



**Eighth Meeting of the  
International Voorburg Group on Service Statistics**

**Oslo, Norway  
27 September - 1 October 1993**

*The SERT Project  
Bi-directional Information Exchange between Enterprises and  
National Institutes of Statistics based on automatic Data Management*

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# **T h e   S E R T   p r o j e c t**

## Introduction

The SERT project intends to explore all possibilities of data processing and EDI in the field of statistical data collection in order to lighten the administrative burden of the enterprises, especially SMEs, and to strengthen their competitiveness. Statistics as a prime example allow to extend the collection and dissemination of data to other executive bodies (administrations): social , fiscal, customs etc.

The SERT project concerns enterprises in all NACE-classes and thus the production of services as well as of goods. This paper focuses on the services part (see scheme page 4).

Reducing the administrative workload of companies, facilitating a fast access to accurate data on the different aspects of the european economy, accelerating the flow of information to the european and national statistical instituts, avoiding discrepancies or incompatibilities as well as the dispersion of ressources during the realisation of projects, are objectifs that may be affected by the creation of a synergy between the different Community actions comprising enterprises and by taking advantage of the attainments and the experience of electronic data interchange (EDI).

The actions that might be integrated into this scheme are the following:

1. Actions aiming at an improvement of the collection of statistical data conducted by Eurostat
2. Supporting actions for SME, especially those that aim at the reduction of administrative workload for enterprises such as filling in questionnaires - action conducted by the GD XXIII.
3. The improvement of telematic communication networks between enterprises and administrations as well as between administrations themselves - action coordinated by the GD XIII.
4. Actions concerning the development of registers of enterprises conducted by Eurostat. (regulation in progress) and similar actions in relation with the Chambers of Commerce financed by the GD XIII.
5. The special action conducted by Eurostat within the framework of the INTRAST/COMEDI project.
6. The action concerning the improvement of the measurement of the GNP which requires an improvement of surveys on enterprises and especially on SME.

## A coordinated approach

SERT can be divided into four sub-projects:

1. Electronic questionnaires: inventory of national initiatives

How are they developed and how are they received by administrations and SME?

Is it possible to propose a general methodological approach that might be used by different administrations of different countries for different types of questionnaires?

Which possibilities exist for the follow-up and the implementation of the generic tools?

## 2. Standardization of information and employment of EDIFACT

It is a question of maximizing the benefits deriving from the automation of the following techniques of data collection:

Determination of standard messages that might be used within the framework of interchanges deriving from the usage of electronic questionnaires. This stage will be based on the works of the WG4 of the MD6 in which the different parts concerned will have to take part.

Preparation of propositions that allow the exchange of standard messages to be most efficient within the different environments and especially in the field of SME.

Making enterprises sensitive to the potential benefits arising from the interoperability of the applications.

## 3. The usage of available information and the integration of questionnaires into the information system of the enterprise

Studying the most common management software used by European SME

Integration of the declarative processes into the standard products offered by the European software industry.

Foundation of assistance centers that support SME in introducing advanced techniques of data collection.

## 4. Study the impact the above mentioned techniques have on intermediaries and the evolution of their role with regard to SMEs.

Preparation of cooperation patterns with accountancy experts and controllers of enterprises etc.

Preparation of pilot projects together with a panel of professional associations

Studying with other executive bodies the generic potential of the solutions proposed.

The preliminary discussions to know to what extent it is possible to develop a general methodological approach (e.g. for economic and employment data) and to what extent a sectorial approach is necessary (e.g. data on products), confirmed that both approaches are necessary.

Annexes:

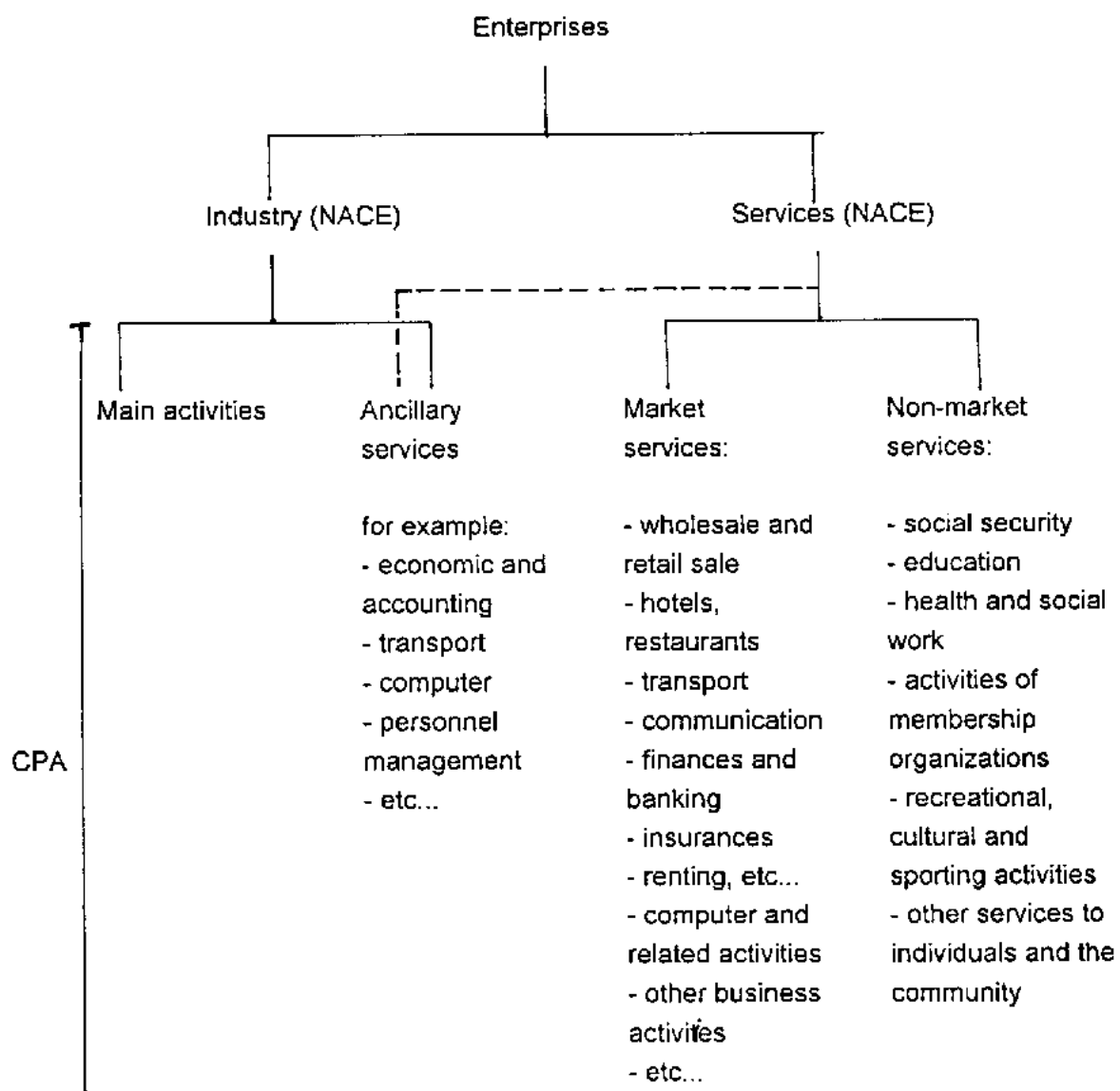
- Annexe 1 is a general description on the current situation and the possibilities to reduce the workload due to the collection of statistical information. This paper has already be discussed in a SERT working party in Luxembourg the 8th of June 1993. The discussion confirmed that the three configurations given on page 9 of annexe 1 will in practice often coexist.
- Annexe 2 gives a general overview on the organization of the EDI process in the frame of the UN/ECE structure, a more detailed picture on the message development group on statistics (MDG), and a description on the EDI declarative mechanisms.

Conclusion

The objective of this paper was to explore the services aspects on this SERT projects and to open the discussion on it, in view to take into account the needs of a maximum of users.

The next SERT meeting, organized by Eurostat, will take place in December 1993, and therefore it would be useful to receive any comments or contribution on the services aspects, before mi-October 1993. The reactions should be send to Mr. Lancetti (unit D4: distributive trade, services and transport).

<p>S.E.R.T.</p> <p>Statistiques d'entreprises et réseaux télématiques</p> <p>Business Statistics and Telematic Networks</p>
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*The SERT Project*

*To reduce the Workload of Companies and Government Offices  
with Regard to mandatory Declarations*

*(Financial, Accounting, Customs, Economic,  
Social and Statistical Data)*

## **THE SERT PROJECT**

### **TO REDUCE THE WORKLOAD OF COMPANIES AND GOVERNMENT OFFICES WITH REGARD TO MANDATORY DECLARATIONS (FINANCIAL, ACCOUNTING, CUSTOMS, ECONOMIC, SOCIAL AND STATISTICAL DATA)**

