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ANNUAL REPORT BY THE COMMISSION
TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the setting up of the CADDIA computerized
telecommunications systems and the implementation
of the long-term development programme

For the period 26 March 1985 to 30 June 1986

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ANNUAL REPORT ON THE CADDIA PROGRAMMESUMMARY

On 26 March 1985, after lengthy preliminary studies, the Council decided to set up the CADDIA Steering Committee, thus giving the go-ahead for the implementation of this ambitious and complex programme.

It is ambitious because it aims to coordinate the CADDIA computerized telecommunications programmes of the Member States and the Commission, which are not necessarily mutually compatible for the moment; it is complex because it addresses sectors which are different (customs, agriculture and statistics) despite having a common basis and close links owing to the overlap and interdependence of the information they cover.

This report presents the various CADDIA activities from 26 March 1985 until 30 June 1986 as provided for by Article 4 of the Council Decision. It covers more than twelve months because of certain initial practical difficulties which delayed the first meeting of the Steering Committee until mid-October 1985.

A second meeting was held in February 1986. At the meeting, the Steering Committee took note of the work in progress. It observed the difficulties involved in electronic document transmission, owing both to a lack of compatibility of the infrastructures and to the lack of agreement on data interchange standards. The Committee was informed of the work undertaken by the Commission and the work in progress between the United Nations Economic Commission for Europe and the United States, with the active participation of the Commission with a view to the adoption of a common worldwide electronic data interchange standard.

The CD project (customs sector), which covers the various elements of the work programme in the customs sector, is intended to establish a framework for the coordinated development of computerized customs procedures. The work programme covers essentially intra-Community trade, trade with non-Community countries, certain of the Commission's internal systems, and trader interfaces. The elimination of internal border controls requires a certain amount of reorientation of the work on the intra-Community trade subproject, to support the simplification proposals put forward. The work on TARIC and its interface system with the Member States has continued, as has that on the computer-related aspects of the implementation of the Single Administrative Document, standards and the pilot projects.

The Steering Committee was informed of the progress of CADDIA work in the agriculture sector. In 1985 the main thrust of development related to the computerization of the management procedures in the various market divisions: these are internal developments in the Commission concerning import/export licences, monitoring of prices on the internal market, and information on intervention stocks and supply balances of various kinds notified by Member States. In 1986, in addition to the continuation of work in progress (notably extension to include the two new Member States), the Commission has undertaken the analysis and development of an interactive data-acquisition system which is gradually to supplement telex communication with the Member States. Furthermore, in the context of work related to the EAGGF, a series of analyses are in progress which should result in the coming months in the effective computerization of the EAGGF procedures, thus supplementing the internal computerization of the Directorate-General for Agriculture.

The statistical sector has continued setting up databases for the processing and dissemination of external and agricultural trade statistics, and its work on the transmission of statistics, easy direct access by users to the databases, and standardization of trade statistics.

Various pilot experiments with the Member States are about to start; these concern the exchange of information between the United Kingdom customs services and the Commission (DG XXI and the Statistical Office (SOEC)) and the installation of terminals for entry of agricultural data that Member States currently transmit by telex (IDES project). Preparations are under way to set up an experimental fraud-control network.

Finally, it should be noted that a CADDIA central team has been set up to coordinate and administer all the CADDIA projects. This team has been particularly active in the priority area of standardization of electronic data interchange where it has made a significant contribution to the drafting of the international standard by the United Nations Economic Commission for Europe (UN/ECE-WP4). It has also given support to the pilot remote transmission projects which will begin before the end of the year in all CADDIA sectors.

In conclusion, the CADDIA Steering Committee has initiated the first steps of a work programme that runs until 1993, covering sectoral activities and a number of joint projects. As provided for in the Council Decision, this agreement is associated with the examination of the technical progress reports for the whole programme: the Steering Committee will be kept informed at all times of the progress of the work, mainly by reports drawn up at sectoral level.

The implications of the white paper on the completion of the internal market, currently under study, have not prevented the implementation of most of the short-term proposals. They will nevertheless be discussed at a later date by the Steering Committee.

It is important to stress that, since the programme was drawn up jointly by the Member States and the Commission, the coordination of the CADDIA project has a good chance of success. It is therefore essential that the Council Decision setting the initial duration of the Steering Committee's mandate at two years should be extended so as to allow it to implement the work programme.

1. INTRODUCTION

- 1.1 The CADDIA¹ programme and its activities arise out of the Council Decision of 26 March 1985 concerning the coordination of the activities of the Member States and the Commission on the execution of a long-term programme on the use of computerized telecommunications in Community information systems on imports and exports and on the management and financial control of the agricultural market organizations.
- 1.2 The CADDIA long-term development programme was drawn up, updated and approved by the CADDIA Steering Committee, set up by the above-mentioned Council Decision.
- 1.3 This report, also provided for in Article 4 of the above-mentioned Decision, describes the various activities and applications which are operational, under development or planned up to 1993, and covers the Steering Committee's first year of work.
- 1.4 Since the Council Decision is valid for an initial period of two years (Article 5), the Commission intends to ask the Council in the coming months to extend the duration of the Steering Committee's mandate so as to allow it to carry out the work programme jointly drafted by the Member States and the Commission.

¹ Cooperation in Automation of Data and Documentation for Imports/exports and Agriculture

2. BACKGROUND

- 2.1 Council Decision 82/607/EEC of 28 July 1982 (OJ No L 247, 23.8.82, p. 25) provides for Member States to coordinate with the Commission a series of preparatory activities with a view to analysing needs, feasibility, costs and benefits of a concerted ten-year programme for the use of computerized telecommunications systems in the areas covered by CADDIA.
- 2.2 A report and proposals were presented to the Council and the European Parliament by a preliminary task force (PTF) composed of representatives of the Member States and the Commission.
- 2.3 The conclusions and recommendations of the PTF, drawn up late in 1983, served as a basis for the preparation of the communication from the Commission to the Council of 13 March 1984 (COM(84)119 final) and the proposal for a Council Decision (in the same document).
- 2.4 On 26 March 1985 the Council decided to start CADDIA coordination work for an initial period of two years (OJ No L 96, 3.4.85, p. 35 - see Annex 1).
- 2.5 Provision is made in particular for the Commission to report annually to the European Parliament and the Council on the introduction of CADDIA computerized telecommunications systems and the implementation of the long-term development programme. This report, which covers the first fifteen months' activity of the CADDIA Steering Committee, complies with that obligation.

3. GENERAL REPORT ON THE CADDIA PROGRAMME

3.1 Preparation of the work programme

From its first meeting, held on 14 and 15 October 1985, the CADDIA Steering Committee has endeavoured to prepare a work programme complying with the objectives set out in the Council Decision (CSC document 86/001 - see Annex 2).

