Chapter III: Organisational and technical aspects of communication between statistical offices, the press and other media

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3.1 ORGANIZED BY SEMINAL TECHNOLOGY

3.1.1 Introduction

Initially **World Wide Web** seemed to be just another way of dissemination beyond the print and off-line solutions like magnetic tapes, diskettes, CD-Roms, but by mid-nineties it was clear that it has an impact on National Statistical Offices (NSOs) overall activities. Rapid expansion of Internet remains a challenge for statistical agencies, requiring re-engineering of many phases of statistical production.
Developments made in the field of technical means of dissemination were followed by the introduction of a new requirement: issuing of advance release calendars, urged by the International Monetary Fund (IMF). As to the work of press units within the NSOs, with **electronic dissemination** they inevitable became a kind of a meeting point, mediating heavy impacts of the new technology to the agencies, which lead to their certain refurbishment.
Technology altered organisation: in a fast moving world it is of crucial importance to be continuously in contact with users and listen to them. As a further modification of existing routines extra efforts were needed to support big data collection activities, such as censuses, which sometimes required involvement of external assistance.
First steps of **shifting from print to electronic products** are instructive: they show that a balance has to be made between different means of dissemination for media. After all, the web rather than turning the world on its head, is turning out to be "only" an extra distribution and marketing channel and an extremely demanding one.

3.2 ORGANISATIONAL AND TECHNICAL ASPECTS OF COMMUNICATION BETWEEN STATISTICAL OFFICES, THE PRESS AND OTHER MEDIA (NEW PLACE IN THE OUTLOW OF DATA)

3.2.1 New patterns for single window

Internet was born outside of statistical offices but as a means of dissemination was nurtured inside them. Before its arrival, it was commonly agreed that within agencies the internal organization must support smooth implementation of preparatory phases, monitoring of the feedback of dissemination and co-ordination of the relations to the mass media. **Co-ordinated outward communication** was seen as necessary for both the press and statisticians. It was clear that the journalists were not going to come for information, national statistical offices (NSOs) had to supply them with it. It was the matter of initiative and demand – a lot depended on offices. The aim was the establishment of a **unified, open and user-oriented statistical information system**. A part of it was to be Internet, a subsystem for statistical dissemination whose function was to serve the media as well. These original objectives had been fully met

in most of NSOs; their later implementation, however, necessitated adapting frequently to the rapidly evolving world of electronic dissemination.

The question was how to make an **effective Internet site**?
The first electronic pages looked like a photo of the printed version and that was not clearly enough. Later it became obvious that establishing a website is not an isolated activity. An Internet site could only be effective when it is part of an integrated media mix. Even a website is not a product, but rather a dissemination channel which can be used in different ways for different products and different groups.
By trials and errors it was Statistics Canada, which took the lead, transmitting its Daily from print to electronic, creating one "single window" for dissemination for media.
And again, the paper production served as a basis of comparison. On line and off line diffusion assured promptness in data release and allowed a better organisation of the great number of data available.
The role of **information towards media** broadened into a wider information strategy. It was felt that the statistical data dealt with newspapers and in television were infinitely inferior in quality and quantity to the statistics available. The paradox became even more evident in social statistics, in which media has a minor interest in comparison to economic statistics: entire volumes of data were forgotten after few lines in newspapers on the day of release.

It was even stated **citizens** ability to benefit from statistics at two different levels:
- media informing them about new data;
- Internet, CD-Rom and multimedia systems allowing them to retrieve all the detailed information in order to carry out a more careful reading.

Obviously a "second reading", consulting data on paper, is possible even today. But there is a clear difference between a library search and the possibility to retrieve the same data on Internet. Could new channels replace printed volumes or not?
Public statistics must be collected, processed and quickly redistributed to the users. In case of the biggest ventures, to wit censuses, some agencies had to discover that their resources are not sufficient to communicate their aims to prospective respondents. The conclusions from **outsourcing** could be expressed in two phrases: "Do not expect that the contractor will be expert in every aspect of public relations. Let the contractor do what it does best, but make certain that what the contractor does best is what you need to have done."

3.2.2 Unexpected consequences

With Internet era new and delicate problems at a communication level came from the multiplication of the information, the acceleration of the processing time and the possibility to break up the data even at a territorial unit level. It became necessary to refine the processing quality, assure the information's autonomy and improve data diffusion, essential terms in every democratic system for public statistics to be credible. In its more mature stage it was stated that statistical office website could be a wholly integrated part of statistical office's internal statistical and business system. Statistical information will be made through presentations that are designed to appear firstly as quality **presentations on an Internet screen**, which becomes the primary means of interaction between a statistical agency and its public.

It was about learning to make and re-create own website, handling feedback from users and inventing new patterns, establishing Editorial Boards for editing on the Internet, conveying newest developments and requirements to subject-matter divisions: a process of perpetual and generic self-correction.
The users of statistics became much more diverse. Among external users subject-matter researchers, political decision-makers, public officials, executives, teachers, students, librarians can be identified. Plus journalists. To comply with such heterogeneous requirements, new patterns of communication are being elaborated, former patterns of work inside the National Statistical Offices modified. In one aspect press offices became the hub of changes. For as stated in a CES meeting: "Our future service model may well come from the media, compared the present more academic-like approach we take".

3.3 SHIFTING FROM PRINT TO ELECTRONIC PRODUCTS – HOW AND WHEN? (SELF CONTAINED SINGLE CHANNEL)

3.3.1 First examples of electronic dissemination

As early as in the late 1960's, one of the U.S. agencies began to use formal magnetic tapes for dissemination of its statistical products. The computer systems and services division provided for the systematic creation and verification of the tapes, recording of recipients, an accounting of the number and type of data sent, and charging to reflect the cost of preparing the tapes (but not the cost of preparing the data) and the cost of distributing them.

U.S. Bureau of Economic Analysis (BEA) *is an operating unit of the U.S. Department of Commerce, organized as part of the Economics and Statistics Administration. Initially the estimates and analyses prepared by BEA were disseminated mainly through its* **monthly journal**, *news releases and other publications. The Survey of Current Business had over 11,500 paid subscribers for decade, number of releases reached 60 per year. Increasingly, various electronic media had been added to the media used. BEA published its first catalogue of products in 1981, and in that catalogue listed only print media and computer tapes.*
From 1976 through 1989 BEA distributed over 2,870 **tapes**, *averaging more than 200 per year, with the period from 1989 to 1993 showing a decrease in tape distribution, when the yearly average fell to mere 25. Program divisions had control and responsibility for maintaining and storing their output tapes.*
However, the advantages that tape had, had been equalled and, in the case of CD-Rom, surpassed by the availability of microcomputer media.
BEA installed an **Automated Telephone Response System** *in October 1985. The system was designed to reduce the hours spent by economists answering questions from users about the data in news releases. The system is available 24 hours a day, 7 days a week and has no service access fee. The data are available on the system at the time of release.*
BEA's **diskette distribution** *started in 1985. At that time, the national income and product accounts tables that appear monthly in the Survey were made available on diskette.*
Information presented on diskette duplicates published data and documents.
Economic Bulletin Board (EBB) *of Department of Commerce began as a pilot project in 1985, specialized in the latest statistical releases of Federal agencies. System was operated*

by the Office of Business Analysis (OBA), a sister agency to BEA within the Economics and Statistics Administration. New releases were the first BEA products available through the EBB. For users advantages of the EBB included quick and timely access to the latest Government-produced information, while the main disadvantage was seen that the system did not provide users with enough selectivity.
Capacity, ease of use, durability, low cost, access speed were all recognized **advantages of CD-Rom media**, *issued from the early 90s – for BEA data output through U.S: National Trade Data Bank. As to the independent production, BEA made great benefit of data from its Regional Economic Information System, a large economic database covering the states, metropolitan areas, and counties of the U.S.A. The REIS CD-Rom prototype being produced in January 1991 with first distribution from July 1991, it got enthusiastic response from the user side.*
From the review some of the primer criteria for a period successful electronic dissemination system come to light. Cost and control of the system were seen to be primary considerations for data producers, while cost of, and speed and access to, the data seemed to be primary considerations for the data users. As the fact that timely response to new technologies, in conjunction with careful tracking of the advantages and disadvantages of existing systems, can facilitate success from both the producer's and the user's perspectives.

The first experiences with Nordic statistics on **CD-ROM** *were made in 1992, of which in* ***Norway*** *about 50 were sold in 1992. The CD-ROM was produced in cooperation with the Nordic statistical offices and Nordic statistical secretariat. CD-ROMs were issued every year, with Statistics Greenland participating in project from 1994. Nordic Statistics compact disk contained statistical tables and PC-AXIS – management system for statistics developed by Statistics Sweden.*

PC-AXIS was an easy tool to download statistical tables from the mainframe to the local PC, to manage statistics, import statistical tables from other off line media and to extract tables for further analysis and presentation through other PC-packages, e.g. spreadsheets. With the help of PC-AXIS, the user is able to create her/his own tables and databases. PC-AXIS was very easy to use and did not require special knowledge.
PC-AXIS had been chosen as the ***main tool for offline dissemination of standard products*** *from Statistics Norway. Statistical information on CD-ROM was organised in databases, each Nordic country having its own database.*

The PC-AXIS program offered good possibilities. You could retrieve information and manage it in different ways e.g. you can calculate sums, make comparisons over time, or edit results of retrieval and present tables as diagrams.

Advantages of the CD-ROM
The advantages of the compact disk are the fact that it can be used off line (easy accessibility on PC), its low running costs and large data storage capacity (680Mb = 300 high-density diskette). Dissemination of data on CD-ROM guarantees data-quality - information on CD-ROM cannot be amended. Information can be Only Read. Graphical user interfaces on CD-ROM's software make it easier to use the stored information.

Online Systems
As opposed to the compact disk, online systems provide new/update information. They are accessible from local PC through communication procedures and communication lines. The last fact made online system less accessible compared to

CD-ROM. The cost level of using online systems depended partially on mastering the **retrieval language and database structure** (how fast you could find relevant information).
SSB-DATA was the online system from Statistics Norway with various statistical databases. SSB-DATA was accessible online for external and internal users and used for the production of diskettes, CD-ROM and the publication "Monthly bulletin of statistics". By 1994, SSBDATA had about 25 external users, but most of them used this system only occasionally.

New technology offers possibilities for better handling and dissemination of statistical information. Statistical information is not only numbers. In order to disseminate statistical information in a proper way we have to **link statistical macrodata and metadata**. The macrodata are the result of an aggregation process based upon statistical microdata. Metainformation is usually defined as "information about information". Metainformation is a central part of the statistical information system. It is textual information about where and what information is available and about the content and "the message" of the statistical information.

3.3.3 Print addicts uncovered in Denmark

Towards the end of the 20th century users of paper publications were divided with respect to how they want statistics to be presented, turned out from three different investigations of **user needs** and especially the **requirements of journalists**. Surveys conducted in Denmark indicated insistence of some users on printed products, thus raising the question at the very initiation of the shift to electronic products in dissemination about strategies to be followed.

The intention of the **two questionnaire-based surveys** and of one intensive investigation carried out by unstructured interviews was to obtain more information about **user satisfaction with agency' products** and on their requirement. After having divided users into seven different groups it became obvious that citizens ("the public") represented only about 3 % of subscribers to Statistics Denmark's publications. Therefore, the press had to be considered the most important channel of dissemination, the needs of journalists had been surveyed intensively.
First survey was conducted in November 1996, by employing 490 questionnaires for subscribers receiving publications free of charge; in May 1997 a survey interviewed 11 large and important users finally in October 1997 a second investigation scrutinized 1,200 paying subscribers. In addition, 18 handpicked journalists answered the second questionnaire.

Considering a strategy of shifting **from paper publications to electronic subscribers** to paper publication question read, whether respondents would prefer to receive statistics on an electronic medium, off-line as well as on-line instead of paper.
Two-third of respondents (66,9 %) gave as answer "no", and further 55,8 % claimed that even in general did not prefer statistics on an electronic medium.
The second questionnaire survey unveiled a good deal of **helplessness about preferring or not to have more statistics on Internet**. As to the distribution of respondent by age, the pattern that emerged was that younger users were more positive towards the Internet and other electronic media than the older ones. So it

seemed plausible that people who grew up in the computer age were more comfortable with electronic information. At the same time persons at managerial level were generally more negative towards the Internet and other electronic media. Apart of fact that these people were aged, the reason for that could partly be that they often need a brief overview of key figures, which can handily be satisfied by a paper publication.

