PROFILE

GST expands its horizons

CATERING to a wide variety of users, including specialist software developers, academics, businessmen and domestic users, means that Sinclair, like any other hardware manufacturer, must ensure the quality and choice of software available to run on the QL. To achieve the aim, the company has contracted a number of software houses to develop operating systems, utilities and applications programs for the micro.

One such company is GST Computer Systems, which has developed several products under QDOS, as well as its own operating system 68K/OS.

Based in Cambridge, GST was formed in 1979 by Jeff Fenton, an ex-academic from the computer sciences department of Cambridge University. The company started as a technical consultancy but gradually has grown to include software and hardware development, turnkey projects, supply of contract staff, small-scale manufacturing, and installation and maintenance facilities.

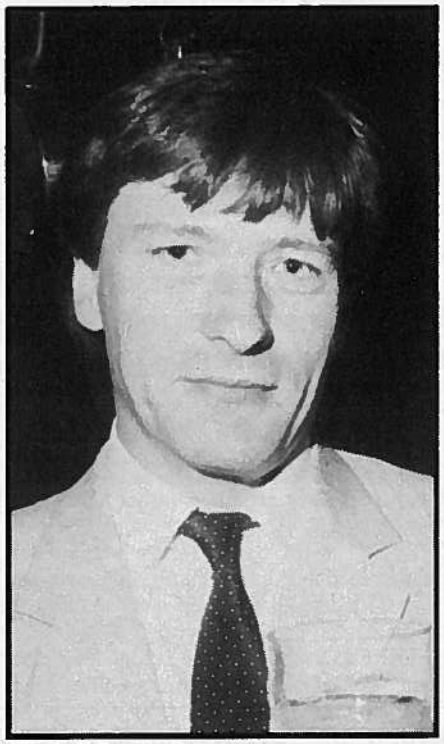
In the last year the company has been expanding its original client base, which for the most part covered about a 50-mile radius of Cambridge. The client base grew from repeat and reference sources, something of a recommendation for any company, and Sinclair Research, also based in Cambridge, did not have to look far when seeking a software house to develop software products for the QL.

Chris Scheybeler, manager of the Systems Software Group at GST, explains that the group began to develop a new operating system for the QL in 1983. Now completed, the system, 68K/OS, is aimed, Scheybeler stresses, at the more specialist software developer, such as universities and software houses.

A bigger market is open to the company, however, through the several other commissions it has received from Sinclair. Scheybeler says: "We do not only develop software to sell on a spectulative basis but also undertake contract work for companies. We have been doing a large amount of contract work recently for Sinclair, covering products under QDOS."

GST, Scheybeler says, recognised a need for quality systems products such as compilers, linkers and assemblers for the QL. Patently, so did Sinclair.

The most recent release from the company is the QC, the first C-Compiler for the QL, which appeared at the end of March. Although GST has not yet begun promotion work on the product, it is already selling in significant quantities to overseas QL distributors, as well as to QL users in the U.K.



Chris Scheybeler.

who have heard of the product on the grapevine.

QC comprises a C-Compiler, special assembler, the official Sinclair linker — which was also written by GST — and extensive QDOS run-time libraries. It costs £59.95 and includes an 80-page manual, as well as a tutorial book on how to write in C, *A Book On C* by Berry and Meakings. Scheybeler comments:

"We see the QL market as now big enough for quality games software"

"The QC package is ideal for the user who wants to move from Basic on to C." To emphasise his point he adds that Sinclair Research uses the product with the new developments progressing in the company laboratories. Scheybeler adds: "We certainly look to the C-Compiler as being our most successful product for the QL this year."

The company, however, is not relying entirely on QC for high-volume sales in the QL market. It has also developed two assemblers for the micro, the QL Assembler and the more up-market Structured Macro Assembler. The QL Assembler, Scheybeler says, is ideal for users wanting to learn 6800 assembly code, while the Macro Assembler, comprising the assembler, macro library, linker and editor, is aimed at the more specialist assembler programmer.