This work programme, drawn up by mutual agreement between the Member States and the Commission, and adopted by the CADDIA Steering Committee on 18 February, is based on a work plan proposed by the Commission, the general concepts and objectives of which Member States accepted at the first meeting.

The technical details were examined in the sectoral groups, offshoots of the Steering Committee for each sector concerned (agriculture, customs and statistics). The Steering Committee was thus able to take the programme decisions on the basis of recommendations from the sectoral groups, each national delegation expressing the coordinated views of all its own sectors.

The review of the Member States' systems and plans, as provided for in Article 3(b) of the Council Decision, must be undertaken as soon as the implications of the achievement of the internal market have been more clearly established. There are plans to present the results of the review in the next CADDIA annual report.

The Commission's white paper on the completion of the internal market, and the adoption of the principles it contains by the European Council, sheds new light on CADDIA activities, notably the CD project, concerning the automation of procedures. The planned elimination of border controls has important implications for current and future work. The CADDIA Steering Committee will be consulted on these problems.

Since the Steering Committee has adopted the work programme describing the sectoral and joint work to be carried out up to 1993, this work will be carried out in successive stages, each culminating in the drafting of a technical report for submission to the Steering Committee which will have to give its agreement for the next stage to be undertaken.

3.2 Overview of the programme

The Commission's information systems have been expanded and improved in preparation for receiving data transmissions from Member States. The first pilot projects will begin before the end of the year.

The standardization of electronic data transfer took a great leap forward in 1986 and paved the way for the setting up of the CADDIA computerized telecommunications applications, in step with the industry and trade sectors.

3.2.1 Customs sector

The priority objective of the CD project is to develop computerized customs procedures and coordinate their integration in national and Community computer systems within a reasonable period. The following principal activities were implemented in 1985 under this project:

- development of the database for the Integrated Customs Tariff of the European Communities (TARIC),
- preparation of the specifications for the interface between the Commission's TARIC system and Member States' tariff systems,
- definitions of data elements for the single administrative document,
- examination of the constraints of the subsystem for intra-Community trade and the preliminary design work of the SAD messages,
- preparation of a method for analysing users' needs,
- evaluation of projects for data interchange and installation of conversion and transfer software in the CUS computer,
- preliminary studies on the trader interfaces and the transaction/regime codes.

In 1986, the CD project will consist of activities finalizing the work undertaken in 1985, studies of users' needs in various areas and the launching of projects for data interchange with the Member States. They will include

- completion of the loading of the TARIC database,
- finalizing of the TARIC interface specifications,
- specification of the constraints of the intra-Community subsystem related to the SAD and simplified procedures,
- participation in the development work of the standards relating to the structuring of messages based on UNTDI recommendations,
- agreements and start-up of projects for data interchange between the Commission and the Member States,
- continuation of the study of needs as regards codes for transactions/regimes,
- preparatory work regarding users' needs in the context of the imports subsystem,
- promotion of studies on legal problems,
- definition of trader interfaces.

3.2.2 Agriculture sector

The day-to-day management of the Common Agricultural Policy involves the regular urgent transmission of data and a great deal of processing.

DG VI has therefore given a high priority to the computerization of processing, especially for the nine market divisions whose day-to-day management accounts for some 60% of EEC budget expenditure.

A database (AMIS) containing all data on the agricultural markets has been developed and is in operation. The aim of this database is to provide a set of information and automated processes to lighten the day-to-day burden of data entry, rationalizing the management of the various areas of a common market organization, and speeding up the circulation of information. At present the data are transmitted mainly by telex and then re-entered locally. An interactive data-entry system for the various correspondents in the Member States is to be set up (IDES project). The data computed by AMIS are published in the recurrent acts of the Official Journal of the European Communities and currently telexed to the relevant departments in the Member States (agriculture and customs) (APACO). This information and other calculated data concerning the CAP will soon be available for interactive retrieval (FIS project).

A number of applications will be linked to the AMIS database as an essential set of management tools in various areas:

- forecasting and preparation of the EAGGF budget (FBF project),
- monitoring of routine expenditure sector by sector and forecasting of annual expenditure on the basis of seasonal trends (AGREX project),
- study of a system designed to improve financial management in the EAGGF Guarantee Section (AGEFT project),
- clearance of accounts (advances-expenditure) for the EAGGF (FAUDIT project),
- adaptation of the EAGGF Guidance Section payments to take account of legislative and technological changes (FEOPAY project),
- setting up of a database on dossiers applying for aid from the EAGGF Guidance Section (FEORI project),
- collection and dissemination of data on agricultural incomes using computerized telecommunications facilities (RICA project),
- rapid dissemination to Member States of information on health inspections on imported carcasses at customs posts (SHIFT).

The management of the AMIS database has also necessitated the development of selection and editing utilities and procedures (DOCED) and the use of various hardware resources (HARD).

Finally, training of users in the market divisions has been set up using a team of training staff and by the preparation of manuals.

3.2.3 Statistical sector

In the statistical sector EUFOSTAT has launched a number of projects aimed at stepping up, improving or supplementing its own information processing needs relating to agriculture and external trade, with the prospect of future data transmission links with its partners in the Member States. For example, the external-trade databases have been provided with interfaces to allow integrated access to these various bases and harmonized data processing.

A keyword retrieval system is also being implemented that will help outside users interrogate the bases.

Similarly, a collection centre project for the rationalization of the collection of statistics opens the way for remote data transmission. At the same time

pilot remote transmission projects for external-trade correction data are being set up and should be launched by the end of the year. The standardization of statistical data transmission is also under study with a view to applying the relevant international standards to these data.

For agricultural statistics the main projects relate to the setting up of a database on the structure of agricultural holdings (EUROFARM) in liaison with national statistics institutes. An agricultural price model will be incorporated into EUROSTAT and a harvest forecasting model is under study. Finally, the RESEAU project for the setting up of a European network to monitor the agricultural and urban environments should be launched in the second half of the year.

3.2.4 CADDIA Central Team

As proposed in the Preliminary Task Force report, the CADDIA Central Team needed to coordinate the various activities at Community level has been set up in DG XIII. This team has undertaken work common to all the sectors concerning the development of data interchange standards in the context of the UN/ECE programme to facilitate trade.

The team gave logistical support to the international negotiations that took place in the first half of the year and set up an information system (CANDY) to improve the consistency of messages developed in Europe. This system is not specific to CADDIA and will also allow CADDIA messages to be defined in step with the messages prepared in the private sectors of the economy. It is also the basis for a global data dictionary for all CADDIA applications around which the functional specifications of CADDIA applications must be grouped.

The CADDIA Central Team has also lent assistance to the pilot remote transmission projects which should be launched by the end of the year; the testing and validation of the equipment and systems adopted will allow harmonized solutions to be proposed that are standardized as far as possible.

