Company Profile

Business Computers Limited

The article reproduced in these pages was written by the editor of Britain's top computer magazine, Data Processing, and was published in December 1968.

It follows with commendable insight the developments which culminated in the Birth of Business Computers Limited in September of that year. It also reflects exactly the atmosphere persisting in the British computer industry into which Business Computers was launched.

The views which the editor expresses in his closing paragraphs have since been shown to be well founded. The company's turnover did indeed top the £1 million mark in 1968 and it was upon this record, and a history of earlier successes, that on June 2, 1969, Business Computers Limited made its debut as a new public company on the London Stock Exchange.

This event in itself will long be remembered as a huge vote of confidence by the British public in its own computer industry's ability to flourish in the face of overseas competition. The public share offer was over-subscribed more than 40 times—this in a period of generally poor trading on the exchange.

This confidence will be well justified, for already since June Business Computers Ltd. has expanded home market activities and preparations are already well in hand for entry into overseas markets—including the U.S.A.

Production has increased accordingly and research programmes during 1969 have resulted in many new features being added to the Sadie and Susie computers. But the main development has been the evolution of a larger computer configuration, evolved from Susie, shown for the first time at the October 1969 Business Efficiency Exhibition. This new computer retains the simplicity of typist control yet has a capacity rivalling that of the small to medium sized hardware of conventional computer manufacturers.

Business Computers Limited

THE significance of 1968 for Business Computers Limited is that it is the year of the company's formation. Moreover, it is the year which marks an important phase in an exceptional success story concerning two computers singularly named "Sadie" and "Susie".*

The history of Business Computers goes back to 1963 and concerns two companies—Systemation Limited and Bismec Limited. Systemation was formed in 1962, at Hove, in Sussex, the nucleus of the firm being a group of six engineers who provided an engineering and design consultancy service for the electronics industry. The key man, and managing director, of Systemation was Bill Gannon, an engineer with many years experience in design and development work in the aircraft industry. Gannon's questioning attitude regarding a number of projects on which the company was engaged in the early 1960's led him to the conclusion that there was a potential market for a small electronic computing device with the ability to operate in sterling. A machine with this capability—called "Betsie"—was designed and manufactured by Systemation in 1962 and was successfuly sold to a number of betting firms. For Systemation the introduction of Betsie marked a tentative, but significant, entry into the market for electronic business machines. Indeed, by 1962 Gannon found himself involved in design work for logic circuits which could be used in a proposed new electronic calculating machine. As a result of this design programme the company introduced in 1963 a new desk-sized electronic accounting machine called Sadie—Sterling and decimal invoicing electronically.

Sadie was shown for the first time, privately, at an exhibition in London, in October 1963. Among those attending the exhibition was Bill Heselton, managing director of Business Mechanisation Limited (Bismec) a business equipment firm which was formed in 1936. Heselton, who was known to Systemation's commercial director, Lewis Harris, had a very special interest in the new machine, principally because Sadie incorporated all the features which were, in his view, the essential prerequisites of a really effective mechanised invoicing system. One of the most important features of the machine, apart from its ability to operate directly in sterling, was that it made use of a conventional typewriter as the basis of its design. The operator could thus control the machine entirely from the typewriter's keyboard. Ostensibly, any competent typist would have the ability to operate Sadie. However, another important factor regarding the introduction of Sadie concerned Heselton. This was that the facilities provided by Sadie were similar, but superior to those of a machine which Bismec themselves had introduced a little earlier. The Bismec machine, which was based on an electro-mechanical machine manufactured in Germany, made use of an automatic sterling conversion unit which enabled amounts to be entered, calculated and printed in sterling. At the time of Sadie's introduction, Bismec had ten orders for this machine.

After seeing Sadie, Heselton was convinced that the machine had considerable potential. Gannon was, of course, equally optimistic about Sadie, but was faced with the task of finding a suitable organisation which would market the machine, in Britain. Heselton was immediately interested in such a proposition which was, of course, of mutual benefit to the two companies involved. In February 1963, marketing of Sadie was placed in the hands of Bismec which ordered an initial batch of 20 machines from Systemation. And without further consideration Heselton decided that development and production work on their own machine should be terminated although the project had, up to that time, incurred costs of over £6,000.