1. The majority of European companies, whether small or large, have installed more or less integrated information technology systems (or have access to these through their intermediaries such as chartered accountants), whose purpose is to process and store a large quantity of data, which they either generate or process, and whose optimum management has become the key to better performance and enhanced competitiveness.
2. Companies are also required to submit mandatory declarations for tax, statistical, social and other purposes. These data are sent by the companies (or their intermediaries) to the relevant government departments. Often, the same (or very similar) data is sent to a number of different offices, without any coherence whatsoever.
3. While this data interchange represents a heavy burden for the companies (and proportionally more so for small and medium-sized firms), it also involves a great extent of downstream work, in terms of processing, queries and return, for the government offices receiving the data.
4. The need for information is growing, and the companies' ability to respond to this need is not progressing at the same rate.
5. It is therefore necessary to employ IT and communication to collect and distribute these data, all the more so as companies tend to resort more and more to electronic data interchange (EDI), both among themselves and with their business partners (banks, etc.).
6. Statistical questionnaires are in a sense a prime example of the declaration process. The need for these questionnaires is, incidentally, not always recognized by company managers. Eurostat has therefore undertaken to launch a number of large-scale projects intended to improve the collection, processing (in particular, comparisons and aggregates) and the distribution of company/business data, while at the same time lightening the workload of the companies and the national institutes of statistics. The main projects are:
  - DSIS, statistical data system issued to the executive bodies in the EC statistical community;
  - Participation in programmes of international standardization within the scope of EDIFACT, a package of standardization systems for messages exchanged between partners;
  - INTRASTAT, a management system replacing the single administrative document for intra-community exchanges, including the sub-project Comedi (Commerce extérieur/EDI = Foreign Trade/EDI).;
  - and, lastly, SERT (statistique d'entreprises et réseaux télématiques = company statistics and communication) which aims at progressively implementing bi-directional information exchanges between companies and national institutes of statistics based on automatic data management performed by the companies (or their intermediaries) for their own requirements.



7. The ultimate objective of SERT is the automation of data collection and the return of enhanced data to the companies, particularly for the purpose of comparison. It will be achieved by electronic questionnaires to be completed in a quasi-automatic manner by the companies or by translation of their internal files into the format required for transmission. Standardization therefore plays a key role, not only between the companies and government offices, but also between the different administrations within the Community. The task of achieving the transition from company-specific nomenclatures to collective nomenclatures is obviously an equally vital aspect of the project. Over and above this, the project can explore the possibilities of reducing the number of questionnaires, harmonizing the concepts used, simplifying the circuits and the return of questionnaires.

8. However, the situation in Community countries and those of EFTA involved in the project, differs in a number of points:

- level of development of telecommunications infrastructures, standards used, existing exchange carriers,
- distribution of companies according to size,
- degree of computerization in the companies,
- role of the companies' intermediaries and natural business partners,
- level of automation within the national institutes of statistics as well as data processing methods,
- relative importance of economic sectors,
- legislation.

9. The SERT project will therefore have to be implemented progressively, taking into account the scenario within each country and sector of the economy for each statistical survey. Experiments are already under way in a great many countries, and the conclusions to be drawn from them will help to define step for step the ways and means of implementing the project. Eurostat hopes to embark on other operations towards the same end.

10. In practice, the SERT project covers the successive implementation of three technical and organisational "configurations" permitting the exchange of data between the national institutes of statistics (i.e. government offices/INS) and business enterprises. Starting with the present configuration (exchange of printed material), we move on to an intermediate configuration (distribution of data entry/print software to companies), before arriving at the target configuration (collection of statistical data by EDI).

11. These three configurations could very well exist alongside one other, either within a country, within an economic sector, within a stratum of companies, or even within one company for the different questionnaires it is called on to respond to. Moreover, for certain non-recurring types of data exchange, the target configuration will never be reached, and printed material will have to suffice. The triple-configuration concept is designed to cover all eventualities.

The three configurations are described in the attached appendix.

12. Since the three configurations may co-exist within one country and one statistical project, they must be compatible with one another in ascending order, enabling smooth implementation of each statistical program.

13. Besides the technical problems posed by the splitting into three configurations, questions have been raised - which in some cases have not yet been properly formulated - regarding organisational problems: the relationship of surveys to one another (heterogeneity of concepts, duplication of the data collected, etc.), the relationship between data collected by the INS and other administrations, legal aspects, data nomenclatures, compliance with Edifact standards, etc. SERT will have to supply answers to these questions.