4. ORGANIZATION AND RESOURCES

4.1 Internal organization

4.1.1 Internal coordination

The CADDIA programme is implemented at the Commission by four departments:

- DG XXI Directorate for tariff questions, for the CD project;
- DG VI Directorate for general matters, for the agricultural projects;
- SOEC Directorate for the processing and dissemination of statistical information, for the statistical projects;
- DG XIII Directorate for telecommunications, for the joint projects and technical coordination and administration of projects;

In order to ensure effective coordination between the various Commission departments taking part in CADDIA, the former Internal Steering Group (ISG) has been remodelled and renamed CPIG (CADDIA Policy Interservice Group). It is composed of the Director for Telecommunications of DG XIII, the chairman, the Director for External Tariff Questions of DG XXI, the Director for Informatics of DG IX, the Director for General Matters of DG VI and the Director for the Processing and Dissemination of Statistical Information of the SOEC.

In accordance with the recommendations of the preliminary task force, in 1985 the Commission began to build up the CADDIA Central Team in DG XIII, which is now composed of the head of the Central Team and three permanent staff. In addition to them, three specialists have been attached to the Central Team for a limited period as experts.

4.1.2 Human resources

The present dearth of posts for officials at the Commission has obliged it to turn to private-sector contractors to carry out all the CADDIA work. As a guide, the breakdown of resources was as follows in 1985:

	<u>Customs</u>	<u>Agriculture</u>	<u>Statistics</u>	<u>Central team</u>
officials	2	3	4	3
external staff	8 ¹	30	9	5

Most of this staff is needed only during the time required to develop specific applications and will not be kept at the Commission once the applications are operational. However, in order to coordinate the sectoral activities set out in the CADDIA work programme, it would be desirable to be able to recruit stable highly qualified staff to ensure continuity of the work up to 1993. In practice, the normal way of satisfying these needs would be for the Commission to have temporary posts allocated so as to be able to engage the services of the necessary specialists at a much lower cost than private-sector contractors.

4.2 Expenditure

4.2.1 The expenditure committed during 1985 and planned for 1986 is set out in the table below. It is financed from the existing budget item 7704.

Sector	1985		1986	
	1 000 ECU	%	1 000 ECU	%
Customs	840	24	1 023	20
Agriculture	945	27	1 366	27
Statistics	765	22	1 360	27
Joint projects	800	23	1 104	22
Management expenses	140	4	202	4
TOTAL	3 490	100	5 055²	100

¹ includes four seconded national officials.

² the budget allocated to the CADDIA programme for 1986 is less than the expenditure anticipated above, but the Commission is looking for ways of increasing the 1986 budget up to this level in order to carry out the work programme within a reasonable timescale.

The increase results from the speeding up of CADDIA work, following the approval by the Steering Committee of the work programme in February 1986.

This expenditure can be broken down into the following basic items for 1986:

Remuneration of experts	81%
Administrative backup for experts	8%
Management expenditure (costs of meetings and administration of contracts)	4%
Purchase/leasing of computer equipment	7%
Cost of using data transmission networks	p.m.

4.2.2 Estimates of expenditure for future years are given below in millions of constant-value ECU. It should be stressed that the allocation of temporary posts to the CADDIA programme would reduce amounts requested by some 100 000 ECU per annum per post.

<u>1987</u>	<u>1988</u>	<u>1989</u>
3,75	4,5	4,5

5. OBJECTIVES FOR 1986-87

The objectives for 1986-87 are directly related to the projects described above and can be summarized as follows:

- 5.1 The clear and precise definition of all the procedures and associated transactions that will be used by CADDIA systems from 1992. This will allow functional specifications to be drawn up for these systems used by both the Commission and the Member States with a view to achieving the long-term objectives of the work programme.
- 5.2 A study on the definition of a data dictionary common to all CADDIA applications to harmonize the definitions of the codes, data elements and messages that will be used in these applications.

- 5.3 The operational launch of the first pilot remote transmission projects between the Commission and the Member States.
- 5.4 The establishment in close cooperation with the Community administrations, commerce and industry, of the facilities required for the common use of the standardized electronic data interchange procedures; the Commission also intends to launch an action programme to promote electronic data transfer.
- 5.5 It is nevertheless necessary to clearly establish needs for telecommunications services, taking account of the European scale of the CADDIA project and the lack of harmonization of existing national networks; the CADDIA work programme will also have to take account of future telecommunications systems so as to derive maximum advantage from future services that will be set up in Europe in this area.

Annex 1Detailed Sectoral Reports

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DETAILED SECTORAL REPORTS

1. Detailed programme of the customs sector (CD project)

1.1 Objectives and description

The Commission is assuming that the Member States will computerize or continue to computerize their customs procedures for their own reasons but that the CD project will give greater impetus to this process. Furthermore, 70 to 80% of the procedures to be computerized are governed by Community regulations. The main task of the Commission in the CD project will therefore be to coordinate the development of national computer systems with the Community system within a coherent programme, to see that Community requirements are properly met and to ensure that the work is completed within a reasonable timescale.

The Commission recognises that the geography, administrative structures and state of computer development vary substantially between Member States. The computerization of customs must therefore be approached with great flexibility. Nevertheless, the Commission considers that the use of simplified procedures should be extended in the context of computerization.

For intra-Community trade, however, an approach consistent with the Milan summit's objectives of creating a single market by 1992 must be adopted. In the shorter term, this implies the widest possible use of simplified procedures based upon the concepts already found in Community law. These procedures need to be standardized and computerized in such a way as to facilitate the work of both customs administration and traders, by making use of computer data interchange techniques. Clearly this work will have to be given top priority along with standardization work. In the longer term, computerized procedures, not involving controls at internal frontiers, will have to be developed for the purpose of VAT "clearing", excise control, the control of goods not in free circulation, and the collection of statistics on intra-Community trade.

The Commission also recognises that the Member States will inevitably move towards the CADDIA/CD objectives at different rates. This will have to be provided for in implementation plans.

Although the CD project has special characteristics that make it unique, it must as a whole be implemented in the same way as other major computerization projects. The CD project must therefore be undertaken in phases on the basis of work plans and precise target dates. The project phases will, however, be peculiar to it in view of its multinational nature, the work already carried out in this area in a number of Member States and the fact that each party to the project is responsible for the design, development and implementation of its own systems.

It should be stressed that the decisions will have to be taken at the end of each phase before the next is started. It may happen, however, that decisions will be taken to implement some functions and facilities before others. This implies that various elements of the system, such as the TARIC, may be at different phases at particular moments of the project.

The Commission considers that the main phases for these elements should be:

- Phase 1 - Preliminary studies

The Commission considers that phase one of the CD project was completed when the CADDIA Steering Committee accepted the Commission's CD computerization framework as a basis for further work. The CADDIA Steering Committee has agreed to the launching of phase 2.

- Phase 2 - Specifications

These should cover:

Computerized procedures to facilitate intra-Community trade in line with the objective of a single market by 1992.

Functions and facilities of the third-country trade subsystem, with details of their inputs, outputs and processing objectives.

