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# By KENNETH OWEN

A relaxation of the western embargo system for computer sales to the Soviet Union may be indicated if unofficial reports of a major sale by Burroughs are confirmed. According to mese reports, five large 5.5500 computers have been ordered, one of which may alteady be installed in Moscow.)

If true, this would represent the sale of computers larger and faster than any previously exported to the Soviet Union from the west. (The WSB 5500 is midway in power between

the I.B.M. 360/50 and the 360/65) (The larges: I.E.M. machine installed in east Europe to date is a 360/40 in Czechoslovakia.)

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A Export licences for four large Brinish computers ordered by the Soviet Union have not yet been granted by the Board of Trade. These comprise two LCL 1900As for the Institute Stringh-energy Physics in Serpuishov, near Moscow; and two System 4/70; for Gospian, the central Soviet planning agency, to replace an existing 4/50.

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Europe and to the Soviet Union in particular were described by Arthur Hemphreys, managing director of international Computers, in evidence to a subcommittee of the Select Committee on Science and Technology last week. Because of the embareo system, he said, considerable "market subtlety" was required.

Soviet customers, Mr. Humphreys indicated, often insisted on ordering words, which were not permitted under the embargo rules. As a result, I.C.L. was often not sure whether it had gained an order or not.

Over the next two to three months, he added, LC.L. could get substantial Soviet business. "But we might not get it." The reported Burroughs order follows the settingup by the company of an east European sales branch based in Freybourg, Switzerland.

The strategic embargo list which defines the items which may not be exported to east Europe is produced by "Cocon", a Nato coordinating committee concerned with international export controls and east/west trade.



Software developed for International Computers' 1900 Series of machines is to be made available under licence with a new Polish computer, the ODRA-1304, deliveries of which have now begun. The hardware firm is ELWRO (Wrocławskie Zaklady Elektroniczne).

This association could well lead to future sales of I.C.L. computers in Poland, since the 1364 uses transistors and is not as advanced as the third-generation 1900-series machines from I.C.L. The Polish computer could therefore have a relatively short life of perhaps three years, while generating a familiarity with 1900 software and a potential demand for the faster, more reliable British machines.

This strengthening of LCL's position is significant at a time when, under the direction of the Soviet Union, the east European countries are tending to standardize on computers derived from the IBM 360 series. An agreement was signed in Moscow last month by eight Connecon countries for the joint acculoment of a family of computers known as RJAD and modelled on the current IBM range.

The licensing surcement with I.C.L. periods the intersurieted use of all 1900-series software. This includes the George operating systems, compilers, utility pro-



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facturer also provides reprints of LCLL manuals, and systems tapes which are identical to those of LCLL.

On the hardware side, the specifications of the 1304 are much more basic than those of the LC.1, 1904, 4s closest parallel. Peripheral equipment, also, is restricted. The ine printer made under licence from LC.L. is relatively slow, at 600 lines per minute.

The Polish machine uses the standard LC.L. interface. This means that all LC.L. peripherals can be linked to the machine, and also that existing LC.L. installations in east Europe can be expanded with the cheaper Polish peripherals. Data-linking between the 1304 and the 1900 series can also be accomplished without problems.

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# New ICL system

A new computer model, aimed specifically at the east European market, has been launched by International Computers. Called the System 4/62, the model has already created widespread interest and it is likely that most future orders from Comecon countries will be for this machine.

System 4/62 is three times more powerful than the 4/50, the next machine down in LC.L.'s System 4 range, yet it is slightly smaller in capacity and much slower than the 4/70. It is thus just small enough to avoid difficulties with present strategic embargo regulations.

This factor is highly significant in the east European market, and particularly in Russia, where the need is primarily for large systems which are used to deal with applications concerning economic simulation and central planning. The difficulty is not in selling these systems but in obtaining export licences. (LCL can already claim a degree of success in obtaining licences for its large machines. It recently delivered two 4/70s to the Institute of Management Control and Gosplan, the central economic, planning authority in Moscow.