In the survey in May 1997 based on intensive interviews, the users were also confronted with a question about their opinion of paper publications versus statistics in electronic form. The following tendency to a **coincidence between nature of work and preferred medium** emerged.
When statistics were used for analyses, which involved vast quantities of data and when used for frequently repeated computations, **electronic publications** were preferred.
When statistics were used in education, in journalistic writings, in minor analyses and just to achieve an overview, **paper publications** were preferred. Some users said that comments and explanations are preferred on paper and data were preferred in electronic products.

The **press** is taken of crucial importance, so in the second questionnaire-based survey was treated separately from other users. Journalists were different from other users in the way that the overall dominating publication used by them was News from Statistics Denmark (a likeness of Eurostat's News release) and in the way they wanted figures as soon as they were released. Of course, some other user types, notably the financial markets, also have the last mentioned characteristics.
The questionnaire was returned by 18 of 23 journalists, 15 of them had access to the Internet and 10 answered "yes" to the question: "Would you prefer Statistics Denmark to provide more publications on the Internet for which a fee is charged?". The situation seemed to be very similar to that of other users, except for a larger proportion of journalists with access had answered "yes".

Contentment with contents
In the second questionnaire, users were asked about the importance of three different element of content in the publications. The answers were arranged on a scale from 1 to 5, where 5 indicated very important and 1 indicated not at all important. It became evident that for the bulk of subscribers there was an **order of importance of types of content**. Description of methods and definitions was most important, while graphs were of least importance. To some degree, the reverse situation applied for journalists. Comment on trends they reckoned to be the most important, while description of methods and definitions of least importance.
At a management seminar with Statistics Denmark, held in October 1997, a famous and trend-setting journalist in Denmark was invited to discuss issues of dissemination. According to him more comments on data would had been made, because **figures should always be seen in context** – in pairs. Isolated data is meaningless. The statisticians knew something that users did not – and that should be stressed in comments.

On the score of surveys' results it became evident that users of statistics could be divided into those who preferred electronic publications and those who insisted on

paper – in 1998 both of them seemed to be of an important size. For the press the overall dominating statistical products were **press releases**, issued almost daily. They were characterized by **comments** and by just a **few tables**, in other words, exactly what journalists wanted. In the meantime, they also wanted this product to be available on the Internet. On the other hand a product with comments and only with some tables was what other users than journalists seemed to prefer on paper.
As a result a strategy emerged in Denmark, earmarked by identity of releases in printed and in electronic form with the aim to treat different users equally. News from Statistics Denmark was released simultaneously in a paper version and on the Internet. The electronic version looked like a photo of the printed version. The Internet version, implemented in the summer of 1997 by March 1998 had 126 subscribers as compared to 530 subscribers for the paper version.

While shifting from print to electronic products, Statistics Denmark was in a continuous contact with its users. **Looking at users preferences** by several investigations facilitated to frame also an alternative strategy envisaging to resort a kind of products consisting of a thin paper publication primarily with definitions, explanations, graphs and a few tables and in addition to it access to a database on CD-Rom or the Internet. As a result, two strategies for shifting from printed issues to electronic products were formulated: The first one was for products giving an overview over the latest figures with comment on them, while the second was for more data-intensive products.

3.3.4 Web at disposal: partial disposal of print

By year 2000 many U.S. government agencies had moved from a predominantly print environment to electronic dissemination of information. The changes were prompted by several imperatives.

- First, customers were expressing dissatisfaction with the **timeliness** of receiving information.
- Second, **government initiatives** were encouraging agencies to be more responsive to customers.
- Third, those, who collected and compiled the information, wanted to **expand access** to their products.

Movement toward dissemination of information on the Word Wide Web was a timely and effective way to respond to these requirements.

Energetic steps
*The **Energy Information Administration (EIA)** is the independent statistical and analytical agency within the US department of energy. EIA was created in October 1977 as the consolidation of energy information gathering and information dissemination programs of several predecessor agencies. EIA's mission is to provide "high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding."*

Within less than 3 years before 1998, EIA's information dissemination program had made the **transition from an exclusively paper environment** *of printed report mailed to customers to*

a mixed publishing program whose primary focus is electronic information dissemination via Internet.
The agency's site became winner of a Federal Web Showcase Award in August 1996. The site provided access to every published product, its use during first three years grew from 2,900 to more than 115,000 unique users sessions. In the same period annual expenditures for printing reports dropped by more than 50 percent, and the volume of product copies distributed annually halved as well.

Since the agency was activated, EIA had disseminated energy statistics and analyses in a large number of printed publications. In its first 18 years (from 1078 through 1995) EIA published each year, in printed form, an average of 360 issues of 100 titles, with copy distribution exceeding 700,000 pieces.
Beginning in the mid-1990's fundamental shifts in governance and technology led the agency to change its thinking about doing business. First, several **new requirements for government agencies** *encouraged to think more about customers and what they wanted. Among others it was the Government Performance and Results Act, which changed the focus of management from a preoccupation with inputs and process to a greater focus on defining outcomes and measuring success in achieving them; then the National Performance Review, challenging Federal Agencies to do more with less, to put customers first and finally executive order from 1993, instructing Federal agencies to survey customers to identify strengths and areas for improvement.*
Responding to new emphasis on customer service and customer satisfaction, EIA began a systematic process of **surveying customers**. *The first survey, fielded in January 1995, asked nearly 300 telephone customers how satisfied they were with various attributes of agency's service and information products (accuracy, timeliness, relevance). Results showed customer satisfaction was very high in nearly all areas, with more than 90 percent of respondents saying they were satisfied or very satisfied. However, an alarming message came through as well: agency was told loud and clearly that customers were not nearly as satisfied with the timeliness of information.*
Historically EIA's culture had always emphasized exhaustive data releases in massive printed publications, the time required for exhaustiveness and production being simply one of the costs of doing business. Customers never had been asked before whether the delays bothered them it had been assumed they were willing to wait as long as necessary for having the very best and most complete data compiled and printed. But surveys clearly showed that many customers had different preferences, for faster releases, preliminary estimates, and short summaries. The message was: "I want the information faster".

Responding to customers and protecting them

So EIA faced some choices. How could it maintain information quality but provide the speedier access that customers were demanding? This was when technology stepped in. Several EIA components had begun to experiment with making EIA publications available on the Internet. They quickly concluded that web access was the best way to address the timeliness issue. EIA's senior leadership gave wholehearted approval to the idea and set up an **inter-office team to design and populate a web site**. *They also amended EIA's strategic plan, in which the linkage to customer satisfaction had already been established.*

The **web site** *was opened in July 1995, and in less than three years had matured into a sophisticated, robust site visited by over a million of electronic users each year. EAI data and analysis became available to the public the moment they were approved for release, often in* **multiple formats** *(text, pdf, html, spreadsheet, and/or database) to serve the greatest number of customers. Moreover, other electronic products had spun off web development effort, including a listserver, providing electronic subscription services for 32 categories of short documents, including weekly summaries and watches and press releases; an interactive query*

facility (IQ2), a service that allowed users to create custom data tables in html or text and generate graphs and spreadsheets; and a quarterly CD-Rom compendium and update of all EIA publications and databases (in pdf, html, and spreadsheet form) with connectivity to the web site for the most up-to-the minute information.

Trough eliminations, consolidations and shifts to web-only dissemination, the number of EIA **titles printed each year decreased** *to 51 in 1997. Moreover, for titles, which appeared both in print and on the web, the number of subscribers had decreased, often by as much as 50 percent. Finally, many printed titles became either slimmer versions of their former selves (as large quantities of tabular material appeared only in electronic form) or were analysis products, which tended to be shorter than average data publication.*
Nevertheless, EIA's policy remained to print all major titles (periodicals, analysis reports and other significant one-time reports, brochures summarizing major topics of products, and specialty materials). It is done because many customers either had at the time access to the web or simply preferred to have printed copy (to read at home, to use on the job, for archives). Over the four-year span of conducting surveys of telephone customers, a consistent 60+ percent of EIA's customers said they still wanted printed report, even if the information they needed was available electronically. In 1997, a full 75 percent of print subscribers said they still wanted printed reports. The transition to electronic media was aggressive at EIA, with its using resources to protect traditional print customers and to serve both customer groups. Continuous efforts were made to redefine the proper balance between two sorts of dissemination.

Initiative on Census Bureau's economic side

It was as early as in 1995 as the census Bureau took the bold step of moving from printed to expanded electronic dissemination of its data products by approving a strategic decision to make the **Internet** *its* **primary means of disseminating data**. *Moving from print to primarily electronic dissemination continued a movement that began when Census Bureau became the first U.S. statistical agency to use CD-Roms for data dissemination.*

The shift to electronic form of dissemination was prompted by several factors.

- *First, customers had expressed dissatisfaction with the amount of* **time** *it took to receive agency' printed reports. Electronic dissemination afforded an opportunity to shave several weeks, and in some cases, months, from the production cycle.*
- *Further on, the move was consistent with* **National Performance Review directive** –
- *and there also were* **budgetary considerations**. *The Census Bureau found that its constrained funding forced it to look for alternative to free up staff for other projects and to identify ways to reduce printing costs.*
- *Besides, as a compelling factor, there was a hint from the former director to the need of "***democratisation of data***". The Internet seemed the perfect medium to give more people access to census data than ever before.*

On August 9, 1995, the Census Bureau announced its plans for increased electronic dissemination in a news release. Initial reaction to the announcement was mixed. Many applauded the fact that data would be released substantially faster electronically and that data would be more accessible. However, a sizeable number were not convinced that electronic dissemination would afford the same ease of use, particularly for researchers. There also was concern that the number of people with access to Internet was limited and that this decision might **exclude from access** *to agency's data large segment of population who were not computer-savvy or who tended to be poor, people of colour or elderly.*

The economic side of the Census Bureau took the lead in releasing data electronically, with the **Governments Division being the most aggressive Internet disseminator**. *Initially, the*

demographic divisions were cautious in deciding, which report series they would move to electronic formats. The first data sets identified for this purpose were the population estimates and projection series. For some very popular data series, condensed report (four to six pages) containing some analyses were created to accompany the larger data sets released on Internet. As experience with this method of dissemination increased, more and more data sets were released electronically. If it had been a data set that later also resulted in a printed publication, the publication staff posted a pdf-file to the Internet at the time it was sent to the printer.
Almost a year after announcing the move to increased electronic dissemination, the Census Bureau announced its new **Internet subscription service** *called CenStat.*
Despite some initial scepticism, the move to electronic dissemination has proved to be a positive step for the Census Bureau. The number of hits grew astronomically, many people (particularly reporters) were happy to have access to the data 24 hours a day. Surveys indicated more people were aware of and using agency's data than when they were issued primarily in printed reports.

3.3.5 Change of Daily form – example of Canada

The transformation of Statistics Canada's Daily during the 1990's provides an interesting case study of a ***migration from print to electronic dissemination****. Looking back, The Daily's move from primarily a print product to primarily an electronic service was successful and uncontroversial. Through a deliberate and carefully managed process, Statistics Canada set out to achieve* ***three objectives****, namely:*

- *to increase news media and public access to Statistics Canada news releases at time of release,*
- *to improve service to the existing client base and*
- *to reduce costs.*

Under Statistics Canada policy, an analytical summary of new information from statistical programs must first be published in The Daily before further dissemination. Each release typically comprises a base reference table and an analytical text accompanied by charts; in other words, news release.
Unlike other statistical agencies, Statistics Canada assembles its releases into one publication, essentially an omnibus news release, published at 8:30 a.m. every working day.