Standards to be used for data interchange purposes.

Trader interfaces.

- Phase 3 - Evaluation and design

During this phase, data flows between the systems will be analysed and their volumes estimated. Using the "building blocks" specified in phase 2, an agreed design will then be prepared which will, in particular, provide for the necessary systems interconnections.

- Phase 4 - Implementation plans and costs

In this phase, implementation plans will be prepared and costed. The plans and costings will be prepared independently by each of the parties and then revised and adjusted, if necessary, as part of an integrated CD project plan.

- Phase 5 - Implementation and operation

During the final phase, the Commission and Member States will implement the functions and facilities in accordance with the plans agreed in the previous phase. The implementation phase is expected to extend over a number of years with certain Member States implementing and operating parts of the system before others have done so.

1.2 Status and medium-term prospects

1.2.1 Activities in 1985

Specification of the data elements in close cooperation with the SAD team and in liaison with the CCC, the Economic Commission for Europe, the CADDIA Central Team, ODETTE and the transport sector.

Examination of the constraints of the intra-Community trade subsystem, including the preliminary design work of the SAD "messages".

Preparation of a method for analysing users' needs.

Study and assessment of the TDI, TDED, MFTS and X.25.

Preparation of proposals for data interchange tests, including the installation of the "Interbridge" software and MFTS on the CUS computer and the preparation of files and tables.

Preliminary studies of the constraints on trader interfaces.

Preliminary studies of the constraints on the transaction/regime codes.

In addition to the tasks specifically mentioned above, the team has spent a great deal of time on other important activities : discussions on the planning of the project, participation in external meetings and preparation of meetings and information documents.

The work on TARIC has continued and at the time of this report 58 chapters have been entered into the data base. The remaining chapters are expected to be completed and loaded into the base by the end of 1986. Phase one of the development TARIC database system is complete (phase two will cover operational updating and the setting up of the interface). Multilingual keyboards are now fully operational as are the Commission's laser printing facilities.

Specification of the TARIC interface has continued within a working party of technical experts from the Member States.

1.2.2. Activities planned for 1986

In 1986, the CD project is expected to be based on the following priorities :

TARIC - completion of loading of the TARIC database

TARIC interface - completion of the design and agreement on the specifications with Member States. Specifications of the data to be added to the present database. Study of the organization and methods required to manage the TARIC and for the setting up of an updating service.

Intra-Community trade - specification of the constraints of the intra-Community subsystem related to the SAD and simplified procedures.

Standards - final editing of the syntax rules and the data elements directory based on the UN standards and publication in a Commission regulation. Final editing of codes and preparation of message structures for the intra-Community trade subsystem. (Work to be carried out in close cooperation with the SAD team, the CADDIA Central Team, the ECE in Geneva, the CCC and ODETTE).

Pilot projects - agreements and implementation of a certain number of data interchange projects aimed at testing and experimenting with the concepts that can be used in the longer term. These projects must cover data interchange between the Commission and Member States, between two Member States and between traders and the customs administration in a Member State.

Examination of needs as regards codes and transactions/regimes.

Start of preparatory work relating to the definition of users' needs for the functions and facilities to be included in the imports subsystem. This work should be undertaken on the basis of a list of priorities to be drawn up by the CD committee.

Promotion of studies of legal problems by CELIM. An important stage in these studies is the symposium held in Brussels by CELIM on 17 and 18 March 1986.

Conclusion of contracts with external consultants to prepare the proposals for trader interfaces and define monitoring requirements. Details of bids to be specified by the CD committee.

2. Detailed programme of the agricultural sector

2.1 AMIS

Purpose and description

AMIS (Agricultural Market Intelligence System) is an integrated computer system that is operational in the nine market divisions responsible for managing the common organizations of markets.

AMIS collects the data (see also 2.6: IDES) needed for the management of the Common Agricultural Policy:

- producer prices on the Community's internal market,
- offer prices on the world market for imported products,
- statistics on applications for or the issue of import and export licences,
- statistics on stock levels,
- consumption statistics,
- statistics on agricultural expenditure under various headings (intervention buying, aids, export refunds).

AMIS calculates the data used in the recurrent acts published in the Official Journal of the European Communities; these data are currently telexed to the Member State departments concerned (agriculture and customs) (see also 2.4: APACO and 2.3: FIS):

- institutional prices in ECU fixed by the Council and derived prices,
- threshold prices
- unit amounts of import levies and export refunds,
- unit amounts of Community aids.

In addition there are the data required for the management of the agrimonetary system:

- representative exchange rates or green exchange rates,
- exchange rates used for recording world market prices,
- monetary compensatory amounts.

Status and medium-term prospects

Most of the developments under AMIS are complete or soon will be. The utilities for managing the AMIS metatase should be added to the list, together with the general procedures for the selection and printing of data on various media produced under the DOCED application (see 2.7: DOCED).

The training team has trained AMIS users in the market divisions, written user manuals and entered data in the metabase with good results:

- about 650 input and processing protocols,
- about 750 printing protocols.

Work on the completion and consolidation of AMIS is continuing in 1986. Work is also being done to meet the natural increase in demands from the market divisions and to cope with all the agricultural implications of the enlargement of the Community from 1 March 1986. Particular mention should be made of the setting up of the STM (supplementary trade mechanism) in agriculture laid down in the Act of Accession for the monitoring of trade flows between the old and new Member States.

In 1987 it is also planned to prepare AMIS for conversion to the harmonized system nomenclature.

2.2 FBF

Purpose and description

The FBF (EAGGF budget forecasting) project is designed to provide the EAGGF division responsible for budget forecasting with a number of tools to automate the manual procedures for forecasting and preparing the EAGGF budget, which accounts for around 60% of the Community budget. In view of the current budget constraints, especially the restraint on agricultural spending, the division needs a system capable of monitoring expenditure trends during the year, forecasting budget requirements for the year ahead and providing facilities for rapid consultation and simulation during Council negotiations.

Status and medium-term prospects

In the course of a general survey of EAGGF requirements and an analysis of its data flows, a preliminary analysis of the FBF project was completed at the end of 1985. Internal Commission development should start in October 1986.

2.3 FIS

Purpose and description

FIS (fast information system) is a project designed to set up a computer infrastructure for horizontal utilization of the AMIS database and other databases useful for the management of the CAP so as to provide information that can be consulted on demand from a TTY terminal either by using a menu or by direct access.

FIS will be used to supply information to the Directorate-General in the form of regularly updated consolidated tables and to provide consolidated information or numerical annexes to recurrent acts concerning the fixing of levies, refunds, monetary compensatory amounts, countervailing charges and other elements of the CAP (see also 2.7: DOCED).

Status and medium-term prospects

FIS will be installed on the computer late in 1987 on the basis of functional specifications which are in preparation.

