SCSQ

1984

GREENMOUNT
Beach
RESORT

Integrating Technologies

PRESIDENTS MESSAGE

Following on the outstanding success of our first National Conference held at the Greenmount Resort, Coolangatta in September, 1984, a number of inovative steps have been taken to improve communication with our members and to make our Association more visable within the Business Community.

One such step will be the production of the "Informaa Quarterly" and its distribution free to members.

I urge all members to contribute to this publication and to help make our Association the leading voice within the Information Technology field.

Harry Haxton
PRESIDENT.

EDITORS NOTES

This first edition has been produced by the Queensland Branch with future editions being prepared by the following Branches:-

February '85	-	New South Wales
May '85	-	Victoria
August '85	-	Western Australia
November '85	-	South Australia

Should any member wish to contribute to the Informaa please contact your local Branch or the Contributing Editor for your state. In the case of the February Edition all enquiries should be directed to the New South Wales Contributing Editor, Ms. Fay D-Elmain,
P.O. Box R53,
Royal Exchange,
SYDNEY. N.S.W. 2001.
Phone (02) 274061.

Barry Joyce
EDITOR.

NATIONAL CONFERENCE 1985

The 2nd National Conference will be held in Sydney from Sunday, 15th September to Tuesday, 17th September. Should any member be interested in presenting a paper at the Conference, please submit a short synopsis of the proposed paper and your resume to Dale Kreibig, N.S.W. Branch President, P.O. Box 795, Crows Nest, N.S.W. 2065 or call her on (02) 439 3978.

TOPIC   - Any field within Records Management.
DURATION - A formal presentation of 40 minutes.
COPY   - The selected speakers will need to submit a copy of their papers eight (8) weeks before the conference.

PUBLICATIONS

1st National Conference Papers
Coolangatta 1984
Cost - $25.00
Available from each State Branch

Records Management Primer Volume 1.

Text in the basic management of records in the office today. Heavily illustrated and has over 55 pages of fact filled notes and hints on the management of the office and office records.

Members and Students - $15.95 per copy.
Non-Members - $19.95 per copy.

Available from Queensland Branch.
                P.O. Box 361,
                NORTH QUAY. Q. 4000

EDUCATION: Records Management Subjects

Contact your local State Branch for details of Course availability within your State.

A correspondence course is currently available throughout Australia and all enquiries should be directed to:-

                Supervisor,
                Technical Correspondence School,
                G.P.O. Box 1326,
                BRISBANE. Q. 4001
                Phone: (07) 443766

BRANCH ADDRESSES

Queensland Branch,
P.O. Box 361,
North Quay,
BRISBANE. 4000

N.S.W. Branch,
P.O. Box R53,
Royal Exchange,
SYDNEY. 2001

A.C.T. Branch,
P.O. Box E330,
Queen Victoria Tce,
A.C.T. 2600

Victorian Branch,
G.P.O. Box 2270U,
MELBOURNE. 3001

Western Australian
Branch,
P.O. Box 397,
Victoria Park,
WEST. AUSTRALIA. 6100

South Australian
Branch,
G.P.O. Box 969,
ADELAIDE. 5001

RECORDS MANAGEMENT ASSOCIATION OF AUSTRALIA

INCORPORATED IN A.C.T. UNDER SECTION 24

ANNUAL REPORT OF FEDERAL COUNCIL

1983/84

PRESENTED AT GREENMOUNT RESORT

COOLANGATTA

20-9-84

FEDERAL PRESIDENT 1983/84
Harry E. Haxton
P.O. Box 729
FORTITUDE VALLEY 4006
Telephone: (07) 528159

FEDERAL SECRETARY 1983/84
Peter Smith
106 Coal Point Road.
COAL POINT NSW 2283
Telephone: (049) 269176

BRANCHES IN:—
Queensland
New South Wales
Australian Capital Territory
Victoria
South Australia
West Australia

CHAPTERS IN:—
Townsville
Darwin
Local Government (NSW)

ADVANCING INFORMATION AND RECORDS MANAGEMENT
& OFFICE ADMINISTRATION

ANNUAL REPORT OF FEDERAL COUNCIL

FOR YEAR ENDED 30th June 1984

Members and Friends,

At this our First National Convention of the Association, I have pleasure on behalf of my fellow directors, in presenting the 9th Annual Report of the Records Management Association of Australia, in repect of the year ended 30th June 1984.

At the last Federal Directors Meeting held in the Festival City of Adelaide in September 1983, the directors agreed to adopt a theme of improved "visibility" of the association, its aims, and the advancement of Records Management, much of which has resulted in this conference this week.

This association , as others in the information management field, is caught in the flux of the current explosion of information processing. With the changing role of Records Management from its traditional place in the office environment, the changing requirements of both government and private sector for information handling, and increasing demands on the retention of information caused by the process of Freedom of Information Legislation in various states, combined with a critical staff ceiling restraint in our major membership area of government has attributed to the slower growth in membership and activities in the various states.

It is up to the Association to provide the necessary impetus to management to give more cognisance to their information processing requirements and to consolidate the structure of information management within both government departments and the private sector.

I believe that there is an important place for the the Records Manager in both the Private and Public Sector, and that this can only improve with our own efforts. During the year I have had the pleasure of visiting three of the states and meeting with a large part of the membership of the association. In this time I have found that there is confusion as to the administrative goals of businesses, departments and agencies - not just in records management as a traditional area of filing and record keeping, but in the total integration of the informational needs of the organisation. There is a need for "consensus" on the role of the "co-ordinator of information" within particularly the public sector. It is time that the "buck passing" of "That's a Data Processing problem", and "That's a Records Problem" was changed to "This is a common problem in information processing".

I find it incongruent that the Records Manager must ask the Data Processor if he can use a office tool, called a computer to improve his office efficiency. The car pool does not ask for Data processing approval when a car is purchased - because the car uses microprocessors to control many functions. Over regulation is inevitably going to squash initiative in the management of records within organisations, if we continue to demand this type of centralist, over-control of the purchasing of

computer equipment.

Many organisations are wasting more time and money in procrastination than they would have done by going out and making a mistake, but learning by it.

All professional bodies in this field have to come to-gether for the benefit of their employers, there is currently a state of confusion in Management with "desires exceeding current capabilities". We must assist other groups in quashing the mystical "Cargo Cult" mentality which believes that the great white microchip will deliver us from the current administrative mess that we find ourselves in.

To this end I place responsibilty on the government bureaucracies which are the potential leaders in this field, for their buck passing attitude of indeterminate information handling.

Industry and government has a problem of first deciding who will be responsible for controlling the information explosion, not just sitting there watching it expand and doing very little about its future. I trust that this First National Conference (and those to be held in the future) will assist those attending to go back to their employers and demand positive action for information management. To ensure that we stop fighting "brush fires" in Office Automation and start an Information Records Management program and a sense of co-operation between the various departments within the organisation.

The Records Management Association is not necessarily the most important organisation in this field, but, as the third largest group of information professionals, it has a role to play in the development of policies and plans for the future growth of effective information handling in industry and government.

To increase the role of the Records Manager we have embarked on a policy of improved visibility of the association, its objectives and it's involvement in education in all states. Part time Courses in Records Management are now run in Victoria (CAE), ACT (TAFE) and Queenland (TAFE) with the New South Wales Branch developing a new course in conjunction with the TAFE in 1985, and in the Federal sphere a Correspondence course is now available through the Queensland Technical Correspondence School. This important contribution will ensure that the future Records Managers are qualified to make a major contribution to the management of their organisations. It is not up to the organisation to use, effectively these trained people, or hire these trained people to improve the management of records and information.

Administration

State branches continue to provide the basic activities of the association in each state, while the Federal Council provides a policy and co-ordinating umbrella for all states. Each state has been represented by two elected directors at the federal level, and these continue to provide the basis for interchange of ideas, concepts and administrative continuity for each state.

Finances

The directors agreed to increase the fees for membership in the current year, and must give serious consideration to further increases in both membership fees and other activities if it is to promote effectively the role of records management in all fields of endeavour.

The defecit for the year 1983/84 of $1,043.38, reflects the accounting proceedures use to bring to account prepayment required for the Funding this 1st National Conference where expenses .where incurred prior to the taking to account of income, and static membership figures in most states. The Working Capital of the Association of $19,005.06 provides a solid base for underwriting future activities.

Membership

This year membership remained stable in the first half of the year, but has shown considerable increased in the latter half and this financial year due to the improved publicity' that the association has gained due to the individual efforts.of branches and the staging of this conference.

I would like the thank the innumerable participants at both state and federal level for their efforts in promoting Records Management in their states. Without their individual unselfish participation, the association would not truly represent its members. Details of membership breakdown and lists of councillors are to be published separately in the state newsletters.

In closing I would like the thank, the Queensland Branch Committee for their efforts in staging this our first National Conference, and for their faith in the future of records management as an integral part of business administration.

No one is going to blow the trumpet for Records Management other than records managers. Through your support of the activities association, you, the members of this association as going to gain both experience, training and improved credibility within your organisations. Keep it up!

Harry E Haxton B.Econ, ARMA, AAIM.
Federal President.
20/8/84

Deloitte
Haskins+Sells

AUDITORS' REPORT TO THE MEMBERS OF

RECORDS MANAGEMENT ASSOCIATION OF AUSTRALIA

It is not practicable to establish control over membership fees and other income until their initial entry in the accounting records. Our audit relating to membership fees and other income was therefore limited to the amounts recorded.

Subject to the above:-

We have audited the accounts in accordance with Australian Auditing Standards. In our opinion:-

(a)   the accompanying accounts of Records Management Association of Australia, being the balance sheet, profit and loss account and statement by directors, are properly drawn up in accordance with the provisions of the Companies Act, 1981, and so as to give a true and fair view of:

   (i)   the state of affairs of the company as at 30 June 1984 and of the results of the company for the year ended on that date; and

   (ii)   the other matters required by Section 269 of that Act to be dealt with in the accounts:

   and are in accordance with Australian Accounting Standards.