## **Appendix - Statistical data collection methods**

### **Configuration 0: common current procedures**

#### **Principle**

The INS approaches the companies by mailing them a printed form which they are legally obliged to complete and return. In return, the INS undertakes to maintain secrecy on all statistical data thus supplied.

#### **Data carrier used**

Printed material, questionnaire-type form, usually accompanied by explanatory notes.

#### **Role of the company**

The company searches its internal business administration systems for the necessary data to answer the questions. This information is usually selected by a company manager (or an external consultant) and entered in the form by a secretary.

#### **Role of the SSI and software suppliers**

Software suppliers offer solutions for the automatic retrieval of the necessary data for statistical questionnaires, either for direct entry of the responses on the pre-printed form or for editing of facsimile forms.

#### **Role of the intermediaries**

A number of professional/trade associations (or institutes) act as intermediaries for the INS in the administration of data collection procedures with a view to increasing the rate and the quality of responses. Auditors/chartered accountants assist small and medium-sized companies to formulate their responses.

#### **Role of the communications operators**

The postal services are the main communications operators. Newspapers and the media in general can help to inform companies of the launching of certain aperiodic collection procedures.

#### **Role of the INS**

The INS draws up the survey procedures, defines nomenclatures and survey forms, has the questionnaires printed and distributed, sends reminders or has reminders sent to the companies, receives the returned questionnaires, enters the data of these responses in information systems, checks and if necessary corrects the responses, processes and consolidates the data and supplies a synthesis and analysis of the responses.

#### **Role of Eurostat**

Eurostat draws up a Community programme of surveys, geared towards the INS, collects in turn the aggregated data and publishes comparative European statistical tables.

#### **Publication of survey results**

Survey results are then published in the form of numerical tables, graphics and global analyses, distributed or marketed as leaflets. These publications are usually sold.

In certain cases, particularly with data collection through professional/trade associations, a personalised copy may be sent to the company, allowing it to assess its position within a subgroup representative of its size, its field of activity and/or its location in relation to an average as well as upper and lower limits.

## **Configuration 1: the supply of intermediate tools**

### **Principle**

The INS distributes software to the companies as an aid in formulating their responses to the survey questionnaires. This software includes a controlled data entry module and a print module.

### **Data carrier used**

The software is supplied free of charge to the company in the form of a PC program. The result of the survey is output as a PC file, if necessary coded.

### **Role of the company**

The company enters its responses on the survey questionnaire using the menu-driven software. Checks on response coherence, including coherence with data supplied during the preceding period, ensure a better quality of company responses and data entry. A print module enables the company to archive a legible document of the output data it has communicated.

### **Role of the SSII and software suppliers**

The SSII can help the INS in the design and distribution of such survey software. The suppliers of software can include paper printouts in their output options to allow grouping of the data to be supplied according to the architecture of the statistical survey software.

### **Role of the intermediaries**

Professional/trade associations, auditors/chartered accountants and other intermediaries may assist the INS in the distribution of statistical survey software and in the collection and consolidation of the diskettes of files supplied by the companies.

### **Role of the communications operators**

The postal services are the communications operators for the mailing of diskettes. However, it is conceivable to use a telecommunications carrier as early as this stage to transmit the files supplied by the various companies.

**Role of the INS**

The INS designs, develops and distributes the PC software, or has it designed, developed and distributed. It must be in a position to receive or arrange receipt of the files on diskettes.

**Role of Eurostat**

Eurostat finalises normalised software (or at least core software common to all Member States), with a view to imposing a minimum standard of quality; as the umbrella organisation for this project, it takes charge of the definition of common objectives and the co-ordination within international standards organisations.

**Publication of survey results**

The company's responses may be returned to it on diskette (possibly, but no later than, by the next survey), showing its position with relation to the average and upper and lower limits for a representative subgroup.

Global survey results can be published (sold) as printed material or on digital carriers.

## **Configuration 2: the target procedure (EDI)**

### **Principle**

The collection of statistical data is a standardised EDI procedure based on the companies' use of an EDI station.

### **Data carrier used**

The statistical data is supplied by an exchange of files structured according to normalised messages.

Nomenclatures can be developed and communicated to the companies following the same principle.

### **Role of the company**

The company compiles or arranges for compilation an interpreter to convert the internal format of its data to the normalised format of statistical data and custom-makes message segments complying with Edifact/Eurostat standards.

The company uses an EDI station to communicate these files to the INS or to an intermediary. This EDI station checks the quality of the data before transmission, may (if required) provide a printout on paper, and ensures the management of exchanges (receipt notes, e.g.).