2.4 APACO

Purpose and description

APACO (recurrent agricultural acts and management committees) is a word-processing system operational in the division responsible for drawing up recurrent agricultural acts and sending them to the Secretariat-General of the Commission and the Publications Office of the European Communities.

APACO allows automatic preparation of the texts of acts in all the Community languages except Greek, through automatic updating of the variable elements from a lexicon.

APACO is a very important application in view of the large number of recurrent agricultural acts published daily in the Official Journal and it saves a great deal of time in the preparation of documents.

Using APACO the same division, which also provides secretarial services for all the management committees, can produce documents required for organizing meetings, summary records and statistical and budget documents.

Status and medium-term prospects

APACO is now operational. The following additions will be made in 1986-87:

- inclusion of Spanish and Portuguese,
- direct link between the word-processing hardware supporting the application and the AGREC telex service,
- merging of the numerical annexes calculated in the AMIS application with the texts produced by word processing.

In the medium term there are plans to send recurrent acts to the Publications Office via the public data network.

2.5 SHIFT

Purpose and description

SHIFT (System for Animal Health Inspection at Frontier Posts) is a project based on Directive 72/462/EEC, Articles 23 and 24 of which make Member States responsible for animal health inspection of imported fresh meat at customs posts. Inspection of a sample covers the following points:

- the public health certificate and conformity of the fresh meat with stipulations on that certificate,
- the state of preservation and the presence of dirt and pathogenic agents,
- the presence of residues,
- verification that slaughter has been carried out in establishments in non-member countries approved by the Commission for that purpose,
- verification of transport conditions.

Status and medium-term prospects

The study carried out in 1985 at the request of the Veterinary Committee concluded that computerization would be useful for coordinating the action to be taken as it would allow rapid dissemination of information between the Commission and the Member State departments involved (customs, public health).

It suggested that a feasibility study of the communication system to be set up be carried out.

2.6 IDES

Purpose and description

The IDES (interactive data entry system) project is designed to set up an interactive data entry system based on the use of TTY terminals complying with the X.28 communication protocol and packet-switched public data networks in the Community; this would gradually replace the telex messages sent by correspondents in the Member States containing numerical data for AMIS (see 2.1: AMIS).

Status and medium-term prospects

Implementation of the basic IDES functions specified by the systems analysis carried out in 1985 is in progress and will be completed late in 1986.

The training team will have considerable work to do in parameterizing the pilot files of IDES for each domain and each sector and establishing multilingual versions of the metabase (see 2.1: AMIS).

The setting-up in 1986 of an IDES working party consisting of Member State representatives for the various agricultural sectors and the project leader will be vital to the success of the project.

2.7 DOCED

Purpose and description

The DOCED project covers a number of infrastructure activities designed to provide horizontal tools for diversification of the products of the agricultural databases and integration and exploitation of the new potential inherent in the widening of the technological horizon and the use of new standards.

Status and medium-term prospects

For 1986 it is planned to implement the following functions or utilities:

- transfer of computer files to the word-processing system,
- transfer of AMIS files to the Multiplan spreadsheet,
- development of general MFTS procedures between computers,
- preparation of files for photosetting,
- preparation of tables for the annual report on the situation of agriculture in the Community,
- various work connected with accession.

For 1987 it is planned to carry out the adaptation work involved in the introduction of the harmonized system.

2.8 AGREX

Purpose and description

Community expenditure under the Guarantee Section of the EAGGF amounts to around 60% of the Community budget. At present monthly expenditure is calculated by computer but the program is limited to the processing of total monthly advances.

For the proper monitoring of expenditure, especially in view of the budget constraints, it is essential to remodel and extend the system so as to monitor the various sectors in greater detail. The system should also allow annual expenditure to be forecast from seasonal trends.

The system will also compare monthly forecasts supplied by the Member States with out-turn expenditure and will calculate a correction factor in the event of over-evaluation.

The system will also have links with the budget forecasting system (see 2.2: FBF).

Status and medium-term prospects

The systems analysis was completed in 1985.

Programming is under way and the system should be implemented during 1987.

2.9 FAUDIT

Purpose and description

The FAUDIT (EAGGF auditing system) project is designed to provide the EAGGF division responsible for accounts clearance with a number of tools for computer processing of the data supplied by the Member States. The system to be set up will also allow cross-referencing with the data contained in the AMIS and AGREX databases and in the external trade databases of the Statistical Office of the European Communities.

Status and medium-term prospects

As part of a general survey of EAGGF requirements and an analysis of data flows to the EAGGF, a preliminary study of the FAUDIT project was completed in 1986. Internal Commission development work will start by the end of 1986.

2.10 FEOPAY

Purpose and description

The FEOPAY project concerns the payment system for the Guidance Section of the EAGGF, which has to be reviewed and adapted to changes in regulations and developments in technology, with direct links with the Member States.

Status and medium-term prospects

A feasibility study will be started in 1987.

2.11 FEORI

Purpose and description

The FEORI (EAGGF Guidance Section) project concerns the establishment of a database for individual files of applications for aid from the Guidance Section of the EAGGF. The system will record the processing of the files from receipt of the application up to the final decision by the Commission. It will also provide statistics on applications for aid.

Status and medium-term prospects

Day-to-day management is operational as a word-processing application (FEOWANG).

The statistical side of the application will be analysed in 1987 (see 2.10: FEOPAY).

2.12 HARD

Purpose and description

HARD (hardware resources for development) concerns the installation of hardware resources, in particular terminals and printers, for project development teams. This hardware is supplied for the duration of the development project on an annual basis.

Status and medium-term prospects

Six terminals were supplied for one year in 1985. This lease has been extended for 1986.

2.13 RICA

Purpose and description

RICA (farm accountancy data network - FADN) is a system for monitoring trends in farm incomes on the basis of a formal ongoing survey conducted in the Member States on 40 000 farms. Data collection is organized in each Member State and the information reaches the Commission on magnetic tape and is then validated. It is intended to study the possibility of transferring the collected data via a network, and to improve the products of the system for greater ease of reading and examine ways of sending the results to the Member States by data communication facilities.

Status and medium-term prospects

RICA (FADN) is an operational system now being modernized. In particular the checking and validation system has been extended and improved.

The proposed extension will be submitted to the FADN Committee which will decide whether certain modules of the enlarged system should be installed in national centres and if so whether the presentation of results intended for Member States need be improved.

2.14 AGEFT

Purpose and description

Presentation of the pilot project for direct daily communication of data from the disbursing agencies to the EAGGF - Danish pilot project.

In order to support the agricultural markets DG VI/G/2 currently manages a monthly system of advances of funds worth nearly 24 000 million ECU direct to Member States.

This system ties up large amounts of capital and in order to obtain more accurate information more quickly and to achieve a better use of Community funds in a budget context that is becoming increasingly difficult every year, there are plans to improve the operation of the system.

In order to do this and to estimate in advance the difficulties of the undertaking, on 1 July the Commission decided to authorize the development of a pilot project for the daily communication of data between the Danish disbursing agencies and the EAGGF Guarantee Section.

