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The design and implementation of a combined CD-ROM and Online Service for Parliamentary Information

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Abstract: Any modern Information retrieval service is a complex operation which involves the source data, the computer and telecommunications systems, the users of the service, and the money available. Not one of these components is static. They exist in a state of dynamic equilibrium with each other. The process of creating such a service is equally dynamic and in the case of a small company, risky. There is an interest these days in how new enterprises get started, particularly those of organisations classified as "small and medium sized enterprises". This paper will describe the commissioning of a new public user service for supplying Parliamentary information to the world outside Westminster.

Introduction

This public user service is intended to provide access to the Parliamentary Online Information Service, more commonly known as POLIS. This is a database of references to:-

- the proceedings of Parliament;
- papers produced by or presented to Parliament;
- various official publications;
- documents relating to the European Community.

This is a very large, rich bibliographic database which covers important materials which are hard to find elsewhere. The data is organised Parliament by Parliament starting with the 1979 to 1983 Parliament. In total, there are close to 1 million references in the database, which deserves to be better known and more widely used.

The process began with an invitation to tender issued by the Library of the House of Commons. There were two parts to the tender; firstly for an in-house facilities management system for supplying the database to the users inside Parliament itself, and secondly, for a separate external public user system for access by anyone else interested in the proceedings of Parliament. A briefing session was held in one of the Committee Rooms in the House of Commons at which Library staff gave presentations on the current POLIS service and what was required of the new services. About 50 different organisations were present at this briefing, most of them much bigger than Context. A small company has limited resources, so the internal debate concentrated first of all on whether one should even try to take part in what was going to be a heavy administrative process. It was quickly decided that the facilities management service was not for us so we focused on the public user

service. Did it fit in with our main stream activities in legal information? A quick check with some of our existing customers showed that there was an interest, though only one or two had ever used POLIS. The case "Pepper v Hart" has had an effect. That gave us something to go on.

The main requirement for the public user service was for an online service that was easily accessible, reliable, quick in response and capable of being updated every day. Context has its own JUSTIS online service which has become mainly a support system for the JUSTIS range of CD-ROM products. It would have to be upgraded, so money would need to be spent.

However we had in the company, plenty of experience of running an effective online service to legal subscribers who may fairly be described as exacting customers. In addition we had substantial experience of creating and marketing CD-ROM products. This was something unique which we could offer.

The result of this intensive internal debate was that a pattern emerged of an entirely new service based on a combination of online and CD-ROM techniques. In brief, the online service would handle the current, up to date, information and the CD-ROM would cover the archive material. A *sine qua non* was that the switch from CD-ROM to online and vice versa should be easy for the user. This meant that user interface for the online service and the CD-ROM had to be the same and, further, that the link between them had to be transparent. We decided to submit an innovative offer based on these lines.

There followed a period of intense activity which involved every member of the Context management team. The response required by an Invitation to Tender makes a heavy demand on any company but bears particularly heavily on a small company. The basic ideas were clear enough in outline but they had to be more detailed. Costs had to be forecast as accurately as possible and some idea of the potential income made, or rather, guessed. Expenditure is certain, income is not. This was a wonderful project but wishful thinking was dangerous, so some hard discussion had to take place. Questions of hardware, software and database design had to be resolved. Finally an agreed solution was reached and a formal response to the tender was prepared.

Context proposed to provide the Public User Service through a combination of its online and CD-ROM services. The online service would provide the daily information from the current session of Parliament in what is known as the "Current" file. This would be updated every day from data received from the Westminster database. This database would grow progressively throughout the Session of Parliament. At the end of each Session a CD-ROM would be produced. This CD-ROM would be cumulative throughout the life of a Parliament. Users would have the option of subscribing to the online service, or to the CD-ROM, or to both via the "seamless interface". In addition, Context proposed to publish the data from earlier Parliaments on CD-ROM. The first of these archival CD-ROMs would contain the POLIS data from the 1979 Parliament and the 1983 Parliament. The second would cover the 1987 Parliament. Context also offered to produce the first archival CD-ROM ahead of the start of the online service. This would provide user feedback on the interface and give some indication of market response. All in all, we felt we had drafted a good offer with innovative features. So we waited on the outcome.

The first response was that Context had been placed on the short list. This was encouraging because it meant that the evaluation team was responsive to an innovative solution. Further presentations would be required and more details of the design requested. At Context we decided to build a sample POLIS database under the JUSTIS interface as a demonstration model. This put a heavy load on our technical department but really this is the only way to show what can be done. Ten minutes demonstration of a working system is worth hours of talk and reams of paper. It also meant we had to get to grips with the POLIS data and understand it in detail. The decision to create this sample database operating under the JUSTIS interface had a considerable effect on both the evaluation panel and our own team. It paid dividends all round. In the event, at the end of the second stage of

evaluation, the contract for the Public User Line Service was awarded to Context for its proposal to provide the service through a combination of CD-ROM and an online service.