(b)   the accounting records and other records, and the registers required by that Act to be kept by the company have been properly kept in accordance with the provisions of that Act.

DELOITTE HASKINS & SELLS

John S Mills
Partner
CHARTERED ACCOUNTANTS

Sydney
September 1984

RECORDS MANAGEMENT ASSOCIATION OF AUSTRALIA

INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 30 JUNE 1984

|	1984 $	1983 $
INCOME		
Membership fees	16,824.50	16,373.00
Joining fees	480.00	505.00
Certificate fees	61.00	97.00
Function receipts	3,676.75	8,119.50
Sale of publications	886.45	438.35
Interest received	1,658.16	1,460.43
Sundry income	1,494.50	244.40
Income from Comtec	–	1,886.98
	25,081.36	29,124.66
EXPENDITURE		
Advertising	200.00	555.21
Auditors' remuneration		
Audit of accounts	2,025.00	1,550.00
Bad debts – written off	22.50	–
Cost of – functions	5,085.81	8,396.63
– education	731.73	577.31
– publications	80.66	803.78
Depreciation	10.00	10.00
Expenses for Comtec	–	1,170.40
Insurances	48.09	47.97
Legal costs	160.00	130.00
Postages and P.O. box rentals	2,123.12	2,428.71
Premises costs	801.32	1,290.05
Printing and stationery	5,109.72	2,146.65
Secretarial expenses	1,106.25	757.61
Subscriptions	347.73	343.92
Sundries including bank charges	1,525.65	1,138.30
Telephone costs	302.46	235.68
Travelling and other meeting costs	4,216.20	3,507.80
National Conference	1,512.70	–
	25,408.94	25,090.02
	(327.58)	4,034.64
Income Tax	(715.80)	(461.70)
(DEFICIT) SURPLUS FOR THE YEAR	(1,043.38)	3,572.94

RECORDS MANAGEMENT ASSOCIATION OF AUSTRALIA

BALANCE SHEET AS AT 30 JUNE 1984

	1984 $	1983 $
ACCUMULATED FUNDS		
Balance as at 1 July 1983	20,138.44	16,565.50
Add(Less): (Deficit) Surplus for the year	(1,043.38)	3,572.94
Balance as at 30 June 1984	19,095.06	20,138.44
	=========	=========
Represented by:		
Current Assets		
Cash at bank	20,256.65	10,778.90
Cash in transit	543.00	535.50
Cash on hand	15.00	15.00
Stock of publications and ties	960.78	2,247.78
Sundry debtors	200.00	1,159.50
Deposit at call	8,893.39	9,013.86
Stock of badges	1,399.38	72.50
	32,268.20	23,823.04
Less: Current Liabilities		
Sundry creditors	11,483.69	2,567.00
Fees in advance	1,142.00	405.00
Provision for income tax	637.45	812.60
	13,263.14	3,784.60
	19,005.06	20,038.44
WORKING CAPITAL		
Add: Fixed Assets		
Office furniture	130.00	130.00
Less: Provision for depreciation	40.00	30.00
	19,095.06	20,138.44
	=========	=========

CAR SYSTEM -- APPLICATION SUMMARY

APPLICATION NAME	PROPOSAL DATE	IMPLEMENTATION DATE	PRESENT SYSTEM (incl avoid cost)	PROPOSED SYSTEM (incl equip cost)	TOTAL ANNUAL SAVINGS
INVESTMENTS	4/82	2/83	$113,230	$ 24,367	$ 88,863*
CBR/PAYABLES	4/82	3/83-8/83	108,835	74,649	34,186*
IRA	10/82	8/83	258,513	42,439	216,074*
AX GOLD	5/83		306,583	138,411	168,172
SPBI	7/83		107,829	52,532	55,297
FORMS CONTROL	7/83	P	15,773	13,462	2,311
CSC	8/83	3/84	418,218	65,442	352,776*
IBG INVESTIGATIONS	9/83		115,799	75,283	40,516
SECURITIES SERVICES	9/83		129,980	62,254	67,726
INCOME COLLECTIONS	10/83	3/84	61,389	35,568	25,821*
SECURITIES VAULT FMG	10/83	4/84	107,215	44,641	62,574*
CREDIT UNIONS	10/83		71,389	48,711	22,678
DIRECT DEPOSIT	10/83		194,766	40,507	154,259
EMPLOYEE BENEFITS	12/83		112,342	71,165	41,177

TOTAL PROPOSED SAVINGS $1,332,430

*TOTAL IMPLEMENTED SAVINGS 780,294

KEYNOTE ADDRESS
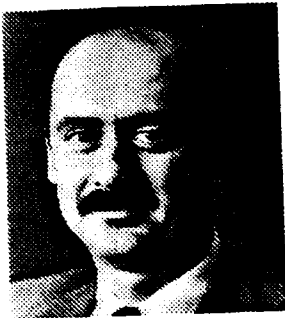
Robert L. Minnich
Vice President
Central Services Department
SECURITY PACIFIC NATIONAL BANK
LOS ANGELES.

Security Pacific National Bank is the principal subsidiary of Security Pacific Corporation, a broadly based financial institution offering a wide range of financial services to a diverse customer base. Security Pacific Bank is the ninth largest U.S. Bank in terms of total assets. It has the second largest branch system in the U.S. with over 640 banking offices in its home state of California. Each of our offices serves a specific community and each office is designed to represent that community. Our Jefferson & Montgomery office in San Francisco hs been totally restored and it's early California architecture and here we have a typical commercial office, and our newest automated self-serve kiosks.

The Corporation also had domestic and international subsidiaries in the businesses of leasing, consumer and commerical finance, mortgage banking, venture capitol, employee benefit fund management and other financial services. These subsidiaries, together with leasing companies and a small business investment company, provide financial services in 450 offices throughout the United States and 40 foreign nations.

Security Banks Central Services Department is the focus of information management services for both the Bank and Corporation. In the past few years, both the financial services industry and information management technology have been experiencing explosive change and growth. Our information management program has been designed to continually adapt to industry changes as well as new technologies, while remaining cost effective.

Within Central Services, the Office Systems and Support Division administers the formal information management program including:

Centralized and decentralized Word Processing

Micrographics analysis and support

Microcomputer applications support (Image Mgt.)

Vital Records

Records Retention

Records Storage equipment control

Files management support

Project tracking systems

The records and information management program at Security Bank is the result of a planned, evolutionary process that began in 1977 with a traditional records management approach. From the beginning, the program was designed to provide flexibility in a fluid and ever-changing environment.

The program was developed under the auspices of the Banks Strategic Planning Committee. This committee controls the growth and direction of the bank and because of the committees endorsement, the program has had the attention and support of top management.

The major goals of the program remain: 1) to reduce the overall costs of records and information related activities; 2) to improve individual and group productivity; and 3) to ensure continuity in the event of a major disaster.

The early phases of the program concentrated on records storage, retrieval, retention and destruction, and of course filing equipment. By 1981, the program had recorded $2.4 million in savings.

The mid phases of the program saw a switch toward micrographics and automation, oriented to solving records related problems.

Todays program makes use of current technologies as well as traditional records management methods to deal with records and information management issues.

Currently, we are changing the direction of our program. Since 1977, we have placed the major emphasis on planning for and dealing with existing records management problems; scheduling areas of the Bank for conversion to newest technologies; establishing a records center; identifying vital records; and establishing and maintaining a retention schedule. We are now taking a more direct role in the planning and reorganization of areas and projects within the bank to incorporate our technologies in the planning stages and provide training in information and records management as a part of the area or projects inception.

Our new emphasis is also evident in the change of our division name. In 1977, we were known as the Records and Information Management Division. Today our name is Office Systems and Support Services Division. We still put out fires, but we also spend a great deal of time on fire prevention.

And, as we refer to fire prevention, we naturally turn to utilization of new technologies. Our involvement in office automation projects has come about over the last 18 months. Previous records surveys from many areas of the bank have given our staff a keen insight into the problems facing us in today's ever-changing environment. This experience helps us treat the illness and not the symptoms. All projects at one point or another face the age-old issues of creating, filing, retrieving, storing, controlling, reporting, and destroying information. Regardless of the technology applied, these basics must be considered.

Many of our projects have been initiated with the management of information in mind.

RECORDS RETENTION & VITAL RECORDS PROGRAM

The Retention Program has been an integral part of the division's function since 1977, while the Vital Records Program was initiated in January 1983. Both programs are bankwide and are provided to subsidiaries on request. Each area serviced in these programs names their own department coordinator to assist in the implementation of the programs. Office Systems and Support Services Division provides definition for these programs, develops management presentations, meets with group managers to appoint department coordinators, trains department representatives and reviews retentions and vital records lists submitted by the client departments.

Both the vital records and retention schedules are maintained on the RIC system. This system provides both control and a historical record of all records transactions from storage to ultimate destruction.

Since the Retention and Vital Records programs are set up to be participative, individual training and support of department coordinators is required. One assistant vice president within Office Systems and Support is responsible for the implementation of these programs bankwide, coordinating the training and providing support to client departments.

The participative nature of the program does not end with the department coordinator. The Office Systems and Support Division also coordinates all proposed schedules or changes to schedules with the Audit and Legal departments before presenting the schedules to the Bank Retentions Committee. The Retentions Committee is chaired by the vice president/manager responsible for the Records Center. The vice president/manager of the Office Support Section is vice chairman and the assistant vice president and retentions analyst is recording secretary of the Committee. Other members include a representative of the Legal Department, the Trust Department, the Banking Office System, the International Banking Group, and the Controller's Department.

The Retentions and Vital Records programs have been presented to management as an insurance policy. We do not try to show savings but stress the need for adequate protection. This approach has been very successful and has resulted in a program mandated by our top executives.