The project will comprise three separate parts relating to both computer and organizational aspects:

- establishment of a computerized data communication link between the Member State and the EAGGF;
- study of the Commission's internal circuits, from the administrative and technical points of view, between the daily receipt of the request for an advance, checking by the various departments concerned and the payment order.
- return circuit to the disbursing agency and the banking system.

The EAGGF committee, composed of representatives of the departments that will probably have to use a similar system, has agreed to this pilot study.

Status and medium-term prospects

Systems analysis will begin in January 1987.

3. Detailed programme of the statistical sector

3.1 Centre for the collection of statistical data for EUROSTAT

Purpose and description

EUROSTAT regularly collects data from bodies in the Member States such as:

- national statistics institutes,
- customs administrations,
- other national and international bodies.

Data collection involves numerous administrative and technical operations that generally have to be repeated for all applications, for all Member States and for all deadlines. Furthermore, each socio-economic field has its own administrative and technical procedures for data collection.

Data are currently transmitted by telex, telephone, post (on paper or magnetic tape) and in the very near future will be transmitted electronically.

The collection process as organized at present involves the SOEC in a considerable volume of management work and is not entirely reliable as regards data integrity and availability.

"Collection centre" is not synonymous with "remote transmission", which is regarded as only one of the several transmission facilities. In addition the collection centre will be the natural basis for the gradual and harmonious development of the current facilities towards new IT facilities.

The heart of the collection centre will be an active catalogue capable of efficient monitoring of collection operations and management of the meta-data concerned (flows, frequencies, dates, volumes, etc.).

The collection centre will have to carry out its functions by offering a systematic and standardized interface for SOEC statistical applications and for information providers in the Member States.

Status and medium-term prospects

A feasibility study is in progress which began with the harmonization and definition of needs. This initial study will be continued to take account of the experience gained in the pilot projects, with a view to producing a detailed functional specification of the system by mid-1987. The system itself will be developed in 1987-88.

3.2 Standardization of statistical data exchange

Purpose and description

There is no standard for the exchange of statistical data that is currently recognized at European level.

Because of the lack of standardization it is necessary to reach agreement on an ad hoc convention for each application and, often, for each Member State. This is becoming more and more difficult with the increase in the number of applications and partners.

The CADDIA Central Team is now studying in general terms the problems involved in the standardization of data interchange in Europe. In particular, it is examining the possible applications of the UNEDI recommendation (United Nations).

The SOEC is participating actively in these studies in view of the vital role of data transmission in the collection of statistics.

The aim of the project is to draft a standard for statistical data exchange that will be suitable for the activities promoted and coordinated by the CADDIA programme.

The establishment of a layer 7 standard (OSI model) is consistent with the Commission's telecommunications policy. In addition, the availability of this standard would increase the number of partners that are able to exchange statistical information.

Status and medium-term prospects

The standardization process will involve the following phases:

- study of the application of UNEDI to statistical data (mid-1986),
- study of the standardization of statistical reports (late 1986),
- drafting of a proposed standard for statistical data exchange,
- negotiation and approval of this standard by the relevant working parties,
- gradual introduction of the standard into the statistical data collection procedures.

3.3 Remote transmission of trade statistics

Purpose and description

The collection of trade statistics is organized by procedures (intervals, deadlines, etc.) which are defined by Community regulations.

For some data categories, the Member States also send EUROSTAT the corrections to be made retroactively to the basic data for the previous 24 months.

At present most of these data are transmitted on magnetic tape.

The aim of the project is to use electronic transmission for the collection of trade statistics.

The percentage of data sent by this new transmission system should depend on an optimum compromise between the advantages offered by remote transmission (speed, improvement in collection procedures, etc.) and the technical and economic costs involved.

Status and medium-term prospects

In 1986 remote data transmission will gradually be introduced for input to the COMEXT/BPT base.

Initially pilot links will be set up with the United Kingdom.

In 1987 links may be extended to other countries, such as Italy, France and Germany.

Initially the pilot links will be limited to the remote transmission of retroactive corrections to be made to basic data.

At a later stage, after evaluation of the various technical scenarios, the system will be extended both to the other partners involved and to the remote transmission of larger volumes of statistical data on the economic situation.

At the same time input procedures for the COMEXT/BPT base will be reviewed and adapted to this new means of transmission.

3.4 Improvement of access to EUROSTAT databases

3.4.1 Keyword retrieval

Purpose and description

Member States send in their foreign-trade statistics on a monthly basis pursuant to Regulation 1736/75 in accordance with the NIMEXE goods nomenclature of some 8 000 headings. (About three million 59-character records per period).

These data are stored after Community processing in the following databases:

COMEXT/BPT, COMEXT/SIENA, COMEXT/EUROSTAT, GATTLUX, CRONOS and other derived bases both at the SOEC and in other Directorates-General.

The users of these bases are the Commission departments (DG I, II, III, VI, VIII, XIV, SUD and others) and the other institutions: the European Parliament, Economic and Social Committee and Court of Auditors.

Outside users: national statistics institutes, ministries of economic affairs, finance, agriculture, foreign trade, etc., trade associations, large firms, research centres, universities, the Press and the general public.

In the Member States there are similar databases and information circuits for national foreign trade statistics based on the same nomenclature.

At present codes are used for data access and transmission; these codes are described in the legal texts of the tariffs and the statistical nomenclature on the basis of a hierarchical product classification system that cannot be used for simple access to the various databases. What is needed now is a keyword retrieval system and brief explanatory texts so that these databases can be accessed on the screen without the need to consult legal texts.

The aim of the project is therefore to develop a keyword retrieval system allowing identification of the codes of the various nomenclatures used to establish a catalogue to guide the user in his search and enable him to combine information coming from different sources.

This system will be applied to all the bases, in particular to those available to the outside world, and will eventually allow the population of users to be greatly increased.

The planned solution is based on the following three activities:

- Storage of the full text of the nomenclatures used (NIMEXE, CCT, HS, SITC, etc.).
- Indexing of these nomenclatures to retain their hierarchical order. (Analysis of these texts). Enhancement by collections of existing keywords and by brief explanatory texts for headings such as "others".
- Implementation of a keyword retrieval system, establishment of an alphabetical index, and establishment of interfaces with all the external trade databases mentioned.

Status and medium-term prospects

A prototype has been developed for external trade using the BASIS system. Once the prototype has been validated, the system will be integrated with COMEXT using the TRS system which allows direct communication with the COMEXT base managed using ADABAS.

In addition, all CRONOS external-trade data have been indexed and catalogued in the CADOS system which allows keyword retrieval of CRONOS series.

3.4.2 Integrated access to external trade bases

Member States send in their foreign-trade statistics on a monthly basis pursuant to Regulation 1736/75 (about three million 59-character records per period). After Community processing these data are stored in the databases mentioned in project 4.3.4.1.

