Statistics Norway
Department of Coordination and Development
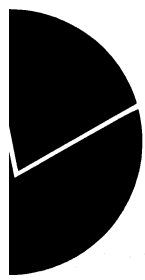
Håkon Berby and Yngve Bergstrøm

Documents

**Development of a Demonstration
Data Base for Business Register
Management**
An Example of a Statistical Business
Register According to the Regulation
and Recommendations of the European
Union

Preface

This paper contains the reports on the completion of phase 1 & 2 of a project for establishing a demonstration data base for business register management according to the regulation and recommendations of the European Union. When finalised, the system will make it possible to demonstrate how an operator will be able to manage the entry and change of register units as examplified by a set of cases developed by Eurostat.

The project is the result of an initiative from Mr. Daniel Defays in Eurostat to Section for business register in Statistics Norway. The demonstration data base is developed by Statistics Norway for Eurostat on contract. The system is established by

1. porting the on line part of Statistics Norways data base system for business register management from an IBM compatible mainframe platform to a PC/UNIX platform and

2. converting the data base and application system to comply with the Council Regulation (EEC) No 2186/93 of 22 July 1993 on Community co-ordination in drawing up business registers for statistical purposes.

The project has been split into three phases. The two first phases was covered by a contract between Eurostat and Statistics Norway and is now completed as described in the following document. Phase 1 started in January 1996 and ended in June 1996. Phase 2 started in August 1996 and ended in November 1996; the report on the work was submitted to Eurostat medio December 1996. The third phase is to be completed by the end of September 1997.

The report on phase 2 contained three annexes covering (i) the subject matter documentation of the system (by Yngve Bergstrøm and Håkon Berby), (ii) a short system description (by Håkon Berby) and (iii) a short documentation of the system with character based user interface from a user's point of view (by Håkon Berby). These three annexes are also part of this document together with copies of the contract between Statistics Norway and Eurostat on phase 1 & 2 (annex 4) as well as a copy of the Council Regulation on business registers mentioned above (annex 5).

Statistics Norway, Oslo, April 1997.
Håkon Berby

Contents

Demo system for Business register management on PC for EUROSTAT

Report on the completion of phase 1
By Håkon Berby

The work plan of the contract consisted of the following 5 points:

1) Conversion of existing application programs
2) Translation of *basic version* into English language
   (i.e. Screen maps and user messages)
3) Functions for updating "external" registers
4) Documentation of results of phase 1 for evaluation
5) Evaluation of phase 1, incl. decision on phase 2

Until this date the following has been completed.

1)   Conversion of existing application programs

The application programs of the on line application system have been:
- transferred from MVS ("mainframe") to PC after substituting Norwegian characters for all variable names etc. into English character set
- compiled on the PC
- run with entity types "Legal Unit", "Enterprise" "Local Unit", "VAT Unit" and "Employer" (only a few, but realistic, units of each type) and all code catalogues (all catalogues complete, except for post office catalogue which presently only contains extracts of the complete Norwegian post number/office catalogue to show the functionality of the system).
- The functions of the Survey Register part of the system are also completely converted, but have not been used with data on the PC yet. The Survey Register system is connected to the survey catalogue which is managed by the new functions for the code catalogues (see below).

In addition:
To be able to run the system on a PC, an original and incomplete part of the on line application system of Statistics Norway, has been removed and replaced by a new complete application for "on line" control of all code catalogues; adding missing functionality of the original mainframe system:

- The original application had *no* on line functions for handling classification etc. (only ad hoc/batch) and therefore no options for the end user to revise the content and eventually correct errors etc. The new application therefore contains:
- New on line (screen based) functions for:
  - Activity classifications covering:
    - NACE Rev. 1 (Norwegian text) with link to
      - ISIC (NACE-ISIC link "reengineered")
      - Institutional sector (NACE-sector link is new to system)
    - ISIC Rev. 2 (Norwegian version SN83, with Norwegian text).
  - Regional code catalogue; e.g. Norwegian municipality code catalogue
  - Postal office number catalogue of Norway with link to municipality catalogue
    The Norwegian catalogues may easily be substituted by code catalogues in another language
- New classification catalogues implemented (incl. enhanced functionality for checks on data) for:
  - Institutional sectors
  - Classification of local government accounts
- Functions for the following internal administrative catalogues in original application has been removed and implemented in the new application for identical handling of all catalogues:
  - User autorization catalogue
  - Survey definition catalogue
  - "Order code" alias definition catalogue

Original phonetic search facility on entity name and address by means of an "IBM assembler" function:
- Completely reprogrammed in Natural

Also implemented/developed in place of/added to, the "old" functions for data entry of the entity types of the Enterprise and the Local Unit:
- Activity codes according to the NACE standard replaces ISIC codes, but with automatic insertion of the corresponding ISIC code (if a "one to one" relationship between ISIC and NACE).
- The data entry function of the Local Unit automatically changes the type codes of a "one Local Unit Enterprise" into the proper codes for a "multi Local Unit Enterprise" when entering a new Local Unit to an existing "one Local Unit Enterprise".

This was added to the "basic version" of the system on demand by Daniel Defays of Eurostat at the demonstration of the systems basic functionality at the "kick off meeting" for the project at the 18 March 1996.

2) Translation of the basic version to the English language

All screen maps are translated into the English language in such a way that the system may be run either in English language mode or Norwegian language mode via a parallel set of screen maps; one English and one Norwegian. Other languages may be included by adding new sets of screen maps.

A li all "user-messages" from the system with translation has been completed. A new developed program uses this list to generate complete new message files in the Norwegian and English languages for use by the message function of Natural. New message files in other languages may be added to complement eventual new sets of screen maps in the relevant languages.

The translations were revised by Peter Struijs of Eurostat in the second status meeting on the project in Oslo the 28 June 1996.

3) Functions for updating "external" registers

Functions established for on line updating (e.g. separate functions for data *entry* and *correction* of data) of the data content of the following registers:

- "Legal Unit" register
- "VAT" register
- "Employer" register

In these functions for data entry, the data entity may be

- linked to a relevant existing Enterprise (for the Legal Unit and the VAT Unit) or a Local Unit (for the Employer Unit) if the relevant unit already exists in the data base or;
- entered without links to other entity types.

For the latter (non-linked entities of the Legal Unit, the VAT and the Employer registers): the *existing functions* of the system are to be used for linking them to the relevant entity types of Enterprise or Local Unit, respectively.

4) Documentation of results of phase 1 for evaluation

This paper plus demo of the system was presented and discussed on status meetings in Eurostat, Luxembourg, the 21 May 1996 and status meeting in Statistics Norway, Oslo, at the 28 June 1996.

The completed version of phase 1 of the system was used at the TES course "The Set-Up and Use of Business Registers" in Oslo 24 - 28 June 1996. With the system, we were able to illustrate how a computer system for management of the contents of a business register according to the EU regulation could work together with integrated on line information from the external administrative registers of the Tax (the VAT-register) and National Insurance Administration[1] (the Employer/Employees registers).

5) Evaluation of phase 1, incl. decision on phase 2

The status meetings on the 21 May 1996 and the 28 June 1996 as mentioned above.

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[1] The Norwegian Social Security authority.

7

Demo system for Business register management on PC for EUROSTAT

Report on the completion of phase 2 of the project
By Håkon Berby

The purpose of phase 2 was

Completion and documentation of the basic version.

The work plan consisted of the following points:

1) Establish data part of demo version
2) Develop/document examples on units in data base
3) Subject matter documentation
4) System documentation (data- and application model)
5) User documentation of on line system
6) Evaluation of phase 2, incl. decision on phase 3

There have been 4 meetings between Daniel Defays and Peter Struijs of Eurostat and Yngve Bergstrøm and Håkon Berby of Statistics Norway (Defays and Bergstrøm was present in 3 meetings) in 1996. The dates of the meetings were 18 March, 21 May, 28 June and 29 September. In the discussions of these meetings it was decided that:

- in the final system emphasis should be on a real GUI interface instead of compatibility over all possible platforms, the compatibility to be across PC/Windows and UNIX platforms,
- to put less emphasis on documentation and more on the development of the computer system in phase 2 of the project.

Therefore, in addition to the points of the work plan above, the following activities have been added:

- Expansion of the relationships and adaptation of the variable content of the data base to comply with the Council Regulation on business registers for statistical purposes.
- The establishment of a graphical interface (i.e. "real Windows GUI interface") for the main functions and unit types of the system.

Until this date, the following has been completed.

1)   Establish data part of demo version

The data part of the demo version was established to be used at the TES course "The Set-Up and Use of Business Registers" in Oslo 24 - 28 June 1996.

We were then able to illustrate how a computer system for management of the contents of a business register could work together with integrated on line information from the external administrative registers of the Tax authorities (the VAT-register) and National Insurance Administration (the Employer/Employees registers).

One amendment has been made to the data part since the TES course; i.e. examples of more than one legal unit controlling an enterprise have been added.

> The on line data base system of phase 1 was essentially a copy of the Norwegian "Central Register of Establishments and Enterprises" (CRE). The data base of that system had only a "one to one" relationship between the unit type of enterprise and the unit type of legal unit. Since the Council Regulation on business registers for statistical purposes requires this relationship to be a "one to many", it was decided to implement this kind of relationship both in the data base and in the on line application system. In addition, the variable content has also been adapted to comply with the Council Regulation. To test the functionality of this new relationship, new legal units were entered into the data base by means of the new "one to many" functionality of the system.

2) Develop/document examples on units in data base

The content of this point partly overlap with the previous point. There was made a brief document on the structure of some of the units of the demo version used at the TES course.

3) Subject matter documentation

A short paper, describing the functionality and use of the CRE in Norway and the characteristics of the system after the adaptation of the relationships and the variable content to comply with the Council Regulation, has been written by Yngve Bergstrøm and Håkon Berby. The paper is added to this report as annex 1.

4) System documentation (data- and application model)

The CASE tools of Natural Engineering Workbench from Software AG has been utilized to develop:

- an entity relationship data model of the data base covering the main unit types and main ancillary entity types with:
  - unit name catalogues,
  - address catalogues,
  - regional catalogues and
  - classification catalogues,
- a file relation model of the data base and
- a diagram picturing the main application structure

These CASE tools is closely related to the development tools for the system (e.g. ADABAS and NATURAL). A short paper commenting on the entity relationship data model and the application structure diagram has also been made. This paper is added to the report as annex 2.

5) User documentation of on line system

A short paper has been made and added to the report as annex 3. This paper describes the use of the "basic version" of the system which was completed as part of phase 1 and used at the TES course in June 1996 in Oslo.

The new version with graphical user interface is not covered by this document. The new GUI version of the system is to be completed in the course of phase 3 of the project. It will then be designed to support the management of the examples of the Eurostat document "Simulation courseware for register management" prepared in the "Working Party of the Business Registers Committee".

The first version of the system with the GUI front end covering the main data retrieval and modification functions of the main unit types of the system has been completed.

6) Evaluation of phase 2, incl. decision on phase 3

Plans for phase 3 have been developed in cooperation between Daniel Defays and Peter Struijs of Eurostat and Håkon Berby of Statistics Norway in a meeting in Eurostat 29 September 1996 and by telephone and electronic mail communication between Struijs and Berby afterwards.

Evaluation of the work of phase 2 is to be performed by Mr. Defays and Mr. Struijs of Eurostat.

Statistisk sentralbyrå
Statistics Norway

Demo system for Business register management on PC for EUROSTAT

Subject matter documentation of the basic version
By Yngve Bergstrøm and Håkon Berby

1   INTRODUCTION

The purpose of the "basic version" is to serve as (i) an example of a statistical business register, (ii) a tool for demonstration and (iii) courseware for studying the task of maintaining the information in a business register according to the regulation and recommendations of the European Union.

The basic version is a modified copy of the on line part of the Norwegian "Central Register of Establishments and Enterprises" (CRE) system. This paper contains:

- a description of the conceptual model and the definitions of the main unit types of a statistical business register according to the regulation of EU on business registers
- a description of how the CRE system has been transformed into the basic version to comply with the conceptual model and definitions of the EU
- a description of the CRE system and how it is used in practice for maintaining the information on the statistical units for the economic statistics in Statistics Norway
- the variable content of the main unit types of the basic version relative to the recommendations of the EU.

