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Chairman of the Edinburgh University Information Technology Committee – **Professor J.H. Collins.**
Head of the Edinburgh School of Information Technology – **Professor S. Michaelson.**

LIST OF PHOTOGRAPHS

Front Cover:- Packaged microchip and complete silicon wafer designed by the Wolfson Microelectronics Institute (WMI) and produced by the Edinburgh Microfabrication Facility (EMF).

Page 2 (left):- The Old College, Edinburgh University. Designed by Robert Adam and William Playfair.

(background):- Converging Silicon Wafers.

Inside:-

(1) Professor Collins and the EMF Ion Implanter.
(2) Micrograph of microchip.
(3) Engineer inspecting chip during manufacture in the EMF.
(4) Deep sea diver using Helium speech unscrambler, developed by WMI, for underwater communications.
(5) Digital micrometer, chip designed by WMI, manufactured and marketed by Moore and Wright Co. Ltd.
(6) Heart rate monitor, microprocessor chip developed at Edinburgh by WMI, manufactured and marketed by Pulse Time U.K. Ltd.
(7) Digital telephone developed by WMI for use in Office Systems produced and marketed by GNT Ltd., Denmark.
(8) KEYSTAR aid to word processing. Developed in Edinburgh by WMI and marketed by INMAP.
(9) The Royal Observatory of Edinburgh and a panorama of the City.
(10) Photograph from the U.K. Schmidt Telescope of the Orion Nebula.
(11) Digitised maps of the USA and Scotland produced by Edinburgh's Department of Geography.
(12) I.C.L./3 Rivers Corporation PERQ single user system, used by ERCC for compiler development.
(13) A Scottish sheep.
(14) Teaching Turtle developed by Edinburgh's Department of Artificial Intelligence. Used to teach children the basics of computer programming.
(15) Computer Monitoring of patient with respiratory problems.
(16) Prof. Michaelson with Charles colour graphics terminal, developed by the Department of Computer Science, showing part of a VLSI design.
(17) Plot of VLSI design, with five mounted chips representing a complete signal processing system designed by the first silicon compiler, which was developed by Edinburgh University's Departments of Computer Science and Electrical Engineering.

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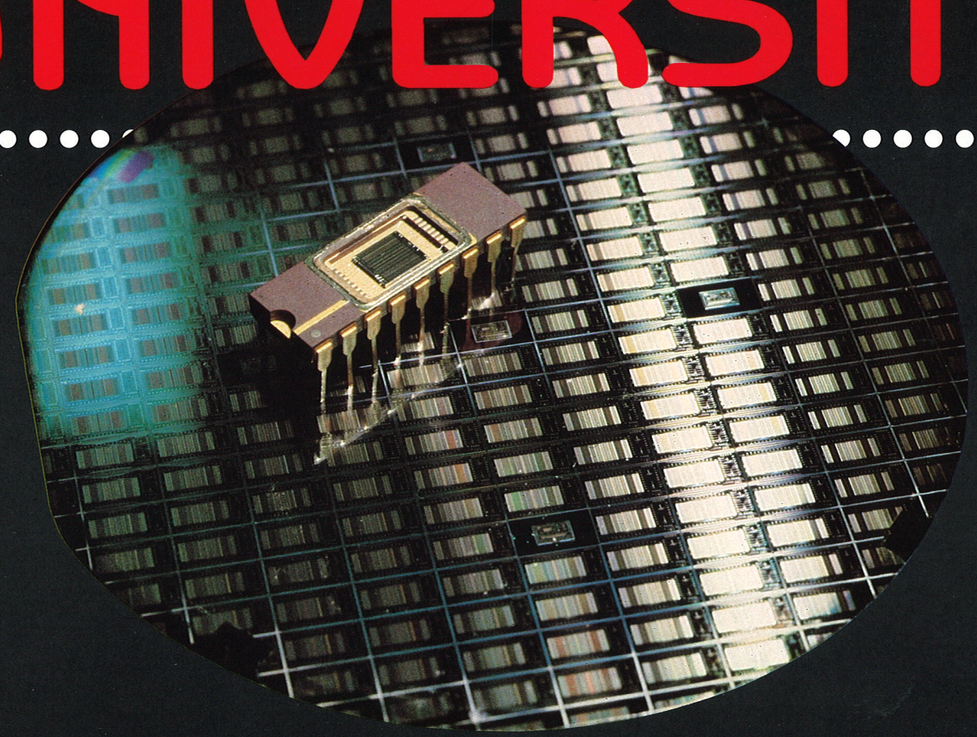
INFORMATION TECHNOLOGY EDINBURGH UNIVERSITY



EXPERTISE SERVING INDUSTRY & THE COMMUNITY

Edinburgh University has been a pace-setter from its foundation in 1583; in the sciences, in medicine and the arts. It enters its fifth century as one of Britain's largest and most modern universities, with more than 150 departments and units grouped in eight faculties of activity, 10,000 students and over 1,500 teaching and research staff, two-thirds of whom are in science-based disciplines. Edinburgh is Scotland's biggest university-based research centre. Its turn-over of £60m a year includes over £8m gained from research grants and contracts, reflecting its standards and spread of expertise, particularly in sciences and medicine.

