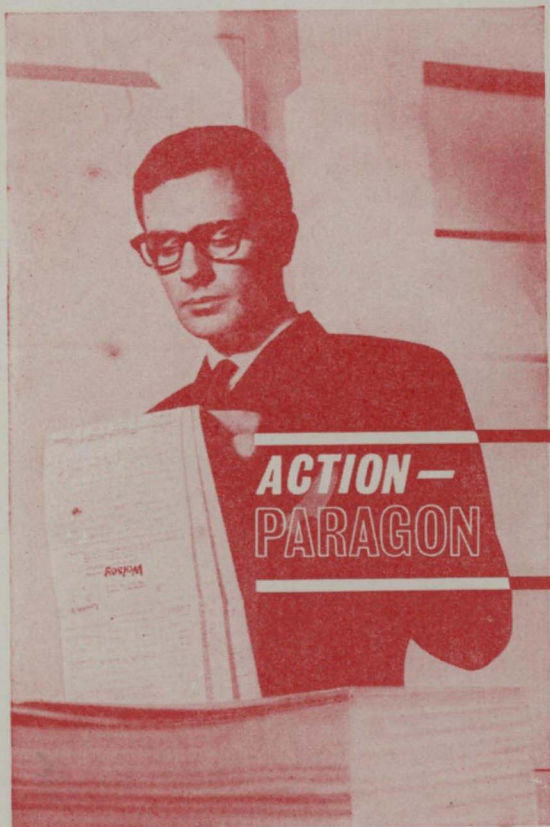


The
COMPUTER
Journal

MAY 1966

VOLUME NINE NUMBER ONE

Published by
THE BRITISH COMPUTER SOCIETY
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Contents

 Volume 9 Number 1 MAY 1966

	PAGE	
F. I. Musk	One man's meat: Part I—The uses of adversity	1
T. K. Craig	CRESTS—Courtaulds Rapid Extract, Sort and Tabulate System	3
Lucy Joan Slater	Computing the state of the economy	11
G. R. Fair, A. D. J. Flowerdew, W. G. Munro, and D. Rowley	Note on the computer as an aid to the architect	16
W. M. Newman	An experimental program for architectural design	21
A. J. Cole	Plane and stereographic projections of convex polyhedra from minimal information	27
F. H. George	Computer assisted instruction	32
F. M. Hughes and A. Brameller	Digital simulation of analogue methods	35
D. C. Cooper	The equivalence of certain computations	45
J. P. Penny	An analysis, both theoretical and by simulation, of a time-shared computer system	53
G. N. Lance and W. T. Williams	Computer programs for hierarchical polythetic classification ("similarity analyses")	60
Eric L. Jones	Note on an alternate method for the computation of rotational energy levels of rigid asymmetric top molecules	65
M. J. Box	A comparison of several current optimization methods, and the use of transformations in constrained problems	67
A. R. Curtis and M. J. D. Powell	On the convergence of exchange algorithms for calculating minimax approximations	78
J. T. Day	A Runge-Kutta method for the numerical solution of the Goursat problem in hyperbolic partial differential equations	81
B. A. Carré	The partitioning of network equations for block iteration	84
A. J. Fox and F. A. Johnson	On finding the eigenvalues of real symmetric tridiagonal matrices	98
A. Wragg	The use of Lanczos τ -methods in the numerical solution of a Stefan problem	106
P. Keast and A. R. Mitchell	On the instability of the Crank Nicholson formula under derivative boundary conditions	110
Book Reviews	Mathematics and Computer Science in Biology and Medicine	10
	Computer and Information Sciences	15
	Computer Augmentation of Human Reasoning	20
	Learning Machines	26
	Introductory Numerical Analysis of Elliptic Boundary Value Problems	44
	On Retrieval System Theory	97
	Computers in Biomedical Research	114
Correspondence	"Timetabling and Scheduling Problems"	66
	"Error curves for Lanczos selected points method"	115
	"Nonlinear programming test problems"	115
Errata	"Evaluation of certain definite integrals . . ." by E. J. Martin, Jr. and P. C. Patton	116
Notice about future publication of the Algorithms Supplement		80
Notes on the submission of papers		xx
Editorial Board and Editorial Addresses		116
Index to Advertisers		xviii

Opinions expressed in *The Computer Journal* are those of the authors and do not necessarily represent the views of the British Computer Society or of the organizations by which the authors are employed.