While the ***audience*** *for The Daily extends well beyond the news media, it is explicitly written to meet the needs of journalists. Our objective in doing so is to secure widespread media reporting of our new information – our principal means of informing the broad Canadian population. The Daily also plays a key co-ordination role within Statistics Canada. It signals to everyone that a data set and its related products and services are now in the public domain.*

In 1991, The Daily was a ***subscribable, print publication*** *priced at C$120 a year. As is the case for all regular Statistics Canada publications, journalists and most public and academic libraries received The Daily without charge.*
In total, some 1,450 copies of The Daily were distributed each day. 150 copies were hand-delivered to the Ottawa-based news media, 340 copies were mailed to journalists and media organizations, and 340 copies were mailed to libraries and

Members of Parliament, who received the publication without charge under a federal government-funded program. Further 400 copies were mailed to paying subscribers in business and government 220 copies were distributed within Statistics Canada through internal mail.

In addition, federal deputy ministers and a small number of journalists received The Daily by fax while a text-only version was sent electronically to users of the CANSIM (Canadian Socio-economic Information Management System) online databank. Other than the Ottawa-based news media and those receiving ***fax service****, almost no subscribers were receiving The Daily on the day of publication, let alone at its 8:30 a.m. release time. For external subscribers, mail delivery typically meant a delay of 48 to 96 hours. Within Statistics Canada the delay was typically 12 to 24 hours.*
The subscription price was insufficient to cover even mailing costs and contributed nothing to other direct costs. Statistics Canada was losing $75,000 a year on its paid subscriptions and internal distribution costs.

Motivation for change
The decision was made in 1991 to explore the technical feasibility of disseminating *The Daily* electronically, and to investigate user-readiness for electronic dissemination. At the time, Statistics Canada was motivated more by the goal of **making its release system more effective** than by reducing costs. Only the news media based in Ottawa (the capital of Canada and the city where *The Daily* is produced) and a small number of media and other clients using the fax service received *The Daily* the same day. Almost all media coverage was based on stories filed by national news agencies from Ottawa. An electronic dissemination system, accessible from anywhere in Canada at the moment of release, held the promise of **broader and more varied regional news coverage**.
For non-media external subscribers, an electronic dissemination system offered a quantum improvement in the **timeliness** of service. Statistics Canada felt that a more timely service could attract a larger client base. As the Agency's internal computing environment was increasingly networked, the goal of giving all employees access to *The Daily* at the moment of its release to the public appeared feasible.

Going into intranet
Statistics Canada has been using electronic publishing technologies for internal communications since 1994. In that year, the agency introduced its **Internal Communications Network (ICN)** *program for employees. While the term intranet had not yet been coined in 1994, the ICN has been, from its inception, an intranet.*
Statistics Canada's Intranet has its roots in a 1992 employee opinion survey. The survey sought employees' views on a variety of issues, including their work environment, career aspirations and training needs. One of the key issues that emerged in the survey results was a general concern about internal communications, specifically a desire for easier access to greater amounts of work-related information.
Attention quickly turned to the Agency's computing and networking infrastructure as the most promising tool for achieving this objective.

At the time the survey was conducted, most Statistics Canada employees had a microcomputer on their desktop, and the number of microcomputers in the Agency was growing rapidly. These workstations were linked together into one continuous network. Regional offices were also linked to headquarters infrastructure through a wide area network. This **Agency-wide network** *was already in use for the most basic of intranet applications, electronic mail.*

Managers concluded that an electronic information service for employees could be built on top of the existing infrastructure at a reasonable cost. With the hardware and software in place, the operational focus shifted to determining and developing content. The objective was to position the ICN as a **key corporate information resource**. *Funding for content development was limited. However, managers considered it essential that employees learn to use the new system and then use it regularly. Program managers identified existing internal communications programs that would benefit most from the technology, programs that employees used extensively.*
Its content was determined by information releases and related documentation, telephone listings, corporate policies, events, job and training opportunities, employees benefits and pay. Moreover, range expanded to the media coverage. The agency naturally monitors its coverage in the news media to detect journalists' errors and unfairly critical news stories. In the paper-based system, newspapers were clipped each morning for articles concerning the agency. These articles were assembled into clipping packages for printing and distribution to senior management. Only the Chief Statistician's office and communications managers received these packages on the morning of the same day. Other areas received packages with delays of one-half to one full working day. **The ICN speeded up the process**. *Newspapers and other media were "clipped" electronically using commercial full-text services. The electronic clippings were then published in the early morning on the ICN for all staff to see.*

During 1992 and 1993, Statistics Canada conducted a number of user research studies and tests of technical feasibility. In this era, prior to the arrival of the Internet, **Electronic Bulletin Board (EBB) systems** were the principal tool for offering text-based electronic services. Statistics Canada selected a leading bulletin board product and conducted several field trials with journalists and other users of *The Daily*.
Testing showed a high level of acceptance among the participants and brought out the importance of bundling the current issue of *The Daily* with complementary information and services such as a searchable back-issues file, information on release schedules and a catalogue of Agency products and services. Testing also showed that bulletin board technology was cumbersome and technically demanding for the client.

Using information from the technical tests, two **market research studies** were conducted. The first study, of existing subscribers to *The Daily*, sought to determine their **willingness and readiness to move to an electronic service** from the existing print product. Two-thirds of subscribers indicated they would use an electronic service if it were available. The news media, however – and particularly the Ottawa based news media – were the least receptive to an electronic service.
The second study, of non-subscribers matching the profile of the **subscriber** base, sought to determine whether an electronic service would induce them to subscribe. Half of them indicated interest in an electronic service.

A further technical large-scale test was planned to determine whether the experimental system could accommodate a large number of simultaneous users. However, the technological landscape had shifted by 1993. In a parallel development, Statistics Canada had begun building a **general-purpose online dissemination system** under the name *StatsCan Online*. The system could accommodate both **statistical and textual databases**. In light of feedback from *The Daily* tests that indicated richer general-purpose systems were more attractive than stand-alone single purpose systems, the technical model for electronic delivery of *The Daily* was shifted to *StatsCan Online*. At this point the Internet was still in the future. Though testing

and market research had not been entirely encouraging, budgetary pressures tipped the scales in favour of a shift to primarily electronic dissemination. In the summer of 1994 it was decided that *The Daily* would be withdrawn as a subscribable print publication on April 1, 1996. Until its withdrawal, the subscription price of *The Daily* would double, to C$240, to represent the **true cost of printing and distribution** and to promote the transition to the electronic service. *StatsCan Online* would be the principal electronic platform for external users and the official *Daily* service. However, Statistics Canada was now experimenting with a new technology, the Internet, and it was agreed to make a limited version of *The Daily* available on this service as well. Access to *The Daily* on *StatsCan Online* would be completely free for the news media. Other users would have to subscribe (C$25 per month) to *StatsCan Online* in order to receive *The Daily*. Access to *The Daily* on the nascent **Internet was free**.

Unexpected delivery platform

To avoid controversy, it was imperative that the needs of all the major user groups be met under the new system. It was no less important to communicate the alternatives to users throughout the transition to ensure each user was able to move seamlessly, without interruption of service or financial penalty, to one of the alternatives offered. The sharp **increase in print subscription price** that accompanied the announcement that the **print publication would be withdrawn** contributed significantly to making users more open to alternative services. The Ottawa-based news media overwhelmingly preferred to continue receiving a print version.

External subscribers shifted ultimately chose the **Internet as** their **delivery mechanism**. By August 1995, virtually all Statistics Canada employees had access to *The Daily* at the moment of release through the Internal Communications Network. For the 220 internal subscribers, this transition also represented a cost saving as the new service, unlike the print subscription, was free.

Contrary to plan and for a number of reasons, it was the Internet that emerged as the primary delivery platform for the electronic *Daily* service and not *StatsCan Online*. **Internet listserv technology** allowed users to subscribe to *The Daily* and have it delivered to them via e-mail automatically, every day, all without charge. *The Daily* was one of many services they could access through Web technology and the tools were powerful and largely free. To some extent, users obtained access to *The Daily* incidentally to their principal use of the Internet. Finally, the Internet technology developed at a phenomenal pace that could not be matched by any customized system. By April 1, 1996, when *The Daily* officially became primarily an electronic service, the Internet had imposed itself as the main delivery platform for *The Daily*. Initially, *The Daily* was offered on Statistics Canada's Web site only in HTML format. Some libraries expressed a **preference for a format** that, when printed, would look like the former *Daily*. This was quickly added to the Web site in the form of an Adobe Acrobat (PDF) file loaded each day at release time along with the HTML version.

Technical underpinnings

As is implicit in the above discussion, *The Daily* grew to be produced in a bewildering **variety of formats**: PostScript for the print, fax and Adobe Acrobat (.PDF) versions, HTML (hypertext markup language) for the Web site, SGML (standard generalized markup language) for *StatsCan Online*, and plain ASCII for the CANSIM and

Internet listserv versions. *The Daily*'s production cycle is exactly 24 hours long. Information releases submitted by 8:00 a.m. are released in the next day's *Daily*.
SGML was adopted by the developers of *StatsCan Online* as the basis for building and displaying text databases. As *StatsCan Online* was to be the primary platform for delivery of *The Daily*, SGML was also adopted for *The Daily's* production. The weakness of SGML was that it is ponderous and inflexible.
Developing, implementing and then stabilizing the SGML production system until it could reliably produce all required outputs for the 8:30 a.m. release time required months of **running** both the SGML and the print production **systems in parallel**.

Time has largely validated the choices made between 1992 and 1996 and *The Daily* was transformed to an electronic product with its objectives intact and became one of the pillars of Statistics Canada's Web site. *The Daily* has been explicitly developed as the front door to the site. **References** to other information, products and CANSIM data embedded in release articles are now live links to related information elsewhere on the Web site. Embedded **e-mail addresses** are special links that launch the user's e-mail software. In addition, 1,300 users receive *The Daily* each day via the **Internet listserv**. A substantial effort has been made to facilitate navigation of *The Daily* on the Web site. Better **search engines** have been implemented.
Statistics Canada also used the Web site to publicize its position on controversies over its data, concepts and methods. By 1998, the Ottawa-based news media remained recalcitrant to obtaining *The Daily* through the Web site. A print version of *The Daily* would remain a necessary component of Statistics Canada's release strategy.

In summary, electronic publishing of *The Daily* allowed Statistics Canada to **reach a larger and growing audience directly**, in its own words, without the filtering implicit in media coverage. Electronic publishing allowed the Agency to **reduce the price** of *The Daily* to zero while improving timeliness of service to virtual perfection. Any Canadian with Internet service anywhere Canada, indeed anyone with Internet service **anywhere in the world**, can access *The Daily* at exactly 8:30 a.m. eastern standard time, the very moment it is distributed to the national media. Regional media **coverage is more heterogeneous** as a result of *The Daily*'s ready availability on the Internet. And all of this was achieved while economizing $50,000 on *Daily* operations.
It is worth noting that this success required would have been unlikely had it not been for the arrival of the World Wide Web and its immediate and tremendous popularity as a communications medium. Neither of the stand-alone solutions originally envisaged in the early stages of the transformation – bulletin board systems or *StatsCan Online* – would have provided the broad accessibility *The Daily* came to enjoy.

The greatest **shortcoming** of the electronic service was that an inherently print product had been converted into an electronic form. Print publishing is inherently linear while electronic publishing is inherently **multi-dimensional**.
For example, release titles could be hypertext-linked to descriptions of the underlying survey; terms could be linked to their definition and the definition to the specific text of the questions or question from which the variable was derived; high-level summaries could be linked to fuller discussions of specific points. There is no need to choose between a table and a chart; both can be present but visible separately.

Tables for geographic areas can be stacked. Electronic publishing offers the possibility of assisting users in understanding our information through immediate, context-sensitive access to meta-information.
In print publishing, space is costly. In electronic publishing **one master copy serves all**. A million characters of disk space cost a few dollars to acquire and maintain. Other than revenue generation considerations, there are few obstacles to providing more extensive information at release time.
In print publishing, disparate elements are bundled into one package. In electronic publishing one should un-bundle these elements. For example, users of Statistics Canada's home page are invited to select the "Daily News" page and then must ask for an entity called "Today's *Daily*" that contains major releases, minor releases and a list of products released. No clue is provided as to what might be in "Today's *Daily*." Web users, most of whom are not familiar with *The Daily*, are interested in releases about ethnicity or corporate finance, or lists of new publications, not the package they come in. This information should be organized to be **accessible quickly, efficiently and separately.** This requires rethinking.