2 CONCEPTUAL MODEL AND DEFINITIONS OF THE UNIT TYPES

The basic version is built to comply with the following conceptual model[1] :
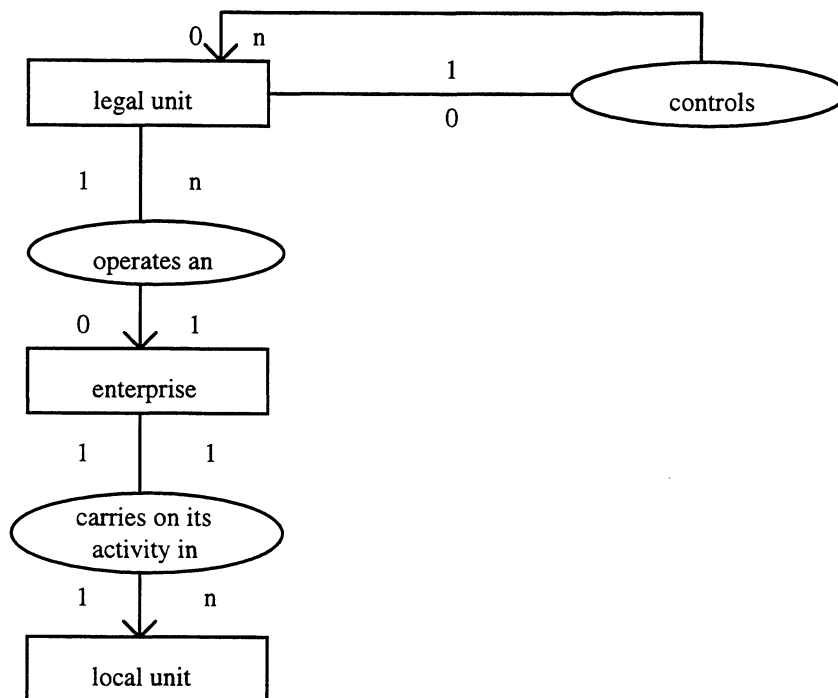
This conceptual model is based on the Council Regulation (EEC) No 2186/93 of 22 July 1993 on Community coordination in drawing up business registers for statistical purposes. Article 2 of the regulation contains the following definitions:

1. For the purposes of this regulation:

(a) 'legal unit' shall mean a legal unit as defined in Section II.A.3 of the Annex to Regulation (EEC) No 696/93([1]);

(b) 'enterprise' shall mean an enterprise as defined in Section III.A of the Annex to that Regulation.

   Hereinafter the connection between the enterprise and the legal unit shall be expressed as follows:
   - the enterprise is attached to one or more legal units, and
   - the legal unit is responsible for the enterprise;

(c) 'local unit' shall mean a local unit as defined in Section III.F of the Annex to Regulation (EEC) No 696/93.

   Hereinafter the connection between the local unit and the enterprise shall be expressed as follows:
   - the local unit is dependent on an enterprise

2. This Regulation shall apply only to units which exercise wholly or partially a productive activity.

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[1] Source: Doc.Eurostat/D3/REP/2rev8, Recommendations manual business register - sections 1-10, January 1995, Section 5 - Contents of the register.

[1] Council regulation (EEC) No 696/93 of March 1993 on the statistical units for the observation and analyses of the production system in the Community (OJ No L 76, 30. 3 1993, p.1).

The Norwegian CRE system is not completely up to the conceptual model and definitions above. The basic version has been transformed to comply with the above-mentioned Council regulation.

The transformation is primarily reflected in:

- the change of the relationship type between the legal unit and the enterprise,
- the redefinition of the LKAU, as used in the CRE, into the LU of the Council Regulation and
- the terminology of the user interface of the system.

A description of this transformation and its implementation is described in paragraph 3.1 below.

3   SOME DETAILS OF THE BASIC VERSION

3.1   Transformation of the Norwegian business register into the basic version for Eurostat

The CRE

The main unit types of the CRE are the *local kind of activity unit*, and the *enterprise*. The local kind of activity unit (LKAU) is defined as a functional unit which corresponds to the definition in the Council Regulation on the statistical units. An enterprise is defined as an institutional unit comprising all economic activities engaged in by one and the same owner. The object of the CRE system is mainly to manage the population of units of economic activity of the society for statistical purposes. For this purpose, the CRE also contains a survey administration register comprising enterprises and LKAUs included in the various surveys on economic statistics of Statistics Norway.

In addition, the CRE contains the following "external registers" (e.g. copies of information from):
* the Norwegian Register of Legal Units,
* the Employer Register of the Norwegian National Insurance Administration (NIA) including employment information from the linked employees register of the NIA,
* the VAT Register of the Norwegian tax authority,
* the so called Owner Register of the tax authority. This is a register of the natural persons responsible for the VAT-payment of the VAT Units.

The Register of Legal Units are updated both on line (daily) and off line (programs running daily in batch mode). Cross checks between the CRE and the external registers are performed annually. The Employer register was previously updated off line every month; presently, Employer data are collected from the Legal Unit Register. The VAT and Owner Registers are updated off line (programs running in batch mode) at 14 days intervals.

The basic version

After porting the on line data base system of the CRE to PC and translation of the user interface into the English language, two major modifications have been carried out.

The major modifications are:

1. The relationship type between the enterprise register and the "Register of Legal Units" has been modified from a *one to one* into a *one to many* relationship. Some modifications to the variable content of the registers have also been carried out.
2. The unit type *LKAU* has been redefined into a *local unit*.

Other modifications include:

* New ISIC and NACE activity catalogues with texts and links.
* New Institutional Sector catalogue with link to NACE.
* The variables of each of the unit types have been revised to accommodate the new relationships as well as a few new variables including date for some variables where date were missing in the CRE.

The purpose of these changes has been to make the basic version comply with the Council Regulation on business registers for statistical purposes as referenced above.

As a consequence of these modifications, the basic version can be described as follows.

The main entity types of the register are:
- *enterprises*,
- the economic active *local units* of the enterprises and
- the *legal units* that controls the enterprises.

The basic version comprises the following external registers:
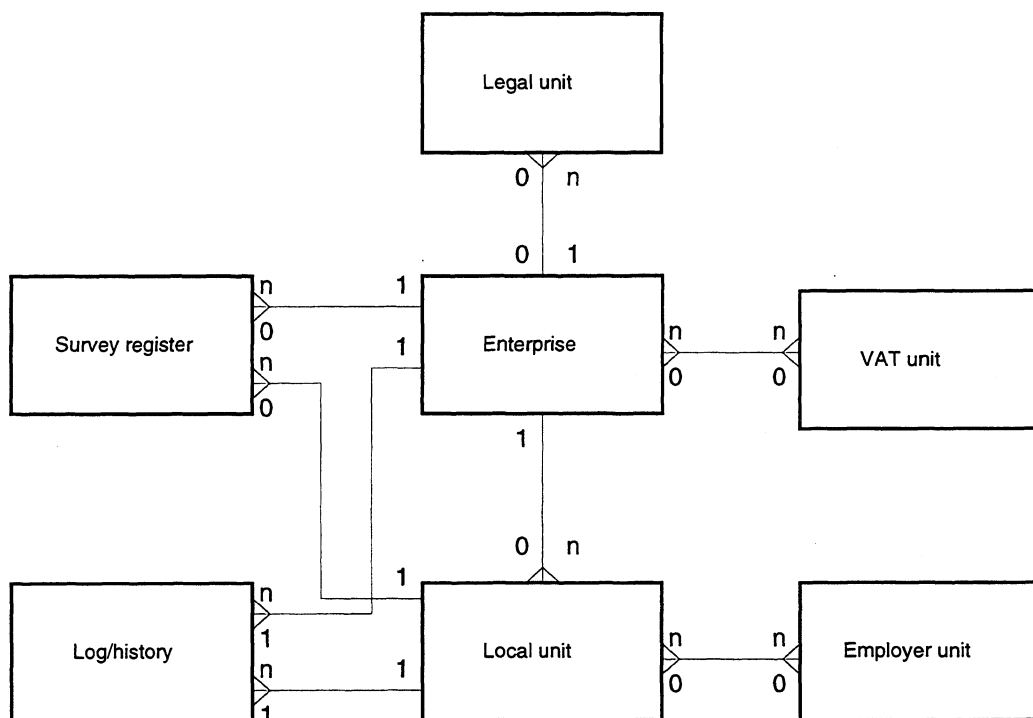- the *employer* register of the National Insurance Administration (NIA) including employment information,
- the *VAT* register of the tax authority and
- the "owner register" of the tax authority. This register has not been used with data in the PC version and will *not* be utilized in the "final version" of the register (with GUI interface).

Among other "administrative" registers and files of the CRE, the basic version also includes:
- the journal-/history file,
- the survey administration register. This has not yet been used with data in the PC version.

3.2   Data model of the basic version

The basic version is built on top of a data base which is based on a data model with its main unit types as pictured in the following figure:

```
                          +----------------+
                          |   Legal unit   |
                          +----------------+
                               0  |  n
                               0  |  1
+----------------+        +----------------+       +----------------+
|                |n    1  |                |n    n |                |
| Survey register|0       |   Enterprise   |       |    VAT unit    |
|                |n    1  |                |0    0 |                |
+----------------+        +----------------+       +----------------+
                               1
                               0  |  n
+----------------+        +----------------+       +----------------+
|                |n    1  |                |n    n |                |
|   Log/history  |1       |   Local unit   |       |  Employer unit |
|                |n    1  |                |0    0 |                |
+----------------+        +----------------+       +----------------+
```

The conceptual model in paragraph 2 above contains a recursive relationship type between legal units; i.e. one legal unit may control other legal units. This relationship is defined in the data base of the basic version, but is not yet implemented in the application system. It is therefore omitted in this data model (as are a number of other relationship types of the system). In the basic version, it has also been necessary to apply a modified relationship type between the legal unit and the enterprise

compared to that of the conceptual model. This is explained in the comments on the relationships below as well as in paragraph 4 ("A more detailed description of the CRE").

The relationships between the unit types imply that *in the data base of the register*:

- A legal unit may exist without an enterprise being linked to it.
- An enterprise unit may only exist without a legal unit linked to it, if and only if it is
  (i) *removed* because of erroneous registration (will also cover duplicate entries in the register) or
  (ii) *deregistrated* as a consequence of a restructuring of the company the enterprise unit was a part of (where a new enterprise takes over the functions of the old enterprise).
  Because it is necessary to cope with such "real life" situations, the relationship type between the unit types of the legal unit and the enterprise of this data model differs from that of the conceptual model in paragraph 2 above.

- An enterprise unit may only exist without a local unit being linked to it, if and only if it is
  (i) *removed* because of erroneous registration (will also cover duplicate entries in the register),
  (ii) *deregistrated* as a consequence of a restructuring of the company the enterprise unit was a part of (where a new enterprise takes over the functions of the old enterprise) or
  (iii) in the process of being *established* (this is often necessary when substantial technical construction work is proceeding for a long time period before real production may start).
- A local unit may only exist without an enterprise being linked to it, if and only if it is
  (i) *removed* because of erroneous registration (will also cover duplicate entries in the register) or
  (ii) *deregistrated* as a consequence of a restructuring of the company the local unit was a part of (where the local unit ceases to exist even if the old enterprise continues its operation with the other local unit(s) still existing and/or with (a) new local unit(s)).
- All enterprise units and local units are represented with one or more entries in the log-/history file.
- An enterprise unit may be part of 0, one or many surveys.
- A local unit may be part of 0, one or many surveys.
- An enterprise unit may be linked to 0, one or many VAT units.
- A VAT unit may be linked to 0, one or many enterprise units.
- A local unit may be linked to 0, one or many employer units.
- An employer unit may be linked to 0, one or many local units.

The units of the register will *never* be physically deleted from the register. All status *changes* are recorded together with the *date* of the status code. Changes/corrections of the enterprise units and the local units are recorded in a history file with "before" and "after" images of each change/correction. Up to four historic relationships, included date are recorded between (i) a legal unit and units of the type of enterprise and (ii) a local unit and units of the type of enterprise. The user has as an option to search for and retrieve (i) only active units or (ii) units of all possible status codes.

4.   A MORE DETAILED DESCRIPTION OF THE CRE

4.1   Contents

Coverage
In principle the register comprises all units (enterprises and LKAUs), except units within farming, forestry and fishing. The different types of units are defined below. This includes units with only the owner working. Employers in all kinds of activity are also included. The register covers central and local governmental bodies and non-profitmaking units like institutions and associations with employees.

The register does also cover specific national Norwegian activities like fish farming, oil extraction, mining, quarrying, electricity, gas and water supply and transport. An industrial classification according to NACE Rev. 1 is implemented from 1993/94 in the register. Originally, the units in the register were classified according to ISIC Rev. 2. Presently, both classifications are used.

By June 1996 the register contains approximately 273.000 operating local kind of activity units and 251.000 active enterprises.

The units
It is important that the statistical units are defined in the same way in all different statistical surveys of Statistics Norway. In the economic statistics compiled by Statistics Norway, the units for reporting and processing are the same as in the CRE-register. Units were previously defined in accordance with UN's recommendation in the International Standard of Industrial Classification (ISIC). We have now started the setting up of the "Council Regulation on the statistical units for the observation and analysis of the production system in the Community".

