



Personal/Microcomputer User Case Studies

Frito-Lay Corporation Case Study

OVERALL SERIES INTRODUCTION

Ever since the electronic spreadsheet program VisiCalc sparked the development of a whole new genre of personal computer software that offered immediate benefits to the casual business user, individuals in all types of organizations—from small businesses to multibillion dollar corporations—have discovered the personal computer. They learned that a personal computer could increase their productivity by automating some of the work they previously did with paper, pencil, and a hand calculator. They soon began to dream of the work they could do if they linked their machines to their corporations' computers. But many such dreamers were brought up short by the information processing establishments in their companies who often saw the new development as a challenge to their control and even as a competitor for scarce information processing dollars.

But in a few short years, personal computer hardware has become so powerful and PC software so focused and professionally oriented that many computer directors have begun to view the personal computer as a device that can make inroads into their ever-present backlog of ad hoc information requests. Once freed of that burden, data processing systems developers can concentrate on the long-range development projects that can make a bottom-line difference in their companies' operations.

There are probably as many ways to utilize personal computers in a corporate setting as there are corporations. Data Decisions' case studies will examine some of the approaches now being taken by some of the nation's largest, most successful corporations.

FRITO-LAY CORPORATION CASE STUDY

INTRODUCTION TO REPORT NUMBER ONE

This report shows how one corporation, Frito-Lay, Inc, the nationwide snack food corporation based in Dallas, Texas, has begun to make the personal computer an important element in its information strategy for the 1980s and 1990s. At Frito-Lay, the personal computer could become, in the next few years, nearly every office worker's electronic entree to the corporate database through use of an Information Center which will offer, in addition to PC programming, a selection of user-friendly programming languages that run on the host. At the same time, it is likely to be the tool through which he will gain access to a number of office automation tools, including electronic mail, calendar management, word processing, and graphics.

COMPANY BACKGROUND

Frito-Lay, Inc was formed in 1961 as a result of the merger between Elmer Doolin's San Antonio-based Frito Company and Herman W. Lay's Atlanta-based Lay's Potato Chip Company. In 1965, Frito-Lay, Inc merged with the Pepsi-Cola Company to form PepsiCo Inc, and Herman Lay was elected Chairman of the Board.

Today Frito-Lay, Inc is the leading profit contributor in PepsiCo, Inc which also includes Pepsi-Cola, PepsiCo International, Wilson Sporting Goods, North American Van Lines, Taco Bell, Pizza Hut, Lee Way Motor Freight, and PepsiCo Foods International.

The revenues derived from its line of snack foods, which includes not only potato chips, corn chips, tortilla chips, cheese puffs and pretzels, but also nut snacks, dried meat snacks and most recently, cookies, totaled \$2 billion in 1982.

Frito-Lay has enjoyed the distinction of being the only nationwide maker and distributor of snack foods; its competitors, which number around 200, have all been regional companies. Recently, national companies such as Nabisco, Borden, Proctor and Gamble, and Anheuser Busch have entered the market. At this point, Frito-Lay has the only national store-to-door delivery system, but the competition is heating up.

From 39 plants, over 120 different products are shipped daily, via 18-wheel vehicles, to some 1400 distribution points where products are unloaded and distributed further by nearly 10,000 Frito-Lay route salespeople. These individuals are responsible for selling the product, as well as placing it on the shelves.

With a company-imposed shelf life of no longer than 30 days, these preservative-free products pose a manufacturing and distribution challenge that is supported by a highly centralized online computer system in the company's Dallas headquarters.

COMPUTING HISTORY AT FRITO LAY

Management Services is the organizational entity at Frito-Lay under which all data processing activities fall. 1969 marked the true beginning of Management Services because it was at that time that Frito-Lay took control and operation of its computing activities out of the hands of an outside facilities-management firm, which until that time managed the computer facility as well as its new systems development. Organizationally the department reports to the Chief Financial Officer.

Over the years, managing information processing as a completely centralized function was considered highly desirable despite the costs of the data communications network that grew over the years as new plants were built, new sales offices were opened, and more people had to deal with the mainframe computer via long distance. It was desirable because although many decisions are made outside of headquarters, the needed data was best stored and disseminated from one place. Further, all functional departments are highly dependent on the resources and output of the others. Sales depends heavily on Manufacturing to get the product into the hands of the customers on time, and Distribution needs order information so that its unique, nationwide daily delivery routes can be mapped out.

The consistency in concept of plants, distribution centers and route sales, and the needed integration of information and support systems, continues to make this centralized approach the most suitable.



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Over the years, computers became a major factor in the corporate strategy of using technology to lower costs and increase profits.

In the early '70s, computing was primarily batch oriented and dedicated to supporting the corporation's day-to-day operations—manufacturing, sales, distribution, and accounting. Beginning in 1973 when an IBM 370/145 was installed, a series of ever larger and more powerful mainframes came in to meet the growing processing demands. In the words of Management Services Vice President Charles Feld, "DP has worked on highly structured projects aimed at producing specific outputs." For example, Sales Accounting was aimed at producing a settlement for the salesman, accounts receivable processing resulted in customer statements, order processing resulted in shipping manifests, and payroll processing resulted in employee paychecks.

As that decade drew to a close, the company began to add unstructured problem solving to this base of bread and butter applications. The reason: American business was changing. Increased competition made it necessary to study the marketplace and analyze competition in greater detail. It was no longer enough to merely account for product sales. End users began to look for more analytical information. This information was based on data buried deep in the corporate computer files and stacks of computer reports.

User analysts spent their days sifting through boxes of computer printouts and pounding away at hand calculators. This awkward method of information analysis was not very productive.

The old style of information processing could not effectively meet the new demands of doing business, according to Feld, who observed that if this trend continues, an increasingly small proportion of a typical corporation's salaries will be going toward the people who are making, delivering, and selling the products. The major growth will be for staff-related work.

"That's too many people keeping score and too few people making it happen," Feld said.

Some of these forces began to be felt at Frito-Lay. While requests for analytical reports from existing databases grew, so did the systems backlog. The application request backlog was measured in years, according to estimates of MS staff members, and that backlog remains today.

As in most companies, this backlog includes large and complex undertakings, ranging from replacement of older accounting systems, to modern technologies for data capture such as hand-held terminals for the route salesmen. At present, the company uses OCR readers to scan hand-written order forms as its primary method of order entry.

It also includes trivial items such as heading changes on existing reports, or requests for new inquiry screens or new transactions. Still others are requests for systems that will never be of high enough priority or enough general interest to be addressed by DP.

How do you begin to make a dent in some of these problems?

While Feld and others at the top of the management pyramid were thinking about how they would begin to deal with these problems, energetic and resourceful individuals, who wanted to solve their own problems, were beginning to bring microcomputers into the organization at all levels.

MICRO HISTORY

Not surprisingly, personal computers began to creep into Frito-Lay in plants and user departments about 3 years ago.