WORD PROCESSING

In 1977, the Bank opened its Word Processing Center. The "up-to-date" equipment included one mag card typewriter, two Vydec word processors and an odd assortment of electric typewriters. The somewhat naive concept was that essentially all of the typing for the Bank would be done by the Center.

As technology advanced and the price tag was reduced, the Center concept also changed. Today, the Center is primarily used for bulk typing, repetitive documents, documents requiring long-term storage and occasional back-up typing. The total cost of the work produced by the Center (including 134,860 full pages and 193,850 repetitive items) in 1983 was $1,006,251. We estimate that to produce this work outside the Bank would have cost $1,242,486 -- a savings of almost a quarter of a million dollars! Confidentiality and convenience are added bonuses.

The Center also provides support over 130 devices located throughout the 55 floors of the Bank's headquarters building. These devices are provided access to either the Wang OIS or VS computers now used by the Center. This decentralized word processing is now the primary form of word processing at SPNB. Connection to a centralised computer provides the conveniences of a shared logic system while maximizing utilization of the CPU's, reducing per device costs.

The selection of Wang equipment was well suited to our overall strategy of providing single workstations that can access a variety of systems. With the new Wang personal computers, users can have the convenience of personal computing and stand-alone word processing along with the ability to tie into the Wang VS system and obtain access to shared storage, Wang data processing functions and access to our VM timeshare computer. This tie-in to VM allows access to a myriad of programs and to the Bank's electronic mail system.

However, in a large corporation like ours, one system does not cost effectively answer all needs. In our banking office system, the primary need was for a personal computer; IBM's pc was chosen as most cost effective. To help maximize the cost of installing this equipment in eventually all of our 640 branches, we are implementing Display Write 2 to fill their word processing needs.

FILES MANAGEMENT

Files management projects at Security Pacific are divided into six distinct phases: management contact; analysis; diagnostic review; design; conversion/implementation; and maintenance.

The first step following the identification or assignment of a potential project is the management contact phase. The impressions made during this phase stimulate support and understanding of the files management program. This phase includes a preliminary diagnostic survey; assignment of an area coordinator; forecast of potential equipment and supplies expenses; and discussion of any plans for reorganization or relocation.

During the analysis portion of a project we identify areas of concern and specific problems by collecting and reviewing data. This data includes the area's organizational structure; floor plans and space requirements; survey of files and filing practices; review of retention schedules; identification of vital records; and preparation of the preliminary cost worksheet.

For the diagnostic review phase a report is prepared based on the data compiled during analysis and presented to the area's management. The report includes a review of cost/savings benefits, the initial classification of records, and the overall task plan.

In the design phase we formulate, prepare and propose equipment requirements that address the analysed and diagnosed areas of concern.

The conversion/implementation phase is generally the most time consuming. It involves training area staff; coordinating the physical conversion of records; conducting a final review of records classification; coordinating RIC system input; scheduling report and label generation; coordinating the equipment installation; and coordinating any input with the Retention Committee. The last step of this phase is the final sign-off by the area's management.

As a maintenance practice we establish follow-up training and review sessions with area staff. This does not necessarily immediately follow the conversion/implementation phase, but could be performed months after implementation is completed.

To show the direct cost, savings and benefits (associated with equipment, floor space, and labor) realized by the Bank as a result of files management projects, we prepare a cost analysis worksheet for each project. Information for the worksheet is obtained from the present filing system versus proposed filing systems and all related acquisition of equipment, floor space and labor.

RECORD STORAGE EQUIPMENT INVENTORY

In 1981, we established an inventory of excess filing equipment to make that equipment available throughout the Bank on short notice at minimal costs. A control program was established using a requisition process requiring the approval of the Central Services Department for any filing equipment. This enabled us to ensure that proper filing equipment was used consistently.

A careful evaluation of equipment needs bankwide provided the information to establish stock levels and determine what type of equipment was needed. Short and long range equipment needs were established to assure equipment availability and regular meetings are held with the Real Estate Management (facilities planning) Department, user departments and our division.

The equipment inventory is maintained on the Bank's timesharing system. This inventory provides weekly reports listing type of equipment, manufacturer, color, number of drawers or style, date placed in inventory, and an inventory control number. The system was designed to provide reports sorted by any of the six variables listed above.

Specifications were prepared for various types of equipment. This information was made available to Bank staff and a section on filing equipment was presented in a "Managing Administrative Records" workshop.

The program has saved approximately $25,000 per year for the past three years. This hard dollar savings does not include benefits accruing from the faster availability of standard equipment and improved control of acquisitions resulting from the program.

RECORDS CENTER

Security Pacific maintained multiple records storage facilities throughout California at the outset of the Information and Records Management program in 1977. Today, we operate one center, housing over 350,000 boxes or 250,000 cubic feet of storage. Volumes associated with the center include:

. Approximately 10,000 boxes stored monthly.

. 3,500 requisitions.processed monthly.

. Over 9,000 boxes destroyed monthly.

. Less than 1% unable to locate (UTL) rate on requisitions.

In 1982, we started a program of storing, retrieving and providing copies of microfilm and microfiche for Bank use. A 2,500 square foot vault was constructed and microfilm and microfiche retrieval (readers/printers) devices were purchased. We now average over 30,000 requests per month providing 65,000 prints.

The Records Center is now fully automated as a result of the Records Inventory and Control System (RIC). Other uses of technology include the use of Kodak and 3M microfilm and microfiche programmable retrieval equipment. The application of automated equipment has resulted in increased production at minimal costs.

Savings from the improved operation of the Records Center can be found in every area of the Bank. The centralization reduced the need for expensive floorspace, vital records storage and/or protection, and the recycling of paper and/or microfilm. The reduction of the center operating budget is another example of the cost effectiveness of the program. Savings from the Records Center facility alone approach $4 million with $1.5 million of that resulting from the avoidance of the construction of new records storage facilities. Through our program we have eliminated five regional records storage facilities (one a commercial service) and have centralized into one center. This was accomplished by developing an effective retentions program, expanding our source document micrographics program, and utilizing the RIC system for control.

RECORDS INVENTORY CONTROL SYSTEM

(RIC)

Development of the Records Inventory Control System (RIC) began in 1981. The system was developed within the Bank. Data processing system analysts, programmers and the records management staff designed, tested and implemented the system in two years at a cost of nearly $200,000. The RIC system is unique in that it not only provides control of archival records (with a 500,000 cubic feet capacity) but also allows for active records control (which exceeds 16 million record capacity). The system also provides for flexible management reporting and is the basis for our retention and vital records program.

The RIC system was very carefully planned to guarantee that the money invested in its development would pay dividends. Painstaking evaluations of systems requirements, long range capacities, and anticipated changes in banking operations were taken into account.

The RIC system was written for our existing Wang VS 100 computer system. This choice was made over the Bank's IBM 370 timesharing system due to Wang's flexibility and our division's ultimate control over the VS which also provides centralized word processing.

Remote terminals were placed in our Records Center and 9600 baud communications were installed. The operation of the RIC system and the active records program is maintained by our Computer Operations Unit while the archival system is run from our Records Center.

The RIC system is unique in that it is a multi-purpose information system. It is capable of providing control of archival records and active records. These two modules of the system are connected via a "records series" identifier. This records series is used for active records or file folder control (subject classification system) and for archival records retention and vital records identification. To our knowledge there is no system operating that provides for the total control of records as the RIC system.

The RIC systems development costs were easily justified. The resulting savings from our files management program and the cost improvements associated with running one of the largest records centers in the area makes the RIC system a crucial part in our overall office support program.

PERSONNEL AND ACTIVITY MANAGEMENT SYSTEM

(PAMS)

The Personnel and Activity Management System (PAMS) functions as an integrated, automated tool for record keeping/activity scheduling, project control and personnel management. PAMS enables the project and/or personnel manager to building a database of critical department records including: people, position, performance history, personal data; projects, phases with projects, tasks within phase and project; standards of performance. From this database the user can:

- monitor projects and activities through their development life cycle;

- estimate time and control factors and do forecasting;

- collect historical performance and cost data at the overall project level, task level and employee level;

- provide critical path and project variance reporting with department chargeback and allocation capabilities;

- display historical and forecast information;

- establish standards of performance;

- forecast performance;

- provide personnel information for Bank and corporate reporting.

PAMS was selected as the application solution for two problems posed by the Administration Division of our department. They needed a centralized system for filing personnel-related information and a project tracking and control system to manage department and bankwide projects. Reports were required from both systems that made automation essential in the solutions.

After examining several separate systems and considering the cost of developing a system in-house, PAMS was recommended as a solution for both problems. The decision to purchase PAMS was made after a careful review of the system had been made by our analysts and several demonstrations were conducted for upper-level management as well as staff.

One of the factors considered in PAMS favour during the selection process was its ability to run on the IBM PC. There is a high prevalence of IBM's in the Bank and corporation. This meant a high number of potential clients for the product. Additionally, there is training available on the use of the IBM both inside and outside the Bank. For record retrieval purposes, the response time of an automated system was considerably faster than a manual one. PAMS comes with reports already programmed to make that retrieval process

efficient.   For information not in the programmed reports, PAMS interfaces with dBASE II and LOTUS 1-2-3 giving the operator the flexibility of creating his own reports or spreadsheets from the personnel and project information.

Two workshops were developed from the vendor's documentation to incorporate project and personnel management techniques with the actual operation of PAMS.   These workshops were first piloted in our department and then sold as productivity tools to other areas of the Bank.

The workshops made use of:

- audio-visual aids for an overview of PAMS and the Personnel/Project Tracking concepts;

- written scenarios and exercises to emphasize the concepts;

- hands-on demonstrations and training for the input staff;

- training manuals to reinforce the input worhshop.

PAMS will provide a centralized filing of personnel information on a department level that was not available previously in the Bank.   It will also allow project managers to integrate project and personnel information in one system.   This will help them in establishing standards for performance and measuring employees against that standard.   Centralizing the records and allowing easy but standard retrieval processes clean up a system that was previously kept in many different formats by varying division and section managers.

