

	<p>Ron Huxley Alan Wiltshaw Dave Pointon John Swan Bob Luke Jack Holloway Craig Edwards George Eardley</p> <p>AVR Assembly Main Bays in 1970s</p>
	<p>Tony Lawton, Andy Barratt, John Griffiths, James Gilliver, Pete Wyatt and John Fallows - Management Training Event - early 1980s.</p>
	<p>Ted Johnson (Assit. Personnel Manager, Kevin Watts - Production Manager. Frank Griffiths - Prod.Control and Bernard Benson - Superintendent LV.</p>



Cricket team
1987 - Capt.
Kevin Watts.



Below Football
team 1987

The S & AA

The Sports and Athletic Association was founded in 1955 in the days of English Electric. It started with 200 members and by 1968 this had risen to 6000 spread over 22 sections. In 1969 ICL formed their own association. By the end of the 1970's membership of the GEC part of the S & AA was more than 1000.

GALA DAY

Throughout the 60s,70s and 80's the company held a GALA DAY on the sports fields. This event was primarily aimed at children of employees and featured a variety of entertainment and competitions including Gala Queen.



A tentative looking Sharon Fryer waiting for the inaugural





Players from the GEC Football Teams pictured at the end of the last season with the P.D.S.L. 2nd Division League Cup. Back Row (Left to Right) Mark Chillington, Colin Perrins, Paul Smithson, Ian Barlow, Ian Clarke, James Chesters, Geoff Broad, Neil Chillington, Phil Haywood, Alwyn Foster, Mick Buckley. Front Row (Left to Right) Brian Abell (2nd Team Manager), Dave Waterhouse, Jeff Callaghan, Andy Stevenson, Phil Buckley, Rob Pass, Nigel Callaghan, Alan Quarmby, Steve Taylor, Phil Stonier (1st Team Manager). Other Players (Absent) Geoff Hancock, Kevin Abell, Dave Buckley, Brian Clarke, Stuart Poole, Mark Powell, Steven Rafferty.



Cegelec vs Black Clawson. Pictured are (back row from left) Alan Simpson, Ian Shaw, Mark Lovatt, Trevor Davies, Phil Watts, Rob Darlington, Charles Burch, Alan Jones and (front row from left), Andrew Stainsby, Peter Myatt, John Cain, Ian Barlow, Tony Atkins.

LONG SERVICE AWARDS

During the summer of 1996 the company held long service evenings at Keele University. John Seed (Managing Director) and Anna Jay (Finance Director) made the presentations.



Pictured with their wives are Maurice Pursell above, Graham Austin (right), Brian Pool (below left) and Harold Rogerson.