Copies of earlier issues are available, at published prices, from the Society's office.

THE COMPUTER BULLETIN

VOLUME 9 NUMBER 4

MARCH 1966

A PUBLICATION OF THE BRITISH COMPUTER SOCIETY

THE COMPUTER BULLETIN is published quarterly, and is issued free to all members of the Society.

Subscription rate to non-members: £1 0s. 0d. per annum post free (four issues), single copies 6s. 0d.

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Editorial Offices: c/o The British Computer Society, Finsbury Court, Finsbury Pavement, London, E.C.2.

Inquiries for advertisement space in THE COMPUTER BULLETIN should be sent to the Advertisement Manager at 2 Breems Buildings, London, E.C.4 (CHA 4620).

CONTENTS

	PAGE
Legal Requirements in DP. R. R. Waller	133
Management Exercise. R. N. Maddison and S. B. Sheldrick	138
Marketing of Computers. A. Hales	136
Optimising Carpet Manufacture. P. Goldsmith	143
Pharmaceutical Abstracts. D. J. Maitland	159
Reflections on Random Access. K. P. Rylett	130
* * *	
Book Reviews	166
Correspondence	172
Film Reviews	172
Library Catalogue	147
News from Manufacturers	173
Regional Branch News	162
Study Groups	145

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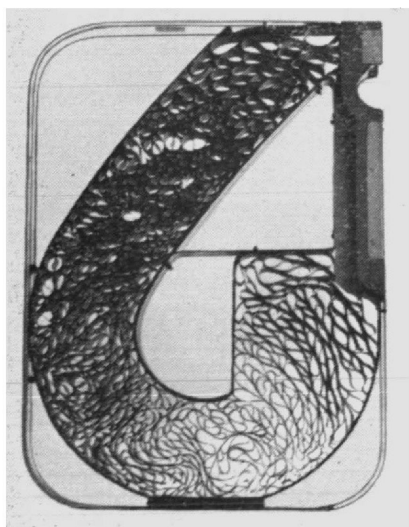
Cassette tape unit

REVOLUTIONARY CASSETTE SAVES THOUSANDS ON PRICE OF NEW I.C.T. 1901 COMPUTER

Literally thousands of pounds have been saved on the price of the new I.C.T. 1901 computer by this revolutionary cassette tape deck. Here are some of the facts about it.

How it saves money. Tape systems in general are designed for large files. These hold on average 12-15 million characters, two thousand per block. But sometimes small files need magnetic tape. And up to now they have had to have a scaled-down version of a large tape system—with all its reels, drive motors and servo mechanisms.

The cassette puts an end to this needless expense. It is designed for small files. Tape length is 240 feet, precisely fitted to the size of the cassette. A fast start/stop time makes small blocks feasible and these save space in small computer stores. A special commercial language, NICOL, makes programming easy and 80 character blocks can be used to make it simple to transfer from punched card systems and use a unit record format.



In the I.C.T. 1901 cassette, the length of the tape has been precisely determined so that the pressure exerted by one loop on another eliminates any possibility of the tape twisting.

In this form, cassette capacity is nearly 880,000 characters (it can be as much as 1,530,000) or about six full

trays of cards. There are four cassettes on line at one time in a 1901 configuration and this amount of data is more than enough to satisfy the needs of a very large number of users.

Cassette characteristics:

Needs minimum air-conditioning.

(a) Because the tape is enclosed and therefore protected from dust and atmospheric conditions, and from general handling dangers. (b) Because the tape is loosely looped and not wound on a reel. (As you know, during storage the tape on the outside of a tightly wound reel is more exposed to atmospheric changes than the inside, and consequently to uneven expansion and contraction. This can result in distortion of the tape.)

Saves on space. The cassette needs 75% less floor area than conventional tape units.

Loads easily, safely. There is no threading of tape, linking with leaders or screwing-on of reels—the cassette is just pushed in. The usual automatic label checks are built into the software.

Performance details

Low start/stop time—six milliseconds. So this 10kc tape is actually faster than a conventional 20kc tape when handling block sizes of up to 240 characters.

Tape life—is better than 10,000 loop passes, or five years if a file is read daily. One reason for this long life is the 'G' shape design. The tape channel curves up at the bottom, so the drive mechanism never has more than the weight of half a loop to pull. Another factor: the channel is lined with a special tape coated with millions of glass beads—which give the cassette tape a low friction (0.2) static-free ride.