One of the first applications was developed in the Beloit, Wisconsin plant by the Plant Services Manager (controller) there, whose technical talents have since moved him to Management Services and a position in its Advanced Systems Planning group. At that time he had built a Heathkit computer himself and saw where it could be applied to a work-order tracking application in his plant's maintenance operation. A little later he used a Radio Shack TRS-80 system to measure performance of the plant's manufacturing staff against a set of standard factors. He also developed graphic displays of budget versus actual

expenditures. The equipment was approved at the time since the system could be cost justified and Management Services could not offer any other alternatives.

At the same time, other external pressures were being brought from various staff-level employees in highly analytical jobs who had read articles about personal computers and Visicorp's VisiCalc, and what they could do for them. Although the systems that were installed during this pre-policy period number less than a dozen, it was apparent that a trend was developing.

While the MS staff was already deeply involved in trying to come up with a future information system that better served these analytical needs, its Advanced Systems Planning staff became interested in the potential of the personal computer. At the same time, however, a third force was being felt—the push to office automation.

It took a year after the first micro appeared in the company, but in that year, MS refined its overall future information strategy, incorporating PCs into the company's future.

The new information strategy for the 1990s, dubbed Fahrenheit 458 after the temperature at which paper burns, would be led by MS and would attack all three fronts simultaneously.

FAHRENHEIT 458—THE STRATEGY

To move this 25,000-employee company from today's information environment to one that provides direct access and the very focused information of the 1990s, MS divided its resources into 2 broad categories: first, operational processing, which supports the day-to-day manufacturing, distribution, sales and accounting of the organization, and second, analytical tools that make the rest of the company more productive.

One of the first steps was to move all "operational" processing to the company's 16M-byte IBM 3081G processor, and dedicate the IBM 3033 Attached Processor system as an information center for timesharing and unstructured problem solving for end users.

Under IBM's Timesharing Option (TSO), the 3033 supports a mirror image of the parts of the company database that are of interest to users whose activities are analytical rather than operational. The 3033 is equipped with FOCUS, the user-friendly, nonprocedural database management and information control language from Information Builders, Inc and the Interactive Financial Planning System (IFPS) from Execucom Systems Corp for financial modeling. It also supports statistical work through SAS, from SAS Institute, Inc, and graphics with SAS/GRAF.

Finally, Management Services established an Information Resource Center, whose staff now numbers 6, to train users in the host languages as well as personal computing and VisiCalc.

Today end users access the 3033 through IBM 3278 terminals. However, the terminal of the future will be the IBM Personal Computer, which will offer users access to all future computing and office automation functions through the same device.

"Hopefully, this summer we will be able to sit down at a personal computer and sign on to any host application, whether it be IBM's IMS or TSO, and use it as a 3270-kind of device," said Feld in mid-April.

The shift to end-user programming will have an important benefit to the corporation overall: not only is it a means to leverage the resources of the user and Management Services departments, it will also free more MS staff members to attack the applications that only professional, experienced systems developers and programmers can do.

WHO PROGRAMS WHAT?

Before end users feel compelled to write programs and start setting up mini systems development groups and mini data processing operations, they are assured that MS will still be charged with overall control for computing.

MS will continue to write all applications that will be used by multiple locations, build or maintain the telecommunications network, interface directly with corporate databases, and require security, control or data processing expertise. MS will also continue to write applications that require large amounts of



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resources—human or machine—and applications which have a significant impact on corporate operations. In short, MS will concentrate on the kinds of things only it can and should do and let the end users assume a larger role for the rest.

Some of the reasoning behind this division of effort is to protect a manager from being dependent on an individual who has written a system that he will be unable to enhance or support—a situation that commonly develops with personal computer programs when the author is promoted, transferred, or resigns.

Two organizations within MS are playing a key role in bringing about the information environment of the 1990s as data processing and office automation technologies merge: Advanced Systems Planning and Advanced Office Systems.

Advanced Systems Planning

Advanced Systems Planning is responsible for assessing the functional and communications capabilities of non-data center hardware and software. In addition, it plays a key role in orchestrating the MS strategy forum.

Advanced Office Systems

Advanced Office Systems is responsible for studying office automation technologies, such as electronic and voice mail, facsimile, word processing, personal computers, and graphics, which ASP will help translate into hardware and software recommendations.

AOS, which includes on its staff relatively non-technical individuals, is responsible for assessing user friendliness of hardware and software; evaluating user requests, applications, and methods; and developing and implementing criteria for project selection, test evaluations, and planning and controls.

Frito-Lay believes that the non-DP experience of the AOS staff is a valuable asset in helping to determine user acceptability since evaluation of equipment should involve user comfort and usability as well as technical performance.

The Information Resource Center

The Information Resource Center (IRC) which has been open since January 1983, provides Frito-Lay personnel with access to and training in end-user programming tools. These tools enable them to retrieve, manipulate, analyze and present data, and the tools are being taught in 2 environments: timesharing and the personal computer.

Helping users first requires that they determine whether the tools being offered can even provide the solution. If they can, the individual comes in for one-on-one training or participates in a class.

Formal classes are available in SAS, SAS GRAF, IFPS, and even TSO's Structured Productivity Facility. The trainers learned that without training in TSO, a majority of employees can't begin to make the other products work for them.

The early phase of instruction has concentrated on the basics of these tools. The next phase will be to offer advanced courses in each language.

THE PERSONAL COMPUTER

MS is developing the IBM Personal Computer into the multifunction workstation largely as a result of Frito-Lay's overall network plans. However, it is not IBM's standard model.

The approved configuration includes the standard color monitor and the standard keyboard, a minimum of 128K bytes of memory, the IBM color graphics adapter, and an AST Research, Inc memory board, which provides an extra 64K bytes of memory, a serial communications adapter, and a battery-backed up clock and calendar. All are ordered with an Integral Data Systems Prism color printer, which brings the retail cost of the system to about \$7,000.

However, it is expected that as time goes on, a family of compatible multifunction workstations will be welcome. For example, recent interest in using the PC as a word processor has unleashed a few requests for PCs equipped with the Diablo

letter-quality printer—a change that has been approved. In addition, the introduction of IBM's PC XT, with the built-in hard disk, is supported when users require additional storage capability.

In general, the overriding application will dictate the machine recommended in each case. In other words, the individual whose primary application is data processing will not necessarily be using the same equipment as the individual whose primary application is word processing.

Moreover, if someone wants to do non-host, non-network-related work in a unique and completely standalone application, and a system other than the IBM PC or the PC XT is better suited to that application, another system would be endorsed.

Pat Steele, Manager of Advanced Systems Planning emphasized, however, that in standard applications the company wants consistent hardware and software.

This is particularly true in the manufacturing plants where the staff does not include data processing professionals and the primary users will be casual ones. Moreover, many plants will use a library of standard programs being provided and supported by the headquarters manufacturing staff, according to Michael O. Wheatley, Group Manager for Manufacturing Planning and Analysis.

"If your hardware isn't consistent from site to site, the 'Oh By the Ways' can kill you. I call it the OBW factor. It could be something as simple as that a particular card expects to see the printer at port locations x and y, while another card expects to see the printer at port locations q and z. Our plants are located coast to coast, and sometimes a technical person just isn't available."