When it was first announced that Bismec was to market the machine, the reaction from some competative quarters was that Bismec had neither the required expertise for selling, nor a true appreciation of the magnitude of the marketing operation which would be necessary for handling such a machine. In short, the feeling from many rival organisations was that Bismec would fail to make any significant impact on the market. Events proved them wrong. Bismec sold 85 machines in the first year and in the first 18 months established nine branch offices to cope with the increasing orders for Sadie. How did Bismec not only prove its critics wrong but also acquire a much larger share of the market than was expected?

According to Heselton, three main factors helped the company in its achievements. First, when the marketing agreement between Bismec and Systemation was concluded, Heselton immediately introduced a campaign to attract salesmen and systems advisers who already had experience in marketing machines of this type. Bismec managed to build up such a team, Heselton's view at that time being that "if they should fail, they would fail with the best." The second factor was that, from the start, Systemation provided good support for the sales force by ensuring that deliveries for the machines were met. Finally, it is clear that the whole marketing strategy connected with Sadie could not have succeeded had not the machine itself embodied features which constituted something of a breakthrough in the design of desk-sized electronic accounting machines.

Some idea of the main features of Sadie, and its related system, Susie (Stock updating sales invoicing electronically), which was subsequently introduced in 1965 by Systemation, can be gathered by tracing the development of these machines. As already mentioned, one of the important features of Sadie (and of Susie) is the use of a typewriter for entering descriptive information, working data, and control functions. Thus the operator is concerned merely with entering information, working data, and control functions. Thus the operator is concerned merely with entering information via a standard typewriter keyboard and pressing certain designated keys to initiate control functions. On the original Sadie the typewriter was an IBM Model B which could (and still can) be fitted with a 12-, 16-, 20-, 24- or 30-inch carriage. On subsequent models an IBM 735 electric typewriter was adopted as the standard input/output unit for both Sadie and Susie.

The calculating and main storage facilities on the first models of Sadie and Susie were composed of solid state circuits. Technically, both machines were basically similar but for the fact that Susie incorporated a special magnetic drum store which provided storage for large groups of information such as stock balances or statistical data. With regard to programs, each machine utilised a set of permanently stored instructions relating to the standard operation of the machine. Variable instructions could, however, be entered via the keyboard.

In 1965 it became apparent to Systemation and Bismec that it would enhance the capabilities of both machines if they could be equipped with peripheral input/output units. Models of Sadie and Susie which could operate in conjunction with a paper tape reader and punch, each of which could also handle edge-punched cards, were introduced in 1965. At the beginning of 1967, a Susie equipped with paper tape input facilities was accepted as a computer in accordance with the Ministry of Technology's standards, thus qualifying for the Government's computer investment grant, as did Sadie later in 1967.

In 1967 Bismec claimed that it had captured the largest share of the British market for desk-sized electronic accounting machines, and this in the face of competition from machines being marketed by companies such as Remington Rand and Friden. This, of course, led to a still closer relationship between Systemation and Bismec. Gannon and Heselton were soon convinced that the only way to tackle the expanding market was for them to get together and form a single organisation. Thus Business Computers was formed on September 4, 1968, with Gannon and Heselton as joint managing directors.

Even before the formation of the new company, Systemation had, not surprisingly, been working on technical and design projects connected with Susie. New models of both machines were shown for the first time at the 1968 Business Efficiency Exhibition. The design of the new models is based on silicon micro-logic integrated circuits. Each machine has a basic delay line store comprising eight 16-digit locations. And Sadie can be equipped with additional storage comprising up to 100 8-digit locations, if required. In addition to its main storage, a Susie also incorporates a magnetic drum store (modular in design) with a capacity of up to two million bits. An important feature of Susie is that alphabetic information can be recorded in the magnetic drum store. Moreover, such information can be modified by the operator who enters new data via the typewriter keyboard.

A new feature of Susie is that up to 3,000 program instructions can be fed into the machine from the keyboard, from paper tape, or from edge-punched cards. Another important feature of both machines is that information can be processed in variable length formats. Variable length fields of up to 64 digits (and up to 48 alphanumeric characters in the case of Sadie) can be handled. Direct division is now a standard feature on both machines.

A notable technical innovation on the new models is a standard interface which enables peripheral units to be "plugged in", or removed, as required. The calculating unit of the machine is connected directly to the interface which provides a direct link to the input/output typewriter and peripheral units. Both Susie and Sadie can be equipped with a paper tape reader and punch (which also handle edge-punched cards) and a separate edge-punched card reader. Information can be read by the paper tape reader and the edge-punched card reader at speeds up to 200 characters per second. Data are recorded in paper tape or edge-punched card at rates up to 40 characters per second. The input/output typewriter on a Susie or a Sadie may be either an IBM 735 which operates at a speed of 15.5 characters per second, or a Hermes KP11 which prints information at the rate of 12 alphabetic or 18 numeric characters per second. The cost of Sadie is between £2,395 and £7,250 depending on its configuration, while the cost of a Susie ranges from £6,500 to £18,000 according to configuration. However, Susie and Sadie can be acquired on a rental basis.