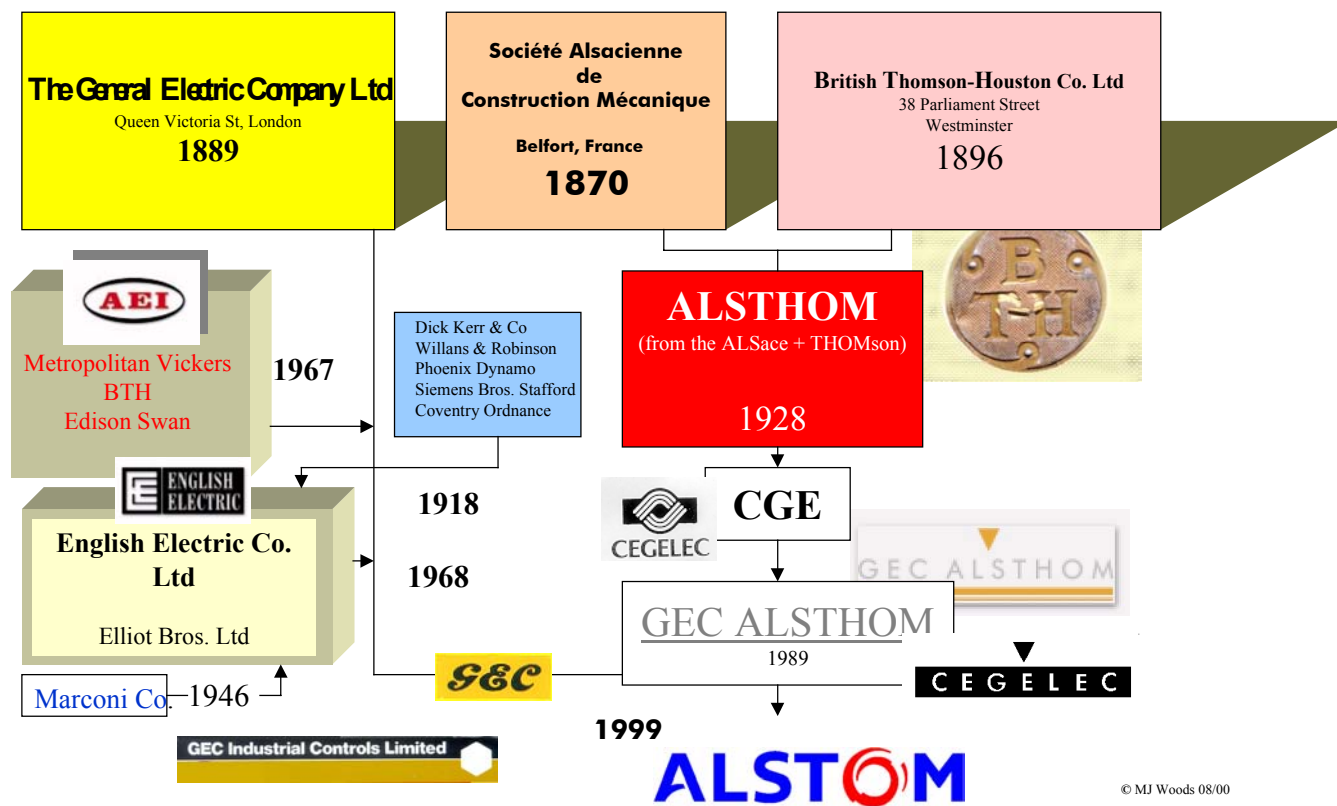


Right - Brian Pope, Division Manager GEM80, explains the new Customer Training facilities to Lord Nelson. Also shown are Janet Hill - Software Engineer and Instructors Mark Woods and John Hughes.



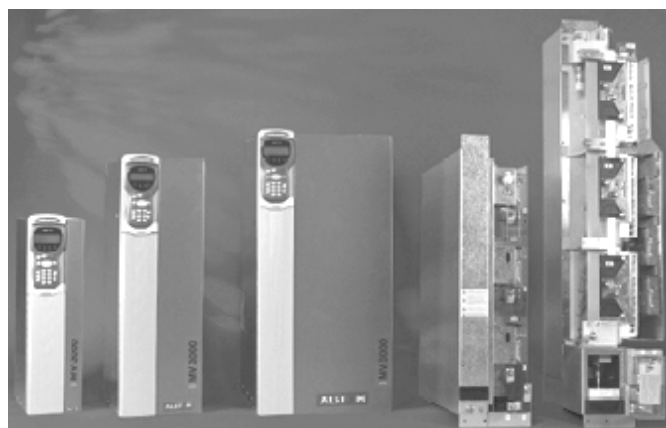
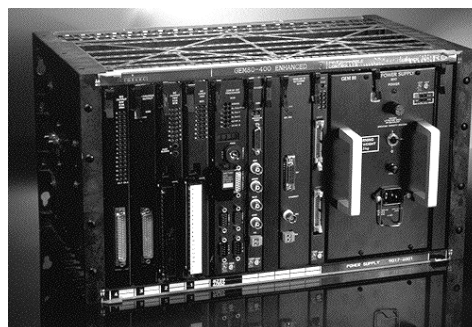
Development engineer Rod Jones discusses the new GD4000 drive with Michael Hesseltine MP. The drive had won the 1992 Triad Award for product of the year.

Origins



© MJ Woods 08/00

2001 - Kidsgrove products include the GEM80 range of PLCs (right), drive cubicles and (below right) the MV3000 range of high performance AC drives - one of the most advanced drive products in the world.



LIST OF EQUIPMENT MADE AT KIDSGROVE

Cubicle Equipment

Automatic Voltage Regulator
Cubicles - AVR's
AC Drive Systems
DC Drive Systems - including
GEMPACK with Mk7 and Mk8
thyristor modules
PLC Systems
Excitation Control Systems
LV/multi-motor panels - Trimline,
Mainline, Powerline

AC and DC Variable Speed drives, rectifiers and related

Mercury arc IGNITRON
Mercury arc EXCITRON
Analogue AC and DC drives -
GEMINI(dc), GEMDRIVE(dc),
INVERTROL VF(ac) SABRE,TB,SL
SYNCDRIVE,