By purchasing a universal licensing agreement for PAMS, the Bank receives additional software copies at a nominal fee.   Compared to buying multiple copies of other less-inclusive project tracking systems or continuing to pay compensation costs for time spent retrieving the records manually, PAMS becomes a cost-effective tool. It was also determined that PAMS could be used within our department and later sold throughout the Bank as a product of our department. This way the cost could be recovered within a 3-year period.

COMPUTER AIDED DIRECTORY

(CAD)

The Computer Aided Directory provides an automated system to quickly and systematically update the internal telephone directory and to retrieve information from it.

Input to CAD is done by the Directory Unit of our department. Their primary need was to produce a report to be sent to the typesetters which would incorporate the necessary typesetting codes with the input. Previously this was done on a line by line basis using a series of SCRIPT files on our timesharing system. The Internal Directory consists of nine sections: General Information; Network Dialing Instructions; General Executive Officers; Departments, Divisions, Affiliates and Subsidiaries of the Bank; Security Pacific Corporation and Subsidiaries; Mail Codes; Domestic Offices and Branches; Functions; Personnel Index. Many entries appear in several sections, this meant each entry had to be input separately for each section. CAD allows the input person to make a single entry and direct it to appear in several sections.

The Telephone Operations Unit needs to retrieve information from the directory for Bank customers and other staff members. This was formerly done by searching through a series of 12 references or lists and numerous hand-written notes passed out periodically by the supervisor. With CAD, the operators can reference the information on-line and service their clients more effectively.

CAD was developed as a Wang data processing system to make use of the integrated Wang system which our department maintains. Using Wang for CAD allows us to interface with other Wang DP programs we maintain. Additionally, we can use our Wang word processing to manipulate the files for added flexibility.

An operator's guide and training guide were developed to instruct the Directory and Telephone Operations Units in the use of CAD. Additionally hands-on instruction was given, with follow-up provided to ensure implementation was effective.

CAD provides centralized access to directory information for the operators and ensures our customers faster service. Eventually, CAD will be available to most Bank staff members for access, allowing the Telephone Operations Unit to concentrate more heavily on customer contact and cross-selling the Bank's products.

The developmental and equipment costs for CAD will be made up for with the anticipated increase in productivity and the increase in profits facilitated by the cross-selling of Bank products.

COMPUTER ASSISTED RETRIEVAL SYSTEM

(CAR)

The Computer Assisted Retrieval System is a combination of two proven technologies: computers and microgrpahics. This on-line indexing and inquiry system permits speedy access to document images stored on microfilm. Implementation of the CAR System has provided improved operational efficiency in the following areas:

- virtual elimination of lost or misfiled records

- considerable reduction in document retrieval time

- improved response time both internally and with customers

- improved file integrity due to controlled access capabilities

- improved accuracy with high-speed filing of documents in up to 98% less space

- elimination of purging costs associated with in-office and archival storage or paper records

- duplicate microfilm kept off premise protects against destruction and loss of vital information.

With the number of new documents growing 20-22 percent per year, the total volume of information stored doubles every four years. Computer Assisted Retrieval offers a means of coping with this paper explosion. One of the obvious advantages of microfilm is the space savings it affords. It can reduce space requirements for record storage by as much as 98%. Misfiled, lost or damaged documents are no longer a problem with the CAR System.

SPNB's CAR System hardware consists of a Prime I450 minicomputer with two 300 megabyte disks. User areas are linked to the mainframe using Eastman Kodak's interfaced microfilm image terminals and ADDS Viewpoint CRT terminals. Microfilmers include Kodak's Reliant 800 and RV3 Planetary. Three off-site applications utilize Ven-Tel 1200 Baud modems. All requests for printed data and reports are channeled to a centralized printer located at the Headquarters building where the mainframe is housed. The Prime presently accomodates 16 terminals, with a capacity to handle up to 64.

The personnel in the user areas are trained by the hardware vendor in the use and maintenance of the equipment. Liaison support from the computer operations section and hands-on training is provided by the Office Systems Support staff of SPNB to familiarize each operator with the capabilities of the applications designed for them.

Each application is specifically designed to meet the retrieval and research needs of the user. Menu driven reports can be designed to provide the user with productivity, statistical and ad-hoc reports.

The indexing of microfilmed documents is generally performed from the developed film. This method acts as a quality control check that the documents will be readable for future retrievals.

To cut down on labor-intensive data entry, indices are extracted from existing data processing systems for download to the CAR System.

As the initial cost of a computer could not be justified on one application alone, a cost analysis was performed in three areas - Investments, Accounts Payable and Correspondent Bank Reconcilements. The justification for these initial users was significant enough to enable SPNB to purchase a system large enough to accomodate several applications. This made it feasible to convert smaller paper volume areas to the system on a timeshare basis.

The CAR System, since first implemented in early 1983, has realized an annual cost savings of $780,294. The areas currently utilizing the system are:

- Investments

- Accounts Payable

- Correspondent Bank Reconcilements

- IRA

- Consumer Service Loan Files

- Consumer Service Collections

- Trust-Income Collections

- Trust-Securities Vault

(See attached Application Summary for individual application annual savings)

Cost justification for each application is based on a cost comparison of present filing systems and the proposed CAR System, considering the following cost factors:

- floor space requirements

- labor (retrievals, file maintenance, research)

- equipment/record storage costs

- supplies

- off-site storage

- computer time

Intangible savings are estimated based on avoidable costs such as operating losses due to lost or misfiled documents and the response time saved relative to customer inquiries.

The management of SPNB has been highly supportive of the CAR System. The system provides a two-fold benefit of streamlined information handling and improved access to timely information. Streamlining the office through automation and micrographics can only result in increased productivity and cost efficiency.

CO-ORDINATING OFFICE AUTOMATION TECHNOLOGY

PETER SMITH M.R.M.A.
THE SHORTLAND COUNTY COUNCIL

I READ RECENTLY THAT "PAPER ITSELF IN THE OFFICE ENVIRONMENT HAS ABSOLUTELY NO VALUE. IT IS THE INFORMATION ON IT THAT CREATES ITS VALUE. PAPER IS ONLY A MEANS OF TRANSMITTING AND STORING INFORMATION. FOR MANY YEARS IT HAS BEEN THE BEST MEDIUM AVAILABLE EVEN THOUGH IT IS BULKY, CAN BE LOST OR DAMAGED, EASILY MISFILED.

IN ADDITION, PAPER TAKES UP TOO MUCH SPACE, IS DIFFICULT AND TIME CONSUMING TO WORK WITH, AND IS NOW VERY EXPENSIVE."

IT IS NO WONDER THAT TECHNOLOGY IS LOOKING TO OVERCOME OUR INFORMATION AND RECORDS PROBLEMS ASSOCIATED WITH TODAY'S PAPER EXPLOSION.

THE WORLD HAS SEEN A MAJOR DEVELOPMENT IN THE SPREAD AND USE OF COMPUTERS BASED ON THE SILICON CHIP. THE AVAILABILITY OF TECHNOLOGY IN THE FIELD OF COMPUTERS AND THE CONTINUING REDUCTION IN COSTS HAS LED TO ITS APPLICATION IN THE OFFICE ENVIRONMENT.

THE USE OF COMPUTERIZATION AND MICRO-ELECTRONICS IN THE OFFICE FOR THE SUPPORT OF SECRETARIAL AND MANAGERIAL STAFF, HAS BEEN GIVEN A NUMBER OF TITLES SUCH AS "THE OFFICE OF THE FUTURE", AND THE "PAPERLESS OFFICE", AND THE "ELECTRONIC OFFICE" BUT THE MOST REALISTIC TERM IS "OFFICE AUTOMATION".

THE TERM OFFICE AUTOMATION, REFERS TO A TOTAL OFFICE PERSPECTIVE WHERE WORD, DATA, IMAGE AND VOICE PROCESSING ARE ALL INTEGRAL PARTS OF THE OFFICE ENVIRONMENT. THE TECHNOLOGY FOR ALL THESE FORMS OF PROCESSING IS CURRENTLY AVAILABLE AND WORKING, OR IS AT LEAST PAST THE LABORATORY AND TESTING STAGE, BUT IT'S ACTUAL USE IN THE WORKING ENVIRONMENT HAS NOT BECOME COMMON PLACE.

THE THINKING IS THAT THE COMPLETE RANGE OF EQUIPMENT AND SYSTEMS WILL BE AVAILABLE IN THE FUTURE FROM A SINGLE SUPPLIER.

LET'S TAKE A LOOK AT THE REASONS FOR THE INTRODUCTION OF MICRO-ELECTRONICS INTO THE OFFICE ENVIRONMENT AND ITS APPLICATION.

THE BUSINESS OFFICE HAS EVOLVED TO THE HIGHLY SOPHISTICATED FORM WE SEE TODAY AND THIS EVOLUTION HAS RESULTED FROM A NUMBER OF FACTORS INCLUDING THINGS SUCH AS POPULATION GROWTH, THE SPECIALIZATION OF PRODUCTION, AND TECHNOLOGICAL INVENTIONS AND INNOVATIONS. TODAY, OFFICES RANGE FROM THE SOLE TRADER WHO MAY HAVE SOME PART-TIME SECRETARIAL AND ADMINISTRATIVE SUPPORT, TO THOSE ORGANISATIONS SUCH AS MULTINATIONALS, GOVERNMENT DEPARTMENTS, BANKS, AIRLINES, MANUFACTURERS, AND RETAILERS, WHICH EMPLOY HUNDREDS AND THOUSANDS OF PEOPLE IN MANAGERIAL AND SECRETARIAL POSITIONS. ALL ORGANISATIONS HAVE TWO COMMON NEEDS, TO COMMUNICATE INTERNALLY AND EXTERNALLY, AND TO PROCESS INFORMATION. THE MOVE TO LARGER AND MORE COMPLEX BUSINESS UNITS HAS MEANT THAT MORE AND MORE COMMUNICATIONS AND INFORMATION PROCESSING ARE REQUIRED.

