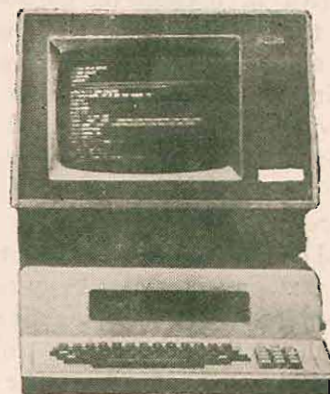


## Word Processors for Libraries and Information Centres



When you receive a neatly typed letter that looks like print, you would like to go through it. Similarly, when you receive a technical report from a country like USA or UK, you are particularly impressed by its neat printing; the matter looks like a typed one but also like a printed one because letter types of various styles and sizes are used for headings, text, etc. You would also sometimes observe that repeated circular letters have certain portions of the text in common.

Now it is possible for you also to produce similar reports or correspondence using Word Processors (WP). Word Processors have come to India and we give below a brief account of their application to the work of libraries/technical informa-

tion centres (TICs) as well as their use in offices. They can be economically used in offices for correspondence, for making contracts or agreements, supply orders including the terms and conditions for the supplies and a host of other communications where certain matter or text is to be repetitively used with no or minor changes.

### What is a Word Processor ?

It is an electronic equipment used for formatting and editing texts or matter for storage in the memory of the equipment or on an external storage facility like floppy disks, for obtaining outputs repeatedly with desired changes. It can also be used for typing on offset masters for printing by using a suitable print unit.

### Components of a Word Processor

The main components of a Word Processor are :

- (i) a keyboard for inputting the desired text or information,
- (ii) an internal memory unit for storing the software necessary for operating the system or any other information,
- (iii) a microprocessor-based logic unit for using the software,
- (iv) an external storage unit for storing information and also software when necessary,
- (v) a video screen that displays the matter being keyed in, and
- (vi) a print unit for giving prints of the matter that is keyed in.

The video screen varies in size with different equipment with display from a single line to about A3 size accommodating two full pages of text. One can see the matter while it is keyed in and correct mistakes, if any. As the inputting is in progress, only the last portion of the matter upto the size of the screen can be seen on it. Even after the matter is recorded in the memory or the storage unit, it is possible to call back and carry out modifications. Any additional matter could be inserted in between the portions of the text; one can store a standard text and also record separately the additional texts or addresses (of individuals or organisations) and incorporate them at desired places for getting the final copy in the desired form. In addition, if a word or phrase repeats frequently in the text, a code can be used to record it so that by keeping the code in, the entire phrase is recorded. For office communications the output can be obtained on standard forms.



- (iii) to make and update mailing lists,
- (iv) to compose matter for offset printing, and
- (v) as a terminal for an on-line computer system.

#### *In Libraries & Technical Information Centres*

The common applications in this area are : (i) Acquisition of publications, (ii) Budgetary control, (iii) Circulation control, (iv) Technical processing, and (v) Production of Information Service Bulletins, and for printing jobs.

##### *(i) Acquisition of Publications*

The correspondence of repetitive nature, like placing supply orders, follow-up of these orders, listing of unfulfilled orders, cancellation of such orders, releasing payments to the suppliers, and other similar jobs can be effectively done using the Word Processors. Standard letters can be stored on the floppy disk and details like titles of publications, their prices, due dates for supplies, etc. can be incorpora-

ted in the appropriate letters and issued to the concerned parties. Similarly details of issues of the journal expected to be received at certain intervals of time can be maintained in the disc and non-receipts can be followed up.

##### *(ii) Budgetary Control*

Details of finances allocated for the acquisition of various publications/information products or services can be stored in the system, and expenses incurred, committed, etc. can be regularly input into the system and prints-out of upto date figures of expenditure under various heads vis-a-vis budget allocations can be obtained when desired.