Reliability. A read-after-write check is provided. Permanent read error rate (i.e. errors not corrected automatically by the Executive program) is remarkably

low—better than 1 in 10¹¹ bits read. Any transient read and write errors are detected by check procedures—one during writing, one during reading—and automatic corrections made by Executive.

Recording system. This is a bit and character serial system, so only one track of the eight is read on one pass of the loop. This greatly reduces skew problems and of course means a big reduction in the amount of circuitry needed compared with a conventional tape, where seven or nine tracks are read at the same time.

For further information about the cassette, the 1901 computer, or any other of the 1900 Series machines, please get in touch with your local I.C.T. office.

1900 Series sales reach £50 million

Fact—by February 12th, 1966, 392 I.C.T. 1900 Series computers had been ordered. Sales value £50 million.

Fact—136 of these are for export.

Fact—by the beginning of February, 55 had already been delivered. And this year deliveries will be increased to a rate of one per working day.

Fact—Only five months after its announcement, 108 I.C.T. 1901 computers had been ordered.

Fact—In recent tests carried out under the surveillance of experts from a Government Department, the reliability factor of a 1900 Series computer was shown to be 99.8%.

Footnote

Against keen international competition, I.C.T. has recently won large orders from The British Aircraft Corporation and the Ministry of Pensions and National Insurance. These orders amount to approximately £2 million—a notable triumph for the British computer industry.

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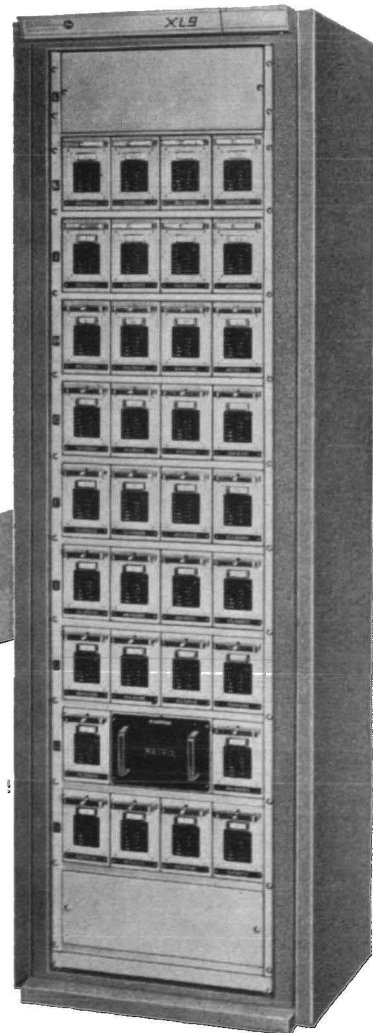
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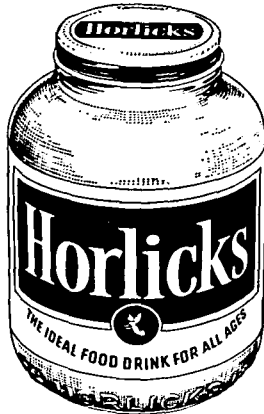