INITIALLY, COMPUTERS WERE USED BY SPECIALIST DATA PROCESSING STAFF WHO DEVELOPED A MYSTIQUE AND JARGON WHICH WAS UNINTELLIGIBLE TO MOST OF US. THEY WERE USUALLY CONTROLLED BY THE ACCOUNTING DEPARTMENT WHO SAW THEM BASICALLY AS ACCOUNTING MACHINES. LITTLE USE WAS MADE OF THEM IN SUCH AREAS AS PERSONNEL, FINANCIAL MANAGEMENT AND CORPORATE PLANNING SYSTEMS. IN RECENT YEARS THE TREND HAS BEEN TOWARDS DISTRIBUTED DATA PROCESSING, WHEREBY ACCESS TO THE COMPANY OR FIRMS COMPUTER IS MORE READILY AVAILABLE TO STAFF. IN SO DOING MANY NEW SYSTEMS HAVE BEEN IDENTIFIED THAT CAN BE PROCESSED ON THE COMPUTER.

A SIGNIFICANT NUMBER OF USERS OF DATA PROCESSING SYSTEMS HAVE BEEN DISSATISFIED AND DISGRUNTLED WITH THE SERVICE THEY RECEIVED BECAUSE OF THE INFLEXIBILITY AND RIGIDITY OF THE SYSTEM AND CONSEQUENTLY DOES NOT PROVIDE THE INFORMATION IN THE REQUIRED FORM.

THIS DISSATISFACTION HAS LED TO AN AWARENESS OF THE PROBLEM AND A DEVELOPMENT OF COMPUTERS THAT CAN BETTER SERVE THEIR REQUIREMENTS. THE OUTCOME HAS BEEN FOR SIMPLER, MORE EASY TO USE SYSTEMS AND THE APPLICATION OF MORE COMPUTER TERMINALS IN THE WORK AND OFFICE ENVIRONMENT. THE IMPORTANT RESULT OF THIS MOVE TO DISTRIBUTED DATA PROCESSING WAS THE DEVELOPMENT OF IMPROVED METHODS OF COMMUNICATING BETWEEN THE COMPUTER AND THE DISTRIBUTED DEVICES.

DISTRIBUTION OF COMPUTER TERMINALS REPRESENTS ONE MOVE INTO THE OFFICE AREA. ANOTHER IS THE DEVELOPMENT OF WORD PROCESSORS WITH THE ABILITY TO PROCESS TEXT RATHER THAN DATA. THE USE OF DISTRIBUTED DATA PROCESSING, WORD PROCESSING, AND THE DEVELOPMENT OF BETTER COMMUNICATIONS SYSTEMS ENCOURAGE THE MOVE TOWARDS THE AUTOMATED OFFICE IN THAT MANAGERS AND THEIR STAFF BEGAN TO HAVE VISUAL DISPLAY TERMINALS ON THEIR DESKS, TOGETHER WITH THE ACCESSIBILITY OF PRINTING DEVICES. THE LINKING OF THESE TYPES OF SYSTEMS AND PRODUCTS TO PROVIDE AN INTERCHANGE OF INFORMATION BETWEEN OFFICES, MANAGERS AND STAFF IS PART OF THE STORY OF OFFICE AUTOMATION. THIS IS AN ONGOING ONE AS MORE AND MORE DEVICES SUCH AS TELEPHONES, PHOTOCOPIERS, FACSIMILE, TELEX, DICTATION AND VIDEO MACHINES ARE LINKED TOGETHER TO PROVIDE A SYNTHESIS OF ALL THE BASIC FORMS OF COMMUNICATION, VOICE, TEXT, DATA AND VISION.

THE OFFICE AUTOMATION SYSTEM DOES NOT NEED TO BE BASED ON ANY SPECIFIC HARDWARE OR SOFTWARE SYSTEM. THE AUTOMATION OF THE OFFICE CAN BE ACHIEVED IN A NUMBER OF WAYS, SUCH AS THROUGH THE USE OF LINKED MICROCOMPUTERS, OR BY USE OF A MAINFRAME COMPUTER LINKED TO A NUMBER OF PERSONAL COMPUTERS. THE SIGNIFICANT COMPONENT OF EACH SYSTEM IS THE COMMUNICATIONS LINK BETWEEN EACH DEVICE, TERMINAL OR PROCESSING UNIT. THE MOST IMPORTANT PART OF THE EQUIPMENT WILL BE THE COMPATIBILITY BETWEEN DEVICES AND THE COMMUNICATIONS NETWORK.

ADDITIONAL DEVICES WILL NEED TO BE LINKED INTO THE SYSTEM TO COMPLETE THE INTEGRATION OF THE ORGANISATION'S ELECTRONIC SYSTEMS. THESE MAY INCLUDE TELEX, TELEPHONE, FACSIMILE, VIDEOTAPE, PHOTOCOPIERS, SECURITY SYSTEMS, VIDEO AND VIDEO CONFERENCE SYSTEM.

ALTHOUGH WE ARE INVOLVED WITH THE TECHNOLOGICAL COMPONENTS OF THE AUTOMATED OFFICE, AND THE APPLICATION SYSTEMS WHICH LINK IT TOGETHER, IT IS IMPORTANT NOT TO FORGET THE NATURE, CHARACTERISTICS AND PROCEDURES OF THE OFFICE.

THE APPLICATION OF TECHNOLOGY TO THE OFFICE ENVIRONMENT APPEARS TO BE CAPABLE OF PROVIDING SOLUTIONS TO SOME OF OUR QUESTIONS SUCH AS WASTED TIME, DECREASED PRODUCTIVITY, LACK OF SKILLED STAFF, INCREASING LABOUR COSTS, TRAVEL COSTS, ETC., AND THIS IS BEING DONE THROUGH EXPANSION OF DATA PROCESSING AND WORD PROCESSING SYSTEMS, BUT THESE IN ISOLATION DO NOT AND WILL NOT PROVIDE A COMPLETE ANSWER TO THE OFFICE ENVIRONMENT. THERE NEEDS TO BE A SYSTEM WHICH INTEGRATES THESE TWO PROCESSES TOGETHER WITH OTHER OFFICE PROCEDURES, TO PROVIDE A TOTALLY INTEGRATED INFORMATION PROCESSING AND DECISION SUPPORT SYSTEM, APPLICABLE TO EACH OFFICE AND ITS STAFF.

VARIOUS COMPUTER COMPANIES ARE NOW OFFERING SYSTEMS WHICH CAN PROVIDE OFFICE AUTOMATION AT VARYING LEVELS. SOME ARE BASED ON WORD PROCESSORS, SOME ON DATA PROCESSORS, TOGETHER THEY ARE TRYING TO PROVIDE INTEGRATED SYSTEMS TO SUPPORT THE OFFICE.

THE STAGE HAS NOW BEEN SET FOR COMPETITION BETWEEN WORD AND DATA PROCESSING SUPPLIERS TO PROVIDE OFFICE AUTOMATION SYSTEMS AND AS NO ONE COMPANY CAN SUPPLY A TOTAL PACKAGE SOLUTION AT THIS STAGE THIS IS CAUSING SOME CONFUSION AND CONCERN ON THE PART OF THE PURCHASER.

THE AUTOMATED OFFICE IS NOT A TOTALLY NEW CONCEPT THAT HAS BEEN INITIATED BY TODAY'S TECHNOLOGY, ACTUALLY IT HAS BEEN A GRADUAL AND CONTINUING PROCESS SINCE THE ESTABLISHMENT OF THE FIRST OFFICE.

DEVELOPMENTS IN TYPEWRITERS, ACCOUNTING MACHINES, CALCULATORS AND TELEPHONE SWITCHBOARDS ARE JUST SOME OF THE AREAS OF CONTINUING IMPROVEMENT. ACTUALLY, ANY DEVELOPMENT

IN THE OFFICE WHICH INCREASES PRODUCTIVITY COULD BE SEEN TO
BE OFFICE AUTOMATION, HOWEVER, WHAT WE ARE SEEING TODAY IS
A NUMBER OF TECHNOLOGICAL DEVELOPMENTS, COUPLED WITH THE
COMMUNICATIONS TECHNOLOGY MAKING POSSIBLE SOME MAJOR CHANGES.
THESE WILL ONLY WORK IF THE SYSTEMS ARE USEFUL, IF THEY ARE CAREFULLY
IMPLEMENTED, AND IF THE IDEOLOGY OR CULTURE OF THE OFFICE
ADAPTS IN A WAY WHICH ALLOWS THE ASSIMILATION OF THIS TECHNOLOGY.

PRIOR TO THE NEW PROCESSES BEING ACCEPTED BY
THE OFFICE ENVIRONMENT THEY MUST FIRST BE ACCEPTED BY MANAGEMENT
AND JUSTIFIED IN TERMS OF COSTS, BENEFITS, EFFICIENCY AND BE
SOUND BUSINESS PRACTICE.

TWO BASIC ARGUMENTS CAN BE USED FOR JUSTIFYING THE
IMPLEMENTATION OF OFFICE AUTOMATION:-

(1)   IT MUST BE COST JUSTIFIED AND ANY PRODUCTIVITY
      GAINS SHOULD BE MEASURED IN CONTROLLED STUDIES.

(2)   TECHNOLOGY IS COMING AND IF YOU DO NOT ACCEPT
      IT AND MOVE WITH IT, YOU WILL BE LEFT BEHIND
      THE COMPETITION.

BOTH THESE ARGUMENTS HAVE MERIT, BUT AT THE VERY
LEAST, OFFICE AUTOMATION SHOULD BE PLANNED AND CONTROLLED TO
ENSURE THE SUCCESS OF ITS IMPLEMENTATION. THE PLANNING PHASE
SHOULD AUTOMATICALLY PRODUCE A COST/BENEFIT ANALYSIS. DECISIONS
ABOUT THE PROVISION OF BETTER MEANS OF INFORMATION PROCESSING
SHOULD, IN THE FIRST INSTANCE, BE BASED ON SUFFICIENT INFORMATION.