##### *(iii) Circulation Control*

When the publications are loaned the relevant details like the borrower's name and address, title of the publication, accession No. and call No. of the publication, etc. are recorded on

*(Contd. on Page 6 Col. 3)*

#### **Applications**

Word Processors are commonly used for the following purposes :

- (i) to issue letters of repetitive text with certain portions modified, added or deleted for certain addresses,
- (ii) to make agreements or contracts with names and addresses of the concerned parties and any special clauses incorporated at desired places,

### SDI Bulletins

SDI Bulletins on the following topics have been issued :

Topics	No. of Bulletins
Aeronautics	1
Armoured Fighting Vehicles	2
Information Science	1
Laser	1
Materials	1
Military & Naval Aircraft	4
Military Electronics	3
Military Organization & Warfare	2
Missile Technology	1
Nuclear Weapons	1
Radar	1
Science Policy & Plans	1

### Information Search

Information on the following subjects/topics was collected and supplied to the indentors :

- (i) Falkland war
- (ii) Chinese satellites
- (iii) Video Cassette recorders
- (iv) Fibre optics
- (v) Air ships/Blimps
- (vi) Reconnaissance satellites
- (vii) Laser glazing

### Meeting/Lecture

Shri SS Murthy, Director, DESIDOC represented DRDO in the meeting at National Aeronautical Laboratory, Bangalore, on 23 Aug 1982 to discuss on the establishment of terminals for the on-line information net-work of the European Space Agency.

Dr SK Goel, SSA delivered a lecture on 'Process of Learning' on 16 June 1982 at DESIDOC.

### Translations Bank

Twelve translations available in DRDO Labs/Estts have been indexed and stored in Bank for quick retrieval Translation Bank.

## TRANSLATIONS ACTIVITIES

Books/articles translated

Sl. No.	Title/Author	Indenting Unit	Pages Translated
<b>RUSSIAN</b>			
1.	Linear polydimethyl carbosiloxanes with carbolic groups in the side radical by AA Zhdonov and others 22, 1980, 1551-1557.	DMSRDE, Kanpur	7
2.	Comparative evaluation of methods for capture of blood sucking mosquitoes, Report. 1-Species composition and ratio of mosquito species captured by different methods by TM Masalkina. Meditsinskaya Parazitologiya I Paazitornuje Bolezni, No. 3, 1979, 47-52.	DRL, Tezpur	6
3.	Methods of constructing liquid crystal non-linear space modulators of light with internal feedback by IE Konapanets and others PN Lebedev Institute of Physics, Academy of Sciences, USSR.	IRDE, Dehradun	20
4.	Exterior Ballistics by YaM Shapiro Chapter-5. 111-155.	IAT, Pune	45
5.	Fixed space Sesistors TBO-Q, 25-60. Technical Specification MPT Y-11.	DTD&P (Air)	34
6.	Study of thermal condensation of organocyclic silazanes with alpha, omega dichlorodiorgnosiloxanes by D-Ya Zhinkin and others. Vyssokomolekulyarnine soedineniya, 22, 1980, 1541-1550.	DMSRDE, Kanpur	10
<b>FRENCH</b>			
1.	Specification AIR 7303—General Technical conditions for the acceptance of electronic materials.	CRE, Nasik	20
2.	Specification AIR 7251/c—Protection against corrosion of aircraft and other aeronautic materials.	-do-	27
3.	Air regulation document OACI annexe 2 dt. 27-11-81.	-do-	4
4.	Certificate of navigability OACI annexe 8 dt. 27-11-81.	-do-	2
5.	Patent No. 7604239—Molded explosives compounds with high cracking power.	TBRL, Chandigarh	8
6.	Behaviour of various condensed explosives subjects to shock-waves calibrated in intensity and induration, Report CO211/75.	-do-	22

7.	Development of special coating for hollow charges applied to the perforation of the probs in petroleum industry by J. Delacovr Rev. de L' Ins Franeaise du petrole No. 12 Dec. 1950 & No. 11, Nov. 1959.	-do-	21
8.	'Pape' a high level language for electronic switching systems programming.	CRE, Pune	6
9.	External ballistics, automated-calculation programme of the movement of a projectile with six degrees of freedom.	-do-	120
10.	Comparison of tests in wind-tunnel and in-flight for an executive aircraft by J. J. Maestratt, Tech. Report No. 75-14.	-do-	24
11.	Electronic scanning antenas.	LRDE, Bangalore	52
12.	Adaptive Kalman filtering application for tracking of manoeuvring targets by Dr. Perriot, Rev. Tech. Thomson-CSF 12, 1980, 133-183.	-do-	41
13.	Lymnaea species animals, their predation.	DRDE, Gwalior	7
14.	Evaluation of the viral charge in water at a Bed pumping station by B. Hugues <i>et al</i> Water Research 13, 1117-1123.	-do-	7
15.	Definition of a new set of profils for helicopter blades by J. J. Thibert, L' Aeronautique <i>et</i> L' Astronautique, 81, 1980, 13-19.	SA to CAS	7