In this external-trade database system inputs are numerous and of varying quality and require numerous operations that are often interconnected, i.e.:

- processing of basic monthly data (formatting, checking, correction, aggregation, conversion, etc.);
- application of retroactive corrections over the last 24 months that are sent in separately;
- processing of preliminary monthly data for agriculture, textiles, steel and energy;
- handling of confidentiality (application of flags and footnotes, etc.).

The outputs are also numerous and concern a large number of users; numerous operations are required, i.e.:

- regular loading and updating of the various bases and subsystems;
- aggregation, conversion, etc. of data;
- preparation of media for printing on paper by photocomposition or other techniques;
- production of microfiches;
- insertion in analysis, forecasting and estimating systems;
- report writing, etc.

The large number of bases and operations gives rise to problems concerning data consistency and integrity; the necessary interfaces with the preprocessing base (reference base) and the new remote transmission procedures require development work in order to integrate and rationalize the various data access and handling systems.

A single integrated system for access to different statistical bases on local computer hardware must therefore be developed. It is necessary to solve the various problems of communications, transfers, conversion, compatibility and exchangeability of data between applications and the machines concerned.

Status and medium-term prospects

The system is operational on an NCR Tower 32 microcomputer running UNIX and at the moment allows consultation of and retrieval from EUROSTAT and ICC bases in Geneva, merging and harmonization of the data, followed by local processing.

3.4.3 Expert system for missing data

Purpose and description

The project aims to evaluate the quality of the performance obtained by applying expert-systems techniques combined with modern forecasting techniques to compensate for missing data in trade matrices. The project will apply these techniques to a particular subset of external-trade data, in other words a matrix of world trade (total trade) in order to provide the "best" consistent set of estimates covering all trade flows.

An experienced statistician specializing in trade matters who has to estimate a trade flow for a given period will begin by assembling all the available information. This will be the results (if available) for part of the period, trade figures for the other party to the transaction, and estimates made by various official or other bodies. He may also make a forecast by applying statistical techniques to data on past trade. He

will then make a "best" estimate using a hierarchical set of rules, some of which are clearly formulated ("organization X is always too optimistic about exports", for example), while others are derived from unformulated experience which is called upon only when certain results of initial calculations do not "look right". If these techniques could be recorded in an expert system, more accurate figures for a wide range of elements could be produced quickly and easily. This would make these figures significantly more useful to users. Comparison of the new figures with the "best" estimates is a by-product of such work that reveals contradictory data and directs work towards the most interesting basic figures.

The prototype system, in its final form, will allow missing data in trade matrices to be filled with estimates that are sufficiently reliable to allow an analysis of recent trends in areas of interest.

Status and medium-term prospects

The prototype will be developed in four phases:

1. project development (at least one month's work for an artificial-intelligence specialist)
 - development of the specifications
2. research (one month)
 - statistical methods
 - explanation of key concepts, relationships and characteristics of the information required to describe the problem-solving process
3. definition of the prototype (one month)
4. implementation of the prototype (three months)

In addition to the six man/months of work for the specialist, EUROSTAT will provide a statistician specializing in external trade for three man/months.

The project will begin in the autumn of 1986.

3.5 Database on farm structures: EUROFARM

Purpose and description

The Community survey of agricultural holdings is intended to provide the fullest possible information on the structure of Community agriculture. This project will provide users with individual data on agricultural holdings to allow specific analyses for the preparation and monitoring of the CAP. The main problem concerns the need to guarantee Member States that the individual data covered by statistical secrecy will not be released outside EUROSTAT. For the Commission this represents a major investment which will enable the Commission departments to avoid the often serious omissions and delays in the available information and obviate the high cost of asking Member States for special data.

Initially a direct link will be established with the Federal German statistical office in Wiesbaden where a database similar to that developed in Luxembourg will be set up. This system could then be extended to include the statistical offices of the other Member States.

Status and medium-term prospects

The problem has now been defined; the feasibility study will be completed in late 1986 and will be conducted jointly with DG IX-E on the important aspects of statistical secrecy. The system will be launched in 1987-88, in the following stages:

1. Provision by the Member States of individual data and a limited number of tables.
2. Establishment at EUROSTAT of two databases:
 - . a production and processing base (BDI) containing individual data,
 - . a distribution and consultation base (BDT).
3. Research on a table generator to analyse BDI data.
4. Design of a simple data manipulation system based on the BDT.
5. Establishment of interfaces between the BDI and the BDT and of the analysis environments (micro, SAS, etc.).

3.6 Model of agricultural prices: SPEL

Purpose and description

Data on economic information for agriculture, statistics on plant and animal production, agricultural prices and general economic indicators are communicated by the national statistical offices and ministries of agriculture and monitored by EUROSTAT. A subset of these data is then entered into the SPEL model.

The SPEL model is designed to carry out the following tasks:

1. ex-post analyses of trends in agricultural production and incomes (including productivity);
2. forecasts of the short-term trend in agricultural income;
3. simulation of the short-term effects on income of alternative measures as regards agricultural policy;
4. verification of the consistency of EUROSTAT agricultural statistics.

The model has so far been developed, maintained and used by the University of Bonn in close cooperation with DG VI and EUROSTAT. Initially, the model will be:

- implemented on one of the Commission's computers;
- equipped with a user-friendly interface for ease of use;
- made available for direct use by DG VI (and later by other interested parties).

Status and medium-term prospects

A contract was signed in mid-1986 with the University of Bonn with a view to improving the functions of SPEL, adapting them to the needs of EUROSTAT and transporting the model onto the Commission's computers.

When it becomes operational, two EUROSTAT officials (1 A and 1 B) will be required to operate the model.

3.7 Harvest forecasting model

Purpose and description

On behalf of EUROSTAT, the DWD (Deutscher Wetterdienst Zentralamt) Institute extracts meteorological data from data exchanged on magnetic tape. This is done every ten days and the data are collected from 120 stations throughout the Community.

The EUROSTAT model uses the AGROMET (meteorology) and CRONOS (area, production, yield) databases. The forecasts produced by the model are examined every month by the competent departments during the crop year.

The aims of the project are as follows:

- Connection by network with the DWD Institute for the transmission of conventional meteorological data at ten-day intervals; this will have a considerable impact on the freshness of data and consequently on the quality of the forecasts.
- Extension of the AGROMET base to remote sensing data concerning meteorological indicators (soil temperature and humidity, vegetation index, etc.) and digitized data on the classification of crop areas.
- Adaptation of the forecasting software for the interpretation of data obtained by remote sensing.

Status and medium-term prospects

A study for the definition of a model will begin in mid-1986, carried out by the Service Central des Etudes et Enquêtes of the French Ministry of Agriculture and monitored by an expert at EUROSTAT; it will be completed in mid-1987 and will specify the model for the forecasting of harvesting and will offer guidelines for the setting up of the computer system for managing the model and the procedures and resources required to operate it.