The Financ I Times Friday July 31 1970

## COMPUTERS



THE ANNOUNCEMENT recently that International Computers (ICL) has received official accreditation in Russia comes at a critical moment in the company's fortunes. ICL, or the several companies which are now merged under its name, was the first computer manufacturer to find an export market in Eastern Europe, and has built up a substantial lead over its competitors.

Recently, however, there have been signs that the tide is turning against ICL, just when the ing against ICL, just when the company's marketing effort was really gathering momentum. The total value of ICL equipment sold to Eastern Europe, includ-ing Russia and Yugoslavia, is estimated at around £32m. Of this, Russia has contribut d film, while the rest has been spread widely over the smaller countries, ranging from £7m, in Czechoslovakia 10 £im. in Romania.

analysis of these Enrther figures reveals two significant factors. In the first place, sales in 1969 came to £15m.—nearly balf the total—of which 18m. was in Yugoslavia and the smaller Comecon countries, the rest in Russia. Secondly, sales in the first nine months of ICL's present financial year suggest that the 1970 total (at the end of September) will be less than 20 per cent, of last year's.

# Sales drop

The main reason for this drop has been increased competition in the satellite countries from several manufacturers, resulting in some dramatic sales achieve-ments. France's Compagnie lu-ternationale pour l'Informatique has sold nine of its new, medium-Romania-normally one of the smallest spenders-and has followed this up by granting the Romanians a licence to manu-facture the Iris 50. This has brought ICL activities there to a standstill.

Britain's ICL was the first computer manufacturer to find a market in Eastern Europe, and now has a substantial lead there. But fast growing competition has this year produced a dramatic drop in ICL's Comecon sales. Ivan Berenyi reports on the situation, and on the steps ICL is now taking.

17 In Bulgaria, the Japanese, who jave been gathering strength in Eastern Europe for some time, had their first success with the sale of 20 Facom 270/30 computers made by Fujitsu, and are also reported to be negotiating, a licence agreement. In flun Eary, the French CII is again leading the field with two of its smaller machines, the EMG 8300 machines to the Russians. The and 810, manufactured locally difficulty is not in selling the under licence.

under new pressure-from computers-but in obtaining ex-siemens in Hungary and Czecho-slovakis, from Univac in Yugo-slovakis, from Univac in Yugo-the Control Data Corporation in the Control Data Corporation in East Germany and even in trailing position will make life Peland, where ICL had granted caster in a lot of ways, but a software licence to the ELWRO particularly in its relation with state plant in Wroclaw, the Lawanes are involved in larger Russian the central Lawanes are involved in larger Russian import/expired a software licence to the SLW over particular, state plant in Wroclaw, the Mashpriborintorg, the central Japanese are involved in large Russian import/export agency, scale negotiations. The biggest threat of all organisations are eager to buy run computers, but to make the best

which has moved in with a vengeance and now leads the market in Yugoslavia and East Germany while also being ahead of the British manufacturer in Romania and Bulgaria. This sudden reverse is really no fault of ICL's—with a sales force of 118 in East Europe, compared with 20 in Russia, sales are running more or less neck-and-neck in the two areas. The real reasons are that the Conlecon countries are easer for IBM machines partly because they are developing a similar range of their own.

# USSR hopes

As a result, ICL's hopes must be increasingly vested in the Russian market, and accreditation will presumably lead to an increase in the sales force there. ICL's success depends to a large extent on its ability to sell large nder licence. Everywhere ICL finds itself enormous demand for powerful

computers, but to make the best use of its resources ICL must devote its attention to those which actually have the currency to spend. To ensure this good relations with Mashpriborintorg and the Ministry of Foreign Trade are essential.

ICL's special trading status is also significant because of the also significant because of the particular nature of the com-puter industry, and the granting of this status reflects Russia's urgent need for Western computers as much as ICL's success in the Russian market.

