FAST INPUT-WRITING

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INFORMATION is the currency of business in insurance, be it direct or reinsurance, and access to information by the under-writers, strategists, mar-keteers, administrators or decision-makers is the major piece in the jigsaw puzzle of making these complex busi-nesses profitable. The debate raging within the computer industry at the de-liverable level (rather than the esoterics of the research departments) is over cen-tralised databases residing on mainframes/large minis, or the powerful and seeming-ly unstoppable juggernaut of achitecture which actually serves the customer.

As application providers to the insurance industry over the last 20 years, Sherwood's role is to stay, hopefully, one step ahead in order to be able to deliver maximum flexibility with maximum security to our clients. Senator — our UNIX-based system for the international insurance and reinsurance community — com-bines the power of client-server architecture with the lower entry point that UNIX central processors offer. The role of this type of architecture with its ability to release the end-user from the conflicts and overheads of a centralised machine would appear to offer the insurance industry the best step forward.

In simple terms, client/server is a method of separating the database itself from the applica-tions which use it. The server or back end is the database proper, and the client or front end is the element the user sees, typically running on PCs. Clients request data from the back-end which serves it to the client. The glue that holds all of this together is perhaps one of the few industry standards, structured query language (SQL). This language in interconnect terms is not seen by the user; it is only when he tries to use it for his own purposes that he realises the limitation he has interacting with his system.

Our role in deciding on the use of this technology for our clients has allowed us to make major strides forward with the use of PCs and associated tools. Our efforts have been focussed around the front end, that part that the user sees and interacts with which is em-bodied in the graphical user interface. Running under windows, the end-user can now simply route to different applications, interact direct-ly with the information and interweave where applicable by direct transfer of data from different systems on disparate machines. With this powerful capability the PC has become the real tool for the nineties that will have a direct consequence on the operation of the business.

Lest we all forget, how-ever, the commercial user is still utilising commands and instructions that are de-signed to make it easy for the computer and its application to interpret. Over the last few years Sherwood have been incorporating an Ameri-can product called Natural Language into its applications.

At its basic level Natural Language allows you to type real English questions directly to your chosen database, be it Oracle, Ingres, Sybase and suchlike. Natural Language inter-prets and develops SQL queries and returns an appropriate English response. This is the prac-tical end of expert systems where true freedom of information is now available to many depart-ments in the organisation that before were hidebound by the inability to interact with their data or the data processing department. The key advantages of such a system are:

Better and more timely decision making: Natural Language allows users to access in-formation they need instantly and provides the flexibility to perform a full range of statistics, to generate charts and graphs or to manipulate tables into a convenient report format.

Reduced training costs: Natural Language eliminates the need for users to learn special-ised command languages, such as SQL, nor do they need to understand the complexities of the database structure.

Increased programmer productivity: Natural Language also increases the productivity of programming staff by replacing complex SQL programming tasks with English queries, and thus helps relieve the application backlog.

Natural Language works because it rests on knowledge. This base is the hybrid of business

specification with database architecture and design. The role of vendors to the insurance industry is to design in the real world to the logic and function of the database. Whilst clearly certain processes fit neatly into a straightforward algorithm or chain of events, a large part of our daily activity, and, we believe, an increasingly large proportion of business will become more event/reaction driven. Software solutions of the future must have either non-structured or have been broken down into small constituent elements so as to provide the ultimate flexibility needed in the real world of tomorrow.