Digital AC drives - GD2000,
GD3000/e, GD4000, MV3000,
DELTA power modules
Digital DC drives - MICRO1,2 and
3, DC3000

Fan controllers- FC100/300 ,
GEMFLOW MINI
Analogue control - UNISTAT, A700
series (DCA1 & 2, CA3,4,5 op amp
modules), Magnetic Amplifiers,
Digital control - NORLOG logic,
OMEGA and SIGMA controllers
DC Injection brake - INSTABRAKE
Machine tool drives -AXIS, SPINDLE

Mainframe Computers

LACE (analogue valve)
DEUCE 2/2a
KDP10
KDN2
KDF9
KDF6
KDF8
KDF7
System 4/10
System 4/30
System 4/50
System 4/70
M2110
M2112
M2140
Datapac (module)

Standard control products -

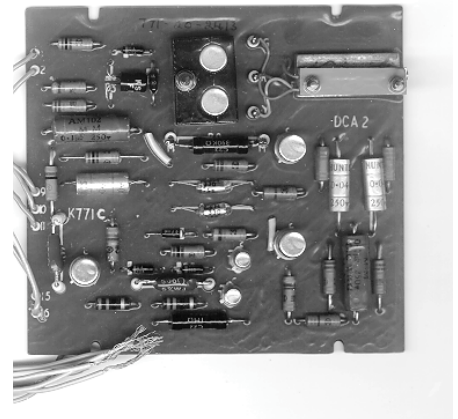
Motor thermal overload
and protection relays MTO
and MPR, lamps,
pushbuttons, pressure
switches, transformers,
reactors.

MC range contactors,
Motor starters -STARTAC,
timers

Door Access systems
(Guestkey etc)

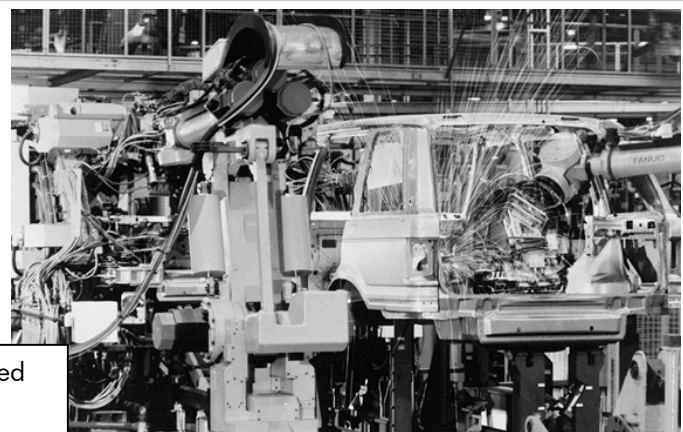
PLC Equipment - Programmable Logic Controllers

GEM80,
MICROGEM,
MINIGEM,
MULTIGEM



**DCA2 amplifier PCB from
around 1963.**

Some customers of the DEUCE
computer (c.1956) - British
Aerospace; Ministry of Agriculture;
Royal Aircraft Establishment
Farnborough; British Aerospace
Warton; Universities - Belfast,
Glasgow, New South Wales
Australia.



Vehicle assembly lines - controlled
by GEM80 equipment

Occupants of the 'Huts' in the 1960s

A Block	No.	Sq.ft	Staff
	Offices		
Computer Service Visitors	2	800	-
Computer Engineers	9	3550	64
Control Gear Engineers	4	850	17
Conference Rooms	2	261	-
Works Accounts	5	1600	26
B Block			
Computer Bureau and Programmers	14	2752	33
Technical Writers	1	315	5
Control Information and Library	3	890	6
Conference rooms	4	573	-
Service Projects Section	2	516	15
C Block			
Typing Pool	2	651	14
Control Gear	4	2100	35
Data Processing	2	700	19
D Block - Lecture Room	2	1560	-



During the late 60's to early 70's some PCB assembly was sub-contracted out to the English Electric factory at **Cross Heath**, Newcastle. (Elaine Wood)

FROM: H.M. FULLER, PEISER & CO.,
Memorial Hall Bldg.,
16, Farringdon St.,
LONDON, E.C.4.

Our Ref: RAN/PWS W.115485.
Your Ref: SEC/CNG/SMP.

27th January, 1955.

Dear Sirs,

Land at Linley Road, Tulse, Kidsgrove

We have had further discussions with the District Valuer and are now pleased to advise you that provisional agreement on the purchase price has been reached, subject to your approval.