### **Role of the SSII and software suppliers**

The SSII create automatic data translators (EDI translators). The software editors offer files with outputs complying with Edifact standards.

### **Role of the intermediaries**

Professional/trade associations, auditors/chartered accountants and other intermediaries offer the companies communications services, possibly including automatic coding, translation and control functions. In certain cases, these intermediaries integrate the communication service (value added network) using a packet of exchange management programs (one or more).

### **Role of the communications operators**

The operators offer communication services complying with international standards (X25, X400). In certain cases, these operators can also offer additional services such as translation and checking of data.

### **Role of the INS (and of Eurostat in the iron and steel sector)**

The INS distributes normalised Edifact messages relating to the various surveys. It informs and reminds the companies of survey methods using a message service, possibly involving fax printouts.

The INS receives or arranges for receipt and consolidates or arranges for consolidation of the files transmitted by the companies. It also takes charge of the synthesis and analysis of data.

#### **Role of Eurostat**

Eurostat manages the complex architecture in which the different configurations co-exist, the integration of type No. 2 configurations into statistical programs (harmonisation of concepts, suppression of duplicates) and the integration of SERT and DSIS.

#### **Publication of survey results**

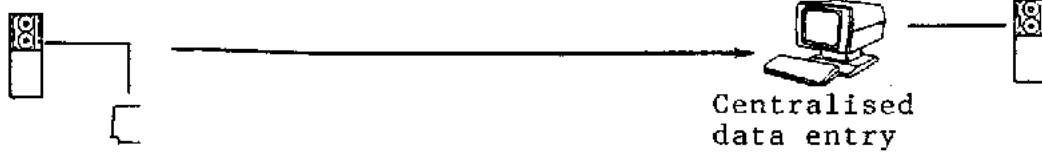
Survey results can be returned to the companies in personalised form (file returned by the same method as used in collection), or made generally available by access to a data bank server, or by distribution of data bases on CDs. These types of distribution are subject to a fee.

COMPANY

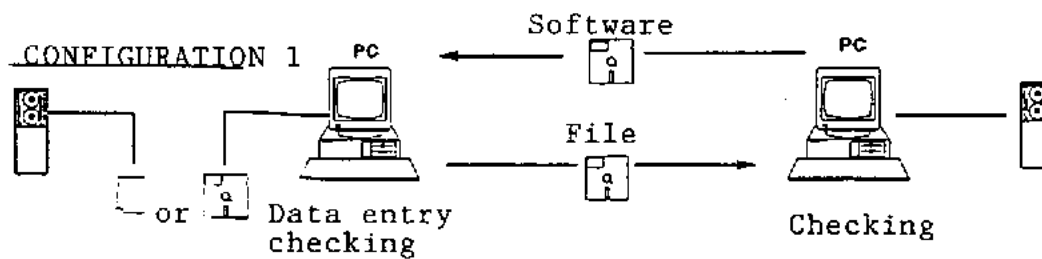
NATIONAL STATISTICAL INSTITUTS

Relay (if they exist in  
the 3 Configurations)

