

TAKING THE HIGH ROAD TO COMPUTING

Strathclyde is the most populous region in Scotland, with over 900,000 households and some 2,316,000 inhabitants; 45 per cent of the Scottish population. The region covers around 13,850 square kilometres, including a wide variety of countryside and communities, from Scotland's largest city, Glasgow, and its suburbs, through industrial and market towns, to rural farming communities and remote islands. In order to service its customers properly, a Regional Council like Strathclyde not only requires an enormous amount and variety of computer power, it also demands reliability.

Strathclyde reckons on handling some 3.5 billion transactions a year across all ledgers and its staff often need to work outside normal hours to enable work to be completed. The council claims to have the heaviest data input load of any council in Britain. With the added demands of community charge systems to be set up and a growing expectation of access to information and speedy response to enquiries from the public, the council knew some three years ago that its ageing GCS (latterly known as InterScan and then part of Bell) System 2100 would be unable to provide the necessary computing capacity.

In November 1986, Tony McCabe, assistant operations manager, and Ian Macfarlane, project manager, began the search for minicomputer hardware that would replace the old GCS system and handle the workload of data entry across the majority of council functions, linked to its mainframes.

Making the Choice

Never a simple one, for Strathclyde there were a number

of priorities. Firstly cost: as ever, local government spending is limited.

Secondly, flexibility: Strathclyde had learned its lesson from its experiences with software which could only be developed by its suppliers due to its complexity/licence restrictions.

Thirdly, the ability to move from centralised data input for all areas in the region, so reducing dependency on one system and increasing data input capacity.

The fourth priority was 2780 communications capability - vital to enable the distributed system envisaged to work successfully, allowing minis to link to each other and to the organisation's mainframes at Glasgow and Hamilton. Last, but certainly not least - and one of the main reasons for the final choice - Strathclyde demanded a good reputation for capability, reliability and quality service and support from its minicomputer supplier.

According to Tony McCabe, from the four suppliers who made it to the final shortlist, ROCC Computers of Crawley, Sussex, won the business for three main reasons: "ROCC had a convincing track record in data processing and an excellent record in customer support. It also showed its 2780 capability at a fully functional (and, we thought, incredibly fast!) demonstration of a working system at Littlewoods. And vital for us, the flexibility of its systems, which could be easily developed by our own staff, fully supported the multiple site - multiple linked configuration we wanted."

From over 100,000 employees of Strathclyde Regional Council, the computer department employs 200 in its operations teams and 157 systems developers, technical support and com-

munications experts - a total of 357 people.

The job in hand

Now for some statistics that might surprise you: council staff are paid in different ways - with cash or direct bank transfer; weekly, fortnightly or monthly - a complex job on its own.

Strathclyde Council made 2.23 million payments out to suppliers, for services and to staff in 1989; it received in excess of 2 million creditor payments: it holds around half a million creditors at any one time on the ROCC system and, in total, handled around 3.5 billion transactions last year.

And there's more. 1989 statistics for the operations teams within the council's computer department show the following numbers of keystrokes in some example applications areas: payment of creditors - 160 million; payroll - 149 million; community charge - 100 million; costing system - 63 million; rating system - 29 million; parking fines - 20 million. An analysis of the operators' time shows they spent approx. 58 per cent entering data and 41 per cent verifying it.

Planned implementation

Looking back, the ROCC computers were phased in over a two-year period during 1987 and 1988; three systems were installed in Renfrew, Ayr and Dumbarton by the end of 1987. Four systems were installed at Hamilton and Glasgow, each consisting of two ROCC computers enabling work to be switched automatically between machines (ie duplexing) should any problem occur with one of them or for data to be inputted via terminals at any

remote location, and processed centrally, should a complete system go down.

Much conversion from the old GCS system had to be carried out - 50 per cent was done by ROCC - and the new system went into operation by mid 1988. It ran in parallel with the old one for some months to ensure that all the wrinkles were ironed out and that the necessary conversion and personnel training was complete.

All data entry at Strathclyde Council is now via ROCC mini-computer terminals - a total of 105, spread as far away as Campbeltown, 130 miles from Glasgow. The distributed solution has worked well; the council has

achieved far greater reliability in its compute-intensive tasks, offers a better service to both its operators and its public and has established a far more efficient and smooth operation benefiting all concerned.

Benefits of Technology

"While incorporating some advanced technology, ROCC has always prioritised the reliability of its systems and we have proved their success again and again," says McCabe. One example of this is shown by the solution to Strathclyde's previous problem of power fluctuation and other causes of serious data loss.

Through battery back-up on disk drives, the ROCC system ensures that the data reading/writing heads are automatically retracted and made ready to re-set, meaning that, in the worst case, only data just keyed-in during the last few seconds can be lost. In addition, the data is being constantly backed-up onto tape, and can be re-called from tape onto the same system after a problem is solved, or taken to any other site for data input and processing to re-commence.

It is believed that 90 per cent of data entry errors are eliminated by the ROCC software. "This is fundamental to our operation," indicates McCabe. "The ROCC software enables the identification of errors at the keyboard stage, so they can be quickly flagged and corrected and clean batches sent to the mainframe. We save considerable amounts of time and money through this facility alone and believe accuracy - or quality - of data is of paramount importance."

From just under 500 terminals in 1987, including dumb terminals used for data entry only, office automation workstations and PCs, visitors to Strathclyde Regional Council's offices will now see in excess of 3000 - with plans for this to increase by at least 1000 per annum over the next five years. The council clearly believes in - and has proved - the benefits of efficient use of the right technology in its business. According to McCabe, the council - as with every other similar organisation - simply could not have implemented central government legislation, including the community charge, without such investment. And the demands on the computer systems continue to grow.

"As the Computer Services Department, our job is to implement information technology for the benefit of the council's operations and to meet its needs in providing services to the public," McCabe reminds us. "Data preparation may be perceived as an old fashioned term, but it is still very much a current issue. High performance, reliable computer systems such as ROCC's, handling the entry and processing of vast amounts of data, will continue to be a crucial part of business life," he concludes. ■



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