[From: *Term banks for tomorrow's world: Translating and the Computer 4*.
Proceedings of a conference ... 11-12 November 1982, ed. Barbara Snell. (London: Aslib, 1983)]

ASPECTS OF TERM BANK OPERATION

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ABSTRACT: Following a period of basic development we now face the responsibility of creating second-generation term banks for tomorrow's world. The utmost attention should be given to the needs of future users when planning these banks. These needs can be summed up in the keywords simplicity, quality and service. A description is given of the ways and means a term bank administrator can use when meeting these needs. In closing, some of the economic aspects are discussed in connection with term bank operations.

THE ORIGINS OF TERM BANKS

Term Banks are a recent innovation. The technology required is in principle a product of the 1970s. For the most part it has been a pioneer undertaking, uniting linguistic and computer skills to create an entirely new field of operation.

Work of a pioneering nature usually displays certain basic characteristics. A handful of enthusiasts, devoted to their ideas, energetically seek to put these ideas into effect in an atmosphere where only a few people are capable of discerning the benefits the new ideas would ensure. The first results are characterised by improvisations and inadequacies. Funds are insufficient to permit market promotion, or to conduct follow-up studies among customers in order to improve the product.

TECHNOLOGY OF LASTING DURATION

Now, a few years into the decade of the 1980s, it can with confidence be asserted that term banks are assured a place in the modern world. Some of the banks have grown to be surprisingly large and fulfil important functions within such institutions as the Commission of the European Communities.

New, expanding user groups have become interested in the services a term banks can provide. Valuable experience in data base handling and information retrieval in general is being rapidly acquired. Therefore, there is a considerable body of material to analyse if we are to begin planning for a second generation of term banks, one for tomorrow's world.

USER NEEDS

The focus of our efforts in future planning should be the user and his needs. All too often we have allowed the computer's possibilities and limitations to determine the nature of the system we use. We devised specific solutions mainly because it was possible to do so in that way and not necessarily because a user was interested in that particular solution.

The objectives of an administrator of a term bank can of course vary considerably. There is nothing wrong with creating a small term bank that has limited functions for the use of a small group of users whose needs are well known in advance. But naturally it is tempting to think big when, after all, something so difficult to foresee as the future is the object of one's attention. Therefore, I intend to concentrate upon the idea of a large, general term bank to serve an entire nation. Such a bank would satisfy the needs of users with a variety of tasks, of prior knowledge, of organisational adherence, or of requirements for a specific product.

THE LINGUISTIC DATA BANK

I have until now used the expression "term bank". But because the subject is somewhat futuristic I shall instead use an interesting neologism that I believe originated with Professor Sager of UMIST, namely "linguistic data bank", or LDB. A linguistic data bank is:

> "a collection, stored in a computer, of special language vocabularies, including nomenclatures, together with the information required for their multilingual dictionary for direct consultation, as a basis for dictionary production, as a control instrument for consistency of usage and term creation and as an ancillary tool in information and documentation".

A FEW FACTS

What facts of computer technology do our study of the future depend upon? Some of the most important are:

- an LDB is a type of data base accessible for example, through an information retrieval system;
- information retrieval (IR) is an aid for information provision;

- information provision consists of a series of sub-processes: collection, selection, organisation, registration, updating, storing, searching for, furnishing and usage of information;

- an LDB can facilitate only some of the sub-processes in linguistic information provision, namely, the storage, retrieval and furnishing of information;

- in order to be able to use an LDB the user must have the necessary special knowledge and equipment.

TODAY'S SITUATION ...

As my point of view is that the user's needs are the most important factor to take into consideration, it would be interesting to look a little more closely into today's situation. What are the characteristic features of information retrieval in 1982? My own experience is limited to Swedish conditions, which are certainly not the most advanced in Europe.

Data terminals are few and far between in Sweden. For most people here computers are still mysterious and complicated phenomena - more of a threat than a help.

The number of people who have mastered online information retrieval methods is limited, perhaps a thousand in all. Of these 75% are employed as IR specialists and intermediaries.

There are many different IR systems in use today, but it is hardly possible to master more than three search languages.

The end user seldom uses online IR methods.

Instead traditional, cost-free methods are preferred if one makes the search oneself. The idea that information should cost something to obtain is an idea difficult to accept.

... AND TOMORROW'S

Soon computers and the use of computers will be part of everyday routine. Many school children today in Sweden are being given a good basic education in data processing and the first generation that has been exposed to this education has already entered active vocations.

The technical pre-conditions for utilising computer services will be improved. Terminals will become common features of places of work, post offices, local computing centres and homes. A variety of services will be compiled and made easily available via one or more computer networks.

THE NEEDS OF THE FUTURE

What will be the needs of linguistic data bank users in the future? These can of course vary to a large extent, but I believe that the ones we should pay attention to are the simple, down-to-earth requests, which can be summed up under the following keywords: simplicity, quality and service.

The LDB must be simple to use, otherwise its use will be restricted to a small group of enthusiasts. LDB products and services must be of high quality, that is, they must suit their purpose. The LDB administrator must always be prepared to provide tailor-made services in response to the wishes of his clients.

The "simplicity" aspect has a very special dimension, it can namely refer to a specific LDB or a group of LDBs. It is apparent that many LDB customers in small countries like Sweden would prefer to have access to the LDBs of other countries as well. If the basic functions of all the different LDBs were well coordinated such an international exchange would be greatly facilitated.

SIMPLICITY

In order to be easy to use an LDB should have the following characteristics:

Administrative routines that control access to an LDB (subscription, billing etc) should be uncomplicated. It should be easy to log on.