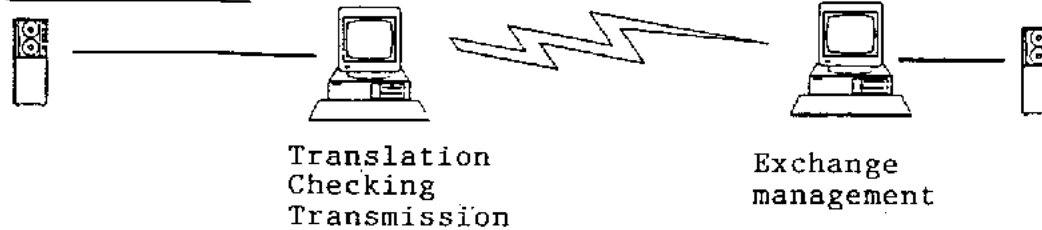
CONFIGURATION 0



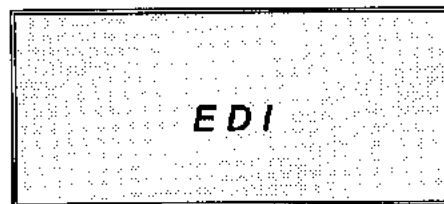
CONFIGURATION 1

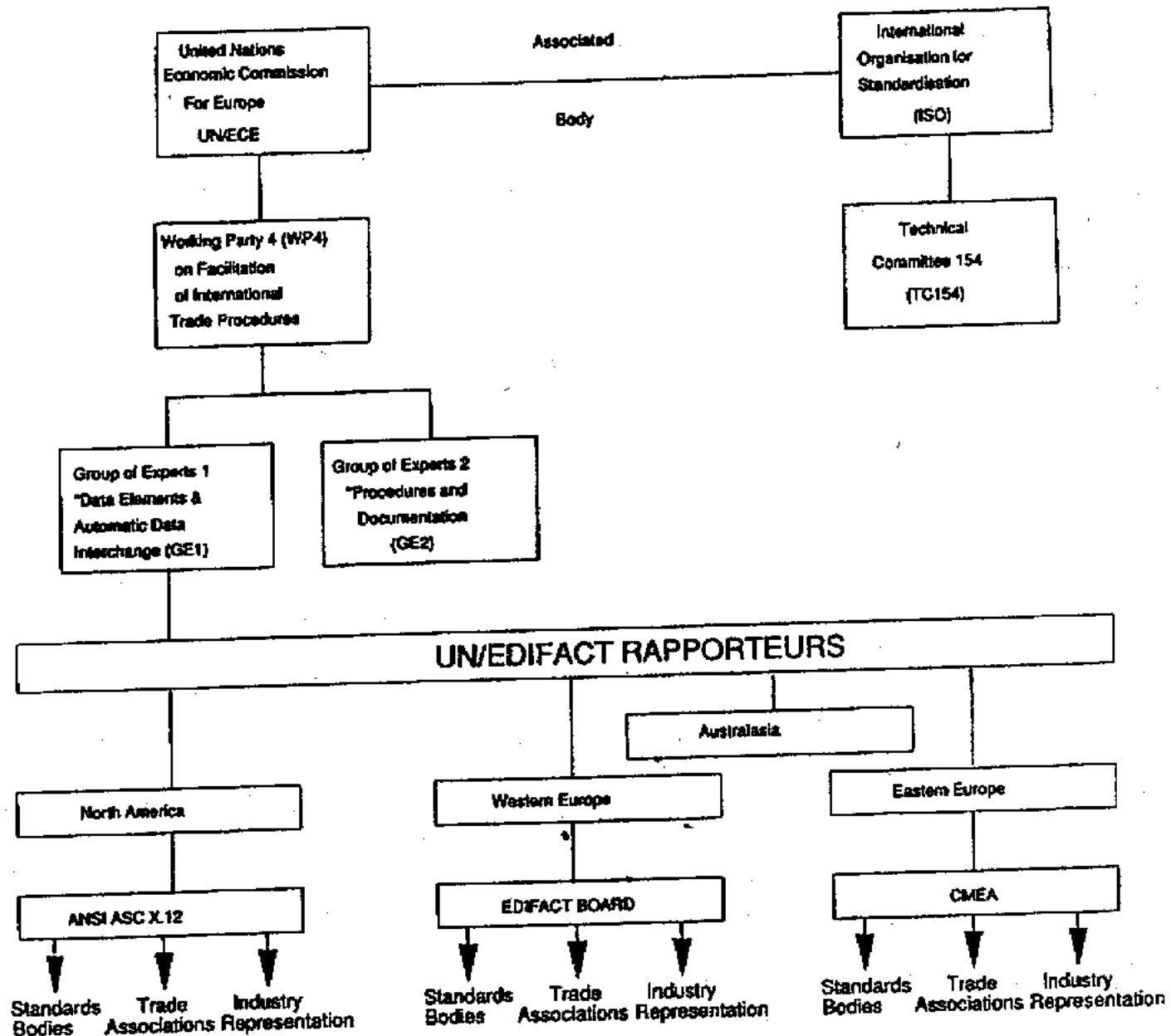


