The LEPDB service was established for the management of data concerning the LEP 'main-ring' construction, for example, planning data, equipment test data, machine components, etc. Applications have been developed mainly by members of the groups requiring database facilities, many of whom had no previous programming experience.

ORACLE proved to be a very effective tool both for developing applications and for data management. As the need arose facilities of a more 'administrational' nature were developed, such as software for managing inventories, office space and key allocations, budget planning and personnel data.

1. PERSONNEL AND SPACE/KEY ALLOCATION MANAGEMENT

A-M. Mercier/LEP
J. Schinzel/LEP

Several applications have been developed for Divisional administration. These include facilities to enter personnel data and to manage the allocation and description of office and laboratory space as well as keys. The data includes

- CERN personnel data (9000 records) - public data
- Locality descriptions (560 records)
- Locality categories (90 records)
- Key data (2400 records)

1.1 LEP personnel data

NAMELIST contains a list of staff employed by CERN as well as external staff working for CERN who require a name abbreviation code in LEPDB applications. The data is transferred weekly from the ADP computer into a temporary table. Non-LEP personnel data are updated from this list.

The data concerning LEP personnel is the responsibility of the LEP Secretariat. Data is entered using formatted screens displayed on the terminals supplied with the Philips Office System. The terminals are connected to the
LEPDB VAX via INDEX. The data is output to the standard multi-leaf forms on the Philips printer and hence sent to the Personnel, Internal Mail and Security Offices. The screens provide forms for entering new personnel data and for updating the Group, office/laboratory and phone number(s) of each member of the Division. Job categories and external phone numbers are also entered.

Each person may be assigned a unique four character name code. This name code is used to identify responsibilities in most LEPDB applications. Data concerning staff who have left CERN, but who have been allocated a name code are tagged as 'departed'. However the entries in the database are left in the table to ensure that name codes are unique. The data includes:

- Identification code (secure)
- Name / Firstname
- Division code / Group code
- Detached Division and Group codes
- Phone number(s)
- Bleep number
- Office location
- Job category
- External telephone number

There have been urgent requests for date of birth and nationality.

1.2 Location definition data

Locations, for example offices, laboratories, etc. are identified by the building number, floor, room, category and surface area. The data includes which type of terminal or micro computer is installed (if any), the terminal link, telephone number, key cylinder number and the Division/Group to whom the equipment belongs. Location categories are stored with a description of the location.

1.3 Key Allocation

The key allocation data includes the key number, the key owner and the location reference.

2. SUPPLIER/STORES CATALOGUE QUERY FACILITY

Several applications refer to the CERN Stores Catalogue and to the data concerning suppliers. For example the electrical equipment components
application which generates completed order forms for printed circuit boards components. The stores catalogue and supplier data is transferred to ORACLE from the ADP system. The data contained in the tables transferred is described below.

CERN stores catalogue (20400 records)

- SCEM code
- Description
- Price
- Supplier code
- Unit code

Activity codes and descriptions (436 records)

Suppliers/activities data (66200 records)

Supplier name, country, headquarters (11800 records)

- Supplier code
- Supplier name
- Country
- Supplier headquarters code

Supplier addresses (32900 records)

Supplier contact data (7640 records)

- Supplier code
- Address code
- Telephone number
- Telex number
- Person to contact

A facility is being developed with which users may query the stores and supplier data.

3. BUDGET PLANNING AND PREDICTIONS

A-M. Mercier/LEP

This application provides facilities for analysing budget predictions for the construction of LEP from 1982 to 1989. The data is secure.

Facilities include formatted screens for entering, modifying and querying data and report generation tools for printing periodic questionnaires addressed to the staff responsible for budgets as well as for printing summary reports. The application uses the public data concerning suppliers and CERN personnel. The data includes:
Provisional estimates (950 records)
Archive of provisional estimates (3100 records)
List of budget codes
List of budget code subdivisions
Status codes with descriptions for provisional estimates

The budget data includes

IDAG number
Tender number
Order/contract number
Supplier/code/address
Budget code
Budget subcode
Description(s)
Person responsible
Division/Group
Status
Provisional estimates per year (1982 - 1989)

All data is copied to the archive table before a modification is committed. The following formatted screens are provided for the entry, modification and query of

Provisional estimate data
Archive data
Total expenditure/entry
Expenditure/year for selected entries
CERN personnel data

This application has been in production since April 1985.