The predicted growth of Business Computers over the next year is 25 per cent. The company's turnover for 1967 was over £600,000, but the company declined to say what its nett profit was for the corresponding period, except that it amounted to six figures. About 85 per cent of its turnover relates to sales for Susie and Sadie.

Many large and small organisations in Britain are Susie and Sadie users, including B.O.A.C., Schweppes, Clydesdale Bank, Fisons, Cementation, British Aluminium, B.I.C.C., and Wrights Biscuits. Turnover in Britain, for the company's first year is expected to be over £1 million. This predicted turnover, if related to figures compiled by the Ministry of Technology, represents about 50 per cent of the market for electronic accounting machines and desk-sized computers.

Business Computers has achieved its success quite independently without any financial help from outside sources. It intends, at least for the time being, to continue to finance its expansion and new projects from its own profits. Currently, Business Computers' production facilities are located at Hove, Sussex, while branch sales offices are situated in Birmingham, Bristol, Dublin, Glasgow, Hove, Leeds, Manchester, Newcastle and Southampton. However, another eight branches are to be established in the near future. Business Computers also intends to establish overseas operations, by setting up marketing organisations in Europe and the United States.

Business Computers Limited

the big name in small computers

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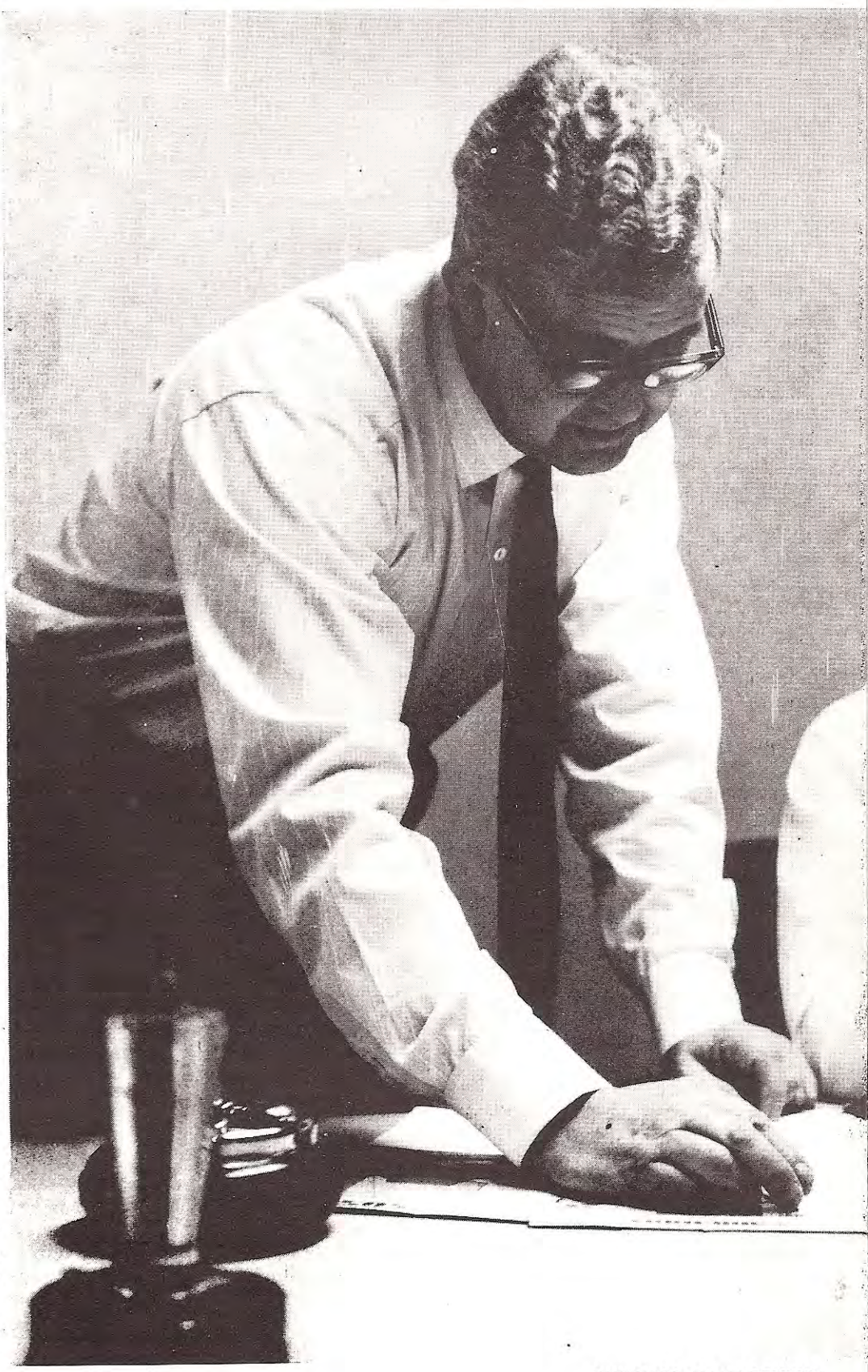
BIG DEAL IN