CONFIGURATION 2 EDI station



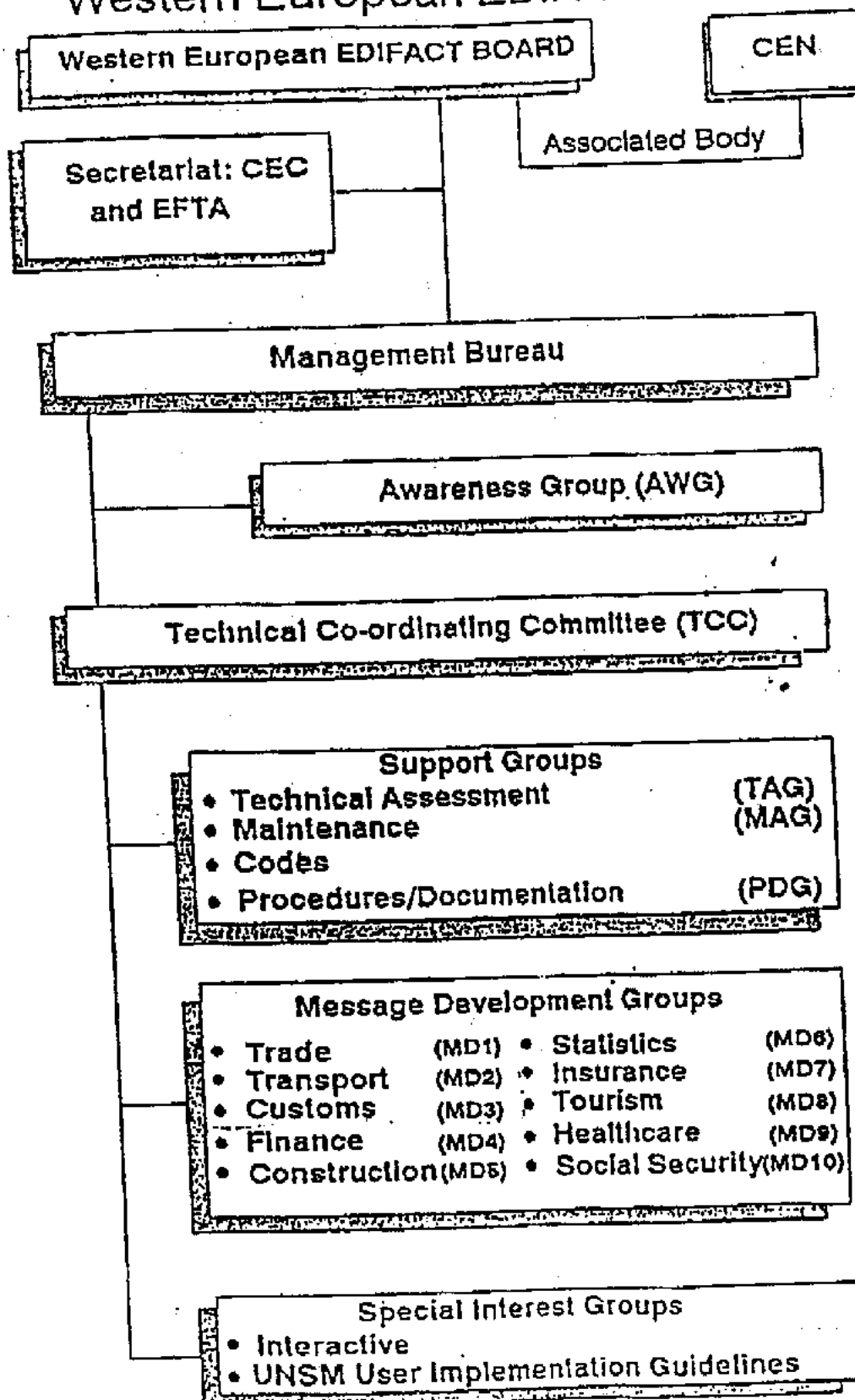






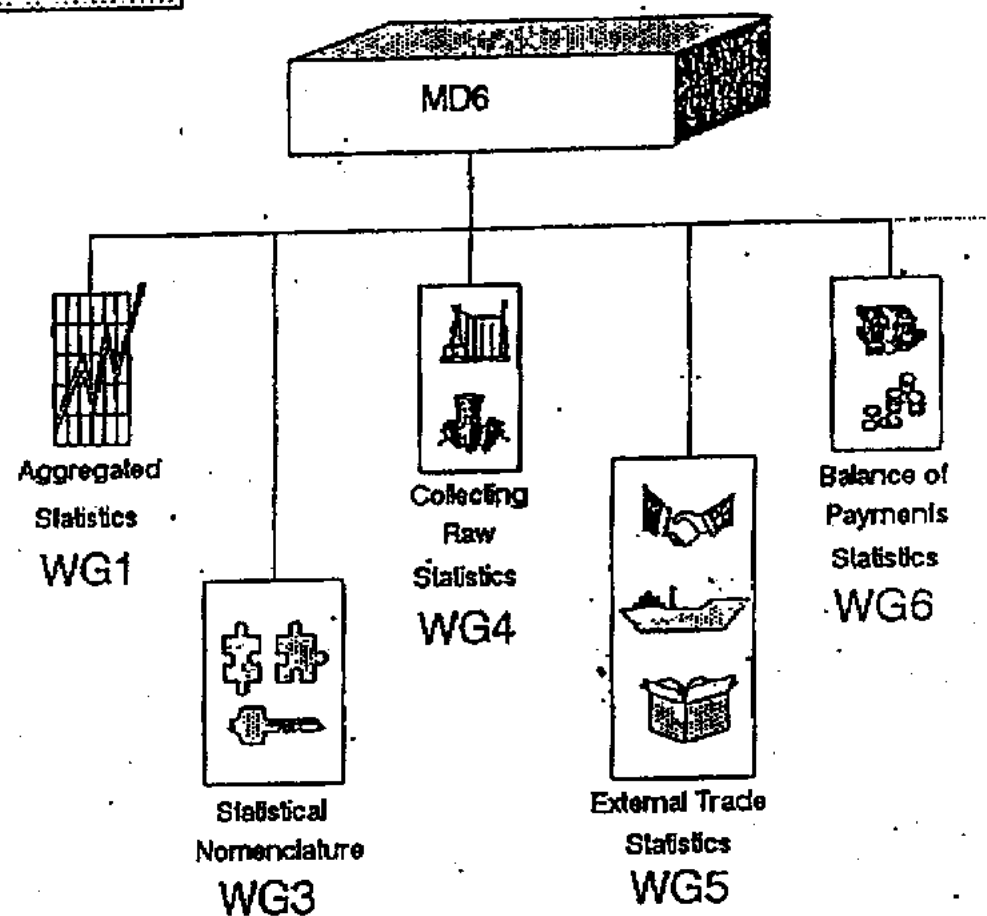
UN/ECE STRUCTURE

# Western European EDIFACT Board