THE PROBLEM WITH MEASURING PRODUCTIVITY IS THAT
THE BEFORE SITUATION CAN BE MEASURED USING A WORK UNIT TO CREATE
A YARDSTICK, AND THIS WORK UNIT CAN BE LEFT UNALTERED WHILST
OTHER AREAS ARE AUTOMATED, AS A CONTROL GROUP. THE PROBLEM BEING
THAT CHANGE HAS THE EFFECT OF A CATALYST. ONCE YOU ALTER
PROCEDURES IN ONE PART OF AN ORGANISATION ALL PARTS OF THE
ORGANISATION WILL BE AFFECTED INCLUDING THE CONTROL GROUP;

CONSEQUENTLY EXTREME CARE SHOULD BE TAKEN WHEN PRODUCING OR
USING PRODUCTIVITY IMPROVEMENT FIGURES.

TODAY'S OFFICE ENVIRONMENT

OBVIOUSLY, IT IS SIMPLISTIC TO ASSERT THAT
DISTRIBUTED COMPUTER PROCESSING, IMPROVED COMMUNICATIONS, AND
WORD PROCESSING, HAVE GIVEN US OFFICE AUTOMATION, AND THAT AN APPLICATION
SUCH AS ELECTRONIC MAIL CAN PROVIDE A JUSTIFICATION FOR ITS
UTILIZATION. THE USE OF TECHNOLOGY IN AN UNCONTROLLED WAY CAN
BE COUNTER PRODUCTIVE DUE TO TECHNICAL PROBLEMS AND FALLING
STAFF MORALE. A NUMBER OF STUDIES HAVE BEEN CONDUCTED IN
AUSTRALIA AND THE UNITED STATES TO DETERMINE WHAT IS DONE IN
OFFICES. THESE STUDIES CAN BE USED TO GENERALIZE ABOUT THE
PROPORTION OF TIME A MANAGER OR SECRETARY SPENDS ON A PARTICULAR
TASK, BUT IT ISIMPORTANT TO KEEP IN MIND THAT ALL ORGANISATIONS,
EVEN SIMILAR INDUSTRIES, CAN VARY, AND THEREFORE ANY CHANGES
TO A SPECIFIC ORGANISATION OR OFFICE SHOULD BE STUDIED IN
DETAIL BEFORE ACTION PLANS ARE DEVELOPED.

CLERICAL ACTIVITY SHOWS A VERY HIGH PROPORTION
OF TIME, IN EXCESS OF 50% BEING SPENT HANDLING PAPER. THE
CONCLUSION WHICH CAN BE DRAWN FROM THIS IS THAT THERE MUST BE
A MORE EFFICIENT WAY TO HANDLE, STORE, RETRIEVE AND REPRODUCE
INFORMATION AND THEREBY OBTAIN IMPROVEMENTS IN PRODUCTIVITY.

THE REVOLUTION IN MICRO-ELECTRONICS

WHAT WE HAVE EXPERIENCED IN THE HIGH TECHNOLOGY
AREA, IS A MAJOR DEVELOPMENT IN THE DESIGN AND MANUFACTURE OF
MICRO-ELECTRONIC COMPONENTS AND THE MAGICAL "SILICON CHIP".
COST REDUCTIONS IN THIS AREA ARE PLACING COMPUTER AND
ASSOCIATED EQUIPMENT WITHIN THE REACH OF MANY OF US. THE DECREASE
IN SOFTWARE COSTS CAN BE ATTRIBUTED TO MORE EFFICIENT FOURTH
GENERATION PROGRAMME LANGUAGES AND THE DEVELOPMENT OF
APPLICATION PACKAGES WHICH OPERATE ON A WIDE VARIETY OF COMPUTERS.
THE INCREASE IN POPULARITY IN THE SALE OF PACKAGES IS PROVIDING
A DECREASE IN THE UNIT COST.

COMMUNICATION COSTS ARE NOT DECREASING AS QUICKLY,

BECAUSE OF THE RESEARCH AND DEVELOPMENT STILL REQUIRED TO
PROVIDE WORKABLE, EASY TO USE SYSTEMS.

THE OFFICE COMMUNICATIONS NETWORK IS THE MOST
CRUCIAL PART OF AN OFFICE AUTOMATION SYSTEM, AS IT IS THE LINK
BETWEEN THE MANY DEVICES NEEDED TO PROVIDE A TOTALLY
INTEGRATED SYSTEM.

IN ADDITION TO THE DECREASE IN THE COST OF
EQUIPMENT, THERE IS A COMING TOGETHER OF TECHNOLOGY, WHEREBY
WORD AND DATA PROCESSING SYSTEMS CAN HANDLE BOTH TEXT AND DATA,
AND TELEPHONE SYSTEMS HAVE MEMORIES AND KEYBOARDS THAT CAN
HANDLE BOTH DATA AND VOICE COMMUNICATIONS. COMPUTER SUPPLIERS
ARE HELPING IN THIS TECHNOLOGICAL REVOLUTION AND IT IS NOT
UNUSUAL FOR THEM, NOW, TO OFFER COMPUTERS, WORD PROCESSORS,
COMMUNICATIONS, TELEPHONE AND PHOTOCOPYING EQUIPMENT ALL AS THE
ONE PARCEL.

WHAT THESE ADVANCES IN TECHNOLOGY HAVE MEANT IN
TERMS OF BENEFIT TO THE POTENTIAL NEW USER IS THAT THE EXPERIENCE
THE SUPPLIERS AND USERS HAVE GAINED IS BEING PLOUGHED BACK INTO,
AND INCLUDED IN NEW RESEARCH AND DEVELOPMENT WHICH MUST RESULT
IN BETTER SYSTEMS. DUE TO THESE CHANGES IN TECHNOLOGY, AND THE
WAY THEY ARE APPLIED TO THE MANY OFFICE FUNCTIONS, IT IS BECOMING
MORE IMPORTANT FOR ORGANISATIONS WANTING TO TAKE ADVANTAGE OF
THE NEW TECHNOLOGY TO HAVE:-

1) A TOTAL VIEW OF WHAT THE INFORMATION NEEDS OF
THE ORGANISATION ARE

2) PROJECTS OR PLANS TO MAKE THE MOST EFFECTIVE
USE OF THE GREATER AVAILABILITY OF INFORMATION.

3) ENSURE THAT ALL THE COMPONENTS OF THE OFFICE,
INCLUDING DATA, TEXT, VOICE AND COMMUNICATIONS ARE INCLUDED
IN THE ORGANISATION AND EVALUATION OF SYSTEMS AND EQUIPMENT.

IF ORGANISATIONS DO NOT FULLY APPRECIATE THESE
FACTORS, THE RESULT MAY WELL BE SYSTEMS THAT CANNOT COMMUNICATE
WITH EACH OTHER, WITH THE RESULT BEING THAT PRODUCTIVITY BENEFITS

WILL NOT BE ACHIEVED.

WHILE THE COST COMPONENTS WHICH MAKE UP AN
INTEGRATED OFFICE AUTOMATION SYSTEM ARE DECREASING, THE OVERALL
COST TO IMPLEMENT SUCH A SYSTEM CAN BE HIGH DUE TO THE NUMBER
OF UNITS, SUCH AS TERMINALS AND WORKSTATIONS THAT ARE REQUIRED,
AND THE AMOUNT OF PLANNING AND STAFF TRAINING WHICH HAS TO BE
CARRIED OUT TO ENSURE THE SUCCESS OF THE SYSTEM. COSTS CAN
ESCALATE IF THE SYSTEM FAILS TO OPERATE SATISFACTORILY AND
THERE IS A LOSS IN STAFF MORALE, EFFICIENCY AND PRODUCTIVITY.

ECONOMICS OF INFORMATION

INFORMATION IS THE MAJOR COMPONENT OF THE WORKING
PROCESS IN THE OFFICE. INFORMATION IN THE FORM OF DATA, TEXT,
LETTERS, MEMOS, TELEPHONE CONVERSATIONS, GRAPHICS, DRAWINGS,
REPORTS ETC. IS KEPT IN A VARIETY OF FORMS AND LOCATIONS: IN
COMPUTERS, WORD PROCESSORS, CARD FILES, CORRESPONDENCE FILES,
INDEX CARDS, DIARIES, LOOSE LEAF RING BINDERS, CUPBOARDS,
CABINETS, DESKS, AND IN THE MEMORY OF SOME STAFF MEMBERS.

IN ADDITION TO THE NORMAL INFORMATION SOURCES
AND RECORDS EXISTING IN OFFICES, THERE IS A CONTINUAL GROWTH
IN INFORMATION BEING GENERATED ELSEWHERE AND IN OTHER COUNTRIES.

WE ARE SEEING AN EXPLOSION OF INFORMATION AS
PEOPLE, ORGANISATIONS AND GOVERNMENTS HAVE THE TIME, DESIRE,
RESOURCES, CAPITAL AND FACILITIES TO GENERATE MORE INFORMATION,
PARTICULARLY THROUGH THE USE OF COMPUTERS AND WORD PROCESSORS.
THE NUMBER OF NEWSPAPERS, MAGAZINES, BUSINESS JOURNALS,
STATISTICAL INFORMATION, BOOKS, SCIENTIFIC PAPERS ETC. WHICH
ARE PUBLISHED ANNUALLY, IS GROWING AT AN ENORMOUS RATE. IN
ADDITION THERE IS AN INCREASE IN THE USE OF VIDEO INFORMATION
THROUGH SUBSCRIBER SERVICES. (VIDEOTEX)

INFORMATION MUST BE REGARDED AS A CORPORATE RESOURCE.
A BUSINESS DECISION MUST BE BASED ON INFORMATION AND THE QUALITY
OF THE DECISION WILL TEND TO REFLECT THE QUALITY OF THE
INFORMATION WHICH HAS BEEN PROVIDED. THIS INFORMATION ON WHICH
DECISIONS ARE BASED MUST BE CORRECT AND AVAILABLE WHEN REQUIRED.