COMPUTER TECHNOLOGY has been the great industrial growth area in post-war years, and there is plenty of life left in this particular horse yet, with the market still expanding at a rate of some 25 per cent a year. Against the huge battalions from across the Atlantic, led by the ubiquitous IBM, Britain has had to develop a system of defence in depth. As a result we now have a heavily integrated computer industry headed by ICL, the only computer company outside of the United States to have a larger share of its own domestic market than IBM.

However IBM, ICL, etc., are dealing with the strictly big league stuff, systems that cost from £100,000. But EDP need not just be the province of companies that can raise the really big money, and indeed even they find that the needs of certain tasks, involving large amounts of data, are served best by rather less massive investments in hardware.

Accordingly, there is now developing quite a battle royal at the bottom end of the market, in the realm of the desk-top computer—handy sized units that can be operated by secretarial or clerical staff. This type of equipment bestrides the computer and office equipment industries, the latter being notorious in this country for being predominantly foreign dominated on the engineering side.



Home-grown brand leader

When considering desk-tops, a number of well known American and Continental companies immediately spring to mind such as Burroughs, NCR, Friden and Philips. In actual fact one comparatively small home-grown company is the brand leader in Britain and this is rare enough in the office machine field to be worthy of note.

This company is Business Computers Ltd., which came into being under its present name last June with the amalgamation of a manufacturing company, Systemation Ltd., and its marketing and service associate, Business Mechanisation Ltd. At this point, the new company went public with quite startling results. Some 700,000 shares at 21s, representing 40 per cent of the equity, were offered to the public, which promptly sent in stock applications to the tune of £30 million,

SMALL COMPUTERS

Joint managing directors Bill Gannon (left) and Bill Heselton — a marriage of technical know-how and marketing expertise which is the essence of Business Computers' success story.

While the ICL's and IBM's fight out the big computer battle, there are interesting things going on at the other end of the scale. A British company less than ten years old has taken at least a third of the home market.

by Roy Grant

thus effectively making the new issue over-subscribed by over 40 per cent, which is something of a record. At the time of writing, the share price stands at 34s.

This in no small measure shows the deep, underlying faith that the investing public has in successful companies in dynamic growth industries. This success can be measured by the fact that, from Board of Trade returns of companies having a computer installation within a price range up to £18,000, Business Computers reckons that from its own known results it should have about 50 per cent of the market. However, Bill Heselton, the joint-managing director on the marketing side, believes that a more realistic assessment would be about 30 per cent, very similar to Friden, the large American-based company. Before going to the market, pre-tax profits were put at £240,000 from a turnover of £1·75 million. Not at all bad for a company that did not exist in any form before 1961.

The company owes a large part of its success to being first in the market with a really workable sterling invoicing machine, which it put on the market back in 1963. It is only within the last year that such a name as NCR has been able to create a great deal of sound and fury out of the fact that it had a machine that could transfer from decimals to sterling at the drop of a switch. Similarly, Philips Electrologica is now making noises about its new decimal sterling machine, as if no one had ever thought of such a thing before.

The story really starts with a remarkable, forthright, Irish mechanical engineer Bill Gannon, the founder of Systemation Ltd. and the current joint-managing director of Business Computers on the production and research side. In the 50's he had been involved with the aircraft industry on the South Coast, in a design capacity. He founded Systemation originally as a consultancy in automotive design. It was work in this field that led him to believe that there was a big future for the small computer.