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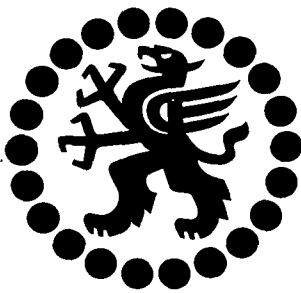
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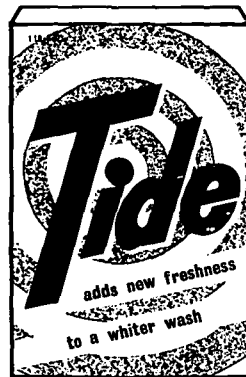
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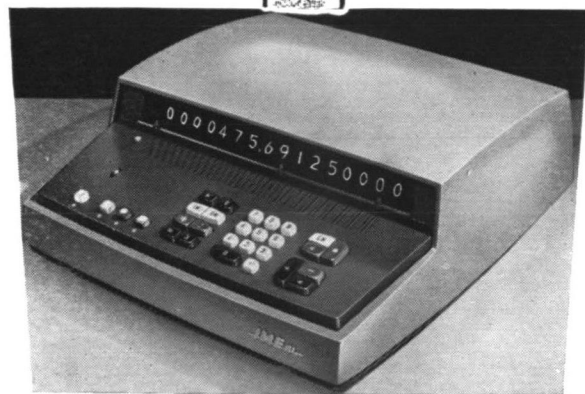