PERSONAL COMPUTER SOFTWARE

As for software, no customized software is yet being provided by MS. ASP is recommending standard canned packages, however, for standard applications. The official spreadsheet package, for example, is VisiCalc, although Lotus 1-2-3, from Lotus Development Corp, will also be permitted once a version is successfully tested for PC DOS 2.2, the operating system used on the IBM PC XT. The currently recommended word processing package is Easywriter II, from Information Unlimited Software, and the preferred scheduling package is Visicorp's VisiSchedule.

Other programs are being written by individuals, and some are being supplied by the Functional departments for use within their own groups. (See User Experience: Manufacturing and Marketing.)

Despite a volume purchase discount that had been arranged with a Dallas retailer, PC buyers in plants and other outlying installations were being urged to place their orders for systems of the approved configuration with outlets in their own locales. This was to assure good local vendor relations and prompt maintenance attention. However, this approach is being reevaluated as local suppliers are not responding as desired. Frito-Lay is examining alternatives, including internal support.

HOW TO GET A PERSONAL COMPUTER

The Applications Development Manager, the individual in MS responsible for a specific functional organization's information processing needs, is the first stop for the person who needs services, including a personal computer. The user is responsible for developing a functional definition of what he wants to do. The ADM will make use of whatever resources he has, including the IRC, to help him.

If a personal computer seems to be able to solve the user's problem, IRC personnel will help him develop the configuration he needs, based on standard approved configurations developed at Frito-Lay and will help price the system. They also will help the individual prepare an appropriation request which includes costs as well as expected benefits. The user then gets budget approval from his department head.

A review committee, composed of MS staff people, which meets once a week, reviews all capital appropriation requests (CARs) for computers and related equipment. If approved, a CAR goes next to the Corporate Planning and the Corporate Tax Departments,



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and the approved request then goes back to the user who prepares the purchase order and deals directly with the retail store to get the system installed. The approval process takes several weeks, and so far, Frito-Lay has relied heavily on the vendor for installation assistance.

Most PCs that fit into the general corporate strategy and have function head support have been approved to date.

Programs for PCs are being developed for intrafunctional use in Manufacturing and Marketing with apparent success. (See User Experience: Manufacturing and Marketing.)

Since the company has yet to complete development of the software that will allow PCs to interact with the network, all PCs at Frito-Lay are now being used in standalone applications. About 100 personal computers, virtually all IBM PCs, have been installed to date.

WHERE THE PC MUST FIT

Frito-Lay is predominantly IBM software based, using that firm's SNA/SDLC to support about 2,000 users in 39 plants and a hierarchy of sales locations.

IBM's MVS is the overall operating system under which the 16M-byte 3081G and the 16M-byte 3033AP work. Network control programs that run in its 3705 communication controllers allow any remote 3278 terminal to log onto any host VTAM application program, or TSO or IMS as though it were a single gigantic system rather than 2 completely separate processors.

In order to get any personal computer to interface with the network, its asynchronous communications protocol will have to be converted to the network's SDLC, and Frito-Lay expects to use protocol converters to do the job. Although a number of devices are being studied and a number of implementations are being considered, the company has not yet determined the best, most secure, and most economical way to approach this. Recent IBM announcements are being examined that may allow the PC to be attached directly to the SNA network.

USER EXPERIENCE

Manufacturing

The manufacturing function at Frito-Lay is by far the largest user of personal computers. At headquarters, an Apple II and an IBM PC are in constant use, and nearly every one of the company's 39 plants has an IBM PC; some will be installing additional units as soon as they can be justified.

The biggest manufacturing application to date has been statistical analysis and graphics at headquarters. "We go straight from personal computer to publication for our senior management reports," according to Wheatley. "If it weren't for the personal computer, I would have to hire one and a half to two additional clerical people just to do the graphics, the number crunching, and VisiCalc models.

"Our biggest constraint right now is that we need to get data off the mainframe into the micro without rekeying it. Conceptually what we want to do is keep the large databases on the mainframe and specify via the personal computer link-up via a modem or something, 'Look, I want to see for this plant the last 13 weeks of potato chip yield.' The mainframe would go into its database, get the plants, their yields, do all the sorting, and then stream specific data down to you that you can put on a floppy disk where you could use some canned regression analysis or VisiCalc-type package against the data.

"To do a job like that now requires keypunching off accounting reports. My people have to take 13 weeks of reports, extract data on 39 plants, add it together, and put it on one piece of paper so we can key it into a VisiTrend/VisiPlot model. Gathering the data for that report could take 8 hours."

Other manufacturing work slated for personal computers is currently processed on Service Bureau Corp's Timesharing System. It is all work that has "little input, a lot of crunching, little output, and no big databases."

Examples of such systems include a program that tracks the average number of times a cardboard carton is used, and a

second is a weekly comparison of the value of sales, tonnage produced, and store-to-door value per pound.

The official corporate version of the latter program is also run on the mainframe at headquarters from weekly plant reports, but the turn-around time is 3 or 4 days. On the micro, results are available in 1 day.

In the plants, the major application is VisiCalc spreadsheet programs for all types of planning and budgeting, and a close second is the program mentioned earlier that was developed on the TRS-80 in Beloit to track plant performance.

That system was converted for use on the IBM PC in headquarters, and it, along with 4 or 5 others, developed at one plant or another and refined at headquarters, have been distributed for plant use. Together, they form the nucleus of what will soon be a library of standard programs that headquarters has committed to support.

At the same time the company is making the transition to personal computers, it is working on an overhaul of the entire manufacturing information system so "we can start with plant data and pyramid that all the way to accounting quality data," Wheatley explains. The plan calls for dedicated IBM 8100 computers in the 25 largest plants (the other smaller ones would share) linked to micros at one end and linked to mainframes at the other.

This will offload a lot of long-distance online work from the headquarters mainframe, thus reducing communications costs. Data needed locally but not centrally will remain at the plant sites, and only summary data will be sent to Dallas.

Marketing

Although the personal computer has already become a productive standalone device here, the gains achieved to date do not compare with the potential expected when the PCs can be used to download data from the network.

For its planning and analysis work, Marketing depends on 3 major databases currently on the mainframe, and expects a fourth important one to be on within a few months. The first is the Nielsen measure of market share, which the staff manipulates to put the company's own performance statistics in context. In other words, "If you're up 20% that could be good or bad. If the world's up 50%, it's bad, but if the world's up 5%, it's wonderful," explains Steve Zimmerly, who left Marketing Services recently for a new position in sales.

The system has been on the mainframe for about 5 years.

The second major system, and newest addition, is the department budget, which includes both marketing and advertising expenses. This system went on the mainframe only 1 year ago.

The third is actually the company's sales database, which has been in place in various iterations for about 8 years. The latest version, which is only about 2 years old, is "awesome," according to Zimmerly. It can be accessed by brand, by size, by flavor. "You can talk about 8-ounce Barbecue Fritos, or you can talk about that in Albuquerque, or you can get it for the last 5 years, for 13 periods a year." At present, Marketing accesses it via IBM 3278 terminals. But after retrieval, meaningful manipulation can only be done manually.