Edinburgh is active in providing services to industry, commerce and public agencies – particularly through the University's Centre of Industrial Consultancy and Liaison (CICL) – offering consultancies, patent-protected product development, lab-testing facilities and access to advanced research programmes in science, technology, medicine, and business. A range of departments can also offer standard or custom-made instruction programmes, on a short course or part-time basis, for individuals in mid-career and for industrial concerns as well as for the new graduate seeking high technology engineering skills.

The manpower training and research expertise of Edinburgh University in critical technologies is a potent factor in generating new companies and attracting new technology-based enterprises to Scotland's central belt 'Silicon Glen' – the major microelectronics oriented industrial concentration in Europe. Equally important it stimulates firms, in the Lothians and further afield, to make use of the new technology.

EDINBURGH UNIVERSITY PACE SETTER PAST & PRESENT

EDINBURGH UNIVERSITY & INFORMATION TECHNOLOGY

INFORMATION TECHNOLOGY the use of computers, microelectronics and telecommunications to help us obtain, store, process and send information in the form of pictures, words or numbers, more reliably, quickly and efficiently. The range of science-based studies in a large modern university and their interplay, provides a particularly fertile base both for technical advances and applications of information technology.

EDINBURGH UNIVERSITY contributes a major thrust to these advances both in research and practical applications across a whole range of fields, medical diagnosis and treatment, agricultural productivity, classroom teaching, industrial and commercial productivity. The innovative and extensive distributed computing network, provided by the **Edinburgh Regional Computing Centre (ERCC)** and the major concentration of skilled personnel and resources, most obviously in **Artificial & Machine Intelligence**, **Computer Science**, and **Electrical Engineering**, are without parallel in Scotland.

COURSES OF INSTRUCTION in information systems are available to all Edinburgh students and specialist courses in aspects of information technology are offered on a full and part-time basis at post-graduate and post-experience levels.

RESEARCH AND CONSULTANCY POTENTIAL is channelled into commercial and industrial applications through the University's inter-disciplinary **Information Technology Committee**, with the active support in technology transfer of the **Wolfson Microelectronics Institute (WMI)** and the **ERCC** based on Edinburgh's King's Buildings Science Campus. The independent company, **Integrated Micro-Applications Ltd. (INMAP)**, established jointly by Edinburgh and Heriot-Watt Universities, markets university based information technology skills to industry and commerce.

Research Teaching and Training in IT

At Edinburgh, the best equipped university-based microelectronics facility in Europe is used to further research, produce new graduate manpower and to help train engineers in mid-career.

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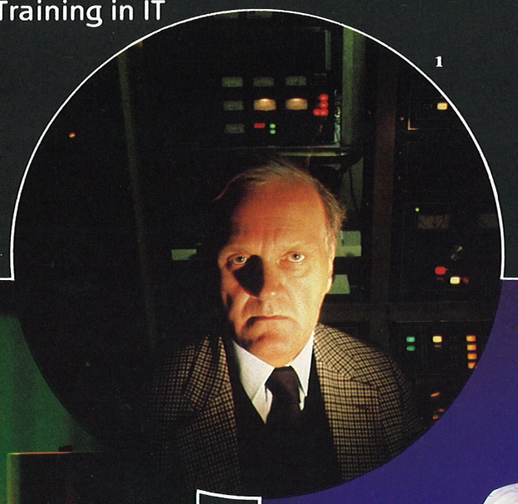