#### GERMAN

1.	Material support for combat tank Leopard 2 by Roland Koster Solaat, Technik 6, 1980, 316-20.	CVRDE, Madras	5
2.	Uptake of latex particles and micro-encapsulated larvicides by larwal stages of by P. Wenk & J. Dinkel. Zeit fur angewandte entomologie 91, 1981, 179-192.	DRDE, Gwalior	14
3.	Radiofrequency electromagnetic pulses generated by detonating chemical explosives charges by B. Koch. BMVg-FBWT-76-1.	CRE (AA), Pune	44
4.	Combat airfields for the Air Force (Installations structure, equipment and protection) by W. Tewes Wehrtechnik 11, 1981, 42-48.	SA to CAS	7
5.	Optimisation of free flight measurements on missiles by L. Sticklorus.	CRE (AA), Pune	67
6.	Water as a vector for viral infection : Viruses in the water. Zbl. Bakt. Hyg. I. Abt. Orig-B, 172, 1980, 237-254.	DRDE, Gwalior	8

#### Library Activities

59 books and 555 reports were acquired for Defence Science Library during the period. The books covered subjects areas like Library/Information Science, Military Science, Laser, Mathematics, Analytical & Physical Chemistry, Engineering & Electronics, Pattern Recognition and Computers, etc.

About 840 publications were issued on loan to the scientists and DRDO Labs/Estts and Technical Directorates. Some of the establishments which availed of this facility are INMAS, SPL, DSE, and DSC. 125 technical queries were also attended.

#### Printing Activities

Printing and binding jobs received from the office of the SA to CAS, CCR&D, Technical Directorates at HQ were executed in addition to the normal jobs of DESIDOC. In all about 41 pages involving 18,441 impressions were printed.

Report of the Science Advisory Committee to Cabinet (41 pages) and other jobs (31 pages) were composed and printed on offset machines.

#### Reprographic Activity

7273 repro-copies and micro-films of the scientific and technical matters were made and supplied on request to the scientists of the establishments in the Metcalfe House and also of INMAS, SPL, SO to SA, SA to CNS, DPRM, IRDE, DEAL, TBRL, and DL, Jodhpur. Besides preparing 29 slides, the Division also provided projection facilities on two occasions to SA's office and photographic coverage to DTRL, DRDO Computer Centre and DMRL, Hyderabad.

7. Stability of vibrations of a rotating cylinder made of linear elastic material by R. Kurktschiev, Ing. Arch. 44, 1975.	DRDL, Hyderabad	7
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**JAPANESE**

1. Complex salts of lead picrate (II) : the possibility of practical use as a priming charge. J. Ind. Exp. Soc. Japan 40, 1979, 16-22.	ERDL, Pune	7
2. The shock sensitivity of slurry explosives by the card-gap test by S. Matsudorira <i>et al</i> J. Ind. Exp. Soc. Japan 40, 1979, 81-85.	-do-	5

**DEFENCE SCIENCE JOURNAL**

Contents of October 1982 Issue :

1. Hydromagnetic unsteady flow of a dusty viscous fluid between a flat wall and a long wavy wall.
2. Recovery ventilation and oxygen debt; A mathematical model for a the prediction of recovery ventilation.
3. Hall Effects on MHD flow through a porous straight channel.
4. Synthesis of cyclotetramethylene Tetraanitramine by three-stage method.
5. Mixed ligand complexes of N-6-methyl benzothiazol-2-YI-salicylaldimine and 2-methyl benzimidazole.
6. Dusty viscous flow between concentric spheres performing longitudinal oscillations.
7. Calculation method for three dimensional turbulent boundry layers.
8. New techniques for separating simultaneously produced scintillation and cerenkov radiation.
9. On underwater explosions-- A comparative study.
10. Prevalence of Dengue infections in India.

**Appreciation of DESIDOC'S Work**

"Information on..... has been found very useful by Deputy Chief of Air Staff".

S. K. SAHIAR  
SA TO CAS

**R&D Digest—Special Issue**

A Special issue of R&D Digest on 'Semiconductor Devices' is expected to be published in Oct. 82. It will cover briefly the proceedings of international workshop on 'Physics of Semiconductor Devices' organised by the Solidstate Physics Laboratory under the auspices of Committee on Science and Technology of Developing Countries (COSTED) and DRDO from 23 to 28 Nov 1981.