Indeed, so far ICL has had to face no major competition in Russia. But how long will this continue, and how soon will the Russians be able to satisfy their own needs with domestic products?

According to Ralph Land, who

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Ralph Land is convinced that while pressing shead with the production of third generation computers, the Russians will also step up the production of exisiing second generation machines such as the Minsk series and the Besm-6. There have been no altempts to phase these out.

Competition from the West, says Mr Land is at present mostly confined to two concerns —Siemens and Bull-GE. Sicinens has only one toarketing man in Russia, who represents the full range of Siemens products.

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The read of the field is made up by Japanese manufacturers— Bitachi, Toshiba and Nippon Electric—who, Balph Land feels, will certainly make an impresston in due course, particularly in the Soyiet Far East. Their handicap is sheer physical distance and their present dependence on American technology. The only known sale to date has been by Nippon Electric, which has installed a medium-sized NEAC 2200-1200 computer at a refrigeration plant in northwestern Litbuania.

Whatever challenge the future <sup>1</sup> brings, ICL is in a uniquely strong position in the USSR to meet it. The competition will certainly grow, but, as Ralph Land points out. The company has accreditation, good cequipment compatible with Russia's long-term aims, a remarkable sales total of just below...30 machines and a competent sales and support team which will now be considerably enlarged.

# Challenge

The company has one computer installation in the country, at Moscow's Institute of Automation, where a number of systems people are working "on contract," but they are not concerned with extending the market, only with implementation.

Mr. Land feels that a stronger challenge is represented by Bull-GE, who can expect some help from the extensive Russo-French scientific co-operation projects. The merger between GE and Honeywell's computer interests could also have an effect. "Honeywell did not want to go to Rossia," says Land, "but the merger could well take them in and we expect increased compevition from the tie-tp." Sales total three machines, two GE 425s and a 435.

As for the wholly American companies, there seems to be little to fear at present, though Ralph Land says be has also heard the persistent runnour that 200 IBM machines are on order. "We tend to discount it, but we might just wake up one day to find it's true. Certainly, if they match the effort they have been making in East Europe, they will be immediately felt."

And apart from IBM? "We know that the Russians have visited the U.S., and went to see Burroughs, CDC and Univac. We also know that negotiations with Burroughs reached an advanced stage, but there is no clear-cut evidence of sales so fay, apart of London's A-1070

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	SUBJECT: UK COMPUTER SYSTEM TO USSR (SERPUKHOV)
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	1. UNDER HEADLINE "HEATH DEFIES US TRADE BAN", FOLLOWING ARTICLE APPEARED ON FRONT PAGE QUALITY NEWSPAPER "GUARDIAN" MORNING DECEMBER 16.
:	A. "THE PRIME MINISTER WILL URGE PRESIDENT NIXON TO CALL OFF AMERICAN EFFORTS TO BLOCK A 6 MILLIONS POUNDS BRITISY COMPUTER DEAL WITH MOSCOW, IT WAS REPORTED YESTERDAY IN THE UNITED STATES. THIS MOVE COMES SHORTLY BEFORE MR. HEATH'S SCHEDULED DEPARTURE FOR CONFERENCES IN OTTAWA AND WASHINGTON WITH MR. TRUDEAU AND PRESIDENT NIXON.
	B. "IN BRITAIN SPOKESMEN FOR THE PRIME MINISTER AND THE DEPARTMENT OF TRADE AND INDUSTRY HAVE BEEN UNABLE TO CON- FIRM THE REPORTS.
	C. " THE SALE OF TWO COMPUTERS FOR A SOVIET NUCLEAR PHYSICS CENTRE IS AT STAKE. THE DEAL HAS BEEN UNDER NEGOTIATION FOR ABOUT A YEAR BY INTERNATIONAL COMPUTERS LTD.
	D. " THE AMERICAN REPORTS SAY THE US HAS OBJECTED ON THE

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PAGE Ø2 LONDON 10353 1610022 GROUNDS THAT THE SALE WOULD BREACH RULES FOR WITHHOLDING WAR-POTENTIAL GOODS AND MACHINES FROM COMMUNIST COUNTRIES, AND WOULD VIOLATE US NATIONAL TRADING RULES BECAUSE THE COMPUTERS CONTAIN COMPONENTS MADE IN THE US. THE BRITISH SPOKESMAN SAY MR. HEATH DISPUTES BOTH ARGUMENTS.