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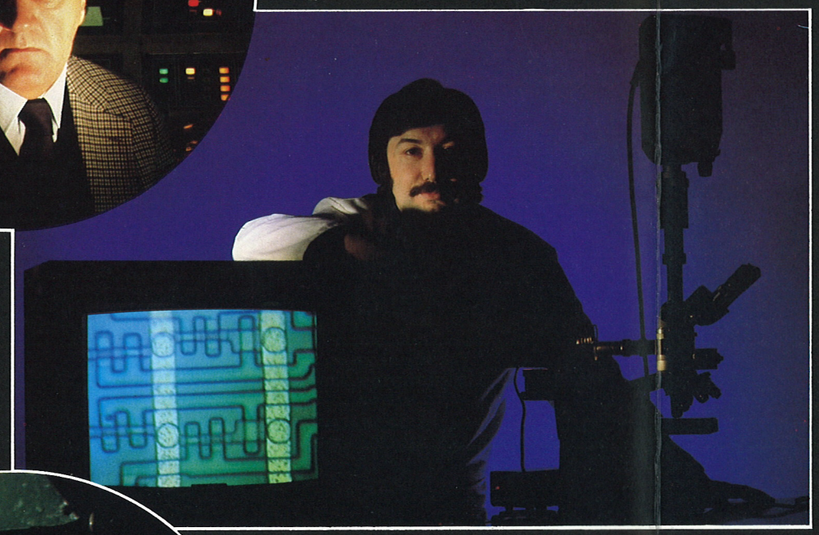

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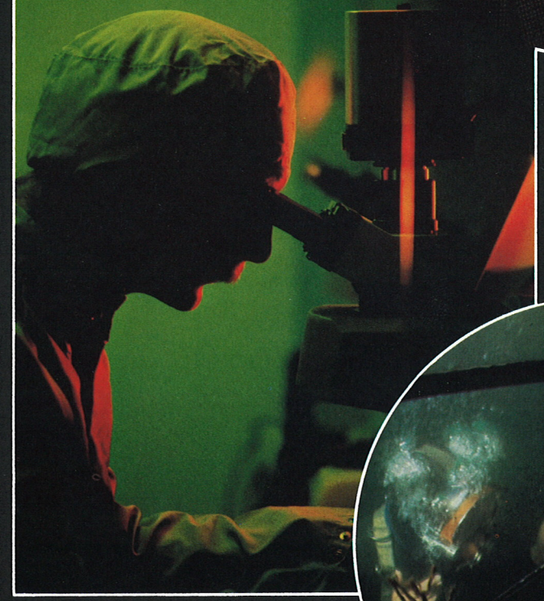

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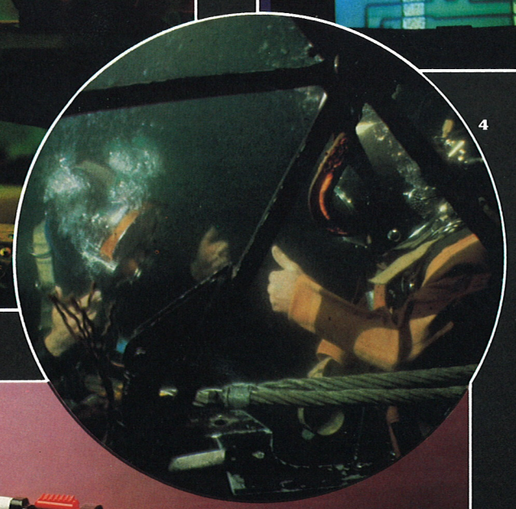

Applying IT to Product Development

Edinburgh is in the vanguard of IT research and education but is also applying its expertise and facilities under contract to develop microcircuit based products in, for example, divers' communications (the helium speech unscrabbler), measurement of materials (the electron micrometer) and of heartbeat (the pulse monitor).

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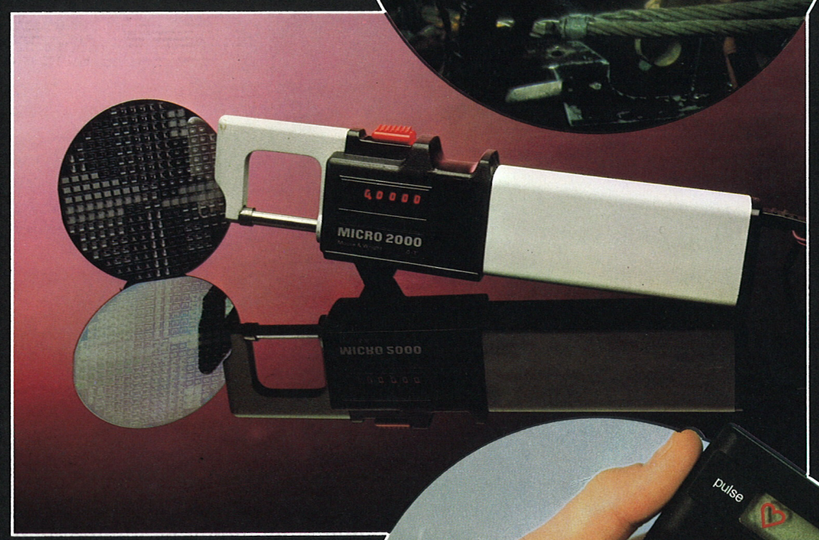

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IT

EDINBURGH UNIVERSITY

Computer Catherine Wheels With Edinburgh At The Hub

The communications network created and run by Edinburgh's Regional Computing Centre gives an excellent base for the application of IT systems in all areas of study and research.