The enterprise lives its own life, and its relationship with various LKAUs changes over time. New LKAUs may join an enterprise, while others may leave it. Similarly, an LKAU may exist and produce independent of the enterprise it belongs to.

In order to be able to connect data to the two statistical units, it is important that each enterprise as well as each LKAU have their own identification numbers. *Because an enterprise often is formed some time before it starts any production activity, it is important to be able to register an enterprise whether or not it has any LKAU attached to it.*

The statistical information which can be logically connected to the two units varies. From the enterprise data on ownership, responsibility, accounts and various juridical data may be collected. Data on location, activity, and number of employees are connected with the LKAU. Statistics on production and employment therefore are based on information from the LKAU, while accounts and finance statistics are based on information from the enterprise.

When presenting the results, enterprises are sometimes grouped by industry. In such cases, a unit is classified in the activity group which is dominating within the LKAUs of the enterprise.

The main unit types in the register are the LKAU and enterprise and it is a clear distinction between information related to these entities. The life and death of the units follow separate paths. The LKAU will change its connection with an enterprise in the register if another enterprise takes over the activity. If, for example, an enterprise that is personally owned goes incorporated, this will result in the death of the old and the birth of a new enterprise.

In the CRE, an enterprise in most cases is defined as an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making. In most cases, an enterprise will be identical with a sole legal unit, e.g. a limited company.

The local unit is an enterprise, or a part of an enterprise, which is located in one particular place and can be geographically identified. In the same way, the *local kind of activity unit* is defined as *an enterprise*, or *a part of an enterprise*, which performs an economic activity (four digit level NACE Rev.1) from a geographically delimited location or area. The local kind of activity unit corresponds to the definition of an *establishment in ISIC Rev. 3*.

The enterprise level in the register is restricted to a pure definition as a combination of legal units, and the register does not comprise information on enterprise groups. An enterprise group may be defined as an enterprise that controls (owns) one or more other enterprises, and the controlled enterprise may itself control others. As these relations are constantly changing, it is considered extremely difficult and time-consuming to maintain a register with a sufficiently updated record of such relations. There are no sufficient administrative sources in Norway to supply this information, and thus the updating of information of this kind must be totally based on special (frequent) surveys.

An enterprise group is for the time being not identical with any statistical unit in the CRE, but the controlling enterprise itself and the controlled enterprises may naturally be included in the register.

Accounting and finance statistics, including banking statistics etc. are based on information collected from the enterprises, as defined in the CRE. For the public sector, particular definitions are specified for the enterprise and LKAU levels.

The characteristics
The essential characteristics related to the *LKAU* are: LKAU-number, name, street address, municipality code, employment measured as the average number of persons employed over the year, turnover, industrial classification. And for the *enterprise*: enterprise-number, name, mailing address, municipality code, institutional sector and industrial classification. Both for the *LKAU* and the *enterprise* the main activity, and optionally up to two ancillary activity codes, is recorded.

Both units types also have a code for type of unit, status-code (normal operation, closed etc.) and dates of the main fields. The identification numbers are assigned continuously with no built-in information. They consist of seven digits plus one check-digit computed by the modulus eleven method. The check-system will fail to detect 1-3 out of 100 errors in identification numbers.

In addition to identification numbers, names, addresses and some statistical information, the register contains various technical information which is useful in data collection and automatic checks on data. When a new unit is created by splitting an old unit or by combining old units, a reference number make it possible to follow such movements.

Finally, reference to other administrative registers is available. These connections give access to a large amount of data, which can be used for production of statistics when combined with information in the register. When combining administrative registers, the definitions and concepts used vary from one register to another. In many cases it is necessary to transform information in order to fit in with definitions and standards in the CRE-register.

The LKAU unit contains a link to the Register of Employers. The enterprise has links to the VAT register and to the Register of Legal Units.

4.2   Maintenance

Introduction
A difficult and important problem in connection with the register is to get information fast enough about new units and information about enterprises that are giving up business. New units do not have to report to the CRE-register directly. However, they have to report to other administrative registers, from which the information is transferred to the CRE-register. Once they are transferred, they are obliged by law to fill out questionnaires to update and complement the register.

Administrative registers
The most important sources for registration of new units are the county tax offices and the local national social insurance offices.

All firms which are obliged to pay value-added tax, must register at the county tax offices. The registrations are reported to the value-added tax register, and copies of the registration forms are sent to Statistics Norway. However, one does not get information from this source about firms that give up business. In the same way, all enterprises that employ wage-earners (also governmental and public activities) have to report to the local national social insurance offices. They continually send reports to Statistics Norway. The National Insurance Institution keeps two registers that are tightly linked, one register of employers and one register of employees.

The main administrative sources for Statistics Norway's Central Register of Enterprises and LKAUs are the tax-register (VAT) and the Register of Employers of the National Insurance Institution. These registers supply information of new units after they have started an activity, but not of enterprises giving up business. Registration in the VAT-register is fundamentally a kind of enterprise unit, but the VAT units are sometimes *sufficiently different* from the enterprise unit in the CRE. In these occasions, it can be difficult to connect the VAT-unit to the enterprise and hard to use the data for statistical purposes.

The complete data base system of Statistics Norway has included full copies of the VAT-register, the Register of Employers and the Register of Legal Units. This is done to enable maintenance of the links between the statistical units of the CRE and the "external" registers.

Updating of information
Once a unit is in the register, the statistical information is updated through information collected by surveys.

Normally, all enterprises are part of some kind of survey each year. In addition to the various main surveys, e.g., manufacturing statistics, a simple questionnaire is sent to the rest of the registered units. This group generally consists of small units but a large part of wholesale and retail trade is also included. At the moment sales data from the VAT system replaces surveys to some extent (about 10-15 percent of all units) for small enterprises with only one LKAU.

Once a year, a large part of the register is checked through information collected by mail in "*The activity survey*". Questionnaires are sent to and returned from the units. The questionnaire of the survey is very simple and is partly filled in with information from the register which each unit is requested to correct and supplement. The activity survey comprises only those units which are not subject to other statistical surveys such as the *manufacturing statistics* of Statistics Norway. The questionnaires are sent to the main offices of the enterprises, which check the pre-printed information (name, address etc.) and gives information about kind of activity, employment and size of production (turnover). The questionnaires are then returned to Statistics Norway for checking and revision. Reminders are sent to the enterprises that do not return the questionnaires in time. The activity survey

has covered approximately 140 000 LKAUs and 130 000 enterprises. Since last year the survey is reduced to approximately 41 000 enterprises and 49 000 LKAUs.

About 30-40 000 of the LKAUs/enterprises are subject to different periodical surveys either annual, quarterly or monthly. Pre-printed questionnaires are produced from the central register. After the questionnaires are returned, the register is updated with the collected information. Errors and corrections that are detected through these surveys are also used for the maintenance of the register. These surveys bring back statistical information and serve as the main source for the updating of the register and to find out whether a business is active or not. The corrections are done in the register approximately one year after the reference period.

4.3   The role of the register in the compilation of statistics

Annual statistics based on the register
The register is the sample frame for all surveys among LKAUs and enterprises, and is therefore of paramount importance for economic statistics. The annual wholesale and retail trade statistics are compiled from information in the register after annual updating. Production statistics in manufacturing and other industry groups are based on information collected from all LKAUs over some minimum size, which varies with **industry group** (cut-off samples). Typical minimum sizes are 5-10 employed persons. Statistics of accounts are based on information from large enterprises. Results from these large surveys are published every year, approximately 1 - 1.5 years after the reference year.

The information collected in the surveys is also used to update and correct the register. A large number of checks are made concerning the activity code, but resulting in few changes. Employment and turnover figures are also updated. These corrections are done in the register approximately one year after the reference year. The register is also used as a mailing register for the statistical surveys and to produce information to the managing director (mainly information on the response burden).

5   THE VARIABLE CONTENT OF THE BASIC VERSION

The variable content and the history of the register units is implemented in the same manner as in the CRE. The following tree paragraphs gives a description of the variables according to Annex II of the COUNCIL REGULATION (EEC) No 2186/93 of 22 July 1993 on Community coordination in drawing up business registers for statistical purposes.

5.1   The register entry of a legal unit

Variable	X = implemented, - = not implemented
a) Identity number	X : with date
b) Name, address, (including postcode), and optionally: telephone, electronic mail and fax numbers and telex address	X : name and address, both with date (address including postcode) - : telephone, etc. (X) : Telephone and fax Nos. implemented in data base; may be included in user interface.
c) Requirement for the legal unit to publish its annual accounts (Yes/no)	X
d) Date of incorporation for legal persons or date of official recognition as an economic operator for natural persons	X
e) Date on which the legal unit ceases to be legally responsible for an enterprise	X
f) Legal form of the unit	X
g) Name and address of any non-resident legal unit, other than a natural person, which controls the legal unit (optional)	-
h) identity number of the legal unit in the register which controls the legal unit (optional);	- (X) : implemented in data base, program functions are planned for phase 3 of the project.
i) Character of "public undertaking" of the legal unit within the meaning of Commission Directive 80/723/EEC/ (Yes/No) (for legal persons only)	- : May be implemented on demand
j) Reference to other associated files, including customs files, in which the legal unit is recorded and which contain information which can be used for statistical purposes	X : implemented link to VAT register
k) Reference to the register of intra-Community operators drawn up in accordance with Council Regulation (EEC) No 3330/91 of 7 November 1991 on the statistical relating to the trading of goods between	? : VAT number or Identification number of the Legal Unit (Organisation No.)?

In the basic version, the legal unit also contains:

- status code,
- activity code (NACE Rev.1),
- trade name in addition to legal name,
- geographical location code (territorial units),
- share capital (where appropriate).

5.2   The record of a local unit

Variable	X = implemented, - = not implemented
a) Identity number	X : with date
b) Name, address and other identifying information as set out in paragraph 5.1 (b) above	X : name and address, both with date and history (address including postcode) - : telephone, etc.
c) Activity code at the four-digit (class) of NACE Rev. 1.	X : with history
d) Secondary activities, if any, at the four-digit (class) of NACE Rev. 1. (optional)	X : (two secondary activities may be recorded together with history)
e) Size of labour force as indicated in paragraph 5.3 (e) below	X : (actual size in man years recorded with date and history)
f) Date of commencement of activities the codes of which are given in (c)	X : (also including history of activity codes)
g) Date of final cessation of activities	X
h) Geographical location code (territorial units)	X
i) Reference to associated registers in which the local unit appears and which contain information which can be used for statistical purposes	X : implemented link to employer register of the National Insurance Administration
j) Identity number in the register of the enterprise on which the local unit is dependent	X (with date and history)
k) Activity carried out in the local unit constituting an ancillary activity of the enterprise on which it depends (Yes/No)	X : implemented in the *type code* of the LU

In the basic version, the local unit also contains:

- status code, with date,
- type code, with date,
- a short description of the kind of activity of the LU,
- ISIC code of main activity, and up to two secondary activities, paralleling the NACE code(s) with dates.
- turnover with date and history

5.3   The record of an enterprise

| Variable	X = implemented, - = not implemented
a) Identity number	X
b) Identity number(s) of the legal unit(s) legally responsible for the enterprise	X = implemented via data base retrieval function of the program system. The reference being moved over to the legal unit side because of the **1:n** relationship between enterprise an legal unit.
c) Activity code of the enterprise at the four-digit (class) of NACE Rev.1 in which the principal activity or all the activities of the enterprise is or are included	X, with date
d) Secondary activities, if any, at NACE Rev.1 four-digit level, if they amount to 10% of the total for all activities of the gross value at factor cost for each or account for 5% or more of national activity of this type; this point concerns only enterprises which are subject of surveys	X : (two secondary activities may be recorded together with dates)
e) Size: measured by the number of persons occupied or failing that, by allocation to one of the following classes according to the number of persons occupied: 0; 1; 2; 3 to 4; 5 to 9; 10 to 19; 20 to 49; 50 to 99; 100 to 149; 150 to 199; 200 to 249; 250 to 499; 500 to 999; 1000; above 1000, the number of thousands	X : (actual size in man years recorded with date and history)
f) Date of commencement of activities of the enterprise	X
g) Date of final cessation of the enterprise	X
h) Net turnover from sale of goods and services (except for financial intermediaries); falling that, allocation to a size class defined as follows (in millions of ECU's): [0, 1]; [1, 2]; [2, 4]; [4, 5], [5, 10]; [10, 20]; [20, 40]; [40, 50], [50, 100]; [100, 200]; [200, 500]; [500, 1000]; [1000, 5000]; 5000 + (optional for turnover not exceeding ECU 2 million)	X : (actual amount recorded with date and history)
i) Net assets (assets after allowing for depreciation less liabilities - financial intermediaries only (optional)	X : (number of digits to be adjusted)

In the basic version, the enterprise also contains:

- name, with date,
- address (including postcode), with date,
- geographical location code (territorial units),
- phone number,
- institutional sector; Norwegian version code (replaces the obsolete owner code of CRE).
- status code, with date,
- type code, with date,
- ISIC code of main activity, and up to two secondary activities, paralleling the NACE code(s) with dates.

6   CONCLUDING REMARKS

The situation pictured in paragraph 3.2 (*Data model of the basic version*) above, means that the basic version may be used simulating the real situation of a national business register where information for the statistical units are collected from external administrative registers like the VAT, employer/employees and legal unit registers. In such a situation the external registers will normally be updated separately by the respective administrative bodies. The information content of the external registers may be available via copies of these registers. In this situation the update situation of the different registers will be asynchronous and the linking of the units will have to be managed at some time after:

- the different kinds of events concerning the status of the units actually has taken place and
- the first recordings of the events in the registers of the responsible authorities.
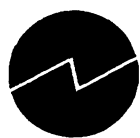
Demo system for Business register management on PC for EUROSTAT

A short system description of the basic version
By Håkon Berby

1 Introduction

The "basic version" has its origin in the online data base system developed for the Norwegian "Central Register of Establishments and Enterprises" (CRE) system. This system was developed on an IBM compatible computer running the MVS operating system from 1986 and put into production in 1988, and it still runs on this platform. The system utilized the "block mode" character based interface of the MVS platform. The DBMS (Data Base Management System) for the CRE system is ADABAS and the application system was developed in NATURAL. The basic structure of the application was revised in the period from 1989 to 1990. Additional functionality has been added through the life cycle of the system.

The first version of the basic version on the PC was, in fact, source compatible with the CRE system on the MVS. This version was used on a TES course on business register management in June 1996. The necessary porting was originally done on the MVS platform in a way that the CRE system itself could run on any platform (MVS, UNIX, Windows et al.) where NATURAL and ADABAS could run. This was according to the contract between Statistics Norway and Eurostat for the project. After this the basic version has been reingeneered to comply with the EU regulation on business registers; the relationship between the unit types of the enterprise and the legal unit has been changed from a one to one to a one to many relationship.

2 The process of porting the CRE to PC/UNIX

The first conversion was to change the Norwegian national character set in the variable and program names etc. on the MVS platform to comply with the then available versions of NATURAL on UNIX and Windows. These were not completely compatible with the mainframe version of NATURAL regarding national alphabets (the present versions are, however, fully compatible in this respect). As a consequence all file names, variable names, program names, etc. is in the English alphabet, but not with English terms in the variable names.

In addition to porting the existing CRE system to the PC, there has been developed a completely new online application for administrative purposes to handle the background catalogues necessary for the system. These catalogues are used for the management of user authorities, order codes and synonyms, activity classifications, regional code catalogues, etc. This new application was *developed on the PC* in Windows and source code compatible with the *character based interface* of MVS and UNIX; it has also been *ported to the MVS* (and UNIX) platform and is now an integral part of the CRE system on the MVS platform.

## 3 The appearance and functionality of the basic version

The contents of the screen maps of the basic version in Windows on the PC are the same as the screen maps of the CRE on the MVS. But the user interface of the PC differs in presentation from the character based interfaces of MVS and UNIX:

- All data fields that are open for modification by the user, appears with a "structured frame" that separates it distinctly from the surrounding part of the screen map.
- All function keys that are enabled for user action is displayed, and may be used, as "GUI push buttons". This means that they are operated by point and click of the computer mouse.
  (The function keys may also be operated by the function keys of the PC ("PF1" through "PF12" (on MVS) are handled by <F1> through <F12> on the PC and "PF13" through "PF24" (on MVS) by <Shift/F1> through <Shift/F12> on the PC.)

The appearance of the system on the PC is therefore a bit more user friendly and "tidy". The functionality is, however, mostly the same as on the MVS platform. This depends on the data base and the program code which is very much the same as on the MVS except for one basic change. The database and the corresponding program code has been transformed to meet the requirements of the Council Regulation regarding the relationship between the enterprise register and the legal unit register. In the CRE, the relationship is a "one to one" relationship. The basic version has a "one to many" relationship between the enterprise and legal unit registers.
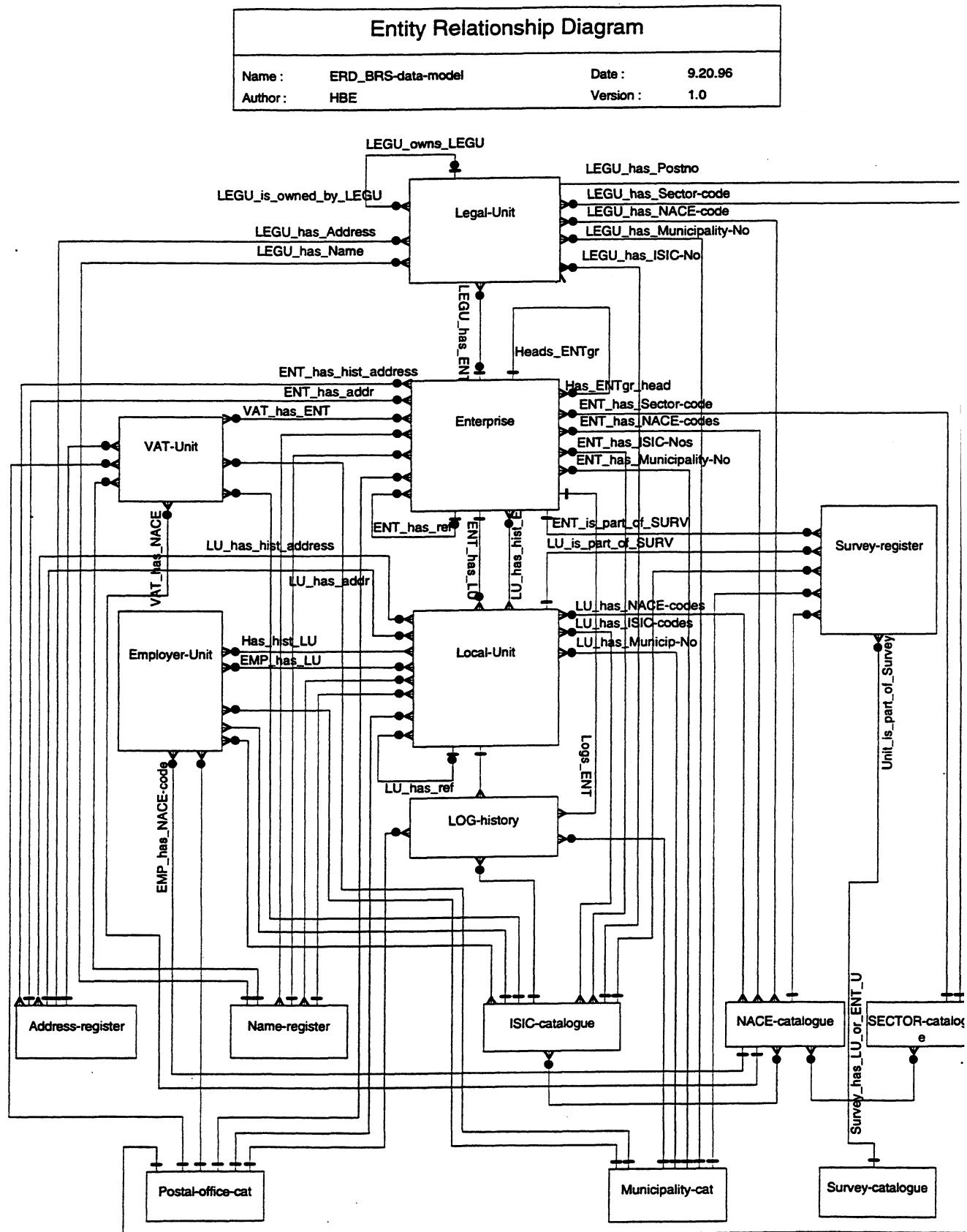
4 The data model of the basic version

The main unit types of the register is pictured in the following simplified datamodel which also covers the main relationships required for the system to comply with the Community Regulation on business registers.
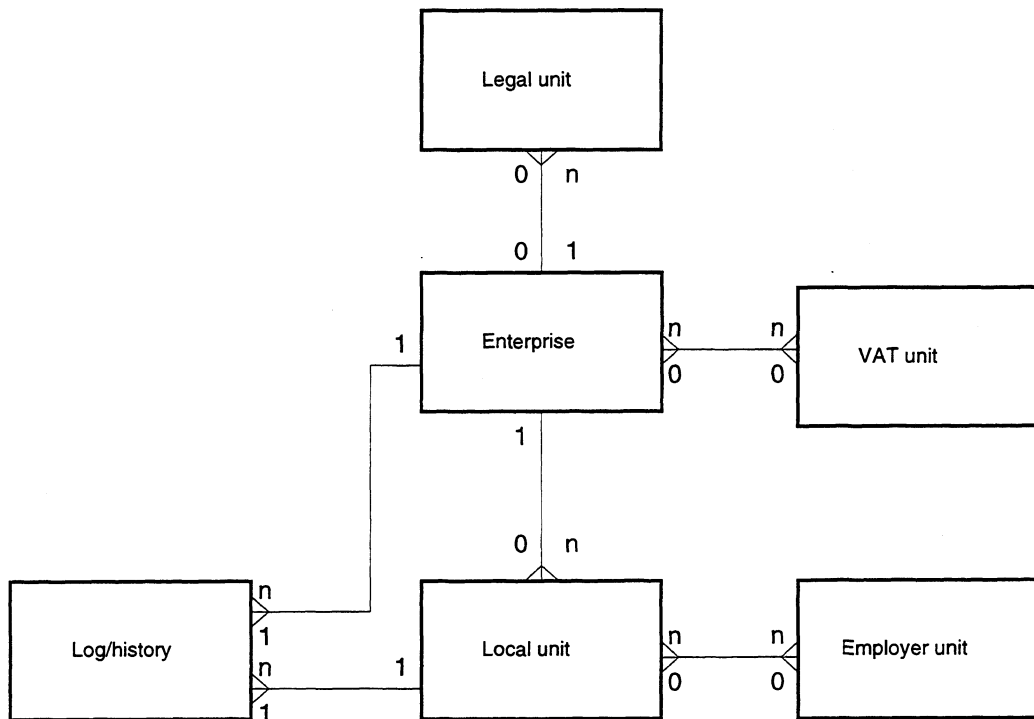
The details of the relationships are described in "Subject matter documentation of the basic version" by Yngve Bergstrøm and Håkon Berby (see annex 1).

A more complete view of the whole underlying database is given below to give a better understanding of the scope of the system. Even this model excludes a few entity types and relationships.

Entity Relationship Diagram

Name :	ERD_BRS-data-model	Date :	9.20.96
Author :	HBE	Version :	1.0

LEGU_owns_LEGU

LEGU_is_owned_by_LEGU

LEGU_has_Address
LEGU_has_Name

Legal-Unit

LEGU_has_Postno
LEGU_has_Sector-code
LEGU_has_NACE-code
LEGU_has_Municipality-No
LEGU_has_ISIC-No

LEGU_has_ENT

Heads_ENTgr

ENT_has_hist_address
ENT_has_addr
VAT_has_ENT

VAT-Unit

Enterprise

Has_ENTgr_head
ENT_has_Sector-code
ENT_has_NACE-codes
ENT_has_ISIC-Nos
ENT_has_Municipality-No

VAT_has_NACE

ENT_has_ref

ENT_has_ENT
ENT_has_LU

ENT_is_part_of_SURV
LU_is_part_of_SURV

Survey-register

LU_has_hist_address

LU_has_addr

LU_has_hist_E

LU_has_NACE-codes
LU_has_ISIC-codes
LU_has_Municip-No

Employer-Unit

Has_hist_LU
EMP_has_LU

Local-Unit

Logs_ENT

Unit_is_part_of_Survey

EMP_has_NACE-code

LU_has_ref

LOG-history

Address-register

Name-register

ISIC-catalogue

NACE-catalogue

Survey_has_LU_or_ENT_U

SECTOR-catalogue

Postal-office-cat

Municipality-cat

Survey-catalogue

4

In addition to the main unit types of the first and simplified data model, the latter and more "complete" data model shows some important code- and name catalogues at the bottom of the diagram, namely.

- Name catalogue
- Address catalogue
- Municipality catalogue
- Postal code catalogue; with link to the municipality catalogue
- NACE catalogue; with link to the ISIC catalogue and sector catalogue
- ISIC catalogue
- SECTOR catalogue (e.g. Norwegian 3 digit version of the institutional sectors)

The name and address catalogues
The name and address catalogues contains the names and addresses of the units of the different register types. Only the numbers of the unit names and addresses are actually contained in the records of the register units. Every data base search, with unit name or address name as search argument, is performed via the name or address catalogues respectively. Together with the actual unit names or address names the catalogues contain a soundex (or phonetic) code of each unit name or address name (e.g. street name). The soundex codes are generated when storing or changing the names in the catalogues. This is done automatically by the system when the user enters or modifies names and/or addresses of the units.

By default the search arguments of the unit names or the address names are converted to soundex code which is subsequently used for the name or the address search in the proper catalogue. The name number(s) or address number(s) found in the respective catalogues are then used for retrieval of the register units of the target register type. The user also have the option of performing a search based on the actual unit name or address name.

The name and address numbers is not be accessed directly by the user. The functions of the system checks the user written names or addresses in the data entry or modification functions. These functions updates the catalogues with new entries only when the written unit name or address does not already exist in the name or address catalogue. If the user enters or modifies a name or an address that is identical to an existing one, the name or address number of the unit record is changed to point to the number of this (already existing) name or address record in the proper catalogue.

The new administrative application mentioned in paragraph 2 above has at present a function for managing incorrect or obsolete unit names. This function is only available for system administrators of a certain authority.
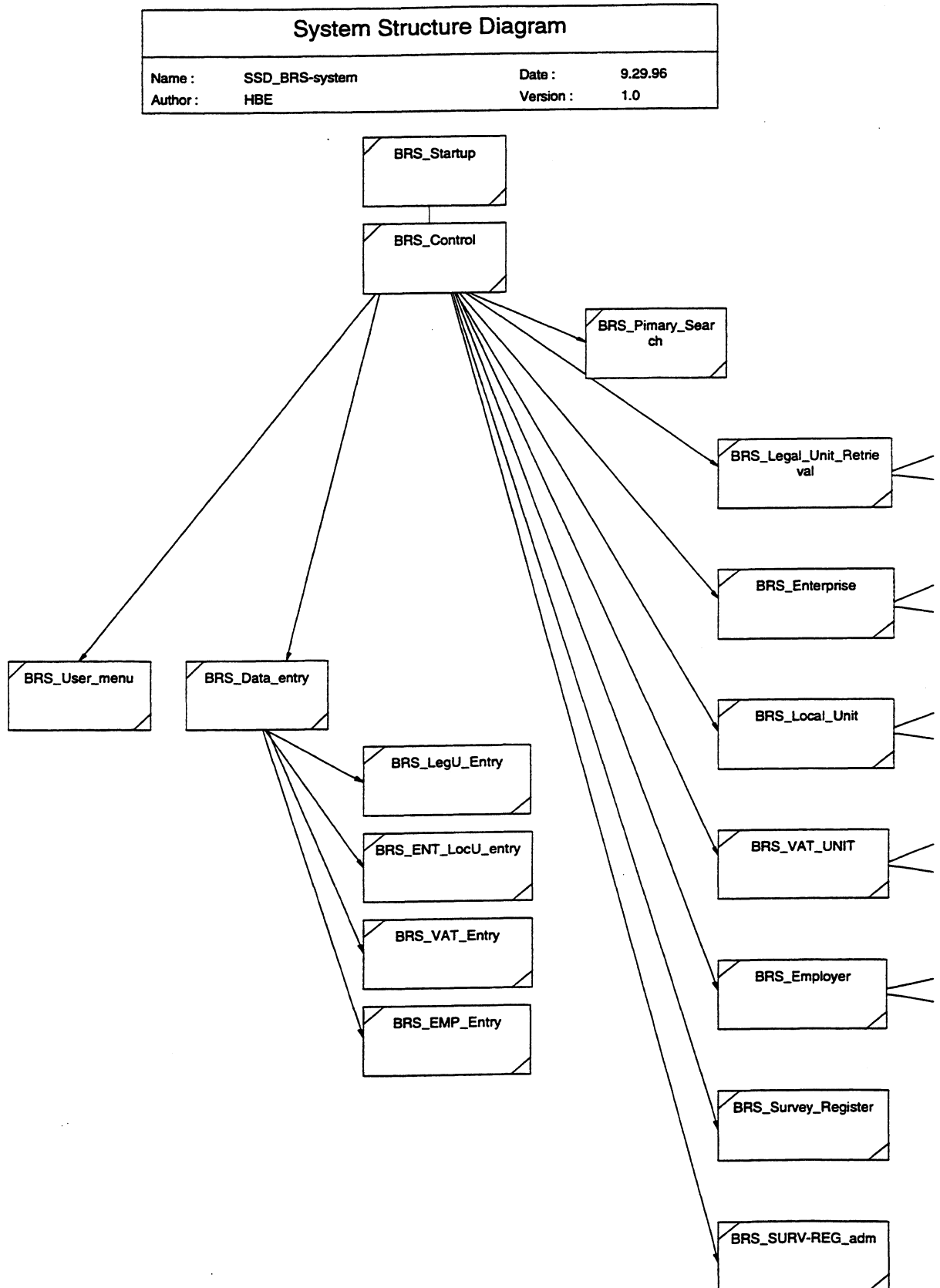
The code catalogues
These catalogues contains codes and texts regarding the regional unit, postal office, activity class and institutional sector. These catalogues are used for checking the correctness of data entered by the user into the screen maps of the system. The texts of the regional catalogues are also displayed on screen together with the regional codes entered by the user.

The user functions for data entry or modification automatically check the codes entered by the user. These functions both perform checks on the correctness of each code and performs cross checks between codes where relevant. The possibilities for such cross checking may be seen in the detailed data model.

5 The application

The following figure gives an overview of the main structure and the main program modules of the application.

System Structure Diagram

| Name : | SSD_BRS-system | Date : | 9.29.96 |
| Author : | HBE | Version : | 1.0 |

BRS_Startup

BRS_Control

BRS_Pimary_Search

BRS_Legal_Unit_Retrieval

BRS_Enterprise

BRS_Local_Unit

BRS_VAT_UNIT

BRS_Employer

BRS_Survey_Register

BRS_SURV-REG_adm

BRS_User_menu

BRS_Data_entry

BRS_LegU_Entry

BRS_ENT_LocU_entry

BRS_VAT_Entry

BRS_EMP_Entry

6

The names of all program modules, pictured above, has been given the prefix of BRS_ (for Business Register System). The remaining part of the names are the actual module names of the application. In the following the prefix will be omitted. The following list contains a short description of the modules:

QPLOGON   Start-up function.
            Sets up standard parameters and starts the main user menu by (i) posting the command of the main data base search facility and (ii) starting the central command handler.

QPDELSYS   The central *command handler*.
            Starts a function depending on an order code posted by another function on a user choice. The order code directs the command handler to start a function that controls the data retrieval, and eventually update, of a given unit type.
            The command handler operates in one modus in the character based basic version (the mainframe compatible) and another modus in the new version with GUI front end:
            i) in the character based version, all other functions is handled within a "REPEAT LOOP" by means of the "FETCH RETURN" command of NATURAL.
            ii) in the new version with GUI front end, the command handler posts its own name into the command stack of NATURAL before it posts the name of the relevant GUI dialogue into the command stack. Thus the command handler gets the control back again as soon as the relevant dialogue is closed (if this dialogue is not posting a new dialogue name on top of the name of the command handler in the stack ....). The following functions are those of the basic character based version operating in the "FETCH RETURN" modus.

OPPRIMAR   The main user menu/data base search facility.
            Controls the main screen map for user specification of search argument and choice of register type for data base search. Based on user action, this function may either:
            • Post a command for data entry via a sub menu and returns to the central command handler (QPDELSYS).
            • Post a command (order code) depending on user specified register type or direct order plus user specified search argument.
                • "Executes" the central function for controlling the data base search (QSSOK) which again calls the actual data base search functions (these are only partly pictured in the diagram).
                • Returns control to the central command handler (QPDELSYS) together with order code and search result.

QSSOK   Calls a data base search function based on a command specifying register type.
            This command may be posted by OPPRIMAR or any other function able to receive a user command. There are one main data base search function for each register type. These functions are contained in the diagram above with the names:
            • YPSOK controls the search for legal units
            • FPSOK controls the search for enterprise units
            • BPSOK controls the search for local units
            • MPSOK controls the search for VAT units
            • APSOK controls the search for employer units
            Based on the search argument of the user, these functions again calls one out of a number of sub functions. The sub functions performs the actual data base search for units of the given register type and post the result into a "result container" in the global data area of the application.
            If any units are found, the content of the result container is, in turn, used by the data retrieval functions of the same unit type to present the found unit(s) for the user.
            If no units are found, a message is returned to the calling function whether it be OPPRIMAR or another function.

TPMENU	Menu that calls a data entry function for a unit type of user choice. Possible data entry functions are:

- TPYPRIM   data entry for legal units
- TPPRIMAR combined data entry function for an enterprise and its local units
- TPMPRIM   data entry for VAT units
- TPAPRIM   data entry for Employer units

YPPRIMAR	Function for data retrieval/maintenance for legal units
FPPRIMAR	Function for data retrieval/maintenance for enterprise units
BPPRIMAR	Function for data retrieval/maintenance for local units
MPPRIMAR	Function for data retrieval/maintenance for VAT units
APPRIMAR	Function for data retrieval/maintenance for employer units
	These functions retrieves found register unit(s) of given type, presenting the found (or selected if more than one) to the user in one out of a set of *sub functions* depending on the users authority. The sub functions are designed to view data or to view and eventually update data depending on user authority. Some of the functions gives users with limited update authority controlled and limited update access.

The functions gets information on the unit(s) found in the data base search in the "result container" in the global data area of the application. The content of the result container is the responsibility of the subfunctions of QSSOK (se above).

Statistisk sentralbyrå
Statistics Norway

Demo system for Business register management on PC for EUROSTAT

User documentation of the "basic version"
By Håkon Berby

1 An overview of the system, the data base and the retrieval functions

The "basic version" is a modified version of the online data base system of the Norwegian "Central Register of Establishment and Enterprises" (CRE). The object of CRE is mainly to manage the population of units of economic activity of the society for statistical purposes. The purpose of the modifications has been to enable the system to comply with the requirements of Council Regulation (EEC) No 2186/93 of 22 July 1993 on Community coordination in drawing up business registers for statistical purposes.

The basic entity types of the register are:
• enterprises,
• the economic active local units of the enterprises and
• the legal units that controls the enterprises.

In addition, the CRE contains copies of the following "external registers":
• the employer Register of the National Insurance Administration (NIA) with aggregated employee data from the employees Register of NIA.
• the VAT Register of the Tax Authority.

The external Registers are updated off line at 14 days intervals.

When using the functions of the system, the user should be familiar with the data model of the "basic version". The following figure gives a view of the relationships between the main statistical unit types, the external unit types and some of the ancillary administrative unit types.
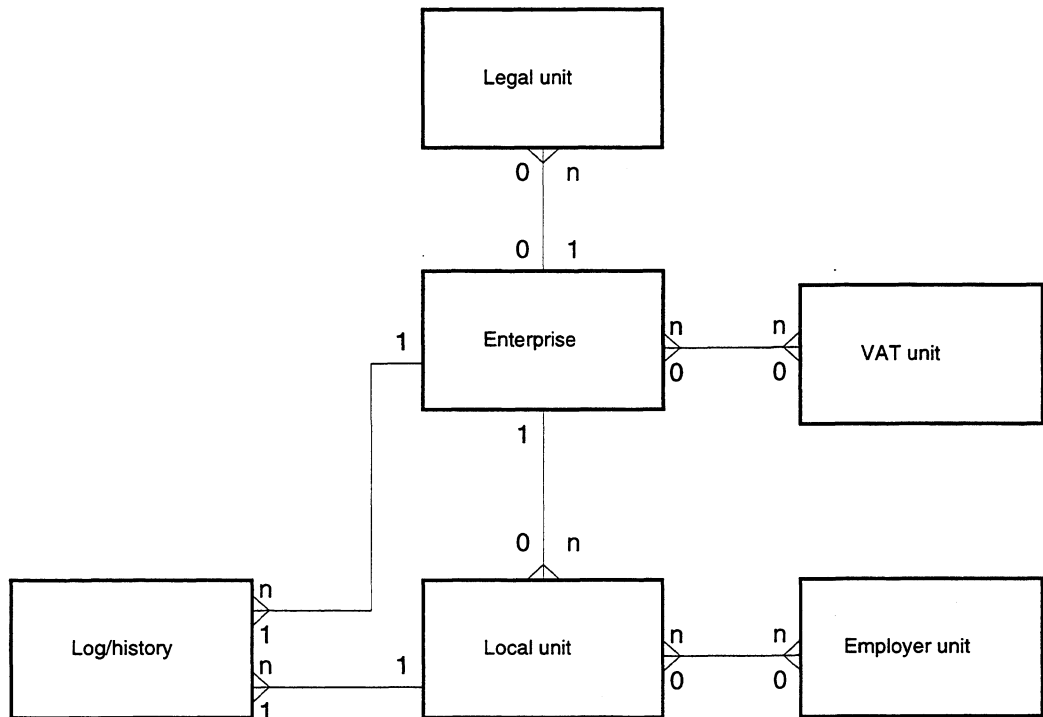
The links in the data base and the functions of the system makes it possible for the user to find any unit of the data base with one of the following search argument:

- Name of the unit,
- Address (e.g. street name) of the unit or
- Identity number of the unit (in combination with Unit type).

If the user has found a unit via the main retrieval function of the system, the user may retrieve any other unit that are linked to this unit; whether the other unit is linked directly to the found unit or indirectly via a unit of another type. For instance, imagine that the user has found an *enterprise* unit. If he/she wants to see any *employer* unit(s) that are linked to one or more of the *local units* of the enterprise, the user may press the "push button" (or function key) marked with an abbreviation for employer (Empl). The "background" functions of the system will then present the user with:

- the employer unit (if only one employer is linked to the local unit(s) of the enterprise) or
- a list of employer units for the user to select a unit for display (if more than one employer unit is linked to the local unit(s) of the enterprise).

2 The data retrieval functions

There are one main user menu (e.g. screen map) for the user to specify the search argument for the data retrieval:

```
┌─────────────────────────────────────────────────────────────────────────┐
│ ═                              B R S                                 ⊠ ⊠ │
├─────────────────────────────────────────────────────────────────────────┤
│ Help                                                                      │
├─────────────────────────────────────────────────────────────────────────┤
│ Map OMPRIM-1           Searching for PRIMARY units        Date 10/12/96   │
│ Dir-cmd. [      ]      Please enter search argument                       │
│                                                                           │
│ Search key's are either name, identity-number or address, with filters:   │
│                                                                           │
│   Name: [EKORNES                                                       ]   │
│         Filters:                                                          │
│         Activity  [   ] [   ] [   ]                                       │
│         Region    [   ] [   ] [   ]   (municipality or county)            │
│         □ Only active units                                               │
│         □ Historical value (only Local Unit or Enterprise)                │
│         □ Exact                                          B=Local unit      │
│                                                          F=Enterprise      │
│   ID-No.: [         ]  In type of register [ ] (B F A N M E D)  A=Employer │
│                                                          N=Legal unit      │
│ Address: [                                   ]           M=VAT unit        │
│         and, if possible, street No. from [    ]         E=Owner           │
│                                       to  [    ]         D=Sub register    │
│                                                                           │
│ For information on search arguments and the system; press <F1>            │
│ You may refresh the screen by pressing <Sh-F7>                            │
├─────────────────────────────────────────────────────────────────────────┤
│ │Enter││Help││Adm││LocU││Ent││New││SubR││Sign││Empl││VAT││Legal││Owner││End││>>│ │
└─────────────────────────────────────────────────────────────────────────┘
```

The user may utilise one of the following *search* arguments:

- Name - by entering a unit name in the name field or
- Address name - by filling in the address field.
- ID No. by entering a valid ID in the ID No. field and one of the valid register (or unit) type fields

Only one of these three options may be used in one search for data.

When using name or address name as search arguments, the user have the following options:

- The search value may be truncated by means of an asterisk (*)
- Name or address search may be executed via a "Soundex" code or via exact values:
  - By *default* the system performs the search via "*Soundex*" Code (e.g. phonetical code).
  - By marking the field named "Exact", the search is performed by means of the exactly written name or address name.
- Name or address search may be executed on the present or "historical value" values of name or address name:
  - By default all search functions is performed on the present values of name or address name.
  - For local units and enterprises: The user may mark the toggle button "Historic" to search for "historical values" of name or address name.
    - By default the search for "historic" values is performed via "Soundex" Code
    - The user may also specify the historic search to be performed on "Exact" values.

Also; when using name or address name as search arguments, the user may additionally specify the following *filter* arguments:

- Regional code. May be used for name or address search.
- Activity code, 1 or more digits (presently ISIC code). May be used for name or address search.
- Address name may be combined with street number(s) as filter variables.

The user must first write the search argument, and eventually the filter values, in the proper fields of the screen map. The user initiates the data base search by pressing the respective *push button* of the register of primary interest. If there is only one unit that meets the specified search criterion (or criteria) this unit is displayed immediately. If more than one unit meets the search criterion/criteria, the user is presented with a list of found units for the user to select one unit for display. The following table gives an overview of available search facilities relative to the different register types of the data base.

Possible search arguments	POSSIBLE SEARCH ARGUMENTS FOR THE UNIT TYPES Register types or historical values						
	LU	Ent	Empl	VAT	Legal	Surv	Hist
Name/address search:							
Name, pres. Soundex..	V	V	V	V	V		
Exact ...	V	V	V	V	V		
Name, hist. Soundex..	V	V	V				
Exact ...	V	V	V				
Address,pres.Soundex..	V	V	V	V	V		
Exact ...	V	V	V	V	V		
Address,hist.Soundex..	V	V	V				
Exact ...	V	V	V				
ID numbers:							
LocUnit No, present ..	V	V	V	V	V	V	V
Historic..			V				
Enterpr No, present ..	V	V	V	V	V	V	V
Historic..	V						
Enterprise group No ..		V					
Employer No,present ..	V	V	V	V	V	V	
Historic..			V				
VAT No.	V	V	V	V	V	V	
Legal Unit No.	V	V	V	V	V	V	

V = Available search function
LU = local unit register
Ent = enterprise register
Empl = employer register
VAT = VAT register
Legal = legal unit register
Surv = survey administration register
Hist = historical values for LU or enterprise

3 Functions for presentation of the retrieved data

If the retrieval function finds more than one unit in the actual register, the user is presented a list of units for selection of one unit to be displayed. The list will always contain the name of the units and some details varying in content depending on the register at hand. The list is scrollable by means of push button or function key and the user may select a unit of interest by cursor positioning and then a double-click with the mouse or pressing the <Enter> key.

The following figure is an example of such a selection list with units of the local unit register of the test data base on PC.
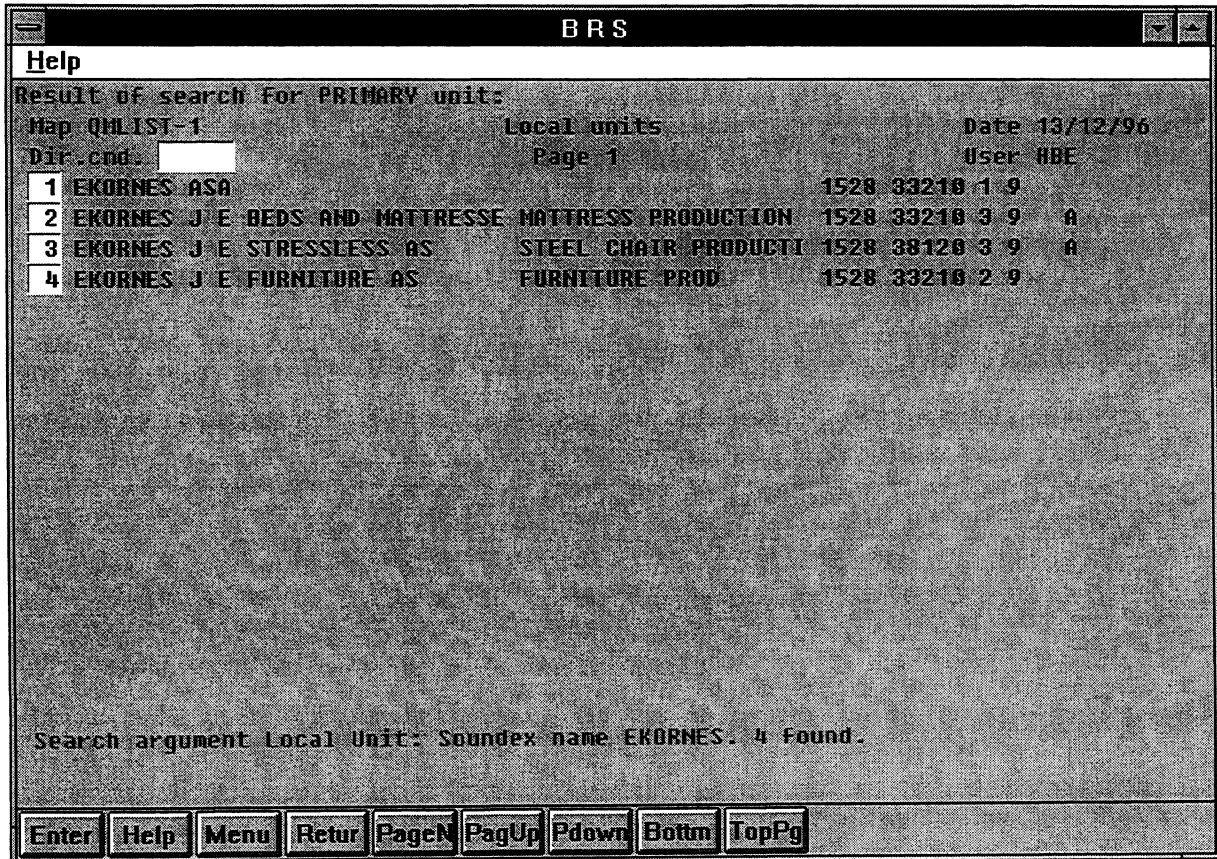
When choosing a unit in the list, or if only one unit is found, the "basic version" displays the selected or found unit. The following figure gives an example of this by means of the local unit.

The figure is representative for the way the units of the registers is displayed. Each screen shows the selected/found unit at the top part ("primary window") of the screen. In the lower part ("secondary window") of the screen, a linked "secondary unit" of another register type is displayed. The default combination of primary and secondary units is as follows:

Unit type in primary window	Linked unit type in secondary window
local unit	enterprise unit
enterprise unit	local unit
legal unit	enterprise unit
VAT unit	enterprise unit
employer unit	local unit

The user *may swap* the contents of the primary and secondary windows so that the original "secondary" unit is displayed in the primary window and the original "primary" unit is displayed in the secondary window. The system also contains functions to search for a unit from another register than the default one to be displayed in the secondary window. This functionality also gives the possibility of finding and displaying another unit of the same unit type as the unit in the primary window for display in the secondary window. For instance another local unit than the LU in the primary window may be displayed in the secondary window (and swappable with the unit in the primary window). Thus, the user may compare a unit in the primary window with any unit in another register or in the same register search for and displayed in the secondary window.

The default secondary units are retrieved by links via ID-No; eventually via a list of units for user selection if more than one unit is linked to the primary one. The user may call a different secondary unit by pressing a push button/function key dedicated for secondary search in the register type of interest. The user may also search for *non-linked secondary units* via push-button/function key (order code <+SPØR>).

4 Functions for updating existing units and entering new register units

Provided proper authority definition for the user, he/she may update existing units and enter new register units into the data base.

Updating
The user may update the contents of the unit in the primary window. Since the secondary window is displayed primarily for information purposes, update of the secondary in the secondary window is not possible. To make the unit in the secondary window available for update purposes, the user will have to swap the contents of the primary screen with the secondary screen; *thus making the unit in the secondary window the primary one.*

If the update of the primary unit calls for update of other linked units, this will be done automatically, in some cases after user choice, by internal functions of the system.

Data entry
There are 2 functions for entering new enterprise units and local units into the data base, one *general* and one *special*. Both of these functions utilize the same combined data entry form covering both the enterprise and the local unit.

The general data entry function of the enterprise and local unit is started manually:

- From the main search function screen. In this case the data entry form is empty.
- From one of the register maps of any register type. In this case the enterprise part of the data entry form is initially populated with data from the enterprise (if the unit of the unit of the primary window is an enterprise) or the linked enterprise (if an enterprise is linked to the "non-enterprise" unit in the primary window).

By the general data entry function the user may enter:

- a new enterprise without local units
- a new enterprise with one or more local units
- (a) new local unit(s) for an existing enterprise.

The special function is started automatically when the ID No. of the linked enterprise of a local unit is deleted (e.g. "blanked out") on update of the local unit and facilitates:

- the entry of a *new enterprise* for an *existing local unit* (e.g. a "takeover" or a partial production transfer to a not previously existing enterprise).

When entering the special data entry function, the local unit part is initially populated with data from the local unit that were released from its former parent enterprise by removing the ID No. of the formerly linked enterprise of the local unit.

When the data entry operation is completed, the new ID-No. of the newly entered enterprise is automatically linked to the local unit that initiated the entry of the new enterprise.

If the 'old' parent enterprise of the local unit was a 'one local unit' enterprise, the user will have to decide whether the old parent enterprise should maintain its status as active or be the subject of cessation.

When using the combined data entry form of the enterprise and the local unit, the user may:

- retrieve the data of an existing enterprise to facilitate the entry of (a) new local unit(s),
- collect data from another register (VAT- or employer register) as basis for data entry or
- delete the contents of the data entry form to be able to start the data entry from scratch.

5 Navigation between, and operations on, the register units

Order codes

Internally the system uses order codes to navigate and execute the various functions. Externally the user in most cases may use the push buttons of the user interface or the function keys to tell the system what he/she wants to do. The system automatically posts the correct order code of the push button/function key into an internal order code analyser which executes the function relevant to the order code. The user may also use these order codes manually via the order code field available on the top of the screen maps. Some special functions is only available through the manual use of order codes.

> *NB! The manual use of these order codes will not be available in the new graphical interface to be developed in the third phase of the project. All functions which is being made available in this interface will be part of a set of pull-down menus or push buttons of the graphical user interface. Because of this there will not be given a* <u>complete</u> *documentation of all order codes.*

The system contains a global function for information on the order codes. Global means that it is not context sensitive. You get information on all order codes whether they are relevant to the function from which the help function was invoked, or not.

You enter the function by typing a < ? > in the order field of the screen maps. The function contains a menu with access to a set of information screens. Each information screen is dedicated to a specific set of order types.

There is a possibility of transferring an order code from the help screen maps to the screen map from which the help function was invoked. Just like the help function itself, he transfer function is global, which implies:

- No check of relevance to the originating user dialogue or map is performed.
- The check is only performed when issuing the command in the map (by pressing the <Enter> key with the order code in the order field of the screen map).

Users with proper authority may enter an administrative part of the system with functions for maintaining the content of administrative catalogues and classification catalogues. This system contains a catalogue of all order codes. These order codes reflects their origin in the Norwegian language. However: for every order, the administrator may enter (a) synonym(s) of the order code. This facilitates the entry of a set of order codes specifically tailored for several user languages.

Push buttons and function keys

The CRE was originally developed with the major user functions addressable by means of *function keys*. In the "basic version" (on the Windows platform) the "enabled" function keys are "beautified" and displayed (with assigned text) as push buttons of the graphical user interface. They are actually also used as push buttons via point and click with the mouse. Alternatively the original function keys may still be used.

There are both "global" and "local" push buttons/function keys.

The global push buttons/function keys has the same functionality in all relevant screen maps. They represent all actual orders available in the different screen maps. In the figure below an overview of the main keys is shown together with a short textual explanation and the respective order codes:

```
Order
code    F-key   Explanation
-----   -----   -------------------------------------------------------------
Hjelp / F1   : General HELP-information available in all functions
Spørr / F2   : Return to the main search screen map
Bedr  / F3   : Search for Local unit(s)
Ftak  / F4   : Search for enterprise unit(s)
Tilg  / F5   : Function for entering new enterprises and/or local units
Delr  / F6   : Search for enterprise/Local unit(s) of Sub registers
Kvit  / F7   : Routine for adm. of response/nonresponse of survey questionnaires
Arbg  / F8   : Search for Employer unit(s)
MOMS  / F9   : Search for VAT unit(s)
Nyfr  / F10  : Search for Legal unit(s)
Eier  / F11  : Search for Owners of VAT unit(s) in the VAT register
Retur / F12  : Return TO or FROM list/function or to main search screen map
```

The *local* push buttons/function keys are assigned to the most common orders relevant to each unit type screen map. The orders are assigned to different keys *depending on screen map/unit type*. The following list shows the correspondence between order and key in different contexts.

Unit type	F13	F14	F15	F16	F17	F18	F19	F20	F21	F22	F23	F24
			Function keys and their assigned order codes									
Local Unit	Korr	Endr	Bytt	BediF	+Ftak	+Moms	Forr	Neste	+Nyfr	+Arbg	Hist	Bryt
Historic.LU			Bytt	BediF	+Ftak	+Moms	Forr	Neste	+Nyfr	+Arbg		
Enterprise	Korr	Endr	Bytt	+Bedr	Bedh	+Moms	Forr	Neste	+Nyfr	+Arbg	Hist	Bryt
Hist.Enterp			Bytt	+Bedr	Bedh	+Moms	Forr	Neste	+Nyfr	+Arbg		
Survey reg.	Korr	InF	Bytt	+Bedr	+Ftak	+Hist	Forr	Neste	Skj	InB	Hist	Bryt
Hist.Survey	Korr	Endre	Bytt	+Bedr	+Ftak	+Hist	Forr	Neste	+Nyfr	+Arbg		Bryt
Employer		Endre	Bytt	+Bedr	+Ftak	+Moms	Forr	Neste	+Nyfr	+Arbg	+Eier	
VAT reg.			Bytt	+Bedr	+Ftak	+Moms	Forr	Neste	+Nyfr	+Arbg	+Eier	
Legal Unit			Bytt	+Bedr	+Ftak	+Moms	Forr	Neste	+Nyfr	+Arbg	+Eier	
Journal							Forr	Neste				
Unit lists						Side	Forr	Neste	Siste	Begyn		
Search							Blank					
New Ent/LU	KopiF	Godkj	KopiB	+Bedr	+Ftak	+Moms	Blank	KopiN	+Nyfr	+Arbg	KopiM	Bryt
Sign		Godkj					Blank					Bryt

The function keys F13 trough F24 is obtained by pressing <shift - F1 trough F12>

In the user interface of Windows the function keys are displayed as push buttons with text. The user therefore do not need to know the underlying order codes (in their original Norwegian version or eventually their synonyms in an other language entered into the order code catalogue).

In the new GUI based version to be developed in the third phase of the project, the use of order codes by the user will not be present. No attemt has therefore been made to make any english versions of the set of order codes.

6 Help functions

The CRE system has 2 types of help functions, *global* and *field oriented* help functions.

The *global* help functions gives information on the DSB system in general and is available from all major screen maps of the CRE system via function key F1 (push button named "Help" in the Windows interface of the "basic version") or the <help> command. The global functions gives general information irrespective of where you are in the system. Each function returns automatically to the previous menu. You may terminate any general help function screen by pressing the F12 function key (or the push button marked <Retur> in the Windows interface of the "basic version"). Detailed information on the individual fields are subject to the same limitation as described for the field oriented help functions described below.

The *field oriented* help functions depends on the availability of the PREDICT meta data system. This is only possible if the data base of the "basic version" is located on a server with PREDICT or when the "basic version" itself is running on a proper UNIX, mainframe or other platform with PREDICT. This is not the case when using a local data base on the Windows 3.1 or 3.11 platform.

With access to Predict, and the proper (and updated) metadata base of the CRE available, the following possibilities exist:

- For fields that are open for modification by the user, the help functions are available by entering a question mark (**?**) in the first position of the field of interest. The system will then display a text window explaining the meaning (eventually the code set) of the field.
- For non modifiable fields, the user may get this information via a datamodel to be found in the global help function or via the direct order code <META> (in the order code field on top of each screen map).

In the new GUI based version to be developed in the third phase of the project, the help functions above will be replaced by a a "normal" Windows based hypertext help function.

Demo system for Business register management on PC for EUROSTAT

The Council regulation on business registers

The following pages contain a copy of the Council Regulation on business registers for statistical purposes. The copy is taken from the "Official Journal of the European Communities" No L 196/1 5.8.93.

I

(Acts whose publication is obligatory)

COUNCIL REGULATION (EEC) No 2186/93

of 22 July 1993

on Community coordination in drawing up business registers for statistical purposes

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 213 thereof,

Having regard to the proposal from the Commission,

Whereas the Single Market increases the need to improve statistical comparability in order to meet Community requirements ; whereas, in order to achieve that improvement, common definitions and descriptions have to be adopted for enterprises and other relevant statistical units to be covered ;

Whereas registers should be drawn up and updated in order to be able to collect information on these units ;

Whereas there is a growing need for information on the structure of enterprises, a need which current Community statistics are not able to meet ;

Whereas business registers for statistical purposes are a necessary tool in keeping track of the structural changes in the economy brought about by such operations as joint ventures, partnerships, buy-outs, mergers and takeovers ;

Whereas the important role played by public undertakings in the national economies of the Member States has been acknowledged, particularly in Commission Directive 80/723/EEC (¹), Article 2 of which also defines such undertakings ; whereas they should therefore be identified in business registers ;

Whereas some statistics are not currently available, particularly in sectors with many small and medium-sized enterprises (SMEs), such as services, because a register of these enterprises for statistical purposes does not exist ;

Whereas business registers are one element in reconciling the conflicting requirements for increased information on enterprises and lightening their administrative burden, in particular by using existing information in administrative and legal registers, especially in the case of SMEs, pursuant to recommendation 90/246/EEC (²) ;

Whereas business registers for statistical purposes represent a basic element of systems of information on enterprises, making it possible to organize and coordinate statistical surveys by providing a sampling base, possibilities of extrapolation and means of monitoring the replies from enterprises, in particular those covered by Directives 78/660/EEC (³) and 83/349/EEC (⁴) ;

Whereas the setting-up of a new statistical collection system covering trade in goods and services between Member States necessitates a register of those persons required to give information ; whereas it is desirable to derive that register of persons required to give information from a central register of enterprises used for statistical purposes ;

Whereas the business registers for statistical purposes are at a different stage of development in each Member State ; whereas the long and costly development of these registers can be carried out only in two stages, the first of which must relate to harmonization of the basic units in those registers in accordance with an established timetable,

---

(¹) Commission Directive 80/723/EEC of 25 June 1980 on the transparency of financial relations between Member States and public undertakings (OJ No L 195, 29. 7. 1980, p. 35). Directive as amended by Directive 85/413/EEC (OJ No L 229, 28. 8. 1985, p. 20).

(²) Council recommendation 90/246/EEC of 28 May 1990 relating to the implementation of a policy of administrative simplification in favour of small and medium-sized enterprises in the Member States (OJ No L 141, 2. 6. 1990, p. 55).

(³) Fourth Council Directive 78/660/EEC of 25 July 1978 based on Article 54 (3) (g) of the Treaty on the annual accounts of certain types of companies (OJ No L 222, 14. 8. 1978, p. 11). Directive as last amended by Directive 90/605/EEC (OJ No L 317, 16. 11. 1990, p. 60).

(⁴) Seventh Council Directive 83/349/EEC of 13 June 1983 based on Article 54 (3) (g) of the Treaty on consolidated accounts (OJ No L 193, 18. 7. 1983, p. 1). Directive as last amended by Directive 90/605/EEC (OJ No L 317, 16. 11. 1990, p. 60).

HAS ADOPTED THIS REGULATION:

Article 1

Aims

Member States shall set up for statistical purposes one or more harmonized registers with the definitions and scope specified in the following Articles.

Article 2

Definitions

1. For the purposes of this Regulation:

(a) 'legal unit' shall mean a legal unit as defined in Section II.A.3 of the Annex to Regulation (EEC) No 696/93 (¹);

(b) 'enterprise' shall mean an enterprise as defined in Section III.A of the Annex to that Regulation.

Hereinafter the connection between the enterprise and the legal unit shall be expressed as follows:

— the enterprise is attached to one or more legal units, and

— the legal unit is responsible for the enterprise;

(c) 'local unit' shall mean a local unit as defined in Section III.F of the Annex to Regulation (EEC) No 696/93.

Hereinafter the connection between the local unit and the enterprise shall be expressed as follows:

— the local unit is dependent on an enterprise.

2. This Regulation shall apply only to units which exercise wholly or partially a productive activity.

Article 3

Scope

1. In accordance with the definitions given in Article 2 and subject to the limitations specified in this Article, registers shall be compiled of:

— all enterprises carrying on economic activities contributing to the gross domestic product at market prices (GDP),

— the legal units responsible for those enterprises,

— the local units dependent on those enterprises.

This requirement shall not, however, apply to households:

— in so far as the goods they produce are for their own consumption,

— in so far as the services they produce involve the letting of own or leased property (group 70.2 of the

statistical classification of economic activities in the European Community (NACE Rev. 1) established by Regulation (EEC) No 3037/90 (²)).

The inclusion of:

— enterprises the main activity of which falls within Section A, B or L of NACE Rev. 1,

— legal units responsible for them,

— local units dependent on them,

shall be optional.

The extent to which small enterprises of no statistical importance to the Member States are to be included on the registers shall be decided under the procedure laid down in Article 9.

2. The enterprises, legal units and local units referred to in paragraph 1 shall be registered in accordance with the timetable set out in Annex I.

3. Separate registration of legal units shall be optional, provided that the total content of information for such units is included in the register entry for enterprises.

The rules for such registration shall be adopted in accordance with the procedure laid down in Article 9.

Article 4

Register characteristics

The units listed in a register shall be characterized by an identity number and the descriptive details specified in Annex II.

Article 5

Updating

1. The following shall be updated at least once a year:

(a) entries to, and removals from, the register;

(b) the variables set out in points (b) and (f) of Annex II (1);

(c) for units which are the subject of annual surveys, the variables set out in points (b), (c), (d), (e) and (h) of Annex II (3) in so far as those variables are included in the surveys.

As a general rule, information obtained from administrative files or annual surveys shall be updated annually, other information being updated every four years.

2. At the end of the first quarter of each calendar year, Member States shall make a copy of the register as it stands on that date and keep that copy for 10 years for the purpose of analysis.

(¹) Council Regulation (EEC) No 696/93 of 15 March 1993 on the statistical units for the observation and analysis of the production system in the Community (OJ No L 76, 30. 3. 1993, p. 1).

(²) OJ No L 293, 24. 10. 1990, p. 1.

Article 6

Access to information

When the Commission so requests, after obtaining the opinion of the Committee provided for in Article 9, Member States shall carry out statistical analyses of the registers and transmit the results, including the data declared confidential by the Member States pursuant to national legislation or practice concerning statistical confidentiality, in accordance with Council Regulation (Euratom, EEC) No 1588/90 of 11 June 1990 on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities (').

Article 7

Access to administrative or legal registers

Each national statistical institute shall be authorized to collect for statistical purposes information covered by this Regulation which is contained in the administrative or legal files compiled on its national territory, in accordance with the conditions determined by national law.

Article 8

Implementing rules

The rules for implementing Articles 3, 4, 5 and 6 and Annexes I and II, as well as the measures required to adapt those rules and any derogations from Articles 3, 4 and 5 or from the Annexes, shall be adopted in accordance with the procedure laid down in Article 9.

Article 9

Procedure

1. The Commission representative shall submit to the Statistical Programme Committee set up by Decision 89/382/EEC/Euratom (²) a draft of the measures to be adopted. The Committee shall deliver its opinion on that draft within a time limit which the chairman may lay down according to the urgency of the matter. The Committee shall deliver its opinion by the majority laid down in Article 148 (2) of the Treaty for the adoption of decisions which the Council is required to take on a proposal from the Commission. The votes of the representatives of the Member States within the Committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

2. (a) The Commission shall adopt measures which shall apply immediately.

   (b) However, if the measures are not in accordance with the opinion of the Committee, they shall be communicated by the Commission to the Council forthwith. In that event, the Commission shall defer application of the measures on which it has decided for three months from the date of such communication.

The Council, acting by a qualified majority, may take a different decision within the time limit laid down in the foregoing subparagraph.

Article 10

Commission report

Within four years of the date of adoption of this Regulation, the Commission shall submit a report to the Council on the implementation of the Regulation which may be accompanied by suitable proposals taking into account the experience gained.

Article 11

This Regulation shall enter into force on the 20th day following its publication in the *Official Journal of the European Communities.*

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 22 July 1993.

For the Council

The President

M. OFFECIERS-VAN DE WIELE

(') OJ No L 151, 15. 6. 1990, p. 1.

(²) OJ No L 181, 28. 6. 1989, p. 47.

ANNEX I

Timetable for registration in the register

The enterprises defined in Article 2 and registered in conformity with Article 3 shall be entered in the register before 1 January 1996. Legal and local units shall be allowed an extra year.

ANNEX II

Identity number and descriptive details

1. The register entry of a legal unit shall contain the following information:

    (a) identity number;

    (b) name, address (including postcode), and optionally: telephone, electronic mail and fax numbers and telex address;

    (c) requirement for the legal unit to publish its annual accounts (Yes/No);

    (d) date of incorporation for legal persons or date of official recognition as an economic operator for natural perrons;

    (e) date on which the legal unit ceases to be legally responsible for an enterprise;

    (f) legal form of the unit;

    (g) name and address of any non-resident legal unit, other than a natural person, which controls the legal unit (optional);

    (h) identity number of the legal unit in the register which controls the legal unit (optional);

    (i) character of 'public undertaking' of the legal unit within the meaning of Commission Directive 80/723/EEC (¹) (Yes/No) (for legal persons only);

    (j) reference to other associated files, including customs files, in which the legal unit is recorded and which contain information which can be used for statistical purposes;

    (k) reference to the register of intra-Community operators drawn up in accordance with Council Regulation (EEC) No 3330/91 of 7 November 1991 on the statistical relating to the trading of goods between (²).

2. The record of a local unit shall contain the following information:

    (a) identity number;

    (b) name, address and other identifying information as set out in paragraph 1 (b) of this Annex;

    (c) activity code at the four-digit (class) level of NACE Rev. 1;

    (d) secondary activiites, if any, at the four-digit level of NACE Rev. 1 (optional);

    (e) size of labour force, as indicated in paragraph 3 (e) of this Annex;

    (f) date of commencement of the activities' the codes of which are given in (c);

    (g) date of final cessation of activities;

    (h) geographical location code (territorial units);

    (i) reference to associated registers in which the local unit appears and which contain information which can be used for statistical purposes;

    (j) identify number in the register of the enterprise on which the local unit is dependent;

    (k) activity carried out in the local unit constituting an ancillary activity of the enterprise on which it depends (Yes/No).

3. The record of an enterprise shall contain the following information:

    (a) identify number;

    (b) identity number(s) of the legal unit(s) legally responsible for the enterprise;

    (c) activity code of the enterprise at four-digit (class) level of NACE Rev. 1 in which the principal activity or all the activities of the enterprise is or are included;

(¹) OJ No L 195, 29. 7. 1980, p. 35.
(²) OJ No L 316, 16. 11. 1991, p. 1. Regulation as amended by Regulation (EEC) No 3046/92 (OJ No L 307, 23. 10. 1992, p. 27).

(d) secondary activities, if any, at NACE Rev. 1 four-digit level, if they amount to 10 % of the total for all activities of the gross value added at factor cost for each or account for 5 % or more of national activity of this type; this point concerns only enterprises which are the subject of surveys;

(e) size : measured by the number of persons occupied or, failing that, by allocation to one of the following classes according to the number of persons occupied : 0 ; 1 ; 2 ; 3 to 4 ; 5 to 9 ; 10 to 19 ; 20 to 49 ; 50 to 99 ; 100 to 149 ; 150 to 199 ; 200 to 249 ; 250 to 499 ; 500 to 999 ; 1 000 ; above 1 000, the number of thousands ;

(f) date of commencement of activities of the enterprise ;

(g) date of final cessation of activities of the enterprise ;

(h) net turnover from sale of goods and services (except for financial intermediaires); falling that, allocation to a size class defined as follows (in millions of ecus) : [0, 1]; [1, 2]; [2, 4]; [4, 5]; [5, 10]; [10, 20]; [20, 40]; [40, 50]; [50, 100]; [100, 200]; [200, 500]; [500, 1 000]; [1 000, 5 000]; 5 000 + (optional for turnover not exceeding ECU 2 million);

(i) net assets (assets after allowing for depreciation less liabilities — financial intermediarieds only (optinal).

Demo system for Business register management on PC for EUROSTAT

Contract on phase 1 and 2 of the project

The following pages contain a copy of the contract between Eurostat and Statistics Norway on the development of the demo system for business register management.

SURVEY CONTRACT

The European Community, represented by the Commission of the European Communities, hereinafter referred to as "the Commission", which for the purposes of the signature of this contract is represented by Mr. Yves Franchet, Director-General of the Statistical Office of the European Communities,

of the one part,

and

STATISTICS NORWAY

with its registered office at

**Kongsgata. 6
N - 0033 - OSLO 1**

hereinafter referred to as "the Contractor",

represented by :

M. Svein LONGVA, Director-General

of the other part,

have agreed the following:

Article 1 - Subject of the contract

Within the framework of the implementation of the Council Decision 92/421/EC of 13 July 1992 and taking into account the statistical programme 1993-1997 of the Statistical Office of the European Communities, the contractor will undertake the setting up of the database on business register to Windows / Unix for Eurostat as mentionned in the work programme provided in annex I.

Article 2 - Duration

The tasks assigned to the contractor shall be completed no later than 12 months.

Article 3 - Reports and documents

The contractor shall submit the results and reports to the Commission in conformity with the work programme and guidelines set out in annex 1.

Article 4 - Payment

In consideration of the services provided under this contract, the Commission undertakes to pay the Contractor the flat-rate sum of 42.750 ECU (forty two thousand seven hundred and fifty ECU), according to the following procedure:

- 30% after signature of the contract

- 30% six months after the signature of the contract and acceptance by the Commission of an interim report of the progress of the work conducted .

- 40% after acceptance of the results by the Commission.

Payment shall be made, on production of invoices, within 60 days of receipt of the request for payment into account :

n° 8200 0132450
Sparebanken NOR, Kirkegaten 18, N-0153 OSLO

The payments shall be deemed to have been made on the date on which they are debited to the Commission's account.

Article 5 - General conditions and applicable law

This contract shall be governed by Norwegian law.

Article 6 - Legal competence

Any dispute between the Commission and the Contractor or any claim by one party against the other under this contract which cannot be settled by the contracting parties out of court shall be brought before the **Norwegian** courts.

Article 7 - Administrative provisions

Any amendment to this contract shall be the subject of a written supplementary agreement concluded on the same terms as the contract. Verbal agreements shall not be binding on the contracting parties.

All communications relating to this contract shall be made in writing and in duplicate - with the Eurostat file Number - 56620009 - and sent to the following addresses :

For the Commission

Statistical Office of the European Communities
for the attention of **Mr. Ph. Nanopoulos, Director**
Directorate D
Office C5/038
Jean Monnet Building
Rue Alcide de Gasperi
L-2920 Luxembourg

Address for the payment
Commission of the European Communities
Statistical Office of the European Communities
For the attention of Mr. Sobrino - Vazquez, Head of unit C2, office B3/034
Jean Monnet Building
rue Alcide de Gasperi
L-2920 Luxembourg.

For the Contractor

STATISTICS NORWAY
For the attention of Mr. Nils HAVARD LUND, Head of Industrial Statistics Department
Oterveien 23
Postboks 1260
N-2201 Kongsvinger

Article 8 - Provisions relating to taxation

Pursuant to the provisions of Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities, the Commission is exempt from all taxes and dues, including value-added tax, on its financial contribution under the contract. As regards the application of Articles 3 and 4 of the said Protocol, the Contractor shall comply with the instructions of the Commission.

The Contractor shall not be subject to VAT.

Article 9 - Annex

The following document is annexed to this contract and forms an integral part thereof :

Annex 1 : Working programme

Done at Luxembourg, **2 9 NOV. 1995**
in duplicate,
in English
and initialed on each page by all the contracting parties

Read and approved

For the Contractor,   For the Commission,

S. LONGVA   **Y. FRANCHET**
Director-General   Director-General

                                                       p.p. Ph. NANOPOULOS
                                                          Director

ANNEX 1

Working programme

The aim of the work programme is to develop a database that satisfies the requirements for harmonized registers inside the Community and make it possible to simulate register management according to the two Regulations that have been adopted in the field of Business Registers:

- The Council Regulation (EEC) N° 696/93 on the statistical units for observation and analysis of the production system in the Community and
- The Council Regulation N° 2186/93 on Community Coordination in drawing up Business registers for statistical purposes.

The data base will be based on the conversion of Statistics Norway's Business Register System which is realized in the Natural/ADABAS on an IBM- compatible (MVS) platform. The plan is based on porting the system to natural /ADABAS on the Windows platform in such a way that it will be compatible across Windows and UNIX (as well as MVS et. al.).

Statistics Norway plans to split the development of the PC-version in three phases. THe programme only covers the first two phase of the development of the PC-version.

The first phase is planned to cover the "basic version" of an application for demo/discussions with Eurostat.
The second phase is planned to cover completion and documentation of the basic version:

Detail of the work plan

Phase 1:
- Conversion of existing application programs   2 weeks
- Translation of basic version to english language (i.e.   3.5 weeks
Screen maps and users messages).
- Functions for updating "external" registers   2 weeks
- Documentation of results of phase 1 for evaluation   0.5 weeks
- Evaluation of phase 1, incl. decision on phase 2   0.5 weeks

Phase 2:

- Establish data part of demo version   2 weeks
- Develop/document examples on units in data base   1 week
- Subject matter documentation   3 weeks
- System documentation (data and application model)   1 week
- User documentation on line system   8 weeks
- Evaluation of phase 2, incl. decision on phase 3   1 week

The final report should be submitted 12 months after the signature of the contract.
The final product (the software compatible across Windows and UNIX described below) will be the property of the Commission and it will be used for didactic puposes.

Recent publications in the series Documents

Documents

B *Returadresse:*
Statistisk sentralbyrå
Postboks 8131 Dep.
N-0033 Oslo

Statistisk sentralbyrå
Statistics Norway