To achieve **cost savings**, it may be possible to use *The Daily* not only as the vehicle for first publication of agency releases, but as the sole publishing vehicle for a wide range of information releases of specialized and limited interest. Effective electronic publishing did not require early adoption of the then latest Web innovations (such as Java, Dynamic HTML and cascading style sheets). Indeed, one of the strengths of the Statistics Canada Web site was considered to be that the agency lagged slightly behind the mainstream, particularly in content intended for a broad audience. Through this strategy, it was ensured that the technology did not become an impediment to access.

While Statistics Canada's *Daily* is clearly unique, experience in transforming *The Daily* from a print publication to an electronic service nonetheless yielded some **general and broadly applicable principles**.

- First, that it was possible to achieve gains in **effectiveness**, reach an expanded **audience** and reduce **costs** through a shift from print to electronic publishing.
- Secondly, the transition might be achieved without controversy provided one never loses sight of the **needs** of the primary audience and ensures that the needs of each significant audience were dealt with in the transition process.

The question should not be, "How can publications made available on Web site?" but rather, "How can Web technology used in order to most effectively disseminate statistical information?" Reaching that potential will require that one no longer think in terms of transitions of existing products from print to electronic, but rather in terms of electronic publishing as a medium in its own right, with unique and powerful characteristics to be exploited.

3.4 (WHEN ALL-ROUND AGENCY IS JAGGED)

Costs and benefits to consider when planning to outsource public and media relation work

3.4.1. Experiences with having media relations work prepared outside the office versus within the office

Blessings and disadvantages of external assistance

Both the U. S. Census Bureau and Israel's Central Bureau of Statistics have grappled with the issue of outsourcing some of the public relations activities of their agencies.

In mid-1999, the **U.S. Census Bureau** entered into a contract with a public relations firm to help with consistent messaging for Census 2000. This was the first time the Census Bureau had used a public relations firm for a decennial census.

Israel's Central Bureau of Statistics has taken a more cautionary approach. Using a public relations company can be beneficial to a statistical office. However, when deciding to use private sector resources certain precautions should be taken. Below are summarized some of the experiences of the U.S. Census Bureau and the Israel Central Bureau of Statistics and provide suggestions for those considering such a move.

Outsourcing in Israel

The decision to outsource technical activities, such as translation services and printing was rather recent development for the Central Bureau of Statistics (CBS) by late nineties. ***Outsourcing*** *was considered a bit risky and a revolutionary step within the CBS. Of particular concern was the fact that moving work to the private sector would involve closing down a department and having to dismiss a number of staff. Finally, the decision (although painful for a few) was made after considering costs and benefits. Management took advantage of the move to new premises – an extremely significant change for the entire staff of 500 people to reorganize several departments, and included this change. After eight months of printing publications outside of the office, the CBS was at a point of evaluating this experience. Preliminary indications were that the CBS generally has benefited from the decision to outsource – at least financially.*

This positive experience with outsourcing helped CBS to introduce such a change in different areas in the future:

- **Marketing and sales of statistical products and services:**

The Information Center at the CBS was established in 1997. It was created to respond to the sizeable increase in requests for statistical information from the public. CBS realized then that it was the right time for a change in its orientation towards the user. Meaning not only a change in approach but also a change in the products. The Center's objective was to tailor products and services to the needs of different users and audiences*. CBS realized that a thorough and well-organized data dissemination plan would lead to more correct and sophisticated uses of its data. However, while using a contractor for these purposes was probably out of the question, upper management consented to engage the use of consultants for special tasks or projects in this area.*

- **Press releases**

CBS released a communiqué almost daily that outlines changes that occurred within a defined time period regarding a particular subject. This press release often contained tables and diagrams in addition to text*. In general, there were a great number of figures mentioned in the text that overshadowed the essence of the statistical news. This happened because the subject matter experts often went into too much detail in the press releases turning it into a boring document. Although the release preceded a more detailed publication, the subject matter experts were unwilling to skip some of the more trivial details and focus on the most interesting facts. Even with editing, it was less stimulating and often overlooked by journalists for stories.*

The staff at the Information Center (charged with all contacts with the public including media relations) was aware of the advantages and disadvantages of having press releases professionally edited and designed. As 'house experts' staff recommended to management

that a team of communications experts, journalists and publicists conducted a series of seminars or workshops for all subject matter experts. The seminars/workshops would provide hands-on experience with writing more effective and interesting press releases and identifying newsworthy topics. This was a kind of compromise on outsourcing, bringing inside the organization a team of experts *to consult with and provide advice on and practical tips for improving the most popular product – the press release. Once the subject matter experts were taught the principles of good writing and realize the benefit gained from it, Center staff believed the process for producing press releases will have been shortened and CBS releases experience increased coverage by the news media.*

• **Brochures**

For many years CBS had been producing its publications primarily on paper. They were thick and heavy books full of complicated tables and a detailed methodological supplement: lots of reliable statistics but all of them extremely unfriendly to the user. Statistical figures, which are at the base of every issue and debate, should be clear, accessible, unequivocal and timely. With this in mind, CBS gradually came to the conclusion that it needed a new line of publications with these qualities. This was particularly important with the competition from the private sector. The new brochures were topical and condensed*. To meet the goal of transmitting information in an interesting way, their composition typically included diagrams or charts, simple tables, clear text and relevant photographs. Each brochure conveyed a different story and used a different, challenging way of presenting the data.*

They were distributed free of charge *at fairs, exhibits, conferences, etc. They decorated desks, appear on the CBS Internet site and staff got a supply to distribute when invited to demonstrate, present or participate in a formal meeting, seminar or conference. Some of the brochures were translated into English making them useful to non-Hebrew speakers as well.*

The brochures were dedicated to a particular subject: "children," "men and women," "Jerusalem," etc. It could be a challenge to get the subject matter experts to gather the information to produce the brochures.

However, once they start composing, the subject matter experts got full support, assistance and guidance from a Center staff person who was leader of the project.

The brochures had proven to be excellent promoters of data series*. Some of the brochures were produced in cooperation with other organizations and institutions. Some of the institutions were willing to pay for reprint of particular topics. Since establishing this new line of "light analysis," CBS had been flooded by suggestions and requests for brochures covering additional topics. Unlike some brochures produced by statistical agencies in other countries, the CBS brochures did not contain any commercial ads.*

These brochures were produced entirely outside of CBS and their production was rather costly. Top professionals in the private sector, who gradually became familiar with CBS requirements, designed them.

Based on their popularity, however, the expense appeared justified *both in the short and long run. This kind of product had a great impact on recipients and served as a teaser, arousing curiosity and a desire for more information.*

This is definitely the outcome of clever decision makers who realized that such a task should be carried out only by professional designers even for a higher price than having it done in house.

For CBS, using design experts resulted in an attractive popular data product that has broadened the data-user audience. Therefore CBS wanted to use outsiders to spread this knowledge to others in the agency. CBS had found that using outside writers did require a long learning curve to get the quality document that you can stand behind.

U.S. Census mobilization

The Constitution of the United States calls for a **national census** *to count all people living in the United States, Puerto Rico, the U.S. Virgin Islands, and the Pacific island areas. It is the*

largest peacetime mobilization of the country and has two primary purposes: to reapportion the 435 seats in the House of Representatives amongst the 50 states, and to distribute more than $185 billion dollars each year to local governments.
Two challenges for Census 2000 were external and internal communications. Despite the importance of the census, the percentage of residents participating in the mail-back phase had been declining. In 1970, when self-enumeration was first introduced, the response rate was 78%; in 1990 the response rate was 65%. The budget and plans for Census 2000 anticipated a 61% response rate. Motivated by a desire to conduct the most accurate count possible and to reverse the trend of declining mail-back response rates, the Census Bureau set out to conduct a comprehensive promotional and educational campaign to increase public awareness of and participation in Census 2000.
The internal communications challenge stemmed from trying to make sure that the more than 500,000 temporary workers hired to work on the census in the 12 Regional Census Centers and 520 Local Census Offices were consistent in their messaging.
To help address these challenges, the **Census Bureau contracted with a public relations firm** *for the first time for a decennial census. (The Economic Directorate used a public relations firm for the 1997 Economic Census.) The firm was a subsidiary of the advertising agency responsible for our first-ever paid advertising campaign. The public relations firm was enlisted to augment current census activities and provide additional outreach capabilities through a unifying strategy. The unifying strategy was intended to be both a strategic and management-driven force leading overall Census 2000 communications efforts. It provided a foundation of messaging support, issues/crisis management and strategic planning in the way of media outreach. By monitoring the messaging and coordinating agency and census activities through one central clearinghouse, the Census Bureau expected that targeted projects would remain consistent with the broader goals of the Census 2000 campaign and that all messaging would be consistent with the core messaging of Census 2000.*

3.4.2 Nine tasks for external assistant

Unifying strategy encompassed all elements of promotional and educational outreach: messaging, issues management, crisis communications, media relations, the census road tour, a grassroots outreach campaign (*How America Knows What America Needs)*, and a promotional agreement with Major League Baseball. Following are some of the tasks performed by the contractor:

a) **Planned and coordinated special events** involving high-level Commerce Department, Congressional, White House and U.S. Census Bureau officials. Examples were the launch of the advertising campaign; launch of the *How America Knows What America Needs* campaign; and a "heroes" media event (featuring the Fairfax County, Virginia, Fire and Rescue Team – an example of one of the many benefits of a census).

b) Helped the Census Bureau's Public Information Office develop a **communications guide on key subjects** relating to Census 2000. The guide was for internal use in handling public or media inquiries and preparing speeches and presentations. The contractor also was responsible for reproducing the guide for distribution to Headquarters and regional staff.

c) Revised the **crisis communications manual** for the regions and developed one for headquarters. Conducted crisis communications training with headquarters principals and refresher training for regional directors.

d) Produced and placed **radio public service announcements** (PSAs) and radio actualities featuring Major League Baseball stars Barry Bonds and Ivan Rodriguez.

e) Coordinated the **Census 2000 Road Tour** that, using 12 colorfully wrapped vehicles traveling to key markets in each region, provided additional and complementary support to existing regional/local census initiatives. For approximately two months, the Road Tour helped educate the public about the importance and benefits of participating in Census 2000. It helped raise awareness of the census questionnaire, reinforced advertising, disseminated educational and promotional messages and "put a face on the census," creating effective awareness with the public and media. The contractor was responsible for all logistics and route planning; design and wrapping of the vehicles; staffing the vehicles; production of exhibits and videos; news releases and media pitches; tracking the vans; and daily reports on activities.

f) Coordinated the *How America Knows What America Needs* **campaign** that was designed to increase participation in the census by involving 39,000 highest elected officials at the state, local and tribal government levels. The campaign had three components *'90 plus 5*, *Because You Count*, and *Quality Counts*.
The contractor:

- ***Prepared communications*** (print and electronic) for the 39,000 state, local and tribal governments. This included an advance letter notifying government officials about the program, a letter of invitation to participate and periodic updates.
- Developed and distributed ***turnkey kits of materials*** that elected officials could use to encourage their residents to participate in each phase of the census. The materials were available on the Internet, by CD-ROM and hard copy.
- Established and maintained a special *How America Knows What America Needs* ***Internet site*** that included turnkey kit materials, an updated list of participants and other information of interest to government entities.
- Set-up a ***toll-free number*** that could be used to sign up to participate in the campaign and request materials;
- Distributed turnkey kits in the requested format; ***updated materials*** as appropriate; and provided ***support*** to the national advisor and nine national governmental organizations partnering with the Census Bureau on the campaign.

g) Provided **logistical support** for regular operational news briefings with the Census Bureau's director.

h) **Pitched media** for various significant census events; evaluated media coverage and, if negative, assisted in getting out a different viewpoint. For example, worked to have a popular afternoon soap opera with a script damaging to Census 2000 issue a statement of support for the census. The statement also clarified that the series of events portrayed on the television show could not happen in real life due to the census's confidentiality statute.

i) Produced **video news feeds** (VNFs) and video news releases (VNRs) to support newsworthy census happenings when the Public Information Office's video staff had too many other projects to provide support.