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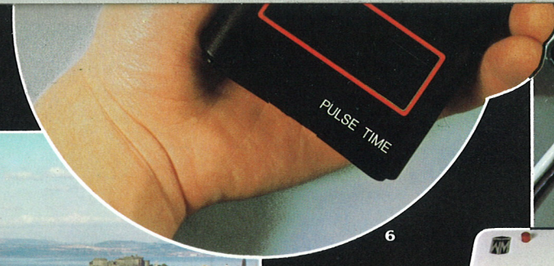

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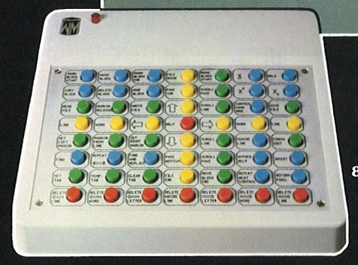

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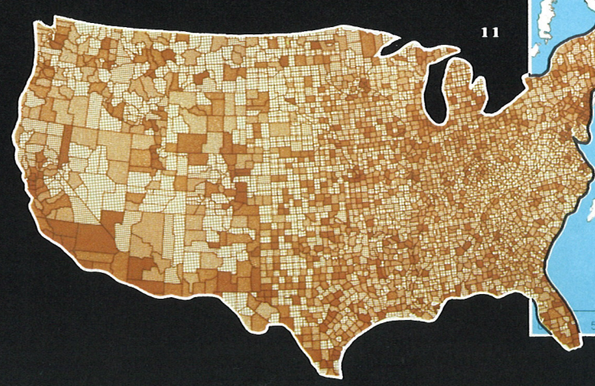
IT — A New Perspective On The World

A computer-controlled network based at Edinburgh masterminds a world-wide astronomy project, which includes the production of an atlas of the southern skies from the telescope installation in Australia.

Information technology techniques are now being applied to the compilation and production of a new generation of information coded maps and charts.



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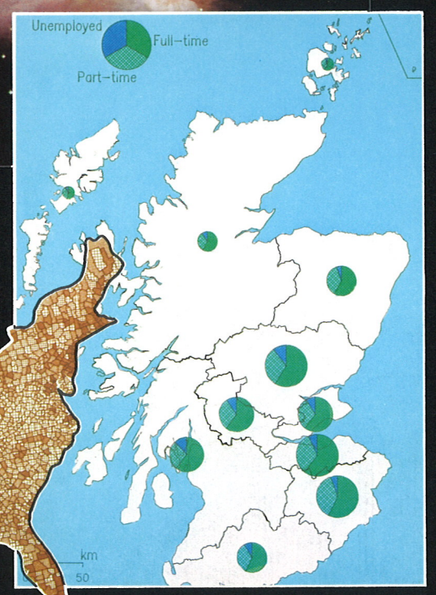
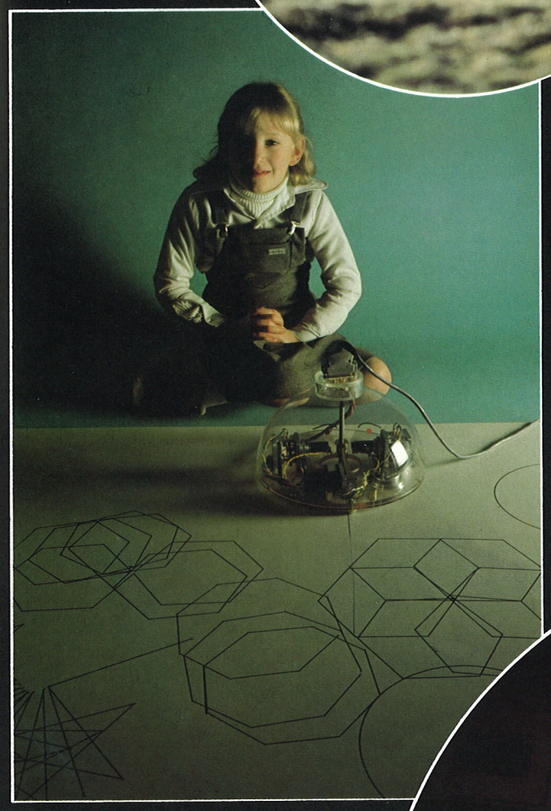


IT, Robots And The Schools

Research devised robotics devices, such as Edinburgh's 'teaching turtle', are already being applied to the teaching process in schools.