E. "ICL HAS ALREADY SOLD 3.6 MILLION POUNDS WORTH OF COMPUTERS TO RUSSIA THIS YEAR, INCLUDING A 2 MILLION POUNDS ORDER IN JUNE.

F. "THE COMPANY HAS TO GET EXPORT LICENCES FOR SALES TO RUSSIA IN ACCORDANCE WITH NATO RULES. COMPUTERS UP TO A CERTAIN SIZE HAVE BEEN ALLOWED WITHOUT TROUBLE. BUT THE 6 MILLION POUNDS ORDER IS FOR SOME OF ICL'S BIGGEST MACHINES. OVER-STEPPING A DELICATE AND ILL-DEFINED SIZE BOUNDARY.

G. "ICL HAS BEEN TRYING TO PUSH UP THIS LIMIT -- THE JUNE SALE INCLUDED TWO QUITE LARGE MACHINES OF THE 4/70 TYPE. BUT THE US ATTITUDE HAS HARDENED IN THE PAST FEW MONTHS. IT RECENTLY BLOCKED A SALE OF OIL REFINERY EQUIPMENT BY AN AMERICAN COMPANY.

H "ICL COMPLAINED TO A COMMONS COMMITTEE IN THE SPRING ABOUT THE LENGTH OF TIME IT WAS TAKING TO GET PERMISSION TO EXPORT COMPUTER EQUIPMENT TO COMMUNIST COUNTRIES." GP-E GREENE

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MOSCOV--IZVESTIA SAID TODAY THE UNITED STATES HAD VETOED THE SALE OF COMPUTERS BY A BRITISH FIRM TO THE SOVIETS AND DESCRIBED THIS AS A "COLD WAR" EMBARGO THAT UPSET BRITISH BUSINESSMEN. "INTERNATIONAL COMPUTERS LTD., AGREED WITH THE SOVIET FOREIGN TRADE ORGANIZATION ON THE SALE TO THE SOVIETS OF TWO BRITISH COMPUTERS FOR SCIENTIFIC PURPOSES, BUT THE DEAL RAN INTO WASHINGTON'S OPPOSITION," IZVESTIA SAID. IT SAID THE BRITISH COMPUTERS CONTAINED SOME U.S. -PRODUCED PARTS, GIVING THE AMERICANS A "PRETEXT" FOR INTERFERENCE ON THE BASIS OF UNCERTAIN ADDREMENTS TO FMPAPEO STRATECIC COODS FROM SOULET BLOCK-TRADE.

WESTERN AGREEMENTS TO EMBARGO STRATEGIC GOODS FROM SOVIET BLOCK-TRADE. "THERE IS NO NEED TO MENTION THAT WASHINGTON'S EMBARGO LOOKS THESE DAYS LIKE A HOLDOVER OF THE COLD WAR PERIOD," IT SAID. "WASHINGTON'S EFFORTS TO PREVENT BRITISH COMPANIES FROM THE SALE OF COMPUTERS HAS CAUSED SERIOUS DISCONTENT IN BRITISH BUSINESS CIRCLES."

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# The threat to ICL's lead East European markets

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OF ICES USSR is monoger branch, the Russians have reemphasised pealediv (bal. aubough they are willing to purchase computers from ICL, they are aiming to satisfy their own requirements in the long con. In the meantime, ICL is confident of ample sales for a considerable period, since the Russian deveropracent programme is progressing slowly and, even when the new machines are in production, it will take some time for them to provide an acceptable alternative to ICL's wellestablished ranges.

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