Unusually for that kind of product, the Macro Assembler includes high-level language features, such as the use of IF, WHILE and REPEAT. The Macro Assembler is not yet available, the masters of the program having gone to Sinclair for the Beta test, but Scheybeler expects it to be released in the next two months.

The official Sinclair Linker, also a GST product, is available — at a small fee, of course — to any independent software house wanting to write a compiler.

GST work with QDOS has also entailed contracts to modify the system to run with the various foreign language versions of the QL. "In a sense", Scheybeler explains, "we co-ordinate between Psion and the overseas distributors."

Meanwhile, the company has continued to develop 68K/OS. All the programs described here will run under K/OS as well as QDOS and Scheybeler adds that the system soon will also have disc support. When that support is available, it will be a plug-in card containing the disc controller chip and the 68K/OS ROMs, allowing programs running under both the K/OS and QDOS operating systems to share the same disc.

GST is also continuing to view 68K/OS as an OEM product, though Scheybeler declined to mention any other manufacturers' names. He explains that GST pursued the development of an OEM product based round the 68000 because it had seen a gap in the operating systems market at that level. That is a gap GST clearly plans to fill. Scheybeler says:

"Recent history of microcomputing has shown operating systems coming to the fore, associated specifically with particular chips. In the past we have had CP/M running with the Z-80 and MS-DOS with the Intel 8086 and 8088.

"The 68000 technology has not yet found its own operating system, particularly at the lower end of the market, though there are a number of contenders. We believe that our operating system is sufficiently robust, tried and tested to fill the gap."

The company also has an eye on the increasingly popular Unix operating system, with a product for the QL which, Scheybeler says, is still at the planning stage but on which the company expects to be working this year.

Expansion and development are obviously fairly high on the GST list of priorities. While the company will definitely port its QDOS products on to other 68000-based

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machines, such as the Atari 520 ST and the new Commodore 68000, the Omega, as well as making the C-Compiler available to the MSX range of micros, through both those activities it will enable software developers to write programs which will run on a number of machines.

GST has also set up a subsidiary company, Electric Software, a specialist in consumer software for the QL. Scheybeler comments:

"We see the QL market as now big enough for quality games software and will soon be offering two initial products, *Backgammon* and *The Wreck*, a combined graphics and adventure game."

He adds that the company has recruited a number of younger people for Electric Software, because it is they who tend to have the interest and imagination for the kind of games which will become popular on the market. He stresses, however, that GST has ensured that the team also includes proven professional designers and programmers, to guarantee that the standard remains at what he describes to be the high level on which the GST reputation is based. It is that reputation, built over the years with clients and colleagues in the Cambridge computing community, that GST is determined both to maintain and to expand.

As part of its expansion the company has, in the last year, been undertaking a recruitment drive, concentrating on finding people with technical expertise rather than sales backgrounds. Scheybeler explains:

"GST recognised a need for quality systems products such as compilers, linkers and assemblers for the QL"

"Most of the clients with which we deal have a technical background themselves and want to discuss products and services in considerable detail. We are all able to cope with that, at least at the initial level, and when the client needs more specific expertise, we call in an appropriately qualified member of the staff. So, although none of us is a salesman as such, we are all salesmen when required to be."

He adds that the company is, of course, ideally placed in Cambridge to find suitably-qualified staff. Many graduates, having spent three or four years studying at the university, want to remain in the area, and he stresses that GST is offering work in the leading edge of technology development.

GST plainly is determined to offer a reliable and professional service to clients and end-users, avoiding much of the publicity hyperbole found increasingly in the micro market in the last few years, and concentrating on product development. Scheybeler comments that while the market for the products developed under QDOS is more important to the company in terms of volume sales and numbers of users, the development of 68K/OS remains a project to which GST is thoroughly committed.

Whatever else may be happening, QL users, it appears, are assured of continued interest in the development of increasingly sophisticated software systems.

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