- 9 -

SOME EXAMPLES OF THE TYPES OF INFORMATION IMPORTANT TO THE
ORGANISATION ARE:-

FINANCIAL INFORMATION BOTH CURRENT AND HISTORICAL
SALES AND MANUFACTURING DATA
MARKETING ANALYSIS
PRODUCT DETAILS
ORGANISATION PLANNING AND RESEARCH
PERSONNEL DATA

THE LIST COULD GO ON AND ON.
IT IS OFTEN NECESSARY FOR INFORMATION TO COME FROM A VARIETY OF
SOURCES WHICH THEN MAY NEED TO BE ASSESSED, COMPARED, ANALYSED,
LISTED, GRAPHED AND COMMUNICATED, SO THERE IS A NEED FOR THIS
INFORMATION TO BE ACCESSED IN A STANDARD WAY. THE TECHNOLOGICAL
DEVELOPMENTS IN MICRO-ELECTRONICS AND COMPUTING HAVE PRODUCED
A METHOD FOR STORING INFORMATION ELECTRONICALLY, BY DIGITIZATION
WHICH IS THE STORING OF WORDS, SPEECH, FIGURES, DRAWINGS,
PICTURES AND GRAPHS IN BINARY DIGITS ON ELECTRONIC EQUIPMENT.
THE USE OF ELECTRONIC STORAGE OF INFORMATION IS A BASIC
REQUIREMENT OF THE OFFICE AUTOMATION ERA. ONCE INFORMATION
IS STORED ELECTRONICALLY THERE IS A NEED FOR COMPUTER
COMMUNICATION TO BE ABLE TO ACCESS THIS INFORMATION EITHER
FROM THE OFFICE ON THE NEXT FLOOR OR ON THE OTHER SIDE OF THE
WORLD.

THE MAJOR DRAW BACK OF ELECTRONICALLY STORED
INFORMATION IS THAT NOT ALL SYSTEMS AND EQUIPMENT SUPPLIERS
HAVE DEVELOPED, OR USE THE SAME STANDARDS FOR INFORMATION STORAGE.
THE RESULT HAS BEEN THAT INFORMATION STORED ON ONE DEVICE MAY
NOT BE READABLE ON ANOTHER. STANDARDS ARE GRADUALLY BEING
DEVELOPED; HOWEVER, IT WILL BE SOME TIME BEFORE ANY UNIVERSAL
STANDARD IS ACCEPTED AND THEN PUT IN TRAIN.

INTEGRATION IN OFFICE AUTOMATION

TRADITIONALLY, THE OFFICE-TELEX MACHINE, THE
PHOTOCOPIER, THE TELEPHONE OR THE COURIER BAG, WERE ALL SEEN AS
INDEPENDENT AND UNRELATED OFFICE AIDS. EACH ONE PLAYED A SPECIFIC

ROLE FULFILLING A CLEAR NEED. IT WAS NOT UNTIL COMMUNICATION AND
INFORMATION STARTED TO GAIN IMPORTANCE, AND IT WAS REALISED THAT
AN OFFICE LIKE ANY OTHER WORK PLACE, COULD OPERATE MORE
EFFICIENTLY THAT INTEGRATION STARTED TO OCCUR. IT IS WITHOUT
A DOUBT THAT THE AVAILABILITY OF NEW TECHNOLOGIES DIRECTLY
CONTRIBUTED TO THIS.

PROGRESS IN OFFICE INTEGRATION IS FUELLED BY TWO
MUTUALLY REINFORCED PROCESSES; ON THE ONE HAND, THE ADVANTAGES
OF INTEGRATION ARE BEING RECOGNISED AND THE DEMAND FOR IT IS
GROWING; ON THE OTHER HAND, HARDWARE AND SOFTWARE DEVELOPMENTS
CONTINUE TO OFFER MORE FACILITIES WITHIN ONE SYSTEM AT AN
ATTRACTIVE PRICE. THE INTEGRATION OF THE AUTOMATED OFFICE IS
BEING TACKLED INDEPENDENTLY FROM THREE SEPARATE DIRECTIONS:-

TRADITIONAL OFFICE PRODUCTS HAVE THEIR FUNCTIONS
EXTENDED E.G. ELECTRONIC TYPEWRITERS, INTELLIGENT COPIERS.

COMPUTERS ARE BEING BUILT AND PROGRAMMED
SPECIFICALLY FOR THE OFFICE ENVIRONMENT E.G. WORD PROCESSOR,
ELECTRONIC MAIL, INTEGRATED OFFICE.

COMMUNICATIONS EQUIPMENT IS EXTENDED TO ENCOMPASS
AN INCREASING NUMBER OF OFFICE FUNCTIONS E.G. PABX SWITCHING
VOICE, TEXT AND PICTURE, ALSO PERFORMING MAIL DISTRIBUTION
FUNCTIONS.

WHERE IS IT ALL LEADING TO?

OFFICE INTEGRATION IS HERE TO STAY.

CONTINUED COST REDUCTION IN HARDWARE PRICES
WILL SUPPORT THIS TREND.

ADMITTEDLY THERE EXISTS SOME CHAOS AND CONFUSION
AS THE COMPETING TECHNOLOGIES COME TOGETHER BUT
THERE WILL EMERGE A COMMON RANGE OF PRODUCTS JUST
AS WE HAVE SEEN IN THE PAST.

TOWARDS OFFICE AUTOMATION (IN TREPIDATION?)

FROM THE OUTSET IT IS IMPORTANT TO REALISE THAT
IMPLEMENTING OFFICE AUTOMATION SYSTEMS INVOLVES MORE THAN

SIMPLY BUYING THE RELEVANT HARDWARE AND SOFTWARE COMPONENTS,
CONDUCTING BASIC STAFF TRAINING, AND INSTALLING AND RUNNING
IT. IF YOU WISH TO ADOPT THIS APPROACH YOU ARE LIKELY TO HAVE
A SYSTEM WHICH FAILS COMPLETELY, DOES NOT MEET ITS OBJECTIVES,
AND WILL NOT REALISE PRODUCTIVITY IMPROVEMENTS AND COST
BENEFITS EXPECTED OF IT.

THE IMPLEMENTATION OF THE OFFICE AUTOMATION SYSTEM
REQUIRES CONSIDERABLE PLANNING OF ALL ASPECTS TO ENSURE THAT THE
SYSTEM OPERATES AT THE BEST POSSIBLE LEVEL. AN OFFICE AUTOMATION
STUDY NEEDS TO BE CARRIED OUT TO IDENTIFY WHAT WORK IS PERFORMED
IN A PARTICULAR OFFICE, TO DEVELOP AN OFFICE PROCESSING STRATEGY,
TO FIND OUT WHAT THE EQUIPMENT AND SOFTWARE REQUIREMENTS ARE
AND TO RELATE POTENTIAL USE AND APPLICATIONS TO USERS AND THE
ORGANISATION STRUCTURE.

CHANGE IS INEVITABLE AND YOU MUST PLAN HOW YOU ARE
GOING TO MANAGE IT.

OFFICE AUTOMATION IS NOT JUST TECHNOLOGY, RATHER IT
IS THE APPLICATION OF THIS TECHNOLOGY TO THE OFFICE ENVIRONMENT.

PLANS NEED TO TAKE INTO ACCOUNT THE STAFF WHO WILL
BE INVOLVED IN USING THE NEW SYSTEMS. EMPLOYEES CONCERN FOR
LOSS OF FREEDOM, LOSS OF EMPLOYMENT AND THE FEAR OF CHANGE NEED
TO BE CONSIDERED.

THE SYSTEM WILL FAIL UNLESS EMPLOYEE RESISTANCE TO THE
NEW TECHNOLOGIES IS IDENTIFIED AND COUNTERED IN SOME PRACTICAL
WAY. PILOT STUDIES CAN BE USED TO ADVANTAGE TO TEST SOME OF THE
NEW SYSTEMS AND PROCEDURES, BUT AGAIN CAREFUL PLANNING SHOULD
BE CARRIED OUT OR THE STUDY WILL FAIL. PILOT STUDIES CAN NEVER
BE 100% CORRECT AS THEY CANNOT SIMULATE ALL THE FUNCTIONS THAT
OCCUR IN THE OFFICE, THEY ALSO HAVE TO INTERACT WITH THE REST
OF THE ORGANISATION USING THE OLD TECHNOLOGIES. ONE CRITICAL
FACTOR RELATING TO THE SUCCESS OR OTHERWISE OF IMPLEMENTING THE
OFFICE AUTOMATION PROGRAMME WILL BE THE ATTITUDE OF SENIOR
MANAGEMENT. IT MUST BE ENTHUSIASTIC AND NOT JUST PAY LIP SERVICE
AS STAFF WILL REACT ACCORDINGLY.

MANY ORGANISATIONS WILL ALREADY HAVE SOME OF THE
SYSTEMS AND EQUIPMENT INVOLVED IN OFFICE AUTOMATION SYSTEMS
INSTALLED AND WORKING IN THEIR ORGANISATION. THIS WILL NEED
TO BE EVALUATED AND INCLUDED IN EQUIPMENT STRATEGIES AND MIGRATION
PATHS, AS WELL AS INTERIM EQUIPMENT ACQUISITIONS, TO ACHIEVE
A LONG TERM OBJECTIVE OF AN INTEGRATED OFFICE SYSTEM.

IRRESPECTIVE OF HOW THE INTEREST IN OFFICE
AUTOMATION AROSE, THE MAIN DRIVE, AND ACCEPTANCE MUST COME FROM
THE TOP.