3.4.3 Sunspots of outsourcing

Using a public relations firm clearly assisted the U.S. Census Bureau in getting a lot of work done in a timely fashion that it did not have staff to do. Due to the volume of media calls coming in, trips by the Director and other media events, staff in the Public Information Office was spread very thin. The public relations firm enabled Census to pass on certain activities to **free up staff for other priorities**. This was particularly helpful, as bringing on additional staff could have taken almost 6 months due to the lengthy civil service hiring process.

The Census Bureau contractor provided an **external perspective** on messaging and events that was less subjective and perhaps more in tune with the potential views of the Bureau's external publics. Also, the contractor identified Census Bureau statistical jargon and helped develop messaging that the general public could understand.
The Census Bureau's contractor made efforts to communicate with national media that were **more concerted, intense and rapid-response** than Census Bureau staff could have managed to execute given the time and procedural constraints.
The contractor's knowledge of staging events: getting space, graphics and design, logistics, etc. resulted in Census Bureau events looking **more professional** and polished. Getting information out to 39,000 recipients and handling their responses, updating the Internet site for *How America Knows What America Needs* and overseeing the road tour were feats that would not have come off as well without their help.
The contractor's ability to **sub-contract** out work allowed quick turn around on the production of collateral materials such as banners, graphics, and novelty items. They also were able to press into service quickly fulfillment houses for mass reproduction and dissemination of materials. Census could get from the contractor items with a 3-day turn around that would take 3 - 4 weeks using normal government contract procedures.

3.4.4 Frustrations to and of subcontractor

Even though the Census contractor had staff that had worked previously in government, they were **unfamiliar** with U.S. Census Bureau policies, politics, history, terminology and writing styles. This led to frustration at times on the part of both parties in trying to get work done. Because our contract began with a big event in fewer than six weeks (the launch of the paid advertising), we were not able to spend the time to "get them up to speed" that might had helped improve their writing and understanding of how things worked. The firm sometimes became frustrated when news releases and other media products could not be disseminated in a timely manner because of internal policies and procedures that necessitated a lengthy review period.

Making sure that the contractor is in the communications loop also can be problematic and requires special consideration. Census had twice-weekly **meetings with contractor** and invited them to attend various other meetings held at the Census Bureau on topics that might be important for them to complete successfully their tasks. At times, Census provided office space to the contractor's staff to help them keep on top of rapidly evolving work and to be of assistance to.

In preparing for trips by the Census Bureau director and other regional/ local events, the presence of the contractor resulted in another layer of communication, which did not facilitate always the efficient execution of the project and that resulted in some feelings of **competition from Bureau staff**.

As mentioned earlier, the Census contractor was good with pitching national media. However, Census found that with local or regional media, despite them having offices across the country, the contractor's number of local **media contacts** often was more limited than expected. In most cases, the regional media specialists proved to be better at working the media at the local level.
While the Census Bureau's contractor proved helpful in reducing the use of statistical jargon, they did **not fully understand the statistical aspects of work** and census operations. That at times hindered their ability to produce accurate messaging.

3.4.5 Nine plus one commandments

1. Do a reference check. If time and the contract process permit, talk with another client, particularly another government client if available, to assess the firm's ability to produce the type of work you would like and in your agency's environment.

2. Allow for a learning curve. Try to find a firm familiar with government and statistical work. If this is not possible, plan to spend several weeks introducing them to what you do and how. The time spent up front will prove valuable later. U.S. Census Bureau's contractor spent several weeks at the beginning of the contract meeting and talking with Census 2000 staff from various divisions working to better understand the work and gather background documents to assist in drafting materials.

3. Learn the contractor's capabilities. Do not expect that the contractor will be expert in every aspect of public relations. Let the contractor do what it does best, but make certain that what the contractor does best is what you need to have done.

4. Plan ahead. If you think you will need to outsource activities to a contractor, get buy-in beforehand as to the necessity of taking this route from those up the chain of command, as well as staff that might interface with them.

5. Monitor. No matter what their credentials, you will need to be in constant contact with the firm to assure things are proceeding as planned or hoped. Depending on the work to be done, this may require a staff person's full-time attention.

6. Be prepared to think outside the box. As statistical agencies, we often view things in a more staid, conservative fashion. However, getting the word out to the public using today's media calls for creativity and glamour. Contracting with a public relations firm can help you see how to bridge both worlds.

7. Provide ongoing feedback. As with any employee, let the contractor know what went well and what didn't. Remember you are paying for their services and they want to please their client.

8. Plan ahead (definitely worth repeating). Know clearly what tasks you want done and articulate these tasks clearly to the contractor. Before the contract is awarded,

have informal discussions on various approaches and preferences to help the contractor develop a realistic budget for the work to be done.).

9. Provide a monetary cushion. Unless your project is defined very narrowly and very specifically, allow for a monetary cushion for your internal budgeting purposes. Invariably there will be things you wish to change or new ideas that surface as the project evolves. Every modification to the original agreement costs money. Repeated adjustments to the original contract are time-consuming, paperwork intensive and frustrating.

10. Try a compromise. If your management is not comfortable with completely turning over products to outsiders, propose bringing in contractors to help train existing staff to do a better job. Investment in this sort of skill building at the subject matter level and in the public relations office can prove valuable over time.

3.5. (GLOBAL ADVANCE IN FORESIGHT)

How to establish fixed release dates for major economic indicators and how to meet them

3.5.1 Market-Moving Data

As it is known, International Monetary Found (IMF) took the initiative in mid-nineties in setting up the **fixing of the dates of data**, released by statistical agencies. Such a step was justified by the globalisation of financial markets, which had given added weight to the importance of providing economic and financial data to the public, including the financial markets. A **regular and timely flow of relevant data** was seen as critical to sound policy formation and implementation and seemed likely to promote smooth functioning of markets. So the motivation for the **establishment of standards for the dissemination** of such data by countries arose from this view of world – and by the judgement, that there is a role for an international organization to play in encouraging data dissemination.

After consultations with producers and users of statistics a set of standards, limited to the minimum necessary and focused on data produced by official national agencies, was elaborated by January 1996. The standard was formulated in terms of the basic data that are most important in shedding light on performance and policy in four sectors across the economy – real, fiscal, financial and external. Comprehensive data, disseminated on a timely basis were seen essential to the **transparency of macroeconomic performance**, while their dissemination as an overriding feature of statistics as a **public good**. Therefore, ready and equal access for the public had been formulated as goal to be achieved.

The plan, known as Data Dissemination Standard Initiative was presented as a discussion draft also at the working group's meeting in Geneva, March 1996.
Access for the public contained the requirement of **dissemination of a release calendar** as well, identifying either the day of release or the day "no latter than" which release would take place for the data categories prescribed by the standard.

Member countries were also encouraged to publish release calendars for data categories not prescribed by the standard. The standard required that data be released to all interested parties at the same time.
For media and commercial data vendors, **simultaneous release** was interpreted as including access, under embargo conditions, to all on equal terms. The act of release might consist of providing summary data accompanied by provision of detail in other formats (e.g., diskettes and access to electronic databases). At the same time, member countries were encouraged to make the release in as **many formats**, especially electronic formats, as possible, consistent with the extent of public interest in the data. It is noteworthy that the principle and practice of simultaneous access appeared to be widely accepted by both users and producers consulted as well that IMF experts found by 1996 a growing number of national statistical offices, which had issued advance release calendars (generally in the form of a preliminary schedule, ranging from three months to one year ahead, combined with a final schedule, ranging from one to four weeks ahead).

After preparatory works the **Special Data Dissemination Standard** (SDDS) was established by the IMF to guide members that have access to international capital markets in the provision of their economic and financial data to the public and posted on the **Dissemination Standards Bulletin Board (DSBB).** Subscription was opened in early April 1996 with a transition period until December 31, 1998; by late 2001 all subscribers were disseminating their template data over their national websites. To latest date, there have been 50 subscriptions to the SDDS and the IMF Executive Board is reckoning to carry the fifth review of the Fund' Data Standard Initiatives out in the second half of 2003.

3.5.2 Acting under double pressure

Israel's Central Bureau of Statistics (CBS) *has been working ever since its establishment in 1948 under the assumption that statistical data should be always* **available, reliable, timely and comparable** *to every user, specifically all kinds of mass media. Since its establishment back in 1948 Israel's CBS has been concerned in supplying statistical information to all interested. This was being done through Press Releases and by Public Information-in the office and by mail (Fax) and through Publications (periodicals, "special publications").*
During the year 1996 (especially in its second half), some important plans were carried out, which brought about changes in the structure of the statistical information dissemination system, the keyword of which was progress.
Apart from an automated computerized fax mailing system for quicker distribution of releases, and apart from the installation of a computer-based automated answering system, which enables everyone to get a "computer voice" answer on all details of the various price indices, the most remarkable innovation was the establishment of a site on the **World Wide Web**.
The information on this on-line site was considered to be of great interest to a variety of customers who access a connection to the service. Some of the popular topics were from the outset: Last Month's Price Indices (which were updated each 15th of every month, the minute they are released to the media), Monthly Bulletin of Statistics (consists of variable major indicators) and Press releases.
This exposure through the site in the Internet increased enormously the amount of requests of statistical information with regard to the site specifically and to all kinds

of other inquiries in general. **E-mail** enabled almost everyone from all over the world **to pose questions** and to expect a prompt response.

3.5.3 Bounded by promises

Moreover, after in early April 1996 the International Monetary Fund (IMF) had established the Dissemination Standards Bulletin Board (DSBB), ***Israel*** *subscribed to this service. To support ready and equal access, the SDDS prescribed* advance dissemination of release calendars*. This procedure, in addition to the on-line site, required the various divisions (the sources of the statistical output) of the Bureau of Statistics to acknowledge its importance and to start to adapt to it physically – personally and mentally – focusing on the concept of work. The CBS management had to take into account that this was the beginning of a transformation, which required a certain period of time to get adjusted to. Until about a year before, when there had been actually no commitment to release statistical output at a specific date, there was no need in establishing fixed release dates, the more so to meet them.*
With regard to **press releases**, which were the first to transmit the updated data or some other new interesting findings to Information Media, there was very little planning (except fixed release dates for monthly Exchange Rates and for the Tel-Aviv Stock Exchange). Until early 1996, most of the Press Releases (85%) were disseminated within short notice.
This was true for almost all the information for dissemination except for the **Consumer Price Index**. This index had always been considered most important in shedding light on macroeconomics performance and policy. No matter what, with hardly any computerization and relatively low wages like the rest of the employees in the CBS, the Price Index was always ready on time (16:30 on weekdays and 13:30 on Fridays) on the 15th of each month like clockwork.
After commitments both to the Internet and to DSBB, the index became simultaneously released through the press release and on a press conference to all interested parties such as correspondents and – as the 'latest' – it is posted on the Internet web site of the CBS at the same time.

The question is how had this been achieved?
The answer to this question is simply – **work culture**. Every person who belongs or joins this group or "team" of the Price Indices' division is imbued with the fact that he is part of a mission to be carried out each month. The **commitment** to the Ministry of Finance, to the Central Bank, to the Federation of Labor in Israel and other policy makers, motivates the people and increases their involvement in preparing the monthly Price Index. This has been the situation for many years, way before automation and computerization. This principle should be well remembered during the process of conducting a new operation, which requires different work habits than before.

3.5.4 Room for special releases

The divisions of the ***Central Bureau of Statistics*** *in Israel hardly had any fixed dates for dissemination of statistical data beforehand. The subscription to the IMF Special Data Dissemination Standard, which required monthly updating, started to imply, still at a slow pace, a new concept of work. Later on, the CBS decided to prepare a* **weekly advance release**

calendar – *forecast of press releases for the next week, which was transmitted on-line to the CBS site.*
Each division's mission was to **inform***, on its own initiative, the* **spokesperson's division** *about the subject of the press release and the estimated date on which it will be ready for publication. This would be considered as part of the work of every division and its proper functioning. This innovation had been conducted since December 1996, constantly being examined and analyzed.*
The CBS management made the decision, but it was the job of the spokesperson's division to convey it to the various divisions. At this stage, the agency did a lot of talking and persuading senior employees mostly, of the advantages of this organized way of announcing their findings or any other statistical data that were of interest to the public and the importance of fixed release dates for better functioning of every division. After many phone calls and countless reminders one could report that the idea of advance release calendar became more or less accepted.
As to **feedback outside** *the CBS – it was highly appreciated and unanimously accepted by the media. Reporters and journalists got used to it very quickly. They anticipated this bulletin board every Thursday and it happened to be very helpful in preparing their schedule for the 'next' week.*
Advance release enabled better deployment of the media concerning dissemination.
Good coverage also achieved proper scheduling with regard to other information released at the same week.

Logical order as result of advanced release turned out to be useful not only outwards but also moreover inwards. It required a new attribution of occupations, which was refreshing and increased motivation.
Fixed dates for release of major updated indicators leaves more space than before for special releases, the aim of which is to announce, for example, a new survey, a new way of calculation or to introduce some main findings in a forthcoming publication.
Once established, fixed release dates happen to strike roots rather rapidly and easily and **affect policy makers and decision takers** in planning and organizing meetings and discussions based on statistical data released on a fixed date.
Fixed release dates are the **source of more information** for dissemination, more feedback, better exposure**,** which arouses more interest, whet more thirst for knowledge and bring about new professional relations. Some of the fruitful ones are to create productive work and more information again and again.

3.5.5 Internal contact persons

As can be imagined, it is almost an impossible mission to introduce a new operation, which seems at fist sight quite aggravating, oppressing, awkward and simply unnecessary. A fifty years old conservative governmental bureau as the CBS, hates to be troubled, dislikes changes especially when the individual does not benefit from them right away. Having experimented for two months one came to conclusion that there must be a computerized control system to take over, that will save a lot of time and at the same time will transmit the data for dissemination accurately almost automatically directly to the P.C. at the spokesperson's division.

After a comprehensive inquiry it was suggested that every division should nominate a **coordinator –** somebody who is popular and accepted by his colleagues who knows his job – not the head of the division – but he may be one of his assistants. One who is aware of the importance of this operation, reliable enough in carrying out this project, assertive and controlling in a friendly way.

This person will be in charge of **updating the progress report**, which will appear on the spokesperson's PC screen. This coordinator will serve as a **contact person** between his division and the division of Data Dissemination. He will be the watchdog, on the one hand responsible for his fellowmen delivering the data when expected, and on the other hand for warning on time through this control system if anything goes wrong. This Progress Report will be carried out through one of the Internet tools.

The Dissemination Unit centralizes the various progress reports on the base of which the Advanced Release Calendar is formed. One tend to believe that it will become easier in the course of the time and once the divisions get used to the new project they will appreciate the advantages of this new concept of work.

As described earlier, the Bureau of Statistics consists of various divisions and sub-divisions, which supply data on demographic, economic and social developments in Israel. The statistical data are prepared with the assistance of government ministries, institutions, establishments and businesses, as well as people and families who take part in the various surveys.
It just so happens that quite often data cannot be released on time as expected because of someone outside the bureau. Although it is easier to **lose control over outside factors** there is still a chance to emphasize the importance of the time element and to try to convince again our partners outside the CBS. Besides, today, there is a possibility to release data before the appearance of the final publication (hard copy).
Sometimes the obstacle occurs in the early stages of the survey, sometimes there is a fault in the figures collected that was revealed after the analysis of the data.
Until a short time ago, the Bureau of Statistics was not used 'to be in a rush' while performing a survey. Apparently it is part of the concept that in a governmental office budgets are limited and frequently cut down but employees are rarely fired consequently.

3.5.6 Progress in a new concept

One of the results of the reorganization of the CBS Israel was the development that brought about the need for a division of Dissemination of Information. The establishment of fixed release dates is within the limits of this division and once successfully accomplished it will spur the management to **conduct more beneficial reforms**.
Success of the establishment of fixed release dates for major indicators depends above all on the type of organization, its state while introducing a new operation, and the preparedness of the people to **accept the change in the culture of work** and its implications.
Successful change builds on constructive interactions among multiple groups within an organization. Three basic groups must be coordinated if change is to be effectively implemented:

change strategists, change "implementers", and **change recipients**.

Each group carries its own assumptions, agendas, and reactions. Unless these are considered both at the outset and during the unfolding of the change process, the most well-meaning will be thwarted.

The advance release calendar being based on fixed dates, is processed by introducing new computer systems and occasionally can result in temporary chaos.

3.6 (DATA-GROCERY ON SCREEN)

Making an effective www site for information media: "What is a good web site"?

3.6.1 Getting through the jungle

*While selecting material for Statistics Finland's web site, it became obvious that the Internet does not reduce the workload, on the contrary, each opportunity it offered required **extra work** in order to be fully exploited. The Internet sets very hard demands on the whole production process of statistical services, but if these demands can be met the result is surely more than pleasing.*

The Internet offers several possibilities for statistical agencies representing an easy and **cost-saving means to publish statistics and to deliver products and services** to customers. It offers both services in time and interaction with clients, links to other services, provides capacity to combine different media and target groups.
To succeed in using all these opportunities requires, however, a lot of work.

The Internet seems to offer a **cost and labor effective system** of publishing information, such as statistics. Statistics are most often presented as plain information without connections to practical experimentation or exact theories and good statistics should be useful in many different contexts. The fragmented structure of the net does not inflate the value of statistics, which is often the case with more theoretical texts in the field of humanities.
The **international dimension** of statistical activity increases the usefulness of the Internet. Since the net helps to make contacts across the borders, it also makes it easy to collect information from any part of the world. The network of statistical agencies is a good source of information, if the user can rely on the comparability of information they provide.

The easy way to publish becomes a problem when examined from a social point of view. Publishing is easy for everybody and that means an **overflow of messages** - information and other messages.

How to get through in the jungle of the Internet?

- **Be good**

The first principle is to be good. You have to make **good pages as to contents, structure and layout**. As far as statistical pages are concerned, the contents are good if they are reliable and valid as well as useful both theoretically and practically. In addition to being enjoyable, the statistical information should also contain basis for reasonable doubt.

At statistical offices the emphasis is naturally put on the first items of the list, but as regards the Internet you should not forget the last ones either. The bare numbers are not enough. You should also provide some kind of analysis. **Recreational elements** should not be neglected either.
From the early presence on the net, Statistics Finland's pages presented basic statistics on Finland and its economy. Articles from monthly and quarterly bulletins served as analytical information. More enjoyable data also were added: e.g. quizzes and an aphoristic page called From the pen of the Assistant Statistician.

Good structure
A good structure means **easy navigation** on your pages. It does not only mean an easy way from your home page to other pages, but an easy way ahead from any page. This means that there has to be a clear hierarchy in the material. And do not keep your logic secret: a systematic list of contents gives the viewer a global view of the pages. It would also be helpful if you could make special user interfaces (pages) for special groups, such as schoolchildren, via which they have an easy access to information suitable for them.
In preparing the pages, at least part of them, can be built as **modules**, which can be used in many contexts.
Statistics Finland provided those customers who had access to Internet techniques with tailored statistical packages. In these packages public Internet-pages as modules were used although the bulk of the information came from a number of sources.

Good layout
A good layout is also important. However, visual supremacy should not become an end in itself. The usability of the pages by all net users is far more important.

• **Collaboration**
The second principle in the publicity contest is collaboration. You have to make **reasonable alliances**. The allies could be big **network "operators"** of your national network. In a way you should put your signposts by the information superhighway. The other type of ally is a **credible page keeper**. The collaboration between statistical offices in different countries seems to be a good example of this kind of co-operation, but in national contexts you should have your links on the pages of universities and greatest newspapers at the very least. The third way is to make an ally with your **customer** or an organization representing them. More and more different groups have their own "user interface"-pages, which they use as a starting point while surfing in the web. Statistics Finland had this kind of co-operation with entrepreneurs' organizations and the education sector.

3.6.2 Drawback on production system

The Internet offers a cheap and effective system of delivering information products to customers. Statistics Finland faced, however, two problems. Most of its printed publications were produced in such a **format**, which did not allow easy digital use. The actual publication can be reproduced in an Acrobat-format, but the figures could not be used effectively in customer's calculations. Thus using the Internet as a delivery method would mean changing the whole production system of printed publications.

The opportunity to provide service in time involves a must: all your data has to **be up-to-date**. When you publish a printed document or a diskette pieces of the data going out-of-date seems a minor problem, but on the Internet every piece has to be the latest one. Since the culture seems to become more and more tight in this sense, it is advisable to have a full-time editor for the agency's web pages.

The Internet users regard the fact that they can contact the organization behind the page straight away as self-evident. The **possibility of contacts** via Internet is a good and resource-saving alternative for telephone contacts. However, they have to be organized and planned in order to make the most of this interaction. As regards the answering of messages, the speed criteria of good service also seems to be tightening. Somebody in charge of the service has to keep an eye on incoming messages. She or he also has to see to it that these messages are answered as soon as possible. Statistics Finland tried to forward incoming messages to about ten places in the organization. The number of messages per receiver was still tolerable, but routines to handle them effectively were starting to shape up by 1997.

A good list of **links to other servers** gives you many friends, but it also has its price. You have to be sure that the addresses are correct, that they are continuously updated. It is advisable to have descriptions of the link pages combined with the links and information on why and to whom you recommend them.

3.6.3 Junction of means and target groups

All the aforementioned possibilities add to your workload. One of the ways if reducing it may be the use of the same material many times for different purposes and media is one.

Different media are not identical. You can simply reproduce printed publications on the Internet pages; the Internet is then the bare delivery media for the publication, which is destined for consumption in the same way the traditional printed publication is – by reading some pieces of paper. The correct way of using different media together is to use the same material in a media-specific way.

One example of combining different media could be mentioned. Based on the Finnish monthly bulletin Tietoaika, four graphical slides were made a month for one of the country's commercial TV-corporation to be presented during commercial breaks as filling material. Only one very simple graphic picture per slide could be used. In addition, pictures had to be made more visual than in the bulletin, because on TV the slides had to adapt themselves to the context of commercials. The system had produced very positive publicity for ***Statistics Finland****, but the TV-spot was not enough for some people. There has to be more information about the slide somewhere and it was decided that Internet pages could serve that function.*
There is an **URL-address in TV-spot**. *On Internet pages the graphics used on TV were reproduced combined with text from the monthly bulletin – not the whole article, but essential parts of it. Thus three different versions of the same material emerged: an article in our monthly bulletin, a TV-slide and a combination of graphics and text on the Internet pages.*

Another way is to use the **same material for different target groups**. The effective use of the same material as modules in different kinds of service packages (internal/external) presupposes an analysis on different customer groups and their needs. The structure of information also has to be made such that pieces of information can be easily combined with one another.

The Internet does not make our work in disseminating the statistics easier. On the contrary, the **workload seems to grow**. The pressures to standardize, harmonize and make the processes more effective are heavy at least in the beginning. All the mistakes (= too easy solutions) you have made earlier on while organizing your work would later stand in your way to good service. But if you can remove them the Internet provides you with an opportunity to concentrate on.

3.6.4 Customer-driven dissemination

A year and a half after having had installed its website in February 1995, ***Statistics Netherlands*** *decided to renew it, with an emphasis on graphical design. The form chosen for the first attempt followed the familiar presentations of information on paper, what was seen as least consistent with the other media agency had used. The second experiment became also short-lived, as was a mere collection of information, which had originally been compiled for other media or target groups. Therefore a third version was soon introduced, which tried to contain products made by agency especially for Internet, using the then newest techniques.*

Accordingly it was concluded by Statistics Netherlands that a **web site could not be a stable product** and when a site had a life-cycle of just 18 months, its framing meant continuous investment both in technique and content. Moreover, it became obvious that making an effective Internet site is not an isolated activity. An Internet site can only be effective when it is **part of an integrated media mix**. This integrated media mix was formulated in the data dissemination policy of Statistics Netherlands. The Internet can be used in different ways within the data dissemination policy (from web site to e-mail). Even a website is not a product, but rather a dissemination channel, which can be used in different ways for different products and different groups.

The Internet techniques made it possible to present **tailor-made information**.
The subsequent increasing individualization of information should not be seen as technology push, but as a consequence of the **information overload**. People cannot handle the enormous amount of information the Internet and other media present to them and look for tools to organize this stream. Technology helps them, but on the other hand editors, who select the information, became more important. Therefore the disclosure and selection of information becomes one of the most challenging tasks for a statistical office. So the reproduction costs of the Internet are not as low as they seem at first sight. Publishing on Internet involves making new products. The Internet offers so much information that most customers want someone to make a **selection** for them.

The main task of a statistical office is to make figures accessible in tabulations. The number of accessible tabulations is increased enormously with the Internet.

Statisticians can no longer hide their table behind difficult texts as everyone must be able to read them. At the same time expert users also use the Internet. The same figures have to be made available to **different groups with different needs** through the same medium.
The minimum solution to this problem is given by metadata: be exhaustive and organize metadata in such a way that every possible selection for specific groups can be derived from it.
Metadata is used to search the data and to interpret them. For both these tasks, the metadata required depends on the customer: is he or she an expert or non-expert, and for what purpose does he need the data. In order to comply with it, Statistics Netherlands developed a number of directives for metadata in electronic publications.
The **index** is an important instrument for users to find what they are looking for, and to know where they are during a user session, so is the responsibility of a central editorial board. All statistics need to be provided with a description of the population and the survey and every variable needs to be provided with its definition. Every figure needs to be supplied with its unit of measure. These directives are simple but necessary; statisticians are even given courses on how to make database publications and on the importance of metadata.
In the old days metadata were recorded, but there was no need for anyone except statisticians to read them. Nowadays metadata has a public function. This development is only a couple of years old.

3.6.5 From database to magazine

The most important development within Statistics Netherlands was not publishing on the Internet, but database publishing. The question was not how to get from print to electronic publishing but how to organize the publication process to be able to make a paper or electronic publication on demand.

At SN **database publishing** was centered on StatLine, which was the first step towards a flexible standardized medium-neutral output database. Input for StatLine was generated from existing publications. It was planned, that before publication was possible all data had to be put into StatLine. It was much in favour of the tendency towards (standard) tailor-made products and publication on demand (printouts, e-mail); flexibility and efficiency are increasingly important factors and these techniques became more profitable as the format of the output was standardized. It was expected some publications to disappear altogether as their edition was too small, while new ones to be introduced, either on paper or electronic devices. The Dutch market of statistical output was a niche market, and within it needs very specific. This meant Statistics Netherlands was able only to publish small series and tailor-made products.

Because of the information overload, selecting information for target groups has become more than ever necessary and also has to be provided more rapidly. To keep up with these needs one must constantly analyze market information.
One example of a product specially made for Internet was the **Web magazine**, situated on Statistics Netherlands' homepage. The formula was based on the news criterion, and pertains not only to news in the sense of the latest press releases but also a statistical translation of topical issues in Dutch society. For instance, if an outbreak

of swine fever occurred in the Netherlands, the Web Magazine would contain an item on pigs, based on livestock statistics. News items were entered daily. This Web Magazine was based on the customers' needs for the selection of information.
The Internet is a fantastic medium, but one must not forget that customers will dictate how and when it is used. The number of users suggested that web site and e-mail facilities provided a wanted service.

The most important thing to be learned: **do not go faster than the organization**. First organize your information. You have to be sure the information you present on the site is updated regularly. At the same time the back-up office must be ready to take care of the (new) reactions the Internet site will raise. This means not only e-mail address but also the capacity and the skills to answer the queries. Be aware that an Internet site generates traffic you did not even know existed before.

The Internet caused an **information overload**. At the same time the most interesting feature of the Internet was the possibility to generate tailor-made information at an individual level. For a statistical office this was an opportunity to open up the immense amount of information, which beforehand was stored inside the building. The accessibility of the information requires statisticians to adopt a different attitude towards the publication of their figures. Storage in a database, together with extensive metadata, from which tailor-made information could be produced, was the progress of the future – asserted summation in 1998 made by Statistics Netherlands.

3.6.6 First year's yield on Germany's site

*The **Federal Statistical Office** offered information via its own server in the Internet from March 1996. The information system suited for gradual extension was developed by an interdisciplinary team of statisticians with the aim to supply up-to-date and timely information tailored to the needs of users all over the world. The system, which in the beginning encompassed not more than a basic program including press services and major structural data, was gradually extended during the first year.*
The office fulfils its legal obligation to publish the results of federal statistics for general purposes by offering a large variety of information to the press and the general public, providing a comprehensive system of printed and electronic publications and supplying data on-line. The assignment to offer data to the public at large was clearly reflected by its slogan "Figures for everyone".

The infrastructure of the Internet was particularly suited for the statistical offices' dissemination of data.
On the one hand, the Internet permits users to have a **flexible, individual, rapid and low-cost access** to information and to participate in interactive communication.
On the other hand, **information about the types of requests** and the **feedback** of Internet users enable the statistical offices to analyze the current demand more rapidly compared with the conventional forms of data dissemination.

Underlying requirements of information the agency provided on the Internet was based on the criteria, which were of great importance as far as the acceptance of the medium is concerned. The information available in the network had to be fully **up-to-date**. The statistical results were initially issued in the form of press releases. They were sent by fax to press agencies, and other media every morning at a fixed time. At

the same time, they were published in the Internet. All other components of the program offered in addition to the press services were updated on the days the latest data are issued.

In line with users' demand, official statistics was issued in **multiple forms** – as free basic information for the public at large; as information for specific target groups with access to specific databases and as information tailored to individual needs. Besides, the globalization of markets has caused national information to be considered in an international context. In view of a worldwide use, the agency provided its Internet information both in the **German and English languages**.

A precondition for users to accept the information system is that the information is **easily accessible, transparent and clearly structured**. Such measures as providing background information about statistics in general and individual statistics in particular and making references to services offered by the statistical offices aim at facilitating an easy search for (rather complex) information.

A **dialogue-oriented structure**, characterized by naming communication contacts in the statistical offices, allows users to directly contact the specialists who, on their part, profit from the feedback for a demand-oriented advancement of the program.
In line with these criteria, the information the Federal Statistical Office began to provide on the Internet was broken down into four categories. Statistical information requested was to be retrieved either via the menu of the home page or directly with the help of **search tools**. It consisted from hot news encompassing all press services. The latest results were available immediately on the day they were issued. All press releases were available in an unabridged form in the German language. Press releases relating to main indicators such as gross national product, foreign trade and consumer prices were additionally accessible in a full **English version** on the Web site. As for any other press releases, they were issued in the form of standards in the English language. Access to press releases was enabled either via subject fields or chronologically for the current and the previous year, and was accompanied with a **preview** about the publication dates of individual press releases.

Under the Indicators home page menu, the office provided selected data base time series of major economic indicators. Since the tables were directly derived from agency's own database called STATIS-BUND, they had a good quality and were up-to-date. However, the information offered was restricted to global data. Data in a detailed subject-related breakdown, e.g. by branches or sectors of economic activity, could be retrieved from the database. The office, introducing its new Internet service called **Time series service**, opened its statistical database STATIS-BUND including more than 1 million time series to Internet users since March 1997.
The time series service consisted of two components. **Metadata** described the information offered in a detailed way, thus allowing a precise selection of the time series required. The data could also be accessed in a **hierarchical order**. In each case, a networked catalogue of definitions facilitated the search for technical terms and offered precise data base-related definitions.

The menu item '**About us**' provided information about statistics and the Office, while **'Science'** described the methods and procedures applied. Under the headline '**Events'** information was offered about events, conferences and fairs. '**Help-line**' listed

competent experts to answer specific statistical questions and '**Feedback'** permitted users to get into contact with statisticians via e-mail.

Mid-night gleaners

To be kept informed about the extent to which our Internet information was used and consequently ensured that the program be updated in a user-oriented way, all Internet accesses to the Web site were recorded in a **server log-file** since the very beginning on 11 March 1996.

In determining the **number of requests**, agency's accesses were not recorded. To avoid double counts, graphics files were not covered (an access to a page with graphics would be counted as an access to the actual file, on the one hand, and to a graphics file, on the other). Requests recorded were in a breakdown by times of access, countries of origin and contents.

An analysis of the log-file as at 10 March 1997 revealed that, from the very beginning, 821,000 times a page of information service was loaded. That figure was equal to an average of 2,254 pages per day. The demand for data continuously had increased since the beginning of presenting data in the Internet. All in all, 56 percent of the users making requests were from Germany, 62 percent from Europe, and 16 percent were from the USA/Canada.

An analysis of the individual pages showed that users had been first of all interested in the **basic information** offered (an overview of all statistical areas) and in **press releases** (initial publication of statistical results). It was concluded that the information offered in the Internet was mainly used by two target groups: on the one hand, general users whose aim was to get a broad idea and, on the other, users who were interested in highly topical information like media, information distributors, banks, etc. The number of requests for press services recorded between March 1996 and March 1997 amounted to 145,000, i.e. 18 percent of all requests.

The monthly request reports showed a continuous increase in the number of requests. The average number of files requested per day also showed an **upward trend**.

As regards the total of press files, it was only logical that requests for the press homepage range first (about 16,000). About 15 percent of those requests were made for English versions. The following order shows how users "advanced" the press service pages. The majority of them selected individual press releases via *Subject fields* (place 2), followed by the options of *Topical press releases* (place 3) and press releases, chronologically (place 4). The *Figure of the week*, which stood for brief information of general interest, accounted for 4,000 of all requests, thus ranging on place 5.

It was interesting to know that the preview of the publication dates for press releases was on place 7. It confirmed the importance of press service among the general public.

An analysis of completed requests in a breakdown by individual press releases showed that **demographic data** in the German language are requested on a large scale. That applies to information about population growth, territories, sizes of households, etc. Apart from real interest, the large number of requests for demographic data might also be due to the fact that users who selected the most frequently requested service page of subject fields often just had chosen the first

option offered, namely population, thus being provided with the information of press releases in that field.
The demand was considerable for **major economic indicators** issued in press releases (gross domestic product, consumer price index, foreign trade data). Information was requested in the German and particularly in the English language.

The press releases were issued every day at 8 a.m. (on days of press conferences at 10 a.m.). The dates (periods) of releasing press information were published every Friday for the week to follow. They were updated in the Internet on a daily basis.
Like the other data provided in the Internet, press release information was retrieved mainly during the usual Central European office working hours. As for versions in the English language, a considerable demand was observed until late at night. Most probably, these clients were non-Europeans.
Analyzing the requests by hours is of interest in order to assess the Internet as medium for rapidly distributing information in comparison with traditional ways of distribution. Regarding very important press releases, whose dates and times of publication had been announced in advance, we recorded rather large numbers of requests directly at the time the releases were issued. Regarding, for instance, the 1996 gross domestic product figures published on 9 January 1997 at 10 a.m., one third of all requests on 9 January 1997 were made between 10 and 11 a.m.

Based on the one-year experience gained, the **distribution of statistical results via the Internet** proved to be very successful. The response to the information offered was good, which had contributed to a more detailed development of agency's potentials for the benefit of the users. Developing a system of information supply, which could be continuously adapted to changes in demand was a big step forward on the way towards the provision of information tailored to the needs of the users.
As the experience gained in Germany showed, by 1997 the Internet was still sort of a supplementary means in distributing particularly current press services to the media; the **traditional ways of distribution** via news agencies and direct mailing being still predominant.

3.6.7 Overview of sites – without rating

Most websites, based on release calendar and frequency of press releases, are updated frequently; however, on some sites the latest monthly bulletin and **data update** was from three year ago – stated a UNECE survey published in 2001 in Geneva. It was the third inquiry carried out, which besides 44 existing **websites of national statistical offices** swept also those of **14 international organisations**.

"News" or "Press Releases" were generally the **most consistently updated** sections with the most recent updates usually on the basic economic indicators such as unemployment and inflation figures.
"Data" was generally **less frequently updated** and on many sites the local language version was updated more frequently than the English version; some sites did not give the information on when the last update was made.
Press releases usually served as one of the main channels to disseminate new statistical information, mostly providing also a calendar. Releases were generally

presented either by release date or by topic, although one site gave the releases on a random order.

The **amount of data** presented and the topics that were posted on the Internet varied significantly. Most of the websites had at least the most recent socio-economic indicators, monthly statistical bulletin and statistical yearbook available online free of charge, report said. Several offices had chosen Internet by 2001 as their main information channel while others were using it mainly to advertise office and to provide general information about their activities, with little actual statistical data.

Almost all of the websites were aimed at a group of **professional users** and were designed accordingly. Only a few had features especially designed for a web surfer coming across the page without a clear idea of what he/she is looking for. Surprisingly few websites collected information about their visitors, though by amassing it could foster to obtain a clearer picture of who the real users were and to better suit the metadata offered to the needs observed.

The **welcome pages** of NSO homepages differed quite substantially, although most clearly presented the basic links necessary for navigating the site. Usually sitemap and site search were accessible from the welcome page and links to data pages and online publication were provided. Although starting pages were somewhat similar in structure, convergence towards a standardized structure would be desirable.

The number of websites offering **access to databases** had increased since the 1999 survey, by 2001 their number reached as many as 15. The amount of information obtainable and the types of queries made varied significantly across the different countries. Some NSOs provided only basic indicators with a limited number of options how to create a query, while others had all statistical data available with advanced query options on the database.

Data on the websites of the selected **international organisations** varied to a greater scale than did data on the websites of national offices. The objectives and the focus of the organisations had a greater effect on both the topics and the amount of data presented. Web pages of international organisations were generally frequently updated. With only a few exceptions press releases and/or the news section was updated almost daily. Data updates also seemed to be more frequent than in the case with most NSOs.

3.6.8 How to attain electronic visibility

As a growing number of National Statistical Offices launched its own site, Internet became increasingly important as a dissemination channel. And for Internet represents a permanent challenge to adapt to new facilities, a set of recommendations was provided by UNECE for the most critical success factors for implementation of a statistical website in publication **"Best practices in designing websites for dissemination of statistics".**

For one, **users** have to be in the centre of attention: it is important to investigate who the users are, what they really need, how they use the data, what their competence

levels are. Further condition to achieve access is strong support among the (top) management as the development and maintenance of the website should not just be the task of IT-experts and special dissemination staff.

The **website architecture** must provide comprehensive navigation across the whole site; a flexible and consistent metadata support should ensure that the published statistical data is transparent and comprehensible for users. The user then must be able to download data into his/her own technical environment. The data should be provided in well-accepted standard formats.

When installed, the website will be the main **output repository** of the National Statistical Office on which statistical information can be provided in various shapes and sizes. The content may consist of fixed statistical tables with key figures and other basic data; publications with text, figures, graphics, maps in a web-readable format; pre-defined tables, time-series; flexible access to databases; download functions for tables, publications; information about the office, general description of main activities – and of links to other statistical and related sources.
A website consists of a **number of Web pages** that have to be **linked together**. A large website may be composed of several thousand web pages containing many cross-references and link to other websites. Because such an architecture can be extremely complicated, it is necessary to maintain complete control of the website, otherwise it may become very confusing for the user.

Definition of the content of Web pages and the style of **presentation** are two different things. A bad presentation can destroy the content and discourage users from accessing the site. When developing a website, there are certain rules to be considered. Response time is a very sensitive issue, so the basic rule should be to avoid all unnecessary features, which may provide a "sophisticated" layout but which are time-consuming. The normal user of statistics is very rational and wants to obtain all kinds of information as rapidly as possible.

3.6.9 The best of all possible sites: a 1998 ideal

The basic information the user needs for assessing and navigating the site should be on the first page; there should be clear hints of language used, marked the sporadic lack of such requirements an observer of National Statistical Offices' web pages at their nascent plight. The style of the period site should add interest to the website without being "busy" and distracting, while different styles within the same organisation can be confusing. Moreover, differences within the organisation, for example between departments, should be transparent to the user.

Anyway, considerations for the users are obviously at the heart of any well-designed web page. Large graphics are tempting, but can slow the response time, while on the other hand, text only pages can be boring, and the judicial use of small icons make things interesting. When the user has navigated to the information he/she requires, there are a number of ways in which he/she can access it, and he/she should be able to choose. The document should have a font large enough for him to read it on screen. It should be also easy to print.

The news page has to contain the dynamic information, substantive information such as press releases and information about the development of the site. Paper publications and electronic publications should be separated, although the same kind of information is needed for both. This information may include categories of publications by topic. The full details of the publication, including ISBN number, internal reference-number, cost and contact information should appear beside the abstract or synopsis.

The **Home Page** represents the normal entry point to the website, its visiting will give the user his first impression. An overview of the contents of the site with links to the different sections could be a common rule. The home page may already contain some statistical key figures on condition that they really are important and are always maintained up-to-date. Navigation is one of the basic user interactions, so it should be comprehensive and efficient from the user's view. Therefore all texts on a Web page with underlying links should be distinguished from plain text. The user should never become lost in the website.

The **design of the web pages** is of great relevance for its use. It signifies a number of problems for designer to solve. The available monitor and the chosen resolution limit the visible part of the physical size of the page. This is a crucial point for web page design because users are equipped with different displays. It is often difficult to limit the size of a page to the physical parameters of the screen.

The **technical functionality** of a website can be static or dynamic. Typical applications of static we pages are: publication of documents; simple search in web pages and published documents; static or fixed tables, graphics; all sorts of administrative information and download function of pre-specified statistical data. Dynamic web pages require interaction by users, who will control their work and will be in the position to decide and select what information should be provided. To achieve such flexibility it is necessary to provide and appropriate database environment.

It is necessary to have a clear picture of the **administrative organisation** of a website, but there may also be a tendency to over-organise website management. In large organisations such as statistical offices, it would normally be more efficient to implement a certain distribution of responsibilities within the office. Subject matter departments should be responsible for loading the website with statistical information following the general rules agreed upon in the editorial board.

3.6.10 …Those supportive tools of transfer

The ultimate **Wide Area Network** became the Internet, which combines the functions of a network, allowing the sharing of data and programs, with those of a dissemination medium, reads "Recommendations on formats relevant to the downloading of statistical data from the Internet", methodological material by UNECE.
World Wide Web had greatly increased the capacity for users to access data from remote resources. Statistical agencies have benefited as a result, users routinely download data (tables, reports, press releases) from their sites.

For transferring data over the Internet, three methods grew to be widely used.

- **Hypertext transfer Protocol** (HTTP) is mainly used as a **"pull" method**, and can be seen as the electronic continuation of the traditional paper-based publication media: the author or publisher makes the information available, and customers take the initiative of accessing it and acquiring it. HTTP is the preferred protocol for the interactive part of the Internet. HTTP is supported by web browsers, programs that interpret HTML (HyperText Markup Language) or XML (extendable Markup Language) and allow users to follow links and select information.
- **E-mail** is the main **"push" method**: the author has a specific reader in mind, and the recipient's address is part of the protocol. Mail messages are written and read in dedicated programs that take care of both encoding and dispatching. A message can be supplemented by any number of files in any format (attachments). This makes it the method of choice for sending documents or references to them (update notification, the document itself being pulled) when the users are known in advance.
- **File Transfer Protocol (FTP) combines the push and the pull approaches**. It is primarily meant as a method for transferring files to or from a remote computer, and is particularly suited for batch work. FTP can also be used interactively, and is the preferred method for large file transfers thus is suited for communication between statistical offices.

The different available protocols illustrate an important **paradigm shift** that has taken place since the advent of the Web. In the past, the accent was on form: files were accessed through file descriptions. The formal structure and format of a file was all important. The content was considered implicitly understood by humans and irrelevant for software. Nowadays one tends to refer to documents, with more stress on the structure of the contents. Unlike e-mail and FTP, which are not concerned with the content of files, HTTP reflects that shift. HTTP is not file-oriented but document-oriented. A document can consist of one or more files. HTTP can use the Universal Resource Locators (URLs) embedded in hypertext links of the HTML or XML formats in order to tie different files together. XML was developed to replace HTML, its immediate advantage is that content and layout can be defined independently. Where HTML tags primarily define document structure in terms of layout sections, XTM tags are used to define the structure of the content.

We access documents for two main types of goals: either to **become acquainted with the information** they contain, or to submit this information to **further processing** such as analysis or integration with other data.
In the first case, we need to be able to read and understand the document.
In the second case, we want out software to be able to access the data correctly.

Accordingly, three types of document formats may be discerned. Human-readable formats include **Word processing formats** (MS Word, WordPerfect, etc.), **read-only formats** (PDF) and **graphical ones** (GIF; JPEG). Machine-readable are inaccessible for mortals, viewing the content of such documents is supported by selection and presentation functionality. Databases offer a typical example if this category. Universally readable formats are designed for interactive processing of data. Most new formats, e.g. XML, are of this type: human-readable and machine-processable.

Knowledge of available formats is not sufficient of course for selecting a preferred format for statistical data. The **purpose of the document, the needs of the users, and various preferences of the office** play a role in this choice.

Key issues

Organisational and Technical Aspects of Communication between Statistical Offices, the Press and other Media

Internet as a new dissemination channel needs co-ordinated outward communication

This requires a new statistical system:

- unified
- open
- user-oriented

Information towards media grows into a wider information strategy

Internet's audience as special group of users is extremely diverse

Users' benefits from statistics in two levels:

- acquaintance with new data through the web sites and the media
- on-line and off-line systems provide retrieval of detailed information

New patterns of communication alter former working patterns of agencies

Shifting from Print to Electronic Products – how and when?

Tapes, diskettes, Electronic Bulletins Boards, CD-Roms as forerunners of electronic products
First web sites looked like photographs of the printed publications

Customers exerted growing pressure, requiring from dissemination:

- increased timeliness (attracting also larger client base)
- expanded access to products offered

Customer satisfaction is to be surveyed for the appropriate design of a web site

Internet became primary means of dissemination due to:

- time shaving
- budgetary considerations
- "democratisation of data"

Statistics Canada's The Daily leading role in merging electronic tools of general-purpose online dissemination (achieved by trials and errors)
Gains from the new electronic medium in its own right:

- filtering of media coverage avoided
- costs reduced
- availability not bound to time and space
- multi-dimensional publishing

Costs and Benefits to Consider when Planning to Outsource Public and Media Relations Work

Well-organised data dissemination and census preparation may involve external assistance by outsourcing part of activities
Contractors' work provide additional outreach capabilities

Benefits of outsourcing:

- frees up staff for other priorities
- provides external perspective on messaging
- more concerted, intense and rapid communication with media
- ability of contractor to sub-contract

Undesirable features of external assistance

- government agency's policy, terminology are unfamiliar
- may have only limited media contacts
- may be inexperienced in statistical aspects of work

Planning ahead, ongoing feedback of outsiders activities and a monetary cushion for internal budgeting purposes could provide sufficient flexibility

How to Establish Fixed Release Dates for major Economic Indicators and how to meet them

To ensure regular and timely flow of relevant data IMF established standards for the dissemination by 1996

Aim: providing transparency of macroeconomic performance by comprehensive data

Means:

- Special Data Dissemination Standard (SDDS)
- Dissemination Standard Bulletin (DSBB)
- dissemination of advance release calendar
- simultaneous release on equal terms

Fixed release dates require from national statistical offices'

- control over outside factors
- formulation of new concept of inside activities
- change in the work culture

Sticking to advance release calendar provide more information for dissemination, more feedback, better exposure arousing more interest.

Making an Effective www site for Information Media: "What is a good web site?"

Internet offers cost and labour effective system of publishing information but selecting material for web site increases workload.

Web sites permit users to have

- flexible
- individual
- rapid
- low-cost

access to information.

Pages are to be correct as to their contents, structure and layout, in addition have to be enjoyable.

Web sites preferably provide:

- easy navigation
- transparency
- clear hierarchy in the material posted
- dialogue-oriented structure
- up-to date data
- search tools
- access to metadata
- special users' pages
- links to other servers

On the Internet, the same figures have to be made available to different groups with different needs.
When preparing a web site first one should not go faster that the organization.

It is advisable for the statistical web pages architecture

- to avoid large graphics as well as
- text only pages
- to have font large enough to read
- to make use of small icons
- to indicate publications with their abstract and availability

Three ways of data transferring:

- "pull" method (HTTP)

- “push” method (e-mail with attachments)
- combination of the push and pull: File Transfer Protocol (FTP)

Document formats consist of:

- human readable formats (word processing, read only and graphical)
- machine readable formats (as databases)
- universally readable formats for interactive processing of data (XML)