**Personnel News**

*Appointments*

Shri BD Joshi JSA II

*Promotions*

Shri R Kohli, SSA	JSO
„ RK Dua, SSA	JSO
„ Karam Chand, UDC	OS (DSC)
„ TC Sud, UDC	OS
„ GL Gupta, LDC	UDC

*Deputation*

Shri TN Banerjee, AMT, Govt. of India Press, Howrah has joined DESIDOC on deputation for two years.

(Contd. from Page 2)

and call No. of the publication, etc. are recorded on the disc. Lists of defaulters, departmentwise or those of publications outstanding with the borrowers subjectwise, due-datewise, etc. can be obtained as a routine. Standard reminder letters could be printed by the WP and issued to the concerned.

(iv) *Technical Processing*

Instructions on the format for card catalogue are keyed into system and the relevant details of publications are also recorded at the time of accessioning. By using appropriate hard paper with perforations as the output medium, card catalogues could be produced in multiple entries for filing by author, subject and so on. By distributing these cards to other libraries/TICs in the department, Union Catalogues also could be maintained. Using the details stored for the cataloguing purpose, bulletins like Lists of Additions to the Library, Subject Bibliographies and Abstracting/Indexing Services can also be issued. Use of this equipment for SDI work depends on the availability of suitable software.

(v) *Printing Job*

Word Processors are also used for composing work by the printing firms. The text and headings are suitably formatted through necessary instructions to the WP with regard to type faces and sizes, column

width, space between the lines, paragraphing, etc. and the manuscript is typed on the keyboard. For getting the facility of types of various sizes and styles, the WP is normally attached to a phototypesetter. A copy of the galley proof is obtained from the print unit or the phototypesetter. It is possible to hook up one or more WP to a single phototypesetter for achieving high speed in composing. A dummy of the pages is then prepared from corrected proofs. Photographs (black and white or colour) are also pasted up on the dummy wherever necessary. The entire matter of these pages is transferred to offset plates through photographic process (using colour filters for colour printing) and then they are printed on offset machines. Multicolour offset printing jobs can be done using this process. If the matter to be printed does not have pictures, it is possible with some WP to type the matter directly on offset masters which can be used straightaway for printing. The storage discs on which the matter is recorded can be preserved for future reuse or can be erased by recording some other matter.

The Xerox 9700 electronic printing system is reported to be an advanced version of the Word Processor based printing system. It could replace several items of printing equipment such as the phototypesetter, plate maker and processor, printing machine and collator,

performing functions of all of them in a fraction of time with far less labour and considerably less usage of consumables.

### How to Choose a System

The following suggestions should be useful in selecting an appropriate system:

- (i) Acquaint yourself with the possible applications of the Word Processing Equipment.
- (ii) Prepare a list of jobs to be done in your office or establishment that could be done by a WP.
- (iii) Using a directory of the WP equipment/systems such as 'Guide to Word Processing Systems', prepare a short list of such systems that are expected to meet your requirements. Get the literature on them from the concerned manufacturers or dealers alongwith a list of those who are already using the system during the past one year or more.
- (iv) In addition to studying the trade literature of the systems in the short-list, try to see their working in the offices where they are already in operation. Try to get the comments of those users on the servicing, maintenance and back up services for the equipment.
- (v) Study the quoted prices carefully for the hidden costs. Ensure to get the equipment of those, whose components meet standard specifications.
- (vi) Consider your long term requirements, say at least five years ahead. If the

workload is going to increase considerably, you may have to go for a WP unit with common logic (where more than one WP are hooked to a single logic or typesetting or printing unit).

- (vii) If you have a computer-system accessible to your office, the WP chosen should be compatible to the main computer system. Discuss with the computer centre manager on the compatibility aspects.
- (viii) If you are planning getting access to external databases you may have to use the WP system as an on-line terminals so an equipment suitable to this hook up will have to be chosen.

### To Sum Up

Electronic office equipment have come to stay. Typewriters and Word Processors, Photocopiers, Video Disc Recording Services and many other office equipment are increasingly becoming electronics based. The libraries/technical information centres can take advantage of these developments, particularly in the Word Processors, to improve the effectiveness of their information services in speed as well as coverage. However, in choosing the equipment or systems, decisions are to be made after all the relevant aspects and future plans are adequately considered.

### Defence Science Journal Editorial Board Meeting

The meeting of the Editorial Board of Defence Science Journal is scheduled to be held on 2 Nov 1982 at Metcalfe House, Delhi under the chairmanship of Dr VS Arunachalam, SA to RM and DG R&D.