The District Valuer's original "asking price" you will recall was £23,150 which he subsequently reduced to £15,000, and as we informed you this price in our opinion was excessive. At our recent interview with him we were able to reduce the price to £8,000 which we consider is reasonable. The District Valuer considers this amount is too low having regard to the sum of £17,800 spent in constructing the road, but in view of the Clerk to the Council's letter offering the land on lease for a term of 99 years at £20 per acre per annum or thereabouts, he is prepared to ignore the actual costs involved and assess the capital value on a market value basis. It will of course be appreciated that had you decided to take a Leasehold interest the Clerk to the Council would not have authority to assess the rent as Government money is involved and the District Valuer would be responsible for agreeing the rent. We do not think therefore the rent asked by the Kidsgrove U.D.C. is a true figure of comparison in considering the proposed purchase price of £8,000.

The Council suggest one or two minor alterations in the boundary and we enclose a tracing showing the extent of the land which they now propose to sell to your Company. The price also has regard to fencing liabilities as the District Valuer wished this to be made your Company's responsibility. We assumed that you would wish to fence the site in any event and so we raised no objection to this proposal. It is also understood that the land is subject to a small Title Rent of 15/6d. per annum.

We understand that the District Valuer is prepared to recommend the sale of this land, which comprises 14.8 acres or thereabouts, for the sum of £8,000 and will issue his Report to the Local Authority upon receiving confirmation that this amount meets with your approval. We shall be pleased to hear that you agree and to conclude negotiations on your behalf.

Yours faithfully,

(Sgd) H.M. FULLER, PEISER & CO.

The English Electric Co. Ltd.,
STAFFORD.



Above : Management team at GEC Industrial Controls c. late 70's. This appears to be a 35 year long service award group.



Part 2 - A Brief History of ICL Kidsgrove

In part 2, the history of ICL is covered. Thanks to Geoff Mellor, Celestica for loan of photographs used.

Copyright © 2002 Mark Woods

Unauthorised reproduction or storage of this booklet for commercial gain is an infringement of copyright.

Extracts of the booklet may be photocopied or used for non-commercial gain e.g. for local history research purposes or educational use.

Legal Notice

The views and events reported in this booklet are those of the author and do not necessarily represent the views of the companies mentioned.