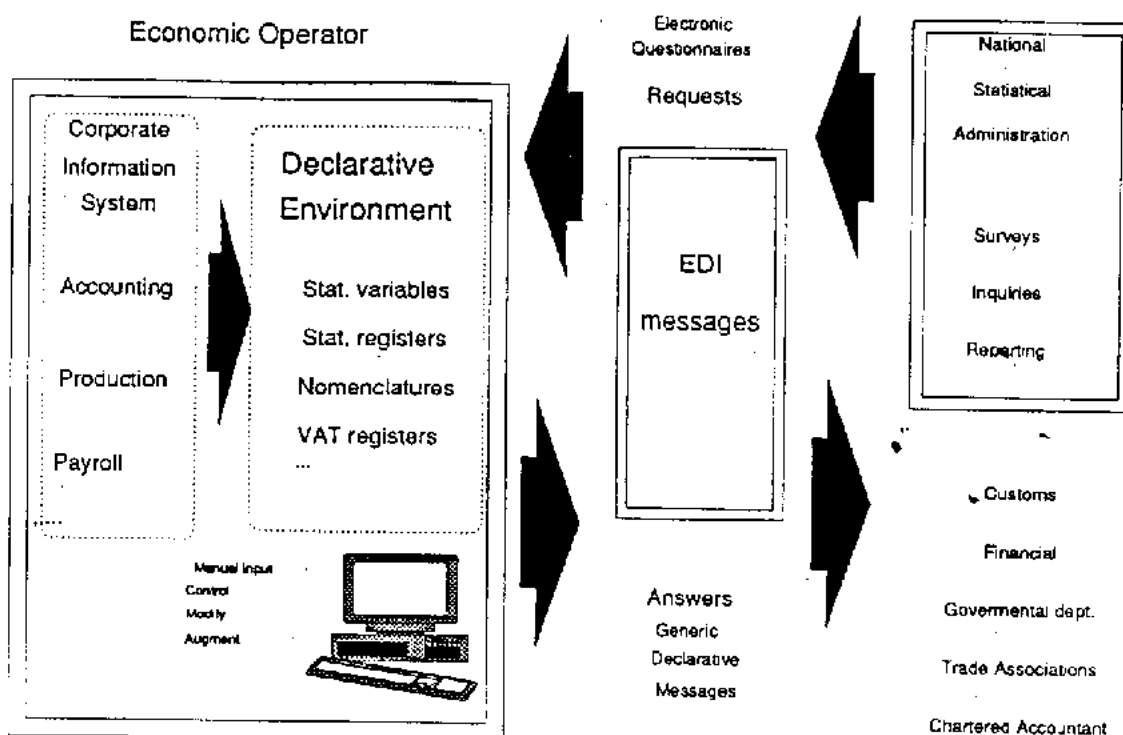


# Western European EDIFACT Board



Message Development Group 6 - Statistics

## EDI Declarative mechanisms



## EDI Declarative mechanisms