Availability should be of a high degree, that is, there should be a minimum risk that the LDB will not work properly due to some technical reason.

The search language should be standardised. The LDB manual should preferably have a standardised layout. The description of the search language and the LDB should be written at different levels of complexity so that each user, regardless of prior knowledge, would be able to find a suitable text-type.

The internal data structure and default output formats should, if possible, agree with other linguistic data banks. It should be easy to create a format of one's own. Questions and directives from a search session should be easily stored to permit automatic execution at another time or in another LDB.

There should be automatic functional aids for both the IR system and the LDB itself. The IR system should, by responding to specific directives, inform about search language and other data-technical aspects. Error messages should be easy to interpret. The LDB should contain meta-information on content and application etc., which can be produced on the terminal via special search sequences.

QUALITY

The linguistic information contained in the LDB must be correct in some, well-defined respect. It must be evident under which circumstances a piece of information is correct.

The user must be able to determine which degree of completeness the LDB has, both horizontally (which are the

subject fields treated?) and vertically (at which level of abstraction is a subject field handled?). In certain cases it may be necessary to declare what the LDB does not contain or which services it cannot supply.

SERVICE

A user should quickly be able to contact qualified personnel to clear up questions of a data-technical nature (for example how to obtain a certain type of result from the IR system) or in questions of content (for example how one should interpret the information resulting from a specific search session).

In addition to the fundamental supply of services and products the LDB administrator should be able to create specially-made computer routines for those clients who request it.

Efficient forms of cooperation should exist between the LDB organisation and its clients where the views of the users on computer techniques and content are taken into account and contribute to the development of the linguistic data bank.

AN ATTEMPT AT MEETING FUTURE NEEDS

What can I as an LDB administrator do to meet the needs I believe future users will have? Let us outline a main frame:

It is likely that large search service organisations will be the most efficient suppliers of IR services in the future. I should therefore agree to have a search service in operating my LDB. The search service could take care of the practical matters of subscription and so forth in a professional way. At the same time the search service could offer my customers access to other data bases, both LDBs and other types, made accessible through the international data networks of which the service would be a member.

The search services would maintain a reliable computer centre with several information retrieval systems. All would have a standardised interface between data base and user, while internal functions would be different. I could therefore select an IR system to suit my own needs for special routines, while the user would see practically no difference between any of the systems.

I should be able to come to an agreement, through international LDB cooperative efforts, on matters pertaining to data techniques and language theory. I would apply these agreements in such a way that to the user the LDB would appear to be organised in the same manner as other LDBs. This I will have achieved with the help of certain internal structuring of data or front-end application programmes.

I would use the search service organisation mainly for the operation of the LDB. Possibly I might permit the search service to conduct training and marketing as well. A separate group of linguists and computer specialists would be necessary for the other functions, those that ensure that the LDB is furnished with a useful content.

Within the LDB organisation we would continuously cooperate with institutions involved with language and its use (such as terminology centres, standardisation centres, language planning institutions, dictionary publishers etc). The LDB customers would be offered some form of continuous cooperation, for example in user groups. If needed, we could hire subject field specialists as consultants for specific studies on some particular problem of language use.

In the agreement between the LDB organisation and the search service it would be clearly defined who is responsible for any particular service. In those cases where the responsibility would be mine I would see to it that my organisation would have all the necessary competence to solve the tasks that are likely to occur. Customers would not have to keep track of the division of responsibility. All contacts with customers would be handled by a customer service section within the LDB organisation. Customer service would convey all businesses to the proper destination within the LDB organisation or, depending upon the nature of the matter at hand, to the search service organisation.

ECONOMICS

What chance does a linguistic data bank have as a product in a traditional market governed by competition, supply and demand? If there were but one LDB in the market there would be little competition. Many of the products and services available from an LDB would not be obtainable from any other source.

But even a unique product must be in demand before it can be sold. The field of information supply has always been noted for the traditional belief that it is a cost-free resource. Even if this attitude is slowly changing, and a readiness to pay for information is slowly making itself felt, we must nevertheless devote a great deal of attention to the task of rendering linguistic data banks more attractive to potential customers.

The basic rule of course is that an LDB must be useful. The user's utility has its source in the content of the linguistic data bank: the right kind of information, of a satisfactory quality, must be there. The utility principle must be used for LDB handling in general. Products and services must be built up around the central information content in such a thoroughly thought-out way that all stages of the linguistic information supply fit together.

And finally, in an open market we must expect *a* user to pay for LDB service only if:

- his total costs are reduced
- his income increases
- the costs of LDB services can be seen as an investment with future returns.

It is very difficult to determine to what extent in the future a fully-fledged LDB can be financed entirely by fees for its use or for the specific tasks it performs. This will for the most part be a result of the market situation for data bases in general. The best situation would be to allow a free and effective price mechanism to work with minimum regulation. The user's willingness to pay would therefore provide valuable information to whoever is responsible for the organisation and development of an LDB.

THE LINGUISTIC DATA BANK AS A NATIONAL INTEREST

The problem arises if there are not enough LDB users with the economic ability to utilise the bank at market prices. It is possible that an LDB would be a useful aid for teachers and students in their daily instruction; for the public at large in their attempt to keep abreast of technical development and participate in the democratic processes in society, and so on. But these types of users would not be able to pay what it would cost, therefore some form of subsidy would be necessary.

If linguistic data banks have national coverage and fulfil an important need in any particular country's linguistic heritage and development it stands to reason that operations should in part be financed as a part of a cultural programme sponsored by the nation at large.