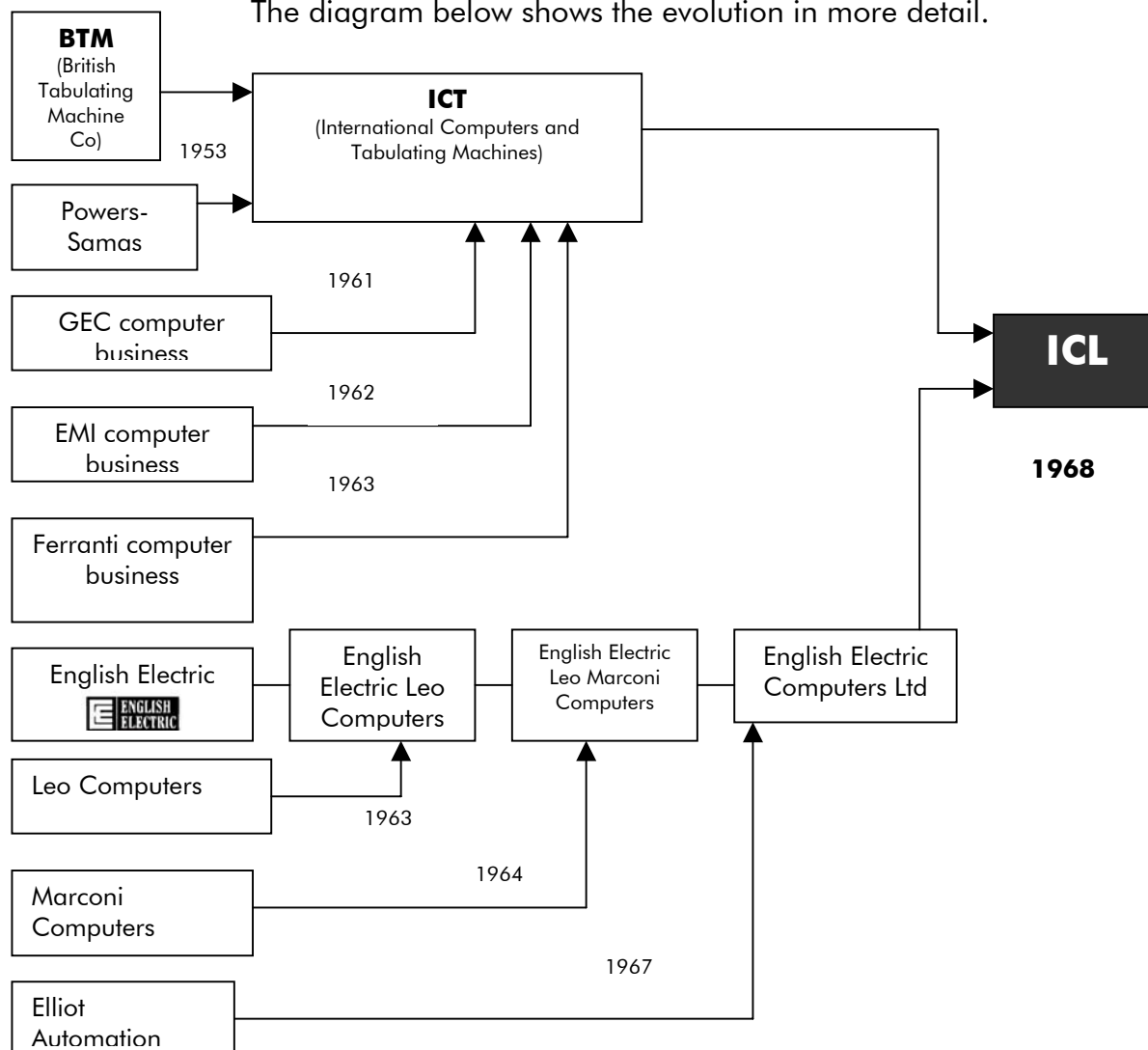
Beginnings

Computers have been made on the ICL site at Kidsgrove, Staffordshire from around 1962 when the factory was part of English Electric. During the mid 1960's there were two main computer manufacturers in Britain: ICT (International Computers and Tabulators Ltd) and English Electric Computers. There were a host of smaller players still around that had not already been swallowed up by the two main firms.

Each company had enjoyed success with the first generation computers but all now came under threat from the giant IBM and other USA companies with their advanced second-generation machines. At the time the Labour Government was in power and premier Harold Wilson realised that the British computer industry was in danger of collapse unless something was done to fight off the competition. Each of the separate UK firms were also using different standards in terms of computer architecture and media such as punched cards. Using the powers provided by the Industrial Expansion Act a series of mergers were forced through to provide one large UK computer firm which culminated in the creation of ICL in 1968.

ICL was essentially a forced merger between English Electric Leo Marconi Computers and ICT.

The diagram below shows the evolution in more detail.



Building and Construction

Building started on the main ICL Kidsgrove works in July 1961 and was scheduled for completion by the summer of the following year. English Electric had purchased six acres of land from the council at a price of £2,000/acre. The main works was modelled on the Marconi Instruments works at St. Albans and cost around £311,000.

In 1967 more space was required and the firm Taylor Woodrow were commissioned to construct a new five-storey office block at the southern end of West Avenue.



Construction of 5 storey
office block, 1967



Early Computers at ICL


When ICL started it was working with the legacy products from ICT and English Electric and had a total workforce in the UK of 34,000 - the largest computer firm outside the USA. The ICT machines were the 1900 series and from EE came the *System 4* and M2000 ranges.

It was clear that ICL needed to develop a new range and the 2900 series was launched in October 1974 after a long, six year development programme where some £40 million was provided by the government. For the remainder of the 1970's ICL prospered and grew.