Complicated bets pay-off

The big breakthrough however came from a somewhat unusual source. In 1961 the bookmakers were enjoying a tremendous boom period, with customers crowding into the newly legalised betting shops. A number of them were on the lookout for a machine that could speedily calculate in sterling terms the wide variety of complicated bets to which the British punter is addicted. Systemation produced Betsie, a calculating machine that could actually do the job.

The implications of this achievement were obviously much wider than the exotic applications of the racing settler. For years mechanised accounting in this country had been bedevilled by our money system. At that time there was no machine that could in one easy step, calculate 257 items at 6s 7d and give a sterling answer.

The traditional method of drawing up an invoice is to get the prices and quantities written down, extended, and totalled by a comptometer operator and then have everything typed. In modern terms this is a deadly slow process, with a wide scope for human error.

This then seemed the most fruitful line of development for Systemation. By 1963 the company had in fact completed the design and development work for a fully electronic sterling invoicing machine which

was christened SADIE (Sterling And Decimal Invoicing Electronically). This new machine allowed sterling invoicing to be carried out by just one person with ease and surety.

The calculating and typewriting mechanisms are combined in one unit. The calculations are typed onto the invoice and the answer appears in a fraction of a second. Later extra facilities were added to the Sadie machine, giving it the ability to read standard data from punched paper tape or edged punched cards, and to punch cards or tape with selected data from the standard accounting procedures for later computer processing.

In the same year as its initial development Sadie was exhibited at the Business Efficiency Exhibition. There it was spotted by Bill Heselton, managing director of Business Mechanisation, then primarily a distributor of a variety of different types of office machinery. Business Mechanisation had itself developed an electro-mechanical machine designed to do the same sort of work as Sadie.

On seeing Sadie, Heselton decided that his machine was outclassed. However, after talking to Gannon and his colleagues it was quickly realised that there was scope for a joint venture in putting Sadie on the market. Systemation had the technical know-how, but nothing like the marketing knowledge and sales contacts of Business Mechanisation. So a partnership was brought into being.

To each his own

Business Mechanisation was given the sole sales franchise and sold the machine from its Tottenham Court Road headquarters, whilst it was manufactured by Systemation at its Brighton factory. The two companies continued as separate entities, until they merged and went public this year.

"There was virtually no competition for this type of machine when we started serious production," says Gannon. "By the time it arrived in the field we were off to a flying start with 60–70 machines already out." (Nowadays there are some 700 machines in use throughout the country.)

"When we started we had to make sure that we got the thing right. We laid great emphasis on service and hired the very best salesmen available," says Heselton. "To start with we actually paid our top salesmen more than the directors of the company." The first UK sales manager was a zone manager for a well-known international company. Similarly, Gannon points out that his company's machines "were designed by customers, salesmen and service engineers as well as the development experts."

The current investment in servicing is quite considerable, with the company not expecting to break-even on its investment for another two years. As examples, all service engineers are given cars, whilst in Scotland there are some areas where one man has only four or five machines to look after. This is the sort of solid groundwork that future prosperity will depend upon.

Two years later the two companies entered the computer market proper, with the development of SUSIE (Stock Updating Sales Invoicing Electronically). The operation principles are still extremely simple. The input mechanism remains a typewriter keyboard. But it is a real computer with a storage memory and is in some sense competing with the small to medium range equipment on offer from the industry's giants.

There was some trouble originally

with the Ministry of Technology over the definition of a computer. Basically if the machine can take a card input it is a computer. The point was eventually taken and now Susie qualifies for the full grant of 20 per cent available to companies installing it, just the same as the products of IBM and ICL.

"Where Susie scores is that it can handle a steady 300 invoices a day on an economical basis," says Gannon. "If a company is using a large computer for this type of operation it must wait for a suitable accumulation running into many hundreds. Also our machine builds up a store of data for instant examination or for later processing by a larger unit."

Later developments include multi-operator use of one machine. Three operators can now process data at one and the same time using identical or different programs. This size of installation can take Susie in to the £30,000 class. Taken in modular form the computer's storage capacity can be boosted to a pretty considerable 130,000 memories. Although it was originally designed for stock control jobs, with the machine's memory being adjusted with each invoice, systems have been devised whereby it can be applied to the whole gamut of management information, production control, sales statistics, costing and payrolls, etc.

Progress towards the happy time when the partners went public together has been heartening. When Business Mechanisation started to market Sadie it had just two sales offices, now it has 17. In the first year of the joint operation the new venture took up 30 per cent of its turnover, and a year later it was up to 60 per cent. Now it has reached 90 per cent and the residual servicing of other company's equipment is more for the customer's convenience than anything else.