That was a year ago. Since then, the proposal has been implemented in full in preparation for public release on April 1st 1994. The first stage was the selection and purchase of new hardware to carry the data and to provide the online service.

At the time the JUSTIS online service was running quite happily on rather ancient VAX equipment operating under VMS. It was decided that the new operating system should be UNIX running on up to date hardware. Small computing systems are now incredibly powerful and efficient. So much so, that two systems could be purchased to provide the duplication and redundancy required for a reliable service. This was done and very little difficulty was encountered in commissioning the system and its operating software. The configuration of the system is :-

Processor:

486 DX2 66

RAM: 16Mb

Disk: 3Gb

Operating System:

SCO UNIX System V/386 Release 3.2

Communications:-

16 serial ports

4 auto detect 9600 band modems

X25 line with 16 channel capacity

The retrieval software is Fultext from Fulcrum Ltd of Canada. The JUSTIS interface is a Context proprietary product.

This system is duplicated in a second stand by system.

It was a rather different story with the telecommunications requirement. This involved British Telecom, additional hardware and specialist software. Getting this on stream to hook on to B.T.'s Dialplus/PSS network was a tedious and wearing business with a number of setbacks. Telecommunications is, at present, a black art rather than a science. There really are far too many unnecessary bureaucratic obstacles getting in the way of good engineering. However, these problems were solved and the system was commissioned.

Concurrently with this work on hardware, we made an extensive study of the POLIS database and how it was used. We were greatly helped by the Library staff of the House of Commons who gave freely of their time and knowledge. The most difficult part of any computer project is to thoroughly understand the nature of the business to which the computer system is applied. In this case it was a matter of understanding the arcane procedures of our Parliamentary system. POLIS is a highly structured database and that structure reflects the way Parliament does its work. Conversely, understanding POLIS provides an insight into Parliament. One strength of POLIS is the quality control exercised by the staff of the House of Commons Library, which ensures consistency in the data and its structure. This is a major achievement in such a large and volatile database. In effect, the structure of POLIS follows the parliamentary day which starts with the Order Paper (i.e. the Agenda) and ends with the Votes and Proceedings (i.e. the Minutes). There are about 30 field headings which classify the individual documents. The entries are organised in Groups:-

1. Parliamentary Questions
2. Parliamentary Proceedings
3. Parliamentary Papers

4. Legislation
5. Official Publications
6. European Communities
7. International and Foreign Official Publications
8. Library Papers
9. Library Collection
10. History Records

These group classifications are useful in searching such a large database by limiting the categories searched. Each group is further subdivided into Type headings:

1. Parliamentary Questions include

- Oral Questions
- Written Questions
- Private Notice Questions
- Lords Questions

2. Parliamentary Proceedings include

- Votes and Proceedings
- Lords Minutes
- Commons Hansard
- Standing Committees
- Early day Motion

3. Parliamentary Papers include

- House of Commons Papers
- House of Lords Papers
- Commons and Lords Bills
- Private Bills
- Command Papers
- Unprinted Papers
- Unprinted Command Papers

Knowledge of the available types enables precise, quick and efficient searching. This structure, which has been developed during 10 years working experience of POLIS, had to be implemented on the Context version. Furthermore this implementation had to bear in mind that POLIS was not in a static situation but a dynamic one. There will be development. Fortunately the JUSTIS interface allows for variation in the data handled so after a certain amount of trial and error a working solution was produced. However it should be noted that this solution was only arrived at after considerable investigation of the existing POLIS database.

Once the structure of the database was understood and its implementation on the JUSTIS system decided, then it was married with the new hardware. The first product of this was the CD-ROM of the two Parliaments 1979-1983 and 1983-1987. This disk was produced towards the end of 1993 and released to the market. This tested thoroughly the whole system apart from the telecommunications and provided some feedback from customers on whether our solution was acceptable. So far the response has been favourable. This was the end of the beginning.

One further problem remained. The POLIS system had existing users who had to be converted to the new system. This was done by organising free training sessions for their benefit. Again education and training of users is an essential part of a project like this. Special training courses were written for this purpose and will form an important part of the customer support which Context provides to all its customers.

This new service is now at the beginning of its life. The objective is to disseminate this important database as widely as possible. In addition to the information provided this database sheds light on how Parliament works and so should lead to a better understanding of the political process. It is a valuable teaching aid to those concerned with education in government and politics. It is far too important to be left to the immediate environs of Westminster.