistics Canada)

A statistical agency's name is only as good as its data, but despite all its efforts to get things straight, sometimes errors do creep in. The agency's response to the issue can increase the public's confidence in its data -- or it can result in some unfortunate consequences. It's easy to make corrections online, but that's not the point. How do we make sure our clients are aware that an error has been made? How fast should these corrections be made? And what happens when the media decide to feast on the correction as the news angle du jour? Statistics Canada has recently had a first-hand experience with such a scenario. This paper explains what happened, and what kind of procedural changes it resulted in at the agency.

### **Presenting updates and revisions of statistics to a sceptical audience**

David Marder (Office for National Statistics, United Kingdom)

Some revisions are the right and proper updates of information as later and more complete data become available. Other revisions occur when someone has got it wrong for whatever reason or where a process has failed. The first type of revision is usually planned for and expected (at least by the statistical community); the latter is usually unscheduled and unexpected.

The often unpleasant consequences of unexpected revisions are not surprising and probably deserved, but a sceptical public and a voracious, unsympathetic media are ever more willing to pounce on the ‘expected’ revisions as ‘mistakes’ and ‘yet more evidence of an incompetent statistical organisation’.

This paper agonises over the issue, looks at UK revisions practice and, without coming up with any magic formula, suggests a few courses of action to alleviate damage to reputation and trust.