Business Computers' success is there for all to see, but there is still a certain resistance to it on the basis that it is not a 'Name' company in the same way that its competitors are. "At one time there was quite a campaign of vilification against us by one of our competitors," says Bill Gannon, "on the basis that we were a fly-by-night outfit working out of a shed in Brighton." Actually the Brighton end of the company employs about 300 people.

Building up a blue-chip cachet is not an easy undertaking and the company has some little way to go yet. The new name must be put across to the people that matter, in such a way that nobody will be caught out saying 'Business Computers, who?' And one main reason for going public was that the company would have much more standing as an established enterprise.

Not enough glamour

As yet the new image is not helped by the central London headquarters, the display windows of which are typical of a distributing/service organisation, with a proliferation of different pieces lying around in a somewhat unstimulating profusion. Changes however are scheduled and by the end of the year it is due to present a much more glamorous face to the world from its sales headquarters.

On the advertising side, Heselton claims that his company spends as much as anybody in the field for this type of product, but of course the others are bound to get the benefit of spin-off from their efforts across a wider range of products. He agrees though that his company must go in for far more prestige advertising in order to establish the new name. Up to now publicity has been very much a product selling activity, mainly in relevant trade journals.

So far the company has saved the country foreign currency in providing import substitutes, but no export selling has been attemped as yet. "In order to build-up a satisfactory manufacturing capacity, it has been necesary for us to concentrate on the home market," says Gannon. "Currently we are turning out about 40 machines a month and we sell everything we make. We have not got anything to spare at the moment."

It is also true that it would be difficult to sell the machine abroad right now. Tariffs would make it expensive compared with leading competitors. The company itself has also to import a fair number of parts, including the computer specialised IBM typewriter keyboard from Holland, and this component alone costs £700. So Sadie and Susie do not sell on price even in the home market. An effort was made at one time to sell them on the continent through an agent, but this did not prove to be possible. The company now feels that what is really needed for European selling is a marketing subsidiary.

However the rest of the world is unlikely to be deprived of an opportunity to use Susie for much longer, as negotiations are in hand with an American source which it is thought could bring in as much as £25 million worth of business.

The question might well be asked, 'just how much Government support a small British company in such an important field fighting alone against heavy foreign competition should receive?' Gannon is particularly bitter about the issue, feeling that his company has not fallen in for its fair share from any source. The Ministry of Technology, he believes, has more or less turned a blind eye, as has the relevant little Neddy.

Whether he is right in this respect or not, one thing is clear, his is just the sort of company that should be receiving every encouragement, from every source. If it is not, something has gone very wrong with the Government's planning policies. Import substitution in this sector should be a major priority.

Further, it would also appear that the company is under some pressure from the Board of Trade not to expand its production capacity at Brighton, but to go instead to a development area. Whilst the development area policy is commendable in many ways it is depressing that a small growing company in a tight tactical situation should be plagued by the letter of the law against its immediate trading interests. In this respect we have a lot to learn from the Japanese about protecting vital native industries. END

Timeline

1939	Low's Calculators Ltd incorporated at 180 Tottenham Court Road.
1961	Systemation Ltd incorporated with Bill Gannon as MD.
1962	Low's Calculators Ltd becomes Business Mechanisation Ltd with Bill Heselton as MD. Systemation's BETSIE launched.
1963	Systemation's SADIE launched at Business Efficiency Exhibition, Olympia
1964	Business Mechanisation Ltd becomes Bismec Ltd and later Bismec Group Ltd. Joint production and marketing deal between Systemation Ltd and Bismec Ltd.
1969	Systemation and Business Mechanisation Ltd together incorporate Business Computers Ltd. Business Computers Ltd in Public Share offering of 700,000 ordinary 2/- shares at 21/- each (oversubscribed by 40%).
1970	SUSIE launched.
1972	Molecular 18 Mark One launched.
1974	Business Computers Ltd in receivership and is purchased from the receiver by Computer World Trade Ltd.
1976	Ex-Singer management buy Business Computers (Systems) Ltd and Mike Munnelly takes over as MD.
1977	Allied Business Systems Ltd take over production of Molecular-18 and BC(S)L launched the Mark IV.
1981	Business Computers (Systems) Ltd become Business Computers (Systems) Plc with a public launch.
1984	Business Computers (Systems) Plc suffer a bad year.
1986	Electronic Data Processing Plc buy Business Computers (Systems) Plc.