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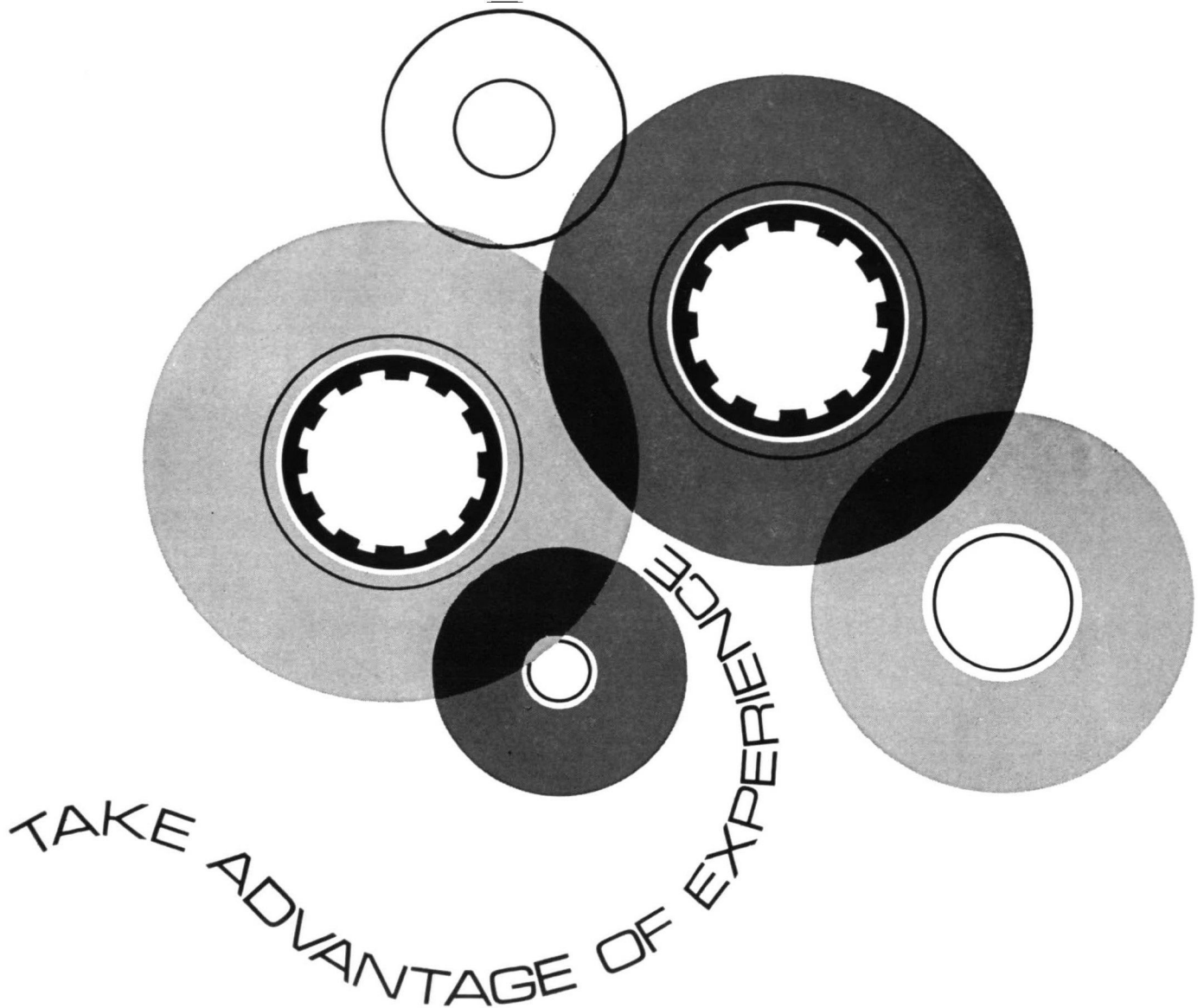
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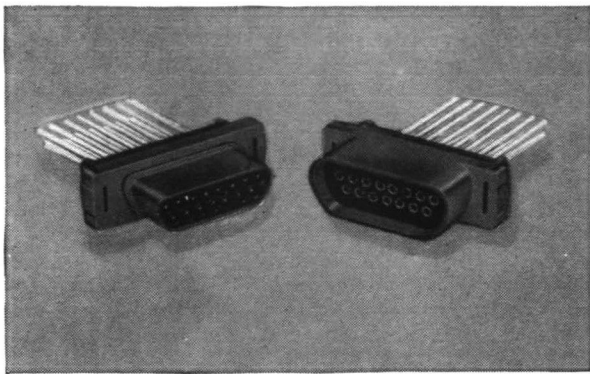
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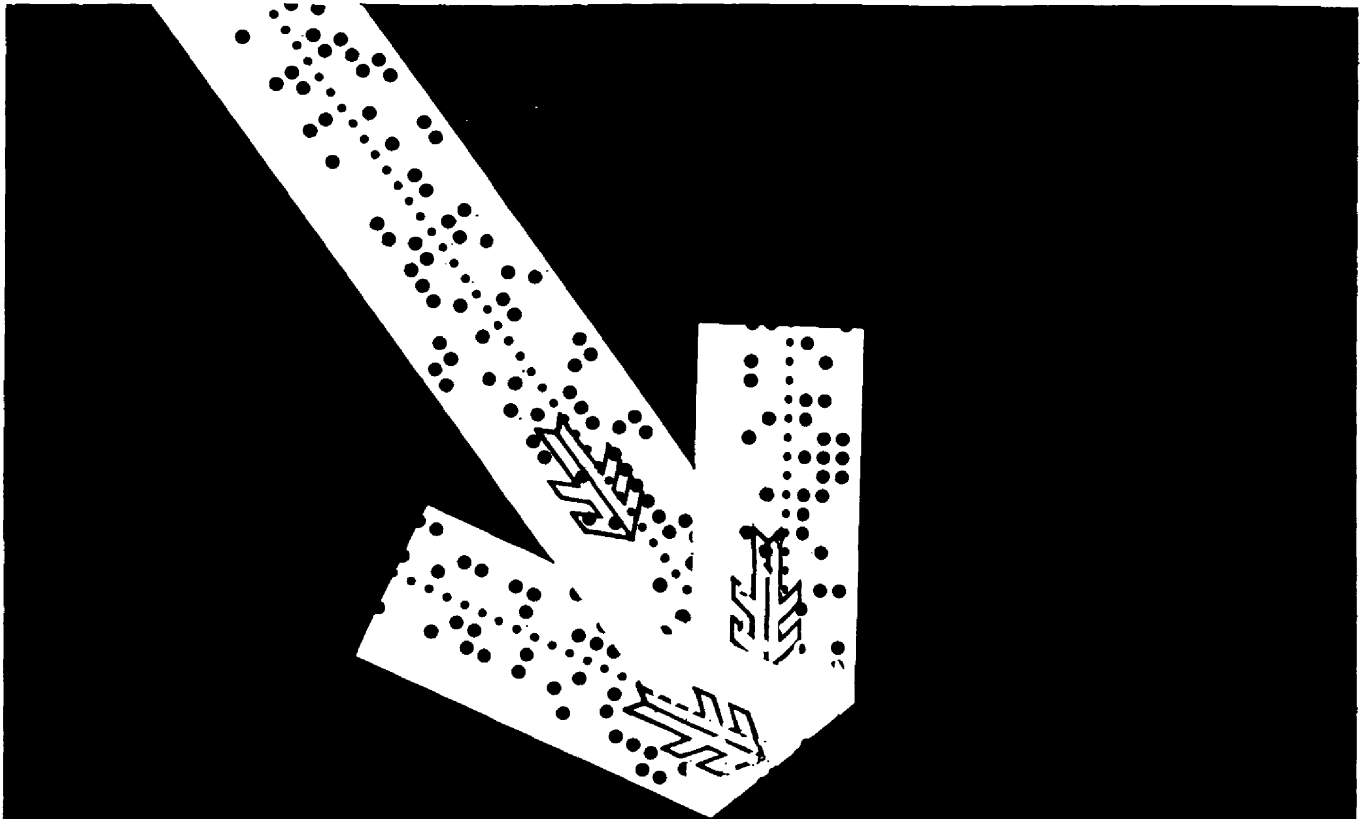
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