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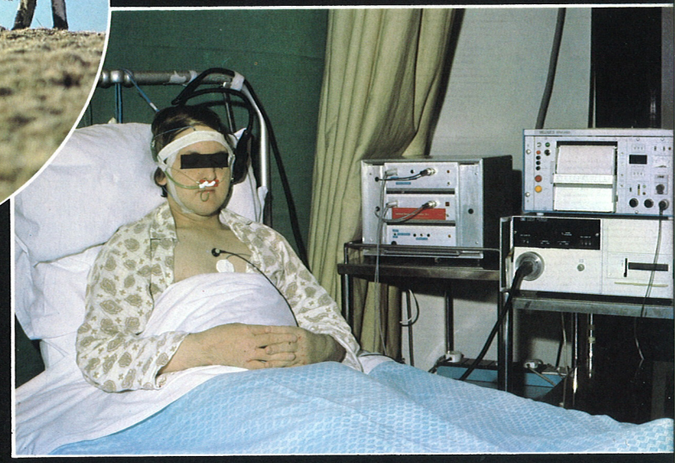
What Has a Scottish Sheep To Do With IT?

Agricultural scientists in Edinburgh use IT to analyse feed and growth processes to service the farming community in Scotland and world wide.



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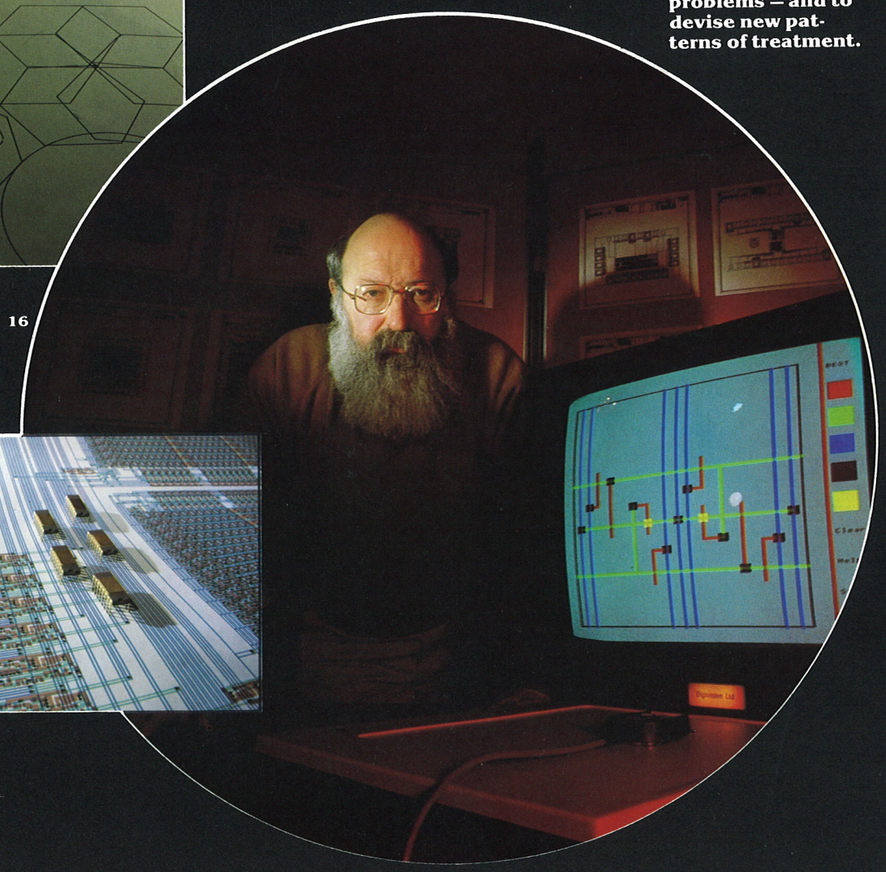
IT And How We Breathe

Information technology enables medical scientists to measure and analyse in detail how our bodies work or fail — including common respiratory problems — and to devise new patterns of treatment.



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Using Computers To Design Computers

IT is central, not just in applying computer techniques to other sectors, but also in the design work for the microtechnology on which the new generation of computer systems will be based.

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