Planned solution

- Establishment of the link with the DWD (Deutscher Wetterdienst Zentralamt).
- Establishment of links for the reception of satellite data between the European firms responsible for the data and EUROSTAT.
- Modification of the forecasting software to allow for remote sensing data from the quantitative and methodological aspects.

- Redesign of the AGROMET base in the light of the new data and input procedures.

Theoretical work on the feasibility of the system is included in the work programme of the ISPRA establishment of the JRC.

3.8 RESEAU: European, environmental, agricultural and urban-development monitoring network

Purpose and description

The environment policy is taken into account in the Single European Act of December 1985. The Commission has declared 1986 Environment Year. EUROSTAT gives access to the Community's environment statistics via the RESEAU database.

RESEAU is a database containing a number of variables for Commission use recorded in the Member States by various ministries or organizations.

The variables are selected essentially by the CORINE multiannual programme which is designed to define needs; these will be harmonized by an ad hoc working party at EUROSTAT. Based on a Dornier system type medium, the data cover a variety of fields, such as: land use, facilities, protection and monitoring of the environment, agricultural production, less-favoured agricultural areas, woodland, urban or suburban areas, including socio-economic criteria.

Status and medium-term prospects

The study will begin in September 1986 and covers the following points:

1. Assessment of the extent of the needs of the Directorates-General;
2. Assessment of the proportion of conventional data in relation to the data generated by new technologies applied to statistics, such as aerial photography and remote sensing;
3. Definition of the medium, such as Dornier type grid system, and the management facilities of RESEAU for the generation of lists and mapping;
4. Facilities for remote data transmission between information providers and EUROSTAT.

4. Details of joint projects (CADDIA Central Team)

4.1 Standardization

Purpose and description

To specify the standardization requirements of CADDIA users and support international standardization work where necessary. In the present case the priority need for standardization concerns electronic data interchange (EDI), i.e. the structure, syntax and content of electronic messages to be exchanged between different systems.

There is also a need to coordinate the application of UNEDI in the various CADDIA sectors and applications which require it and also to coordinate these developments with user groups outside the Commission.

Status and medium-term prospects

The CADDIA Central Team has actively involved itself in activities for the development of the electronic data interchange standard based on the UNTDI proposed by the UN/ECE in Geneva:

- organization and administration of meetings to coordinate European partners in Brussels;
- organization of teleconference meetings with the ANSI X.12 (USA) for the negotiation of a common standard;
- support to the negotiations by using the CANDY system

This work resulted, in June 1986, in a proposal for a universal standard (UNEDI) which has yet to be ratified by the UN/ECE. The Team will then reorient its work towards activities to promote the standard:

- in CADDIA applications,
- in all applications of the TDED in the industrial and commercial sectors since the standard must be common to administrations and traders (CD project).

This implies the coordination of the national work of the COMPROs to:

- produce UNEDI popularization and implementation manuals,
- translate these manuals into the Community languages,
- circulate this information to interested parties.

An informal EDI coordination group has been set up to coordinate all the EDI implementation work in the various Commission departments:

- survey of messages, data elements and codes used;
- presentation in UNEDI format;
- ensure consistency of proposals and conformity with international standards.

An information system (CANDY) has been developed to store the standard data elements, codes and messages and to serve as a tool for harmonization work.

The CADDIA Central Team has also followed and taken part in meetings of outside groups with the same aim of harmonizing all developments:

- COST project 306 (transport),
 - ODETTE (European motor industry).

The proposals of these groups have been incorporated into CANDY.

This coordination and harmonization work will continue and be stepped up throughout the development of CADDIA applications and industrial projects.

4.2 Validation of the computerized telecommunications infrastructure

Purpose and description

A number of the computerized telecommunications infrastructure components envisaged for use in CADDIA applications, such as X.25 networks, file/document transfer software and formatting software, etc. already exist and others are under development. Some of them refer to international standards or will do so when they are ready.

CADDIA applications must have an infrastructure based on components which are:

- standardized;
- of a high quality (efficient, user-friendly, etc.);
- reliable (technically and commercially);
- interconnectable.

For this the following validation plan has been implemented.

Status and medium-term prospects

1. Validation tests

Testing of infrastructure components and their interconnections on Commission hardware (CADDIA Central Team, Computer Workshop, sectoral or central equipment): syntax software, data transfer software (teletex, MFTS).

2. Assistance in pilot projects

Pilot data interchange projects are being set up in the various sectors. CADDIA coordination provides advice and assistance for these projects on the basis of experience gained in the validation tests.

3. Certification

In collaboration with the Task Force's standardization unit, setting up of conformity testing centres for certain components (e.g. file transfer, formatting, etc.): for the moment a feasibility study has been started to determine what functions and testing levels such a centre should have.

4.3 Methodology

Purpose and description

The development of CADDIA applications involves the production of functional specifications of the systems to be set up, especially their interfaces. If these functional specifications are to be acceptable to all the participants, an agreement must be reached on a basic methodology for producing them.

Status and medium-term prospects

A seminar on methodological awareness organized for the CADDIA sectors at the Commission has allowed two priorities to be established:

- firstly, the establishment of a CADDIA data dictionary, as an extension of CANDY and which indicates the relations between the various existing data dictionaries in the sectors (TARIC, CADOS and SABINE). This dictionary will be used for the development of the CADDIA applications to verify their consistency and then as a common tool for general access to the CADDIA systems;

- secondly, the production of a guide for the drafting of functional specifications giving the structure of a particular document and a description of the content of the various chapters. This guide will also propose a formal data description method compatible with the data dictionary referred to above.

4.4 Setting up the computerized telecommunications infrastructure

Purpose and description

The various organizations engaged in CADDIA have to deal with telecommunications structures that offer widely differing services. Furthermore, depending on the application and the country, the means of transmission are very varied and include virtually all the techniques known today: paper mail, telex, telephone, magnetic tape and data networks.

It is the task of CADDIA coordination to furnish an overview of current practice and to propose computerized telecommunications scenarios for meeting the needs of each of the CADDIA applications.

Status and medium-term prospects

In collaboration with the CADDIA sectors, information has to be compiled for each of the interconnections planned for the CADDIA programme, i.e.:

- a list of the computers and protocols which are or will be in use by the Member States must be drawn up;
- the protocols proposed or planned by the manufacturers concerned must be identified and evaluated;
- the data flow must be analyzed and the frequencies, volumes and peaks quantified;
- infrastructure requirements must be assessed and submitted to the Member States for approval.

On the basis of this information, scenarios for setting up the infrastructure will have to be proposed and harmonized with the Commission's computerized telecommunications infrastructure strategy. Finally, the appropriate communication services and options to be used will have to be agreed with the PTTs.

The work of collecting the information has begun but tangible results will not be achieved until the development of the CADDIA applications has begun in earnest.