HUMAN ISSUES (TRAUMA OR TRANQUILITY)

THE INTRODUCTION OF OFFICE AUTOMATION IN AN
ESTABLISHED WORK ENVIRONMENT IS LIKELY TO BE A TRAUMATIC
EXPEREINCE FOR BOTH MANAGEMENT AND STAFF, UNLESS PARTICULAR
CARE IS TAKEN TO OBTAIN THE CO-OPERATION OF EMPLOYEES.
THE WORST PROBLEMS ARE LIKELY TO OCCUR WHEN A GREATER PROPORTION
OF THE STAFF ARE OLDER AND MORE CONSERVATIVE. IF THE NEW
TECHNOLOGY IS INTRODUCED BY A CAREFULLY PLANNED METHOD THEN THE
CHANGE SHOULD BE A SMOOTH ONE. THE CO-OPERATION AND SUPPORT OF
THE STAFF IS AN ESSENTIAL FACTOR IF THE PROJECT IS TO BE
SUCCESSFUL.

IT IS UP TO MANAGEMENT TO INVOLVE STAFF FROM THE
BEGINNING IN THE DECISIONS AND ENCOURAGE THEM TO BE INVOLVED IN
THE PLANNING AND THE IMPLEMENTATION PROCESS.

EMPLOYEES WILL NEED TO BE MADE AWARE, NOT ONLY OF
THE NATURE OF ANY PLANNED INNOVATIONS, BUT THEY SHOULD ALSO BE
GIVEN A TIME TABLE WITH DETAILS OF THE ACTUAL IMPLEMENTATION OF
THE CHANGES. MANAGEMENT SHOULD ALSO CHECK FOR ANY EXPERIENCE
STAFF MAY HAVE IN OFFICE AUTOMATION SO THAT IT CAN BE USED TO
ADVANTAGE. INVOLVEMENT OF STAFF OFTEN LEADS TO SUGGESTIONS,
ALSO IT WILL HELP BREAK DOWN ANY NEGATIVE APPRAOCH TO THE CHANGE.
THE NEW TECHNOLOGY WILL NOT MAKE AN ENORMOUS DIFFERENCE TO
OUTPUT AND PRODUCTIVITY IMMEDIATELY AS IT TAKES TIME TO ADJUST
TO CHANGE AND FOR MANAGEMENT TO REALISE THE POTENTIAL OF THE
NEW EQUIPMENT. MOST IMPORTANTLY, MANAGERS MUST BE SEEN TO HAVE
A POSITIVE APPRAOCH AND ATTITUDE TO AUTOMATION.

THE BEST REULTS WILL BE ACHIEVED BY EDUCATION, CONSULTATION AND REGULAR REVIEWS, AFTER THE EQUIPMENT IS INSTALLED.

MANAGEMENT ISSUES AND STAFF TRAINING (YOUR BOSS, YOU AND TRAINING)

WHILE MANY FIRMS SEE OFFICE AUTOMATION AS BEING BASICALLY AN EXTENSION OF THE E.D.P. FUNCTION, THE TREND NOW IS AWAY FROM THIS APPROACH. OFFICE AUTOMATION IS AS NEW NOW AS COMPUTERS WERE A GENERATION AGO. TODAY LARGE ORGANISATIONS SEE ACCOUNTING, E.D.P. AND OFFICE AUTOMATION FUNCTIONS AS COMPLIMENTARY RATHER THAN OVERLAPPING AND THE SKILLS INVOLVED IN SUPERVISING AN EXERCISE IN OFFICE AUTOMATION MAY NOT BE THOSE NORMALLY EXPECTED OF AN E.D.P. MANAGER. THEREFORE THE MANAGER SHOULD BE SELECTED ON THE BASIS OF INITIATIVE AND INTERPERSONAL SKILLS RATHER THAN E.D.P. EXPERIENCE.

OFFICE AUTOMATION IMPLIES CHANGE. IT IS NOT NECESSARY TO FEAR IT FOR THAT REASON BY THE SAME TOKEN DO NOT MAKE THE CHANGE FOR CHANGE SAKE. TAKE SPECIAL CARE OF STAFF MORALE DURING AND AFTER THE CHANGE.

TRAINING IN THE NEW TECHNIQUES NECESSARY FOR EFFECTIVE USE OF AUTOMATED OFFICE TECHNOLOGY IS EXPENSIVE BUT CUTTING DOWN ON TRAINING THE NECESSARY BACK-UP STAFF CAN AND WILL HAVE DIRE CONSEQUENCES IN THAT THE BEST ADVANTAGE CANNOT BE TAKEN OF THE EQUIPMENT.

ERGONOMICS AND AUTOMATION

THE USE OF WORKSTATIONS AS AN OFFICE TOOL REPRESENTS A HIGH DEGREE OF CHANGE IN THE WORK ENVIRONMENT OF PEOPLE IN AN ORGANISATION. ATTENTION MUST THEREFORE BE GIVEN TO THE WORK SITUATION AND WORKING LIFE TO ENSURE THAT PRODUCTIVITY GAINS ACHIEVED BY THE SYSTEMS AND TECHNOLOGY ARE NOT REDUCED OR LOST THROUGH ERGONOMIC DEFICIENCIES. ERGONOMICS GENERALLY REFERS TO THE DESIGN OF THE WORKING ENVIRONMENT TO MEET THE NEEDS OF THE PEOPLE WORKING THERE. IT INVOLVES THE STRENGTHS, CAPABILITIES AND LIMITATIONS OF THE PEOPLE, AND THE ADAPTIONS OF DEVICES TO THE WORK ENVIRONMENT.

WHEN PLANNING FOR THE IMPLEMENTATION OF AN OFFICE
AUTOMATION SYSTEM, ERGONOMIC FACTORS SHOULD BE INCLUDED IN THE
PLAN SO THAT THE EQUIPMENT AND THE ENVIRONMENT ARE ADAPTED TO
THE PEOPLE IN THE OFFICE AS MUCH AS POSSIBLE.

CHARLES F. KETTERING, A GREAT AMERICAN AUTOMOTIVE
ENGINEER IN THE 1920'S AND 1930'S WHEN SPEAKING TO THE DETROIT
CHAMBER OF COMMERCE SAID,

"WE OUGHT TO SPEND MORE TIME THINKING ABOUT THE
FUTURE.........THAT'S WHERE WE ARE GOING TO SPEND THE REST OF
OUR LIVES."

FINALLY I WOULD LIKE TO STIMULATE YOUR THOUGHTS
WITH ......

A MIND ODYSSEY

NEXT TIME YOU'RE IN A BUSINESS MEETING, TAKE A
LOOK AROUND. YOU ARE PART OF A MEETING OF MINDS.

THROUGH EXPEREIENCE AND TIME, YOUR MIND AND THOSE
OF YOUR ASSOCIATES LEARN TO INTERACT WITH ONE ANOTHER, TO SHARE
AND EVALUATE INFORMATION AND TO WORK TOWARD COMMON GOALS.
AND, NOTHING WILL EVER REPLACE THOSE HUMAN MINDS. THEY ARE TRAINED
IN THE ART AND PROCESS OF COMMUNICATION - AN ART LEARNED THROUGH
OBSERVATION AND PARTICIPATION. THE PROCESS OF COMMUNICATION,
THOUGH, IS NOT PERFECT.

JUST OVER THE HORIZON WE CAN SEE TECHNOLOGY THAT WILL
ENHANCE COMMUNICATIONS IN BUSINESS MEETINGS AND HELP PARTICIPANTS
DO THEIR JOBS BETTER.

LET'S LOOK IN ON A TYPICAL MEETING IN THE NOT-SO-DISTANT
FUTURE.

SEVERAL BUSINESS ASSOCIATES SIT AROUND A LARGE
CONFERENCE TABLE IN A PRIVATE ROOM. THE TABLE IS TRANSPARENT.
COMPUTER SYSTEM CRTS ARE RECESSED BENEATH THE TABLE TOP AT EACH
PERSON'S PLACE; THEY ARE VISIBLE THROUGH THE TABLE.

You always know who everyone at the table is, because once you've been introduced, a diagram of the seating chart appears in one corner of your screen. If you are interested in some background information on a participant, you can touch a certain spot on the screen for a brief biography.

You might call this a paperless meeting. No one distributes printed papers or charts, because through the CRTs, each of you can look at text and images relevant to the agenda for this meeting. Even little slips of paper, once used to pass notes from one person to the next, are obsolete. You can send electronic messages from screen to screen.

And just in case you forgot some important information back in your office, do not panic. Do not run back to your office. Do not call your secretary to ransack your desk. You need only press a few keys on your workstation and the report will appear before you.

While everybody reviews a particular chart on their CRTs, you can make notes on your screen, highlight certain figures, and then broadcast your comments to all participants. You can even supply copies of charts for everyone to take away with them. Or send the image electronically to their office workstations. When it's time to vote on an issue, the screen displays the question, and you can vote using the touch-sensitive yes/no area on the screen. The system records each vote and broadcasts the results.

If you need a record of certain comments, simply pressing the "copy" button summarizes the information you requested and stores it for future reference. And at the end of the meeting you can send a synopsis of the proceedings or a summary of action items to your files and to the attention of your subordinates or superiors.

If one of your executives is travelling, he or she can plug a portable computer into the television at the hotel and participate in the meeting without interrupting a travel schedule.

WHEN "SOMEDAY" ARRIVES, WE WON'T NEED TO
WORRY ABOUT THE LITTLE THINGS THAT GET IN THE WAY OF PRODUCTIVE
MEETINGS - PROBLEMS LIKE PASSING AROUND PAPER AND PICTURES
OR GRAPHS, RELAYING VERBAL INFORMATION, CONQUERING DISTANCE AND
TIME WILL BE TURNED INTO CREATIVE WAYS OF COMMUNICATING WITH
AUTOMATION. AND, THE FINAL PRODUCT WILL BE A BETTER DECISION.