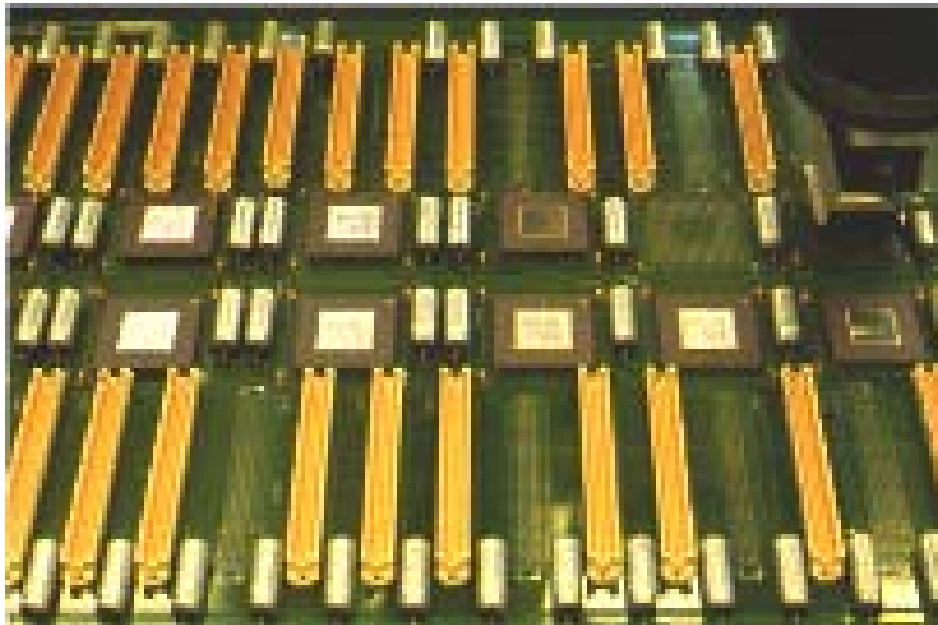
List of Computers

A list of some of the Mainframes made by ICL.

Model		Year
1908A		
2903		1973
2970		1974
2960		
2980		1975
2950		1978
DAP		1979
DRS 20		1981
MiniDAP		1985
39 Series		1990's

PCs

In addition to mainframes ICL also made PCs from 1982 such as the 15,25,26 and 35 models all based around the Intel 8085 microprocessor.



Main Board for 39 series computers.

PCB Manufacture

As well as making computers the Kidsgrove factory made the Printed Circuit Boards - including the actual blank PCBs. A massive PCB plant carried out all the functions from etching of copper, cleaning, plating, drilling and so on to complete the finished boards.



The illustration above (taken in 1990) shows part of the PCB line which had 20 stages and used some 109 different chemicals!

The blank boards were then populated using the most modern, automatic insertion/placement machinery available and soldered down. A few years after this picture was taken the PCB plant was decommissioned (when the firm was called D2D) and PCBs were then bought in.



Assembly of the main
Series 39 Mainframe
PCBs

Acquisitions, Take-overs and Mergers

The pace of computer development has always been fast and by the end of the 1970's ICLs machines were losing ground to the competition. A new range was required which would need many millions in development money. At the same time the country was going through a recession and profits were falling. The new conservative government under Thatcher was not going to provide free help as had the Wilson regime in the 1960's and money was raised from shareholders and bankers. Major restructuring took place from 1981 - 84 and the group went from 33,000 workers to 20,000. ICL decided they needed to have a partner who could bring new technology to their designs and negotiations were started with the Japanese firm Fujitsu who would provide the chips needed for the new 3900 series mainframe. At the same time ICL started talking to STC as it needed a partner in the telecommunications sector to prepare for the coming merger of IT and communication technology and the Internet.

These negotiations were to backfire on ICL which would eventually be swallowed up by both these partners. In 1984 STC acquired ICL by take-over and the UK's biggest player in computers became just another division of STC. STC soon reorganised ICL and set up Kidsgrove works as a manufacturing unit called D2D (Design to Distribution). The main ICL sign on the works was removed and replaced with D2D (although ICL still had a smaller presence on the site). D2D would now concentrate on electronics sub-contract manufacture which started to change the whole direction of the firm. In 1990 the chip partner Fujitsu returned and bought up 80% ownership of ICL.

In 1991 the parent firm acquired part of Nokia and soon the Kidsgrove works would be building mobile phones, satellites, lottery terminals and a wide range of other products.

This situation continued up to January of 1997 when D2D was sold to the Canadian firm Celestica - a giant, sub-contract electronics manufacturer. By now - the old firm of ICL no longer owned any manufacturing plant directly (although ICL did maintain a small presence as part of the Celestica site).



Celestica at Kidsgrove continued to prosper and expand throughout the remainder of the decade until another recession - this time in the mobile communication market would hit in 2001. Hundreds of redundancies were announced in the second half of 2001 as orders continued to fall. Even with a reduced workforce the site still remains a major employer in the area at the cutting edge of technology.

In January 2002, it was announced in the press that the small, remaining ICL presence at Kidsgrove would be re-locating to the Crewe Business Park by 2003. It was also announced that the name ICL would be dropped as a brand name completely by Fujitsu thus marking the end of the ICL era.



Above - aerial photo of the site showing the massive ICL works to the right of West Avenue and part of the old GEC works to the left.

Right - first generation surface mount machinery used at ICL

