

DATA Chairman's overview

Roger Moore,
Institute of Hydrology, Maclean Building, Crowmarsh Gifford, Wallingford, Oxon

In parallel with the normal work of the Data Centres, acquiring and disseminating data to the LOIS community (Table 1), the main activity of the year has been planning and beginning the production of the LOIS CD-ROMs. Currently it is proposed that there will be at least 5 disks, one per Data Centre (Table 1). The CDs are one of the most important tangible deliverables of the LOIS project. Three objectives lie behind it. The first is to make the data available to the research and end-user community. The second is to demonstrate progress on the creation of an integrated database and the last is to ensure the security of the data. Dealing with security first, it is felt that the best way to ensure the future availability of data is to publish and distribute them as widely as possible. In publishing the data, the hope is that others will take them and both continue the research that LOIS has begun and use them to create new products for the benefit both of individuals and society.

The CDs will contain:

- all data collected for LOIS
- selected model output
- documentation
- a viewer

One of the expected products of LOIS identified in the Implementation Plan has been "integrated databases". We mean by this a database where data may be drawn from different disciplines, different environmental media or geographic regions, but where all the determinations are internally consistent and can be related to the same temporal and spatial context.

LOIS has assembled vast amounts of data from many disciplines. At present these data reside in many systems. Because the systems were not designed to 'talk' to each other, analyses that explore relationships that cross discipline boundaries are difficult, if not impossible. If the data could be held within a single generic system then many of these difficulties could be dramatically reduced. To date the technical problems have been too great, however, it is now believed that solutions are at least theoretically and may be practically possible. The production of the CDs provides a wonderful opportunity to test these ideas. If even modest success is achieved, then a section of the CD will contain a prototype integrated database containing examples of all the data collected for LOIS.

All data are held within one logical data model, the Water Information System's cube (Figure 18). The physical implementation will be in the form of an Access database. Users will be able to browse and retrieve data using the viewer.

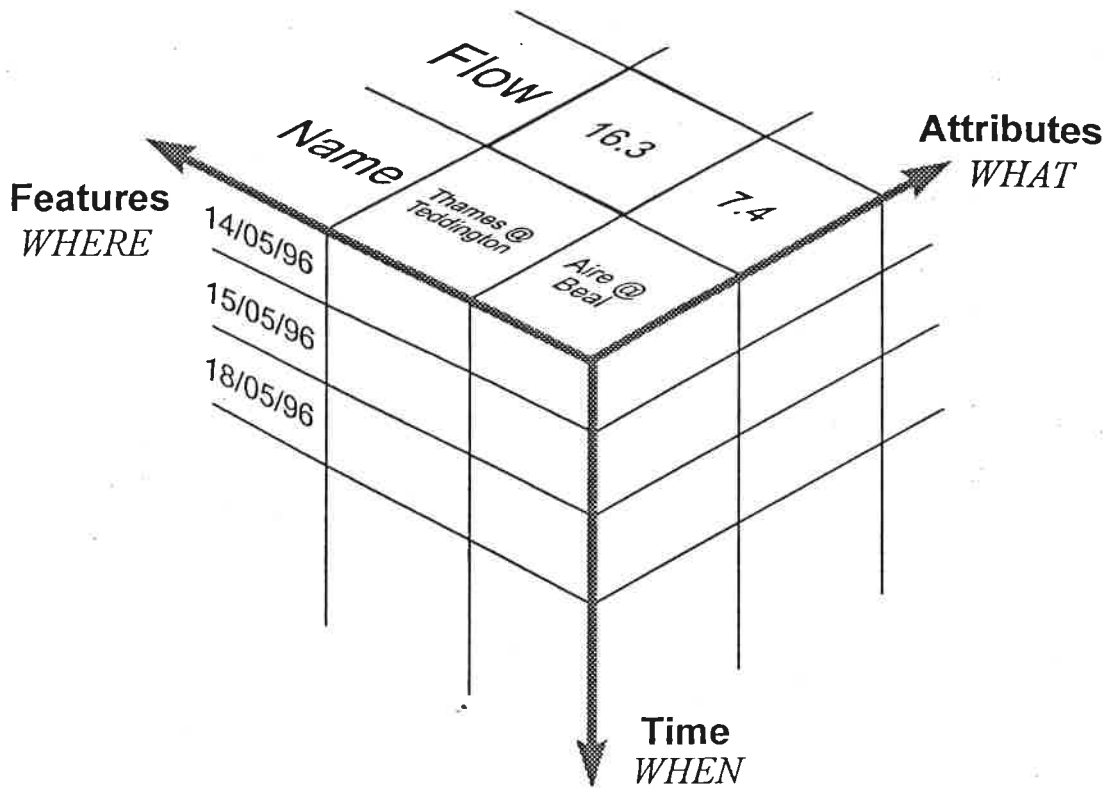


Figure 18: The Water Information System's 'cube' in which all data are located.

All the data will be documented in a manual. A preamble will describe the LOIS programme and the CD itself. A key part of the documentation will be the LOIS data dictionaries, which list and define all the data used and, as importantly, match the LOIS terminology to that employed by all the data suppliers to the programme.

Summary activities of the LOIS Data Centre at BODC

SES - cruise data and moorings

- 38,000 kms of underway surface data
- 1,057 CTD profiles
- 25,000 measurements from 7,300 water bottle samples
- data from 216 out of 270 instrument deployments

RACS(C) - data from estuarine and offshore cruises

- 50,000 kms of offshore cruise data processed
- 1,076 CTD profiles
- 3,750 water bottle samples
- 7,300 water bottle measurements
- 8,000 kms of estuarine "*Sea Vigil*" data processed

Data requests

- 255 requests from LOIS scientists
- 30 scientists at 8 sites granted remote access
- 1,000 remote accesses to LOIS database

There is a growing awareness outside the LOIS community of the approach to data management that we have adopted. It is therefore gratifying that the LOIS model is to be used by new Thematic Programmes, such as Environmental Diagnostics and URGENT. We have also received enquiries from industry in the UK and abroad who may adopt the LOIS data management system.

Some component programmes are now running down or are virtually complete. RACS (Atmosphere) now has only to finish its modelling which aims to help understanding as to whether ozone is made or destroyed by the photochemistry that takes place in the coastal marine boundary layer. Other components too are concentrating on modelling work, which throughout LOIS will continue until the end of the project, partly to maximise progress towards meeting Objective 4. DATA has the heaviest workload in the final year as it draws together and produces the CD-ROM. The detailed planning of the CD-ROM is well underway. The main project milestones are:

identification of the data to be included	Feb '97
construction of a data dictionary	May '97
preparation of software	Sep '97
assembly of the data	Sep '97
collation and documentation	Dec '97
review	Jan '97
production of the CD	Mar '98

The problems to be solved and workload to be accomplished by the end of LOIS are considerable. However, LOIS DATA operation has enjoyed tremendous help and support from the organisations supplying data and from the scientists collecting data within the programme. If that can be maintained, and the proposal to meet Objective 4 succeeds, then there is every chance of a successful conclusion. The success or otherwise of the proposal will have an important bearing on what the Data Centres can achieve in the concluding year of LOIS and the extent to which an integrated LOIS database can be developed. Work is progressing on the assumption that it will succeed, as to wait for the outcome would mean that the work could not be completed in the time available.

407082-2001

LOIS

land-ocean
interaction
study

CEH Lancaster
Archive Copy
Please do NOT remove
Not for loan

Land-Ocean Interaction Study

Second Annual Meeting
Hull

18 - 20 March 1997



LOIS Publication No 323