NATURAL LANGUAGE ARCHITECTURE

**REASONING BASED ARCHITECTURE**
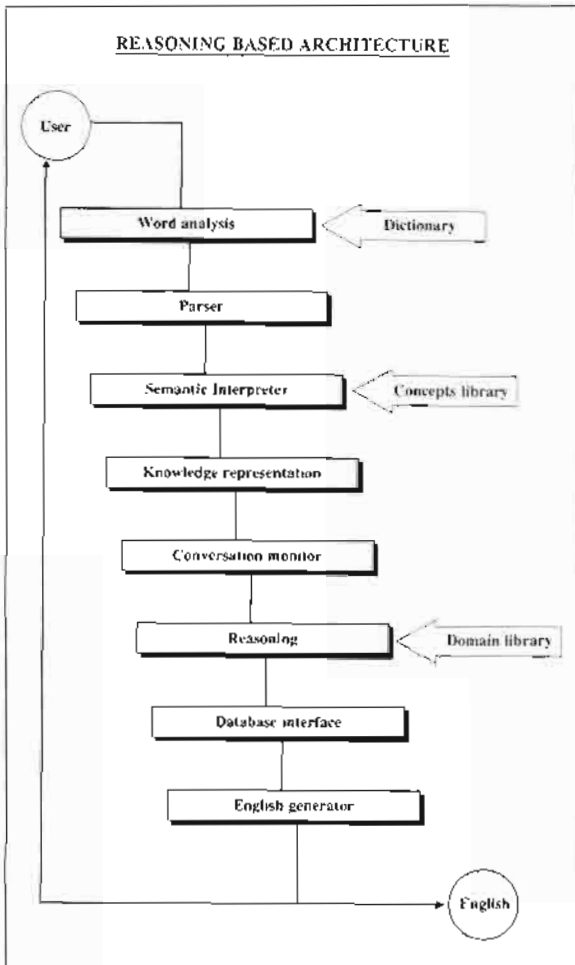
The database, language and networking vendors will all have to bend and open their products so as to ultimately achieve true openness. Anything to run on everything will allow information to be passed to and from machine to machine totally transparently, intelligently relating with the information over neutral networks and knowledge-based applications that really reflect the business process. This scenario is not around the corner, but we can start preparing for this by the adoption of open systems and standards and ensuring that your application vendor is not locking you into products that are defined by the marketing
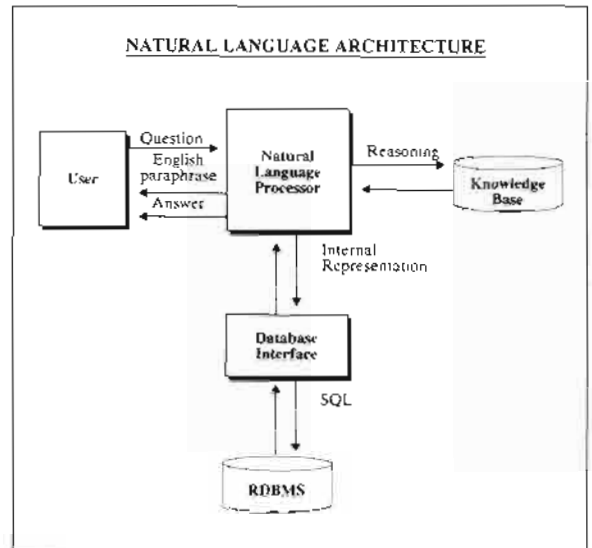
strategies of the hardware manufacturer they have chosen to write their application on.

In reality most companies keep their software ten years and their hardware five years. Therefore at some point you will have tough choices to make on your growing investment. Modern Languages for application (usually 4GL) should be de-coupled from their respective databases as were languages such as Cobol and 'C' in the past to allow the interoperability against different databases for different purposes. Thus Ingres may be correct for one application providing it can also run under a DB2 environment; this reflects your need to have inherent flexibility.

The essence of the relationship with companies such as Sherwood is an ability to interpret your business concepts and strategies to allow you to retain competitive advantage. The new technologies now allow us to perform this feat directly with user. The process now looks like this:
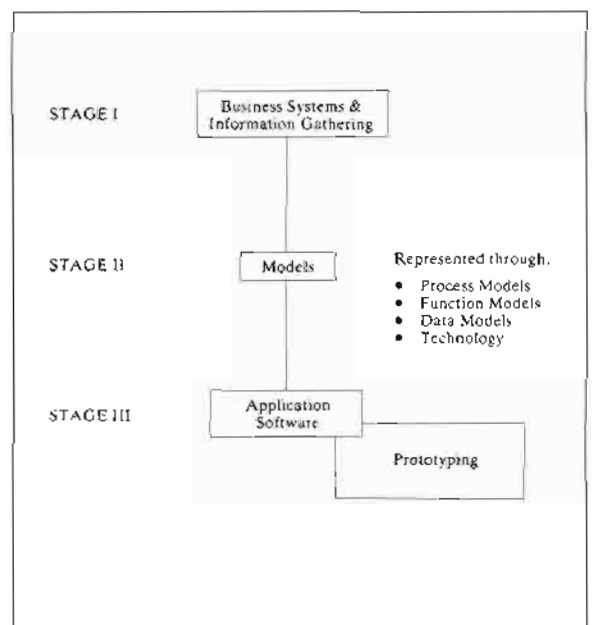
Returning to flexibility, if the business process can be broken down to interconnecting individual components, say one element of the claims processing, then it should be an easy process to represent that element to the end-user to prove the correctness of interpretation from concept to production. New tools allow this process to be more relevant to the business analyst, the programmer, the designer and the end-user. These are known as case tools, usually seen in the past as upper case tools which concern Stage I (business systems) to Stage II (models), now we are seeing the development of lower case technology that will actually do the application coding for you using pictures to represent a common language between the business user and the designer.

It is obvious from this quick trip at a high level and high speed through some of the issues that there is a real dilemma, namely when can I step onto the motorway without seeing technology flash past in the outside lane. One of the keys, however, is the knowledge-based repository that can be used with products like Natural Language so that the interaction with data or information takes place at a level everybody understands: conversational English.

Both the computer industry and the (re-)insurance industry seem to pride themselves on the ability to hide behind their complex respective businesses. The role of the new databases, graphical user interfaces and products like natural language will allow the better utilisation of staff in a time of demographic upheaval, cost containment and service to the client seen as the major business factors for the next five years. In the final analysis the ability to forecast from a knowledgeable position of the historical situation by means of sound data interpretation is the key to a happier marriage between the underwriter and his computer. ∎

David Edwards is business development director at Sherwood Computer Services which he joined in 1985. Starting his career as an insurance broker in 1980, he moved to a firm of London consultants with responsibility for the development of accounting systems and broking software. He joined Sherwood as sales director in charge of the London reinsurance market before moving to his present position.