A fourth system, which is slated to go live soon, is another syndicated service called Majers, which measures advertising presence in publications (not TV or radio).

The department has 10 personal computers for analysts' use, and several programs developed for use on the systems in standalone mode are worthy of note.

One is a program that tracks artwork. "We have hundreds of pieces of artwork in production or use at any given time, whether it be a new bag design, a point of sale poster, an ad or a coupon, for example. The system is used to record exactly where each piece of work is."

Another is a program that tracks coupon sales. According to Zimmerly, Frito-Lay has hundreds of discrete coupon events every year. It could range from a 5-cent Lay's coupon in Dallas to a national 50-cent coupon on Ruffles.



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The program, which was written by a Marketing Services staff member, allows the staff to log in the coupons, determine how many are redeemed, determine the percent of the total, and ultimately develop a forecast for coupon events.

"We used to track this more or less by hand, and we more or less knew our coupon budget was under control in an after-the-fact kind of way. This system gives us stronger control of a sizeable budget item," Zimmerly remarked.

The fact that the person who wrote this program is now moving on to other responsibilities will provide a good test of the long-term usefulness of department-generated programs. Good documentation will ease any transition.

Security

The overall security system now in place is not expected to change much when personal computers begin accessing the mainframe. Since they will look like other 3270s, mirror images of the pertinent databases on the 3033AP will facilitate productivity for analytical workers and at the same time protect the corporate data from destruction or modification.

At present the general philosophy is as follows: data is a corporate asset and MS is the custodian of that data. The function that generates or is the prime user of that data is considered its "owner" and is therefore responsible for its improper access. Management Services is accountable for preventing destruction or modification of data. An MS staff member is responsible for assuring the proper security procedures are observed.

All databases that are not public are considered private, and approval of the functional owner must be sought to gain access to these.

A series of passwords and account numbers is in effect to protect the individual files of TSO users.

THE MS DIRECTOR MAKES A DIFFERENCE

Charles Feld, who was appointed MS Director in May of 1981 and subsequently Vice President of Management Services, says, "It really is time for MIS managers to become an influence in their companies.

"I talk to many such managers who are timid—they've been beaten so many times. They're unreasonably negative, and they don't see themselves as part of the management team. It comes from years of letdowns, years of things they proposed and couldn't

make happen, a lack of will to climb the hill once more. The fact is that now the time is right to be aggressive, and they're missing the moment."

Feld is well aware of all the unknowns that lurk behind every information decision they are trying to make, but he feels the great thing about Frito-Lay is that "It's not fatal to be wrong."

"The thing that makes us more accurate is that we've begun to focus on strategy—people, process, application, and technical strategies. We have a long-term view."

Feld calls this "Vision." "You've got to have Vision," he says, drawing an analogy between what he's doing at Frito-Lay and hitting a golf ball.

"If you've ever watched a professional golfer hit a ball you know what it ought to look like, what it ought to sound like, and you can picture it landing in the middle of the fairway. This gives you a picture of what you're striving for. The same is true in business." Feld says that although he and his people may not know exactly what the future will be, among them they know just about as much as anybody else. What's different is they're taking the plunge.

"You have to know two things," says Feld. "You have to know what you want your system to look like in five or ten years, and you have to know where you are now. If you know those two points, then you're not going to go too far wrong. You may wander a little, but you can keep correcting yourself and heading in the right direction."

Feld's department enjoys a good relationship with the other functional departments. Manufacturing's Wheatley expressed the views of all users interviewed when he said, "Our relationship with MS is better now than in the past five or six years.

"That's not to say that we wouldn't like things quicker or that they don't make mistakes, like we all do, but we are striving together."

And Bill Franks, Manager of Computer Technology, an MS insider, pointed to Feld's creative thinking and brought up a new funding strategy devised for 1983. It works as follows:

If a user department head believes a new system makes sense for the company and is willing to move some of his budget into MS to pay for it, they are now permitted to do so. This change has had an important effect on end users. It has helped involve them in our business and motivated them to be more informed. It has also given them a feeling of control and participation. It has also provided the mechanism to ensure the funds necessary for quality implementation. How many companies can say that?

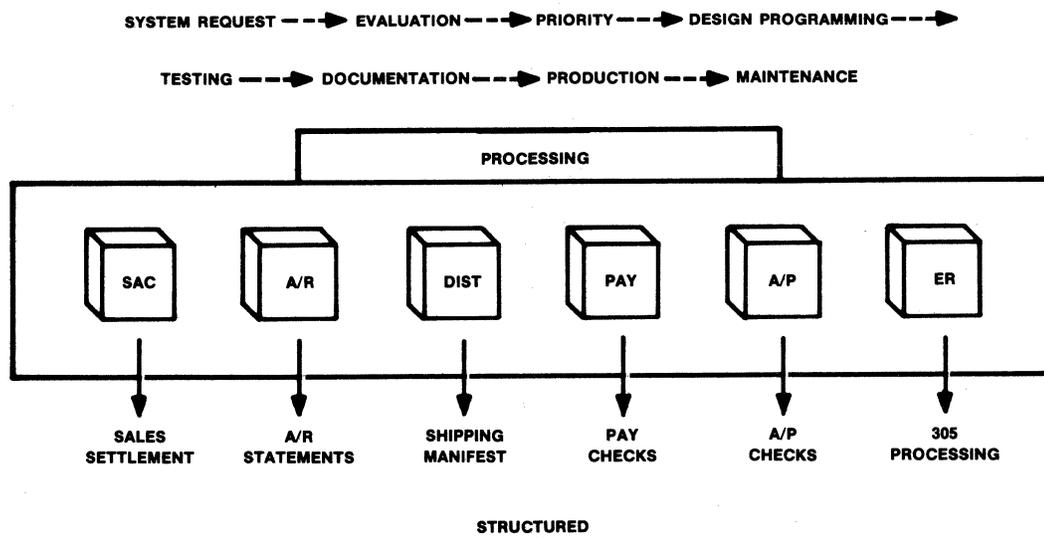


Figure 1 • computing in the 70s.



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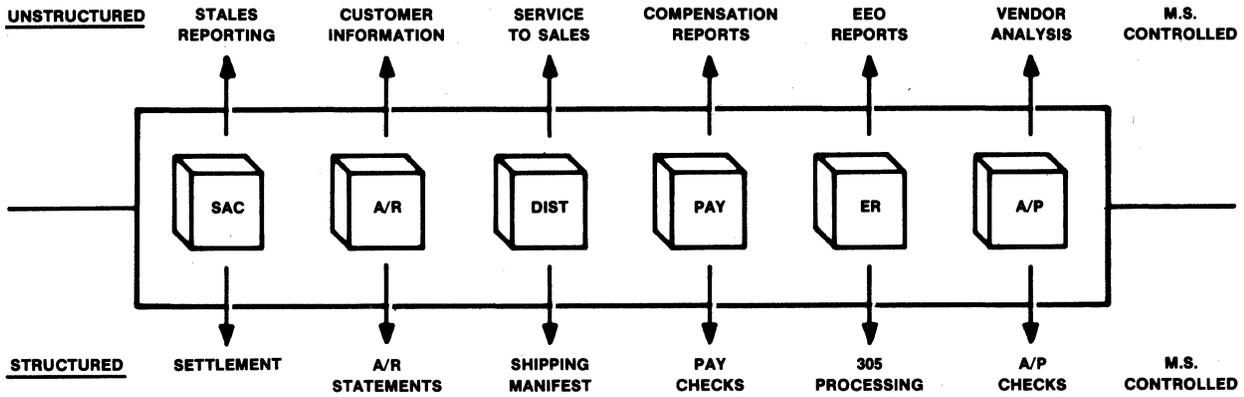


Figure 2 • computing in the 80s.

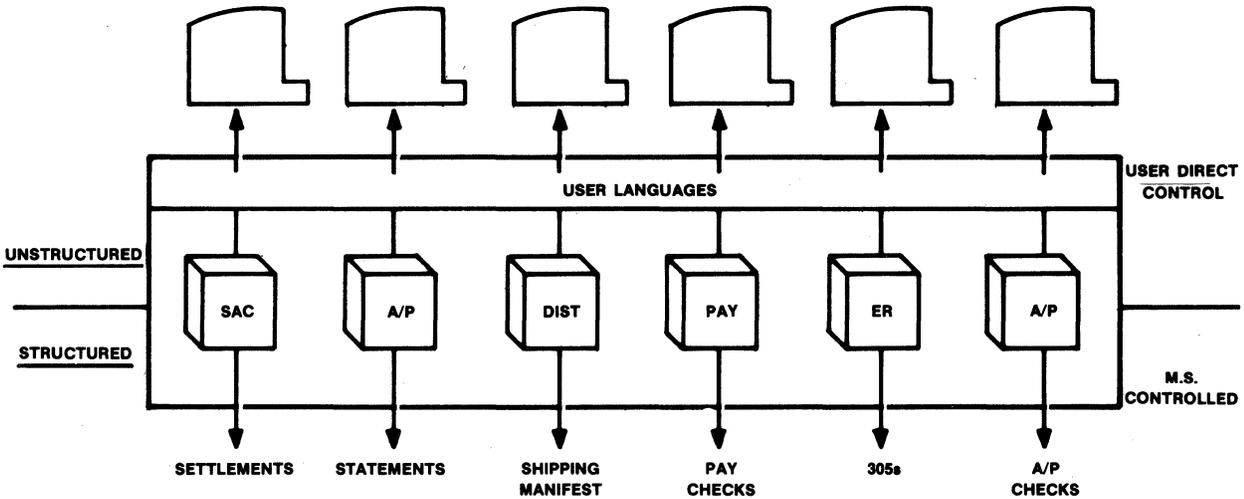


Figure 3 • computing in the 90s.

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Cigna Corporation Case Study

INTRODUCTION

This report shows how INA Individual Products (IIP), part of Cigna Corporation, a Philadelphia-based insurance and financial services provider with business and individual customers worldwide, has developed a microcomputer-based sales system to assist the network of agents who sell its life insurance product line.

The system is designed to improve productivity and thus increase sales, and independent insurance agents interviewed said it is achieving that goal.

The program involves customized software, created under contract with specialized software development and marketing firms, along with a discounted hardware and a financial support program that allows the agents to purchase these systems at very low cost.

The system was developed through the efforts of the Computer Marketing and Financial Planning Services Department of the IIP division with technical advice and support from the Life Systems Department, a data processing unit.

IIP encompasses the individual life insurance subsidiaries of the former INA Corporation. This group, together with the Connecticut General Life Insurance Company, comprise the Individual Financial Division of Cigna. Each company operates in distinct markets, with separate product lines and distribution systems. Computer Marketing and Financial Planning Services provides the microcomputer development, support, and training for each of the IIP companies.

IIP expects to have 1,000 of its agents using 1 of the 3 microcomputer models it supports, primarily in the preparation of life insurance proposals and state-required comparison forms, by mid-year 1984.

COMPANY BACKGROUND

Cigna Corporation was formed in March 1982 as a result of the merger between Connecticut General Corporation, an industry leader in domestic employee benefits and individual life insurance, and INA Corporation, with emphasis in property and casualty products and services and a position in the international market.

With combined common stockholders' equity of \$4.2 billion at the time of the merger, the new company could be seen as ranking near the top among stockholder-owned insurance companies in the United States.

Since the new company promises to be a blending of the 2, reorganization, shifts in responsibility, and consolidation efforts are expected to go on for some time.

Prior to the merger, companies within the INA family were pretty autonomous with each president of a line of business controlling many of his own resources, such as data processing. This is changing as the company places greater emphasis on streamlining operations and eliminating duplication. For example, very recently it was announced that INA's and Connecticut General's data processing operations would be consolidated into a single service division to be known as Cigna Systems Division.

PRODUCT DISTRIBUTION

In general, insurance companies have several choices when it comes to distributing their products. Some involve working through a hierarchy of sales units that are owned and managed by the company itself. Others involve working through independent marketing companies or managing general agents

who pay their own overhead, and, in turn, are paid a commission override on sales made by the individually owned general agencies they recruit and service on behalf of the insurance firm. Some forego this people-intensive approach and sell through TV promotion and the U.S. Mail.

In the former 2 instances, the principal difference, however, is that some agents are "captives" and sell only 1 company's product line while others are "independents" who represent a number of companies in the same product category, such as several life insurance companies and several casualty insurance companies.

IIP includes INA Life Insurance Company, Investors Life Insurance Company of North America, and INA Life of New York companies, with a tradition of selling through independent agents. As such, each company faces the ongoing need to resell its agents on why they should emphasize its various product lines rather than those offered by competitors. They do this through various incentive programs as well as ongoing support for day-to-day sales efforts.

HISTORY—LIFE INSURANCE SELLING

Since the end of the Great Depression, very little has changed in either selling methodologies or product design in the life insurance business. It has always been an emotional purchase, seen mainly as a way to pay the funeral bills and replace earning power lost as a result of the death of a wage earner. In addition, business owners and other wealthy property owners purchase life insurance to defray estate taxes or protect their businesses. As people began to live longer, its usefulness as a vehicle for producing retirement income—a kind of forced savings program—was stressed.

In the late 1970s when interest rates began to skyrocket, however, it became evident that insurance policies were losing ground to other retirement investment instruments because the interest rates were just not competitive. As Bill Heinberg, a Wilmington, North Carolina-based Managing General Agent for Investors Life, explained, "traditional cash value insurance was competitive when savings and loan associations were paying 2 percent interest. But when consumers found they could get anywhere from 5 percent to 10 percent interest elsewhere, they did so."

Sales slowed, and in fact, many people began to borrow against their accumulated cash value and even cash in whole life policies in favor of renewable term insurance. They put the cash in a money market account. This had a tremendous impact on the insurance industry as a whole. At that time, it became important to give even more support to agents in the field to assure they closed a higher proportion of sales. And at the same time, insurance companies began to focus on new types of products where death benefits were separate from the cash value accumulation element and where the accumulation element produced a rate of return that was comparable to other types of investments.

So, better support for existing products and new product development became the focus of attention. Better support would involve computers as a means of speeding sales support so the agent could sign his prospect while the prospect still was enthused and interested in making the insurance investment. But what would computers do?

Sales Background

On the agent level, the life insurance sale is basically a 2-interview process. First, the agent calls on the prospect to determine his life insurance needs. For agents of the INA Life companies, this involves completing a form called the "Financial Needs Analysis," which details the prospective client's family size, liabilities, income generated by each spouse, future income



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expectations, and how much income that family would need if one of the wage earners died. From this information, a computer-generated analysis is made of the prospective client's capital needs. Realistic interest and inflation assumptions are used to determine insurance needed.

Once this is completed, the agent can present 1 or more possible policies. If the prospect is already insured by another company and plans to drop his existing coverage, the consumer protection laws in some states require the agent to prepare a "comparison form" often called a "replacement form" for the prospect. This is designed to give the individual an idea of the differences between his existing policy and the proposed new one.

In order to prepare the replacement form the agent needs a copy of the potential client's existing insurance policies. If he has done a good job in interesting the prospect in his ideas, he will go away with the financial needs analysis form and the existing policies which he will use to prepare a formal, written proposal.

Then the paper work begins. The agent must do all the calculations needed to compare the 2 policies year by year for various categories, including premium, proposed premium, premium savings, accumulated savings, cash value as a total of accumulated savings, insurance amount, and death benefit from the individual's current age through age 65.

The proposal for the new insurance is actually less complicated, but still time consuming to prepare. Both are ripe for errors, especially if they have to be calculated and then typed.

On his second visit, the agent presents the proposal and comparison form to the prospect, and usually if the client sees the new policy is a better deal, he will switch, and the sale is closed. This all takes place before the customer has his medical exam or an underwriter in the home office sees the application.

Because these activities were so time consuming, the prospect often had "cooled down" by the time the agent reached the formal presentation step, and step 1—the original sell—had to be repeated. Often this resulted in a lost sale.

It became clear that if some of these documents could be generated by a computer, agents could close their sales before their clients lost interest, and therefore, sell more business.

INA LIFE TAKES ACTION

In 1980, INA Life Insurance Company decided to bring the power of its mainframe computers to bear on this problem. Aplitec, Inc, a Houston-based custom software firm was engaged to develop a customized, mainframe-based proposal system that could be accessed via dumb terminals at the home office and in the field service offices.

The Radio Shack TRS-80 Model III was chosen as the machine through which the field offices would access the mainframe and thus prepare the proposals online.

At the same time, the insurance industry was ready to launch a new kind of policy known as Universal Life Insurance. This type of insurance is considerably different from traditional whole life policies. In traditional life insurance, mortality expense loading, death benefits, reserve computations, premium outlay, and interest rates generally do not change. As a result, they can be reduced to tabular form and printed in a rate book.

Universal Life, on the other hand, leaves the various components separate. Each policy can be tailored specifically for the individual. Everything can and does change. For example, the premium works much like a deposit to a cash value account where mortality charges are the debits, and interest earned goes in the credits column. Interest rates may vary with the rates paid, for example by U.S. Treasury Bills, and therefore, remain competitive with other investments. Because of all these variables, it could not really be sold from a rate book; one really needed a computer to demonstrate everything it could offer to the prospective insurance client.

At the time Aplitec's proposal program was being tested for field use, it was generally thought within the marketing and financial group that the company could support the sale of this new product within the proposal system used for the more standard life and annuity policies on the company's mainframes via its

timesharing system known as "Quest."

But few people realized the magnitude of supporting these activities from a systems and marketing services point of view, according to IIP's Marketing personnel. "Very few of IIP's competitors have even defined the problem. We're well on our way to a highly effective solution, because it requires that a marketing and sales perspective drive the system's application. Other life company marketing executives abrogate all computer functions to strictly system personnel."

A pilot project was launched in which 9 of INA Life Insurance Company's 21 regional service centers were equipped with the Radio Shack TRS-80 Model III for running proposals for agents.

With only 9 locations accessing the mainframe, the \$77,000 budgeted for timesharing in 1982 shot up to \$230,000, and a forecast quickly showed that increasing the number of online terminals from 9 to 40 could bring the company's annual timesharing cost to a whopping \$1.2 million in 1983. There had to be a better way.

The better way emerged as a result of an invitation from Aplitec to serve as the test site for development of a micro-based proposal system that would duplicate all the functionality of the existing mainframe system. The promised micro-based proposal system would offer regional service centers and agents who wished to install a micro the ability to generate their own proposals and replacement forms in-house, thus eliminating the burdensome timesharing costs INA Life had been absorbing and also generate the materials much more quickly so agents could "strike while the iron was hot."

How It Works

In early 1983, IIP began to offer the licensed agents with its companies a microcomputer software support program, at no charge, along with financial assistance for the purchase of compatible hardware, that eases any financial burden that might preclude an agent from making such an investment. Each user must belong to the user's group, which since February, has grown to more than 500 members—far more than had been projected for the program at this time. The number is expected to mushroom to 1,000 by mid-1984.

Custom-Designed Software

This proposal system, known as the IIP Micro Computer System, provides its users with software in 3 broad categories. This includes proposal programs which aid an agent in the illustration of products such as Universal Life, Deposit Term, and Retired Lives Reserve. It also incorporates software for financial planning. For this purpose, the system includes software for Financial Security Analysis, Estate Taxation and Planning, as well as Business Valuation. In 1984, the system will be expanded to include productivity, activity, and sales management components.

UNIVERSAL LIFE MICRO PROPOSAL

The Universal Life Micro Proposal Program is the centerpiece of the IIP Micro Computer System software.

The Universal Life system is set up so there is no limit to the number of changes that can be made in developing a policy. The agent need input on only 2 screens, making the system easy and fast to use. It also allows the agent to put up to 100 separate proposals on 1 diskette.

Features of the system, built into the function keys, allow the agent to illustrate policy flexibility, such as minimum premium and vanishing premium, for example, with 1 keystroke.

It allows the agent to change the death benefit operation twice and change premium outlays or specified amount of premium each year, which is thought to be helpful in comparing the policy with other plans.

Lump sum deposits and withdrawals can be entered for each year or scrolled for a specific period.

The agent can thus tailor a plan to dovetail with a specific "financial needs analysis" prepared from a prospect's financial data.



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The agent can also target for specific cash values at particular ages or after a span of years. Further, in addition to the current or historical rate, the agent can illustrate an alternate interest rate pattern which the client can specify.

Other Products

Other products are illustrated through the Advanced Insurance Plan Function (AIPF). It is designed for more traditional products and combines a product with proposal type, sales method, and premium financing selections to produce a custom-tailored ledger statement. For example, proposal types include ordinary ledger statements, life plus annuity rider, vanishing premium, and executive bonus.

The Ledger Statement is the standard illustration showing premiums, cash values death benefits, reduced paid-up insurance, and insurance cost or gain for each year.

The Life Plus Annuity/Side Fund illustration provides a ledger-type presentation of the results of purchasing a life insurance policy together with a flexible premium annuity or side fund.

Vanishing premium shows how annuity/side fund contributions can be used to "pay up" the insurance benefit and make the premium "vanish."

The Executive Bonus illustration reflects the purchase by an employer of a life insurance policy on the life of a key employee where the employee is the owner and names his own beneficiary. The program shows both employer and employee costs.

Another proposal system supports Retired Lives Reserve. This is a form of group term life insurance that provides benefits after retirement and on a tax-favored basis.

Complete instructions for preparing these proposals are spelled out in the Systems Documentation provided to each users' group member.

The system is set up with prompts and beeps to assure information is entered properly and each step is completed before going on to the next. "Help screens" are even provided to assist the agent if he gets lost or hung up. It then details how to print out the proposal when information has been input.

Every effort has been made to make the systems easy to use and minimize learning time.

Documentation included with the systems is as detailed as a cookbook, but understandably depends on the reader having complete knowledge of the insurance products. Specimen input and resulting output for most common and some sophisticated product applications is included in the manuals.

Documentation, promotional literature, and news releases are attractive and professional looking with the same attention to eye appeal as one might find in a commercial product sold in a computer store.

The IIP-developed insurance software is provided free of charge. There is a small fee for replacing diskettes. However, other generalized application software is being made available at highly discounted prices as a result of high-volume contract agreements between Cigna Service Company and certain software vendors.

For example, agents that wish to purchase WordStar, MailMerge, SpellStar, the WordStar/MailMerge/SpellStar combination, InfoStar, or CalcStar from MicroPro may do so through IIP at 52 percent off the suggested retail price.

Training

Initial training on the IBM PC was provided by IIP Marketing people in the field during a 5-day session in February. In general, agents who have become users since then have depended primarily on self-teaching tutorials built into the documentation and assistance from either their managing general agents or their INA Life Marketing Representative. To alleviate the strong demand for home office training support in field locations, staff analysts from Computer Marketing Services conduct both individual as well as seminar-style training sessions regularly. To reduce the cost of this labor-intensive activity, 1984 will see the

development of CATS (Computer-Aided Tutorial Systems). It is IIP's intention that the computer and the IIP Micro Computer System become both the instructor as well as the object of the lesson. It is felt that the CATS will increase the CMS capacity to train users effectively and maintain quality without dramatically increasing its labor costs.

Hardware Selection

In making the decision to go to standalone micros, IIP decided to support 3 manufacturers' systems: the IBM Personal Computer, the Apple IIe, and the Tandy Radio Shack TRS-80 Model II. The systems were selected on the basis of cost, versatility, and popularity among agents surveyed.

IIP decided to support Radio Shack and Apple systems because many agents were already using those machines and had expressed reluctance to purchase another model computer just to run the IIP software. As for the IBM PC, although it was not a widely installed machine at the time the decision was made, it was seen as a future leader. Also, as a 16-bit machine, it offered the capability of running bigger programs, which was a plus for the future.

Discounts were arranged with 3 vendors to support the company's agents nationwide. The retail outlets are Computerland of Philadelphia, Computerland of San Francisco, and VR Data Computer Center of Springfield, Pennsylvania. The discounts are offered only to persons who have signed end-user agreements for the IIP Micro System. In most cases, this turns out to be a mail order arrangement. However, literature prepared by IIP's Computer Marketing Services Department provides step-by-step instructions for setting up the equipment—everything from removing it from the boxes to inserting the boards and loading the diskettes.

Financial Assistance Program

To make it nearly impossible for an agent to say "No" to getting a micro, IIP's Marketing Department instituted a Computer Hardware Assistance Program to help qualified agents and general agents purchase the hardware necessary to run its Micro-System Proposal Program.

Under the plan, INA Life will loan up to 80 percent (or \$5,000) of the cost of the micro equipment on a 2-year installment note. For example, if an agent wants to borrow \$4,000 toward the purchase of his equipment, it will cost him \$569.83 per quarter for 8 quarters.

If he chooses the IBM PC, a recommended configuration could end up costing him less than \$1,000 out of pocket after depreciation, the Federal Income Tax Credit offered on the purchase of capital equipment, and production incentives made available by INA Life.

System Configuration

IIP recommends several different IBM PC configurations from a "pure" IBM system to a "miser" unit that substitutes some less expensive alternative peripherals. It also agrees to support IBM PC look-alikes that utilize the Intel 8088 CPU and run the PC-DOS operating system, have 192K bytes of RAM, 2 disk drives, parallel/serial ports, a color graphics adapter, and any green, amber, black, or RGB color monitor.

For Radio Shack implementations, the unit must be a TRS-80 Model II, Model 12, or Model 16 (operating in Z80 mode) and running under the CP/M 2.211 Operating System from FMG Corp in Fort Worth, Texas. (TRS-DOS is too slow.)

For Apple IIe implementations, the unit must have 64K bytes of RAM, 2 disk drives, parallel/serial ports, the Z80 Softcard, the 80-Line Card, and the CP/M language card. As for a monitor, any unit capable of an 80x25-line array with medium- or high-resolution graphics will suffice.

All users are advised to use a parallel dot-matrix printer with at least a 13-inch platen.

A number of hardware difficulties have cropped up in the course of this program. Users of the TRS-80 Model II system claim short circuits have developed between the keyboard and the terminal.



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One other complaint has been voiced concerning the latch on the disk drive door, which tends to spring open.

The IBM systems have been virtually fault free, although several multifunction boards purchased from Quadram Corp failed. However, all were replaced promptly under warranty service. Major problems occurred with the printer selected for INA Life Regional Service Centers. Forty IDS Prism 132 printers were purchased, and within 2 weeks of installation, 25 percent failed. Within a month, more than 50 percent of the units failed. Due to the need for graphics, high speed, as well as near letter-quality printing, this printer was thought to offer a good, cost-effective compromise. To its credit, Integral Data Systems identified the engineering fault which caused the failures and replaced every printer with a new unit. Not a single problem has been reported since these replacements were made.

THE AGENCY EXPERIENCE

Consolidated Underwriters, Dunn, North Carolina represents about half a dozen companies besides Investors Life, an INA Individual Products Division company, which is his largest selling product line. Walter Smith, who heads this managing general agency, expects his firm to bring in between \$3 and \$4 million in sales in 1983. Smith says \$2 to \$3 million of that will be in life insurance alone. Only a small proportion of Smith's income will come from direct sales; the lion's share comes from commission overrides on the 70 other general agents and their individual producers that work under Smith's general management.

Today term insurance represents 80 percent of his business, with Universal Life accounting for only 20 percent, but by 1984, Smith expects those figures to begin to flip flop, with UL accounting for as much as 50 percent of his overall life insurance business.

Smith recruits, manages, and services this network of general agents in North Carolina, South Carolina, and Virginia with a staff of 2 marketing directors, his father and partner, and 2 secretaries. Several other marketing directors in strategic locations in the 3-state area buttress his efforts.

CU purchased the TRS-80 Model II about 2 and a half years ago for only one purpose: to generate the replacement forms that both North and South Carolina require any new insurer to prepare in conjunction with a new insurance proposal.

Says Smith, "The software was available for the proposal preparation system 6 months before I purchased my computer, but that wasn't sufficient justification in my mind for having a system. But once the software became available to handle the replacement forms, I bought my TRS-80 the very next month."

Smith has since added an IBM Personal Computer to his computer arsenal because he was "afraid of what could happen to my business if my old TRS-80 broke down."

Smith keeps 1 of the 2 micros busy all day just preparing replacement forms and proposals for the general agents he supports.

When the time came to add a system, he chose an IBM PC over a second TRS-80. The reason: although he confessed to knowing little about computers, he says it just made sense that a micro made by IBM would be more compatible in the long run with the home office mainframe as more and more computer-based functions became available to agents. Furthermore, he found that the IBM PC could generate a Universal Life proposal in 23 seconds, compared with 90 seconds for the TRS-80, and when you're doing proposal work on a production basis, all day long, that kind of time saving can mean a lot.

Smith provides the proposal service to his agents on a 1-day basis and at no charge. Proposals are requested by telephone or in writing. If a salesman needs a replacement form along with the proposal, Smith gets it out in 2 or 3 days. The latter form requires having a copy of the potential client's existing insurance policy to prepare it. Moreover, because the program designed to create it is far less efficient, each one could take as long as 2 hours to generate. Improving this system is one of IIP's short-term goals.

Benefits

The micro program has been a production and productivity boon to Managing General Agents like Smith. "Without a

microcomputer, we would be doing all this document preparation by hand or not at all. We'd be getting someone else, such as the home office, to do it." In the latter case, the time element involved can be detrimental to the sale.

To date, Smith has persuaded about 7 of his general agencies to sign up to IIP's microcomputer users' group. This has not only off-loaded a lot of his proposal work, but is already beginning to increase their sales, he said.

As for his own bottom line, Smith was unable to quantify gains experienced since he has installed INA's Micro System, but he is a confirmed believer in the use of computers by virtue of his experience with another insurance company a few years ago. At that time, he says, he showed a 25 to 30 percent increase in business over a 3-month period after beginning to do insurance proposals and replacement forms on a micro. However, he also believes strongly in the intangible gains that microcomputers bring about. For example, "it's easier for me to hire good quality agents with good micro support," he says. "Companies that don't get into supporting micros are slowly losing their insurance agents to those companies that do."

Further, having a micro will also give Smith direct access to the home office databases for checking on the status of pending business and getting information for his policy holders. This is far more efficient than having to telephone a clerk in the home office for the customer information.

BILL HEINBERG INSURANCE AGENCY, WILMINGTON, NC

Bill Heinberg, another general agent with Investors Life who has 74 full- and part-time producers who work under Smith's Consolidated Underwriters, is also a TRS-80 user. His primary application is preparation of term insurance proposals using the Term Insurance Proposal System (TIPS). He charges his agents \$1 for a proposal and \$4 for a replacement form, but he reimburses them for the documents if they make the sale. His workload is anywhere from 7 to 40 proposals per day.

"If an agent has the input form filled out and into the office by 9:00 AM, we can get it back to him by 10:30 the same day. Requests that come in the mail are turned around the same day or the next," Heinberg says.

In addition, Heinberg has written some of his own programs to update agency administrative files and track policy applications from beginning to end (that is, decline or acceptance). In addition, he uses it to keep track of agents' production records as well as to disburse the single commission payment Heinberg receives for all the agents in his city. This involves calculating and paying out checks as well as completing the Federal Tax Form 1099 for each agent's payment.

Benefits

The output of the system, according to Heinberg, is "flawless, fast, and accurate. It does more than any small group of mathematicians could be asked to do," he remarks.

In the 3 months since his Radio Shack TRS-80 has been installed, Heinberg says his agency production rate has "quadrupled," and he attributes all of that increase in business to the computer system. "I haven't gotten any smarter, but it is, and we've learned how to use it better," he says. And this agency hasn't begun to use it for Universal Life policies yet.

"Investors' Life of North America has had a sales spurt in the last year and a half, and that spurt has been a result of having competitive term and annuity products and making available to general agencies the ability to generate proposals and comparisons for those term and annuity products," he says.

"Remember, we are not captive agents. We put the majority of our premium dollars with companies that have good products but also where companies represent us and our need to make a living. At the same time, if a company wants to flirt with us, what they will offer us first and foremost is a computer support facility along with free or low-cost software because we're not receptive to a company that isn't at least that modern."

Having a computer in-house gives agents at the local-level confidence that they don't have if they have to mail requests for



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proposals across the country and wait several weeks for them to come back. Fast turnaround allows the agent to strike while the iron is hot. In addition, "Insurance is three-quarters emotion and one-quarter logic. And the computer doesn't really change that, but it helps people understand the mathematical soundness behind their decision."

Without the computer, Heinberg says he would "get out of the business. Although some of the older, very effective agents still work with yellow pads and pencils, and others have gotten quite skilled in using advanced calculators, errors can creep in, and if you make a mistake and it is seen as an exaggeration or misrepresentation, you can lose your license forever. As an agent, you're sensitive about that," Heinberg points out.

NON-TRADITIONAL PRODUCTS & MICROCOMPUTERS: A SUCCESSFUL COMBINATION

Although the direct impact of computer systems in the office might be hard for individuals to measure, on a company-wide basis the results are very clear. Since 1980, the generally stagnant economy as well as uncompetitive products had resulted in sluggish sales and little true growth in premium.

Non-traditional products, such as Universal Life, Retired Lives Reserve, and Deposit Term (a product sold exclusively by Investors Life) cannot be sold without the aid of a computer. However, given past sales results, the commitment to a major computer support program represented a substantial risk, particularly during sluggish economic times, but it paid off.

In late 1981, Investors Life had spearheaded the introduction of non-traditional products, although prior to that time it had primarily marketed annuities, and life insurance premiums were a very small part of its business.

A special microcomputer program was purchased from Aplitec, the supplier of the mainframe-based proposal system, in late 1981. Approximately 40 Managing General Agents purchased their own TRS-80 Model II systems to produce ledgers or illustrations of this product. The following year, premium production in this product line increased by more than 400 percent. Thus far in 1983, this product line is 100 percent ahead of the previous year. Coincidentally, the number of micros in use with Investors has grown to 160.

In late 1982, INA Life introduced its Universal Life Policy. At the time, 9 of its Regional Service Centers were outfitted with TRS-80 Model II systems along with the Model IIIs used for communications. Through the end of 1982, sales of this new policy were brisk but not as good for those offices without micros. Management decided to install micro systems in 28 offices, and at the same time, convert the Radio Shack hardware to the IBM PC system. In addition, 140 INA Life agents and general agents purchased systems and joined the users' group. This automation strategy would appear to have worked.

Through May of 1983, premium production exceeded all of 1982. Universal Life represented about 50 percent of the total.

In early June, Robert F. Rink, CLU, president of IIP, reported that his division had already exceeded its entire 1983 objective.

HOME OFFICE SUPPORT: THE GLUE THAT HOLDS THE SYSTEM TOGETHER

What