4. ADP EXPENDITURE AND CONTRACT DATA QUERY FACILITY

J.Schinzel/LEP

Management of a project the size of LEP requires project management tools to analyse past and present expenditure and future predictions. The evolution of contracts spanning several years must be carefully followed.

4.1 Accounting data

The expenditure data available from the ADP system covers the expenditure of the present year as well as the total spent per current order in the past. Details of expenditure over past years is not available. Future estimations cover the following three years, however, this information is only registered
once a firm order has been made. There is no provision for budget predictions as estimated by the group leaders responsible.

In order that the information over past years is accessible, the ADP accounting data concerning LEP was copied into an ORACLE database. Originally the data was copied from an INFOL file on the IBM. Since summer 1985, it is transferred automatically from the ADP computer into ORACLE. The data includes

Order data (40800 records)

- Order number
- Budget code
- Specific code
- Supplier code
- Country
- Currency
- Order date
- Order description
- Status
- Past payments
- Paid current year
- Committed current year
- Year of provision
- Initial provision
- Provision payed
- Estimate for next year
- Estimate for year + 1
- Estimate for year + 2
- Estimate for year + 3

Summary list of expenditure for temporary labor, Interdivisional Transfers (TID), stores and miscellaneous. Each category is summed per budget and specific codes.

Summary list (1100 records)

- Budget code
- Specific code
- Expenditure category
- Amount for current month
- Amount for current year

Detailed lists for miscellaneous expenditure, 'Advances and Claims' (AVC) and for Interdivisional transfers. The data includes:

Miscellaneous expenditure (19000 records)

- Budget code
- Specific code
Transaction reference
Transaction date
Description
Amount

The expenditure for the current year is copied monthly. A summary table is created after each transfer of data which gives a profile of expenditure and firm commitments from 1982 to 1989.

4.2 Contract data

All data concerning contracts is stored using COPICS which runs on the ADP IBM computer. Modifications to the data are copied weekly into ORACLE. The data includes:

Contract reference and descriptions (470 records)

Contract reference
Contract description (multiple)

Contract data concerning the supplier (272 records)

Contract reference
Supplier code
Supplier address code
Initial date
Valid from date
Valid to date
Currency
Country
Technical responsibility
AODO reference
Estimated amount
IDAG reference
Divisions concerned
Status
Total amount

Contract calendar (177 records)

Contract reference
Element number
Element description
Amendment suffix
Entry date
Payment date
Currency
Amount committed
Revised amount committed
Contract calendar budget data (751 records)

- Contract reference
- Element number
- Amendment number
- Budget year
- Budget code
- Budget amount

Invoice data (1347 records)

- Contract reference
- Element number
- Amendment number
- Invoice number
- Invoice description
- Invoice status
- Payment date
- Payment amount
- Revised payment amount
- Equivalent amount in CHF

Invoice/payment budget data (68 records)

- Contract reference
- Element number
- Amendment number
- Invoice number
- Budget year
- Budget code
- Budget amount
- Equivalent amount in CHF

4.3 Query facilities

The facility is menu-driven from a terminal screen. Users must be registered before they have access. The data is semi-confidential. Several reports may be generated and scanned or printed according to the user's selection of data. The choice includes selection by Group, budget code, specific code, etc. Orders may be summed by similar criteria. The following reports can be generated for the accounting data:

- Payments and commitments sorted by Group and budget code
- Payments and commitments sorted by order number
- Orders and suppliers sorted by order number
- Totals per project, Group or section
- Miscellaneous costs
- Future estimations
- Monthly LEP Division summary
For the contract data:

Summary list of contracts per Group or budget code
Details of contract data for a selected contract reference
Contracts selected by code, country, currency, supplier

Analysis tools include:

Histogramming of costs per range
Formatted screen for scanning orders

5. CV INQUIRY APPLICATION

R. Mackenzie/LEP

The general purpose of the application was to help in the analysis of replies to preliminary inquiries which were sent out to firms concerning cooling and ventilation equipment. Some of the replies were such that they could be put in standard form, while others could not. This meant that a set of forms made for one inquiry would not fully match another, however in practice the overlap was quite large.

The information contained in the documents returned by the firms was put into the data base by way of four or five forms. Aids were provided in the form of codes for entering replies to questions about standards, ranges, materials and surface treatments.

There are five principal tables and three minor tables, each one with a form, selected from the menu, for entering or for querying the data. The Company table has ten columns holding the name, state, code number, address, phone and telex number, and the names of commercial and technical contact people. Only those firms which replied positively to an inquiry are in the table and there are over three hundred of them.

The Contract table has seven columns which describe the largest contract that a firm has had in the last five years; the site, the customer, the type of work, and the amount of money and the manpower involved.

The Maker table has fourteen columns for standards and range of products, the surface treatment and the materials proposed.

The Installer table has eight columns for the firm's experience in the kind of work, their policy on temporary labour, and the surface treatment offered.

The Tender table has six columns for the inquiry number, the lots which are being bid for, the parts being sub-contracted and the names of partners.
Rapid answers to questions are provided by having about thirty views of the data.

The Company table was also "..." - another application called Firetender but this has now ceased operation.

6. LEP INVENTORY

A-M. Mercier/LEP
P. Strubin/LEP

The LEP inventory contains information concerning laboratory, office and workshop equipment. The inventory management software is comprised of formatted screens by which to enter, modify and query data, and reporting facilities. The data is contained in five tables and is accessible to all database users.

Inventory items with identification code (5200 records)
Archive table of equipment (800 records)
Equipment descriptions (1000 records)
Item locations (5200 records)
Maintenance history per item

The inventory data includes

Inventory number
Manufacturer
Type
Series number
Supplier
Order number
Price
Budget code
Arrival date
Person responsible
Group
Location

The INVENT application accesses the CERN staff list and the supplier data copied from the ADP computer.
7. LEP/SPS EQUIPMENT STORAGE MANAGEMENT

J. Chuteaux/SPS

This application has been developed to management the storage of movable equipment for the SPS and LEP Divisions. It replaces software which ran on a dedicated Olivetti computer and on the Central CDC System.

All entries, exits and transfers of material are recorded via screens formatted in the same way as the standard 'fiche de stockage' used in the SPS Division. Whenever material is registered or old material transferred, the operator enters the corresponding information (article code, person responsible, budget code, etc.) via the terminal keyboard. The data input is checked and if satisfactory, is committed to the database. The action of pushing the 'COMMlT' key activates a local printer, which outputs the data to a multi-leaf form. The form requires a written signature. Once the confirmation has been checked, the data is marked accordingly and the account of stored material updated.

Future developments to this facility will be the production of off-line reports of equipment and equipment movements.

8. ACCESS CONTROL SYSTEM

H. Koerner/LEP

The ACS provides a facility for coding and printing the owner's name, privileges, etc. on the official CERN access cards. The software is at present in the development phase. It is planned to go into production in Autumn this year. The data printed on the card will be read from an ORACLE table. Data originating from the various services, Medical, Divisional, etc. will determine whether or not the person concerned may be given access to a LEP site.

CERN staff information is read from the NAMELIST data and from the list of contracted firm employees who are registered on a Wybur file on the IBM.

9. LABOUR CONTRACT ACCOUNTING

H. Koerner/SPS

The MANUST application is designed for managing weekly reports on work executed by CERN and non-CERN staff. It is used by the ST/AM group.

The data includes dictionary tables defining work types, teams, clients, etc, and a calendar. The calendar is defined at the beginning of each year for weekly reporting and for monthly accounting by the CERN administration.
The follow-up of temporary labour contracts includes calculation of the cost of different work and the checking of bills. The cost of supplementary hours and 'piquet' duty are calculated following the CERN conventions. The data used for these calculations are regularly updated, likewise the data defining professional categories. At present changes have to be made manually. The currencies quoted may be varied. Costs are translated into Sfr. where necessary.

The CERN staff name codes are read from the NAMELIST data which is updated from the ADP data weekly.

10. LEP DOCUMENTATION CATALOGUE

F. Hemmer/LEP
J. Schinzel/LEP

NOTES contains a documentation catalogue for LEP Notes and LEP Divisional reports. The facility is activated on entry into the account DOC. A menu displayed on the screen allows the user to select several reports, for example, a list of document categories or a list of all documentation selected by author, number, category or keyword. A privileged user may use a formatted screen for entering, modifying or querying the public catalogue. Users may enter their private catalogue, identified by a two character code. No attempt has been made to store the documentation source in an ORACLE database. However a field was introduced for describing the location of the document.

A document is described by type, number, date, revision date, origin and title, as well as by one or more authors and categories (keywords).

11. DRAWING DIRECTORY (ODD)

S. Capper/LEP

The ORACLE application ODD is used to catalogue all drawings connected with LEP and to record comments on those drawings distributed for approval.

The main facilities provided are a main menu with several sub-menus guiding users to formatted screens or allowing users to print reports. The main table for this application contains information on each drawing;

Number
Title
Date of origin
Draughtsman
Person responsible
Further information is included for drawings distributed for approval the status (approved, not approved, in state of approval etc.), whether the drawing has been created by CAD and the microfilm number. Only information on the latest version of each drawing is contained in this table. Details of older versions of drawings are transferred to an archive table with a similar format. This permits the complete follow-up of a set of drawings. The other main table in this application contains comments entered by Group correspondants on drawings to be approved and the date of entry of these comments. The data is entered by several different formatted screens - depending on the type of drawing.

This application has also a connection to the ST drawings database which is implemented on VAX VXSB and to the INFOL database on the IBM MVS which uses the details of LEP drawings to update its general drawing database. The structure of the ODD application covers also the SPS drawing database.

12. SPS CABLES MANAGEMENT

H. KOERNER/SPS

The SPS/AES Group are responsible for the installation and management of the control cables around the SPS site, connecting buildings, the SPS machine, experimental zones and the Computer Centre. Approximately 60,000 cables are registered. Other applications which are integrated into cables management are

- SPS/AES stock control and material estimation
- Job request handling
- Labour contract handling
- Drawings catalogue

A cable is defined as soon as a Job Request is registered asking for a cable installation. Estimates of the labour and material required are calculated and hence the estimated cost of installation. The actual cost can be calculated once the cable has been installed. This information can also be used for cross-checking the amount to be paid out to the contracting firms, the evolution of contracts and the amounts owed by the the clients requesting the installation of a cable. Changes in exchange rates, etc. are taken into consideration.

This application is described in the Audit of ORACLE Applications in the SPS Division - SPS/AES/0257Q/BS.
13. APPLICATIONS DESIGNED FOR THE SPS PERSONNEL PROTECTION GROUP

H. Koerner/LEP

The following applications have been in production since January 1985.

13.1 Orders for CERN Stores items

This application is based on data found in the CERN Stores Catalogue database, which is updated monthly and uses the information printed on the CERN stores card which is entered into an ORACLE table. The following facilities are provided using formatted screens.

1. CERN Stores Catalogue Query

The data includes a description of the stores items, the item code and the price per unit.

2. Order form preparation and archiving

Screens have been developed for creating order forms for new material with the automatic addition of stores card data, the person responsible, etc. The total cost of the order is calculated and printed on the form with the delivery date requested. This date is overwritten once the goods have been delivered by the current date. The facility also includes weight calculations from information entered on the terminal.

The order is printed from the screen in a similar format to the standard order form. Past orders may be scanned on request.

13.2 Internal and External orders

This facility allows users to enter orders for non-stores items or for internal CERN services. It is at present based on supplier information which is kept up to date by the user. This data will eventually be replaced by the supplier information copied from the ADP system.

13.3 Inventory

The data includes a rather elementary inventory of equipment owned by the PP Group.
14. CHASSIS AND JUNCTION BOX MANAGEMENT

H. Koerner/LEP

The CHASSIS application is used for managing the construction, modification and maintenance of electrical 'chassis' and junction boxes. Since this equipment has been mainly replaced by printed circuit boards, the application is becoming obsolete. The chassis data is used for producing lists of cabling to be executed.

15. LEP ELECTRICAL EQUIPMENT MANAGEMENT

N. Grosch
B. Pasche/LEP

The LEPEL Group are responsible for the distribution of electricity from the 400 KV supply on the Prevesin Site at the required voltages and for the installation of all electrical power and control cables for the Groups involved in the construction of LEP. The total number of cables is estimated to be 400,000.

The data includes the information required for pulling and connecting each cable and dictionaries of reference data such as codes for 'ouvrages', cables types, connectors, electrical component, equipment, packaging, electrical panels, connection conventions, cable ladders, cable ladder functions, cable paths, etc.

Due to the size of the LEP machine and the extra difficulties of equipping underground areas, the organization of the various tasks involved must be done with care. Activities, both those describing a job of work and those describing the individual tasks required to execute the job of work, are entered into the LEPEL database. They are then copied into the planning database POL and processed to provide start and finish dates for execution. Applications have been developed for the management and follow-up of these activities as well as for providing orders for material, managing storage, and organizing transport for equipment and material.

The application consists of approximately 200 procedures and programs which provide facilities for accessing about 50 tables, generating the reports necessary for organizing cable installation, for supplying material and for providing the firms responsible for the work with the necessary equipment and execution dates.
16. VACUUM EQUIPMENT MANAGEMENT

P. Strubin/LEP

The VACUUM database contains data concerning the vacuum equipment and provides facilities for the follow-up of the fabrication and for recording the results of acceptance tests.

The data includes a list of all elements to be mounted along the beam line, as well as details about the components, pumps, the location of valves, mobile pumping and heating assemblies. Facilities for automatically generating cabling lists is foreseen.

Data is entered, scanned and modified using formatted screens. Some of the follow-up data is entered directly into ORACLE from Germany by dialling up the CERN INDEX network using a PPT modem. The beam line elements are copied from the MAD database.

17. ELECTRICAL EQUIPMENT COMPONENTS MANAGEMENT

A-M. Mercier/LEP
P. Strubin/LEP

The CIRDOC application is used for allocating and managing plan or drawing numbers, lists of cables, chassis and printed circuit boards components.

Component lists are compiled from the CERN Stores Catalogue data which is regularly copied from the ADP computer. Non-stores items may be allocated pseudo codes.

All data is entered and checked using formatted screens. Reports are available for listing and printing component lists and for printing orders for new assemblies. This application is described in Lep Note 427.

18. EXTRACTION AND SEPARATOR EQUIPMENT MANAGEMENT

G. Boch/SPS
C. Merle/SPS

The ABT/EX Group are responsible for the construction and installation of the electrostatic separators to be placed at 8 positions around the LEP machine. The separation of electron and positron beams during injection and acceleration prevents the reduction of intensity due to beam-beam interaction. The separators are connected to generators, resistances and discharge commutators and are synchronized using HT cables. This application is designed to manage the separator equipment data. A menu provides facilities for entering, modifying
and scanning data using formatted screens and for printing reports. The data includes

1. ZL_IDENT - a table similar to the IDENT table defined for the Installation Logistics.

2. ZL_REF - a table similar to the ELEM table defined by the DICLEP application

3. ZL_REF - supplementary data to the data in the previous tables.

4. ZL_COD - material requirements

5. ZL_CAB - electrical cables data

6. ZL_ENS - separator elements

7. ZL_SUI - separator/element follow-up data

8. ZL_FAB - fabrication follow-up

9. ZL_JARG - daily reports on equipment intervention


Information related to drawings stored in the ODD database are stores automatically.

Future developments include the generating a synoptic view of the separator configurations in the tunnel and automatic updating of stock data.

19. LEP DICTIONNAIRES

B. Petiot/LEP

The ORACLE application DICLEP is used to read and print the LEP dictionary data. This data includes codes for buildings, systems, type of activities, locations and abbreviation codes of elements (ARCODE). A menu points to formatted screens to read dictionary information and to list pre-prepared report of dictionary information and logistics.

The dictionary tables contain codes, descriptions and supporting information (dimensions of elements and buildings, weights, distances etc.).

The data in DICLEP is used by many applications e.g. POL, LOI, LEPEL etc. to verify codes.
20. POL, PLANNING USING ORACLE FOR LEP

J. Schinzel/LEP

POL is the Planning system using ORACLE for LEP. The data consists of activities and the links between activities. These are entered into the planning database using formatted screens on the terminal. The data is checked for validity as it is entered. Classification codes are checked against the corresponding dictionary table, dates are verified and a check is made on the ownership of the data. A critical path analysis program calculates early and late starting dates and slack times. Results may be listed as reports or plotted graphically as barcharts or as 'chemin-de-fer' plots. A simple resource histogramming facility is also available.

The activity data is organized in a tree structure to represent the different levels of detail. Each activity may be broken up into one to ten sub-networks each of which may contain up to 100 activities. Users may analyse data within the constraints imposed by external links coming from or going to subnets belonging to other analysts.

Each activity is described by an activity code, four description fields, a duration, a calendar code (to indicate on which days of the week the activity can be executed) imposed dates, the analyst's name code and the executant's name code, as well as classification codes, such as system, function, element, location, etc.

Different sets of network data (duration, calendar code, imposed and calculated dates, etc.) are stored for the three phases of an activity: the analysis (work), the reference and the follow-up phase.

Milestones, contractual and target dates are kept for comparison purposes.

POL is driven by nested menus providing facilities for data entry/deletion and modification, critical path analysis, report and plot generation and follow-up processing.

Graphic output has been generated on the CDC computer using programs developed over the last ten years. The data is extracted from ORACLE on the LEPDB VAX and sent to the CDC. The software is being rewritten to run under VM and GKS on the IBM computer. The new plot definitions are saved in ORACLE tables.
21. INSTALLATION LOGISTICS (LOI)  

C. Genier/LEP

The LOI application is used to define the logistics of LEP installation. Facilities are provided to generate reports by Fortran application programs. These reports give detailed installation information. For example one weekly report lists the transportable equipment per system to pass through a given pit between given dates. Another report gives the load for the crane in each pit. The programs calculate to which pit the equipment should be passed by minimizing the distance between the point of entry and the point of installation. The availability of the cranes, lifts and the monorail is taken into consideration.

The main table (IDENT) contains all equipment to be installed. The entities are the element code, identification code (INOM), building code, position of the element, type of activity to which the element belongs, the installation date, the access pit through which the element will be introduced, the distance to the installation position from the access pit, the reference to the scenario number (this number gives details on the way in which the element will be installed), and other fields of less importance. The installation date, access pit and distance are calculated according to the officialised planning by optimisation of the load, means and time of transport. LOI also includes a dictionary of all handling and transport means - giving details and characteristics of them e.g. load. The scenario number refers to a sequence table which gives for each element its access pit, the code of the different means needed to install it, the time required for each sequence and the number of handling and transport people.

The data is inserted into tables mainly by formatted screens and updated by calculation as explained above. LOI is closely connected to POL, planning being part of logistics.

22. INSTALLATION FOLLOW-UP  

S. Capper/LEP

The ORACLE application SUIVI arranges data passed from the LEP installation follow-up to allow the update of the POL database, and to record the installation activities.

The main facilities are a formatted screen to prepare data files for the micro computers used for the LEP installation follow-up by those responsible for each area of LEP (gerant de zone). There is also a program which creates data to be loaded with the ORACLE data loading facility ODL into the LOI database. This data is then used to update POL by program.

The tables belonging to this application are in the LOI database. The main table includes information on the activity code as defined in POL; the date of
follow-up, the name abbreviation of the person responsible for follow-up, the building or work-site code as well as data concerning the actual follow-up of each activity; its start-date, progressive percentages of the work carried out and finally the date of completion of the activity. The other important table contains a shortened description of each activity. This description is displayed on the restricted screen of the micro computer.

The data comes from the POL database, and the micro computer is used for follow-up. The shortened descriptions are entered using a formatted screen. This application is closely related to both LOI and POL.

23. PLANNING AND INSTALLATION LOGISTICS QUERY FACILITY

S. Capper/LEP

The POLIN application gives information on the planning and logistics of installation for LEP. The main facilities provided are extraction and display of the planning data, printing and plotting of reports and barcharts and planning layouts. In the future it will include additional data concerning LEP installation.

The application is a menu facility allowing access to the POL and LOI databases - see write-ups on these applications for further details.

24. WORK REQUEST FOLLOW-UP

S. Capper/LEP

The DTLEP application is used for handling the follow-up of work requests ("Demandes de Travaux LEP") for LEP installation. Formatted screens are provided for entry and retrieval of data and a report of the current work requests. These facilities are accessible by a menu program. The application has been designed for non-specialists and is very easy to use.

There is one main table in the database (eventually archive tables will be added when necessary). This table describes the work request number, person requesting and his group, the company executing the work request, the location of the work, the deadline date, various estimations of the cost of the work to be carried out and eventually the date of completion of the work.

The data is entered using formatted screens. This application is independant of other applications.
25. EUCLID BUG DATA

S. Capper/LEP

The DIAGLOG application is used to catalogue documentation details, bug reports, bug fixes etc. on the EUCLID Computer Aided Design system which runs on VAXES VXCAE1 and VXCAE2. The main facilities provided are a menu giving access to formatted screens for entering and retrieving data and pre-prepared reports for EUCLID users.

The main table describes the entry code, its type (bug, method etc.), its description, the user responsible, the version of EUCLID, the action either taken or required, a detailed description and a resume. There are also tables of usernames, keywords for cross-referencing purposes etc. Formatted screens are provided for each type of data entry. The application is independant of any others.

26. MAGNET MANAGEMENT

T. Tortschanoff/LEP

The Magnet Data Base contains all relevant data about the fabrication and deliveries of the LEP machine magnets as well as selected data produced by the reception tests and magnetic measurements.

The data input is provided either by menu driven IAF forms or, for data measured at CERN, by data transfer from diskettes.

The output facilities include means for statistical analysis and software to create numerical or graphical presentation of all possible correlations.

27. THE SURVEY GROUP DATABASE

J-P. Quesnel/LEP

Due to a large build up of files and archives concerning the installation of the LEP machine, the LEP Injector, the machines and transfer tunnels, the necessity of a single database containing all the relevant parameters for the metrologie of these machines became imperative.

The role of this database is to stock and direct all data, acquired from both the physicists and from measurements taken in the field. In so doing it can provide the necessary information to install the machines, the results of which are then stored in the same manner. It also sends an account of the work carried out to the persons concerned.
The database also provides the 'real' position of the machine with respect to its theoretical position (as prescribed by the physicists), retaining, for a certain amount of time, a record of its movements.

The principal tables contain the data for the theoretical beam of a machine, the data for the actual element positions and the data from the field measurements.

A range of programs - using the Oracle SQL language - can be called to update the data, list it according to chosen criteria or use it in further calculations.
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