DEB on the Web

(Extract from 'Web-forms for Intrastat', Eurostat, March 2000)

Overview

In France, two different systems are being implemented which use web-forms for the collection of Intrastat declarations:

- "DEB sur le Web" (Intrastat declaration on the web). This system is being developed internally by the IT service of French Customs. It is the migration to the internet of the existing French videotex system (Minitel) for Intrastat data collection.

- "WebEDI". This project is the implementation of an internet server for access to local administrative information in the Chalon sur Saône region and the first web-form is for the Intrastat declaration. Unlike "DEB sur le Web", WebEDI is a private initiative where French Customs are in partnership with commercial and local government bodies. The role of French Customs is to provide specifications, validate results and give approval for the system to become operational.

Other projects in this perpetually changing domain are expected in the future. French Customs encourage all initiatives on the development of Intrastat web-forms.

Since 1993, French law has allowed the Intrastat declaration to be sent in electronic format and the French government chose this declaration as the pilot for any trial on Electronic Data Interchange, including the projects on web-forms.

These projects follow a governmental action programme for the entry of France into the information society (PAGSI). The objectives of this programme are to simplify the life of the users and to improve the quality of the transmitted data. This will be done by providing electronic forms on the internet to facilitate electronic commerce and administrative procedures.

Before sending an electronic declaration the declarant is required by French law to sign an interchange agreement with French Customs. This agreement ensures the legal and technical security aspects of the interchange, by the exchange of the following information:

- an agreement number identifying the declarant,

- a personal password for the person responsible for the declaration, to enable authentication,

- an acknowledgement sent by French Customs to the declarant indicating the acceptance or the rejection of the declaration, with the number of lines and the total amount of the invoice values, to ensure the integrity of the data.

In the future, in compliance with the European directive on a common framework for electronic signatures, the declarant will have to present a certificate provided by a certification authority. The certification authorities will first be agreed by the French Ministry of Finance.

DEB sur le Web

"DEB sur le Web" (Intrastat declaration on the web) is being developed internally by the IT service of French Customs. It is the migration to the internet of the existing French videotex system (Minitel) for Intrastat data collection. The internet user interface is new but the existing internal programs have not changed. The system is in the development phase and will come into service as a pilot with a hundred companies on 1 March 2000. Companies which are already reporting their Intrastat declarations via Minitel will be the first to migrate to internet.

Figure 7: Input page of "DEB sur le Web"

Functionality

Most of the functions exist already in the Minitel system:

- user authentication,

- creation of a new declaration,

- management of declarations,

- validation and acknowledgement of the declaration,

- printing of declarations,

- looking up a country code,

- looking up a CN8 code,

- downloading the country code file,

- downloading a CN8 code file,

- correction of a recorded declaration.

A more detailed description is given below.

The user's view

The system is targeted at third declaring parties or companies providing statistical information, including those using the Minitel system, who have fewer than ten lines per declaration. This new system changes neither the organisation nor the work of the companies already using the Minitel system, and will be free of charge. The system also allows users making declarations of more than 10 lines to download IDEP/CN8 as a supplementary option.

A company which wants to use this system has to register with the administration. The user has to:

- contact French Customs in order to establish an interchange agreement,

- fill in a pre-registration form with the IT service of French Customs for the usage of the system.

When the interchange agreement is signed between the two parties, the user receives his identification and password by sealed letter and is registered with the IT service of French Customs in a user database. The text of the interchange agreement and the pre-registration form can be downloaded from the web server.

To use the system the user has to log on giving his identification code and password. The user authentication control is done on the web server. Companies already reporting their Intrastat declarations with the Minitel system will keep their current identification code and password when they migrate to the internet.

The web-forms are filled in on-line, the user's PC remaining connected to the web server during the entire transaction. When the user wishes to create a declaration, he must first input the flow, the threshold and the statistical procedure in order to display the appropriate input form with the useful fields to be filled in. He can save the declaration when it is partially complete, and it is stored in a temporary database on the server. The user can manage his temporary stored declarations by listing, modifying or deleting them.

The necessary code lists and validation criteria are integrated into the HTML page. The function for looking up a CN8 code includes a complex search of the CN8 codes by key-words or synonyms. The downloading of the CN8 and country code files, and on-line searching of these files, are also available as separate options.

When his declaration is completed the user can validate it, and it is then recorded on the web server. An automatic acknowledgement is displayed to the user before being sent to him by e-mail. This acknowledgement contains the declaration number, flow, period, threshold, number of lines, total invoiced amount and the certification number.

The correction function existing in the Minitel system will be implemented. It permits the user to correct a previously validated and processed declaration.

The lesson learnt from the Minitel system was that it is easier for the user to do a declaration with an electronic form. The internet web-form has further advantages. Compared with Minitel, the ergonomics of the user interface are much better, and will give the opportunity for access to other administrative services on the

internet. However, it has also been found that internet tools still need promotion and the SMEs need more education about their use.

The administration's view

The objective of the collection of Intrastat declarations by web-forms is to:

- decrease the number of paper declarations, and therefore the cost of keypunching or OCR processing,
- reduce the number of errors due to paper declarations, and therefore to improve the quality of the data sent by the SMEs.

An important factor for French Customs is that this project requires almost no finance because the office procedures, help desk and many of the programs have already been implemented for the Minitel system.

Promotion and courses about the system are not yet scheduled. But it is planned to send mailings in September 2000 to Minitel users and companies which declare fewer than 10 lines per month on paper. An example of an Intrastat web-form will be stored on the server for demonstration; such a form already exists in the Minitel system.

Technical view

This new architecture is well integrated with the existing videotex server. The new system uses the same machines and the same programs for access to the databases; only the user interface has changed. The team which implemented the Minitel server is now working on the web-form server with the same partners and the same associated applications.

The "DEB sur le Web" server is a Unix machine. Two different firewalls ensure protection between the internet and the private network against non-authorised accesses and viruses. The protection between the web server and the internal system (databases) is achieved by separating the web server from the Information System of the administration and ensuring secured transfers of data by a proprietary protocol similar to FTP.

This basic architecture is presented in figure 8.

The minimum system requirements for the user are:

- 32-bit PC,

- Windows 95 (or above) or Windows NT,

- Internet access,

- Netscape Navigator version 4 (or above) or Internet Explorer version 3 (or above),

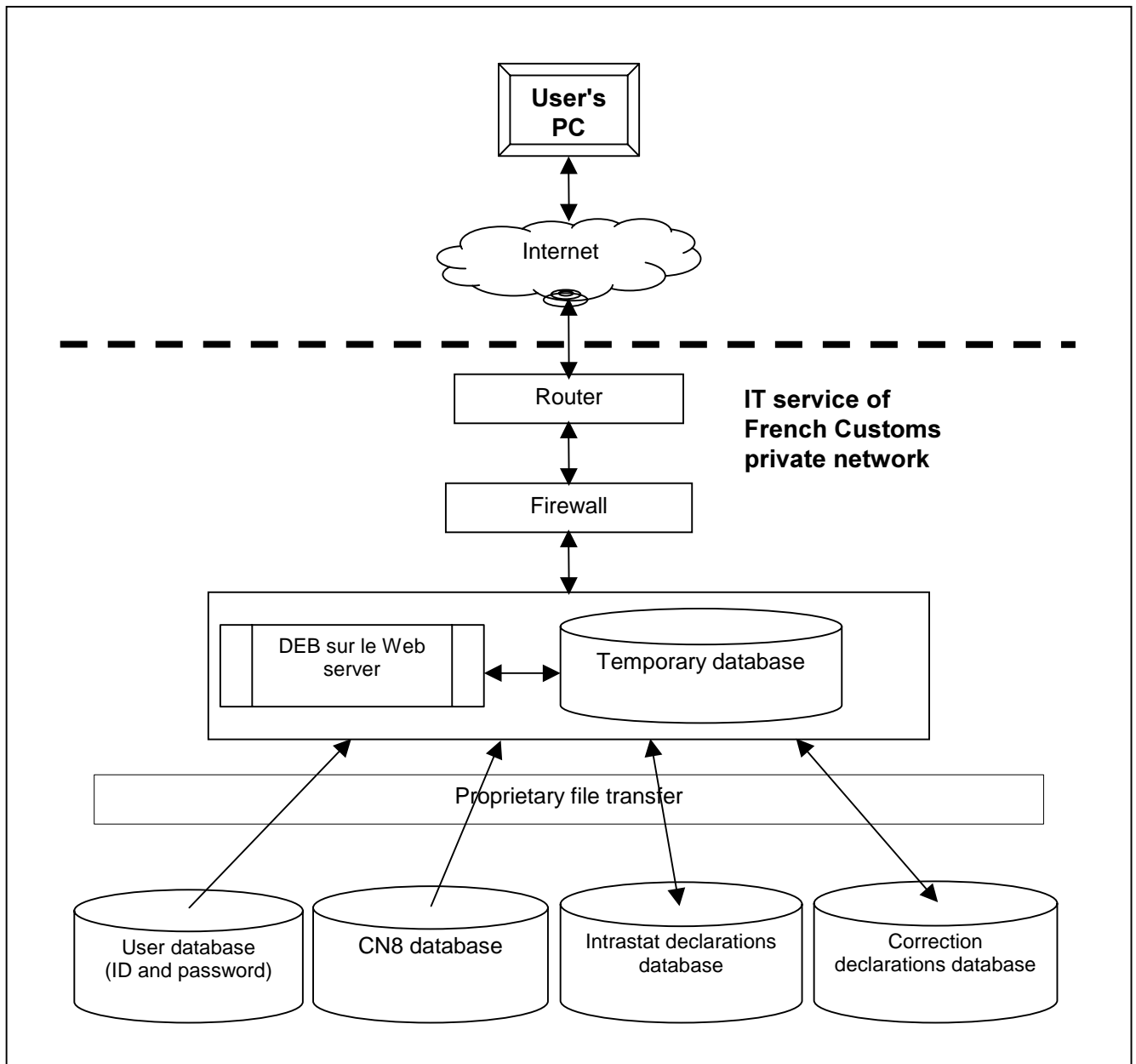- screen resolution of 800 x 600 (recommended minimum).

Figure 8: Technical architecture of "DEB sur le Web"

The user interface or client side is composed of HTML pages associated with programs in Javascript for the input of data and the validation of the data against the lists of acceptable codes. Inputs and some validations are executed in the user's browser; more complex functions, like looking up a CN8 code, are executed on the server side. On the server side the existing programs written in C programming language for the Minitel system have not changed. For example, the function for looking up a CN8 code uses the same program as the Minitel system which includes a complex search of the CN8 codes by key-words or synonyms.

As with the existing Minitel system, once the declaration has been validated, the data are sent in in-house format to the database without translation into EDIFACT. XML is not currently used but will be considered in the future.

Project view

The Ministry of Finance is responsible for the good implementation of specifications of the Intrastat declaration. One project leader and two programmers from the IT service of French Customs (DNSCE in Toulouse) are working on this project. Some skills have already been gained with the Minitel system, for example programming in C. Courses in Java and HTML were organised for this project. An external consultancy is used for security aspects and ergonomics. The total resources required are three staff.years and the expected duration is twelve months. The project timetable is shown in table 4.

Task	Duration
Function description	February-March 1999
Validation	April-July 1999
Definition of conditions of opening of the site	July 1999
Publication of specification for security issue	August 1999
Programming	November 1999
Implementation of the local security system	Second quarter 2000
Integration of the remote security system	Second quarter 2000
Testing	April 2000
Opening of the service	June 2000

Table 4: Project timetable of "DEB sur le Web"

Take-up

The new system will be tested by around a hundred companies who are already working with the Minitel system. Since it is similar to the Minitel system, the take-up by these users should be easy.

The number of users expected to use "DEB sur le Web" is estimated as:

- 1500 users/month in 2000,
- 3000 users/month in 2001,
- 5000 users/month in 2002,
- 10,000 users/month in 2004.

Lessons learnt

It is not possible to come to a firm conclusion before June 2000, when the system has been fully implemented. Nevertheless, it is possible to say that the development of this system has been facilitated by the existing implementation of the French videotex system called Minitel, because most of the specifications are similar; the biggest difference is the user interface. New security aspects linked to the internet must be studied and strengthened between the administration and the companies.

It has also become clear already that high service quality and good availability of the system are very important. Any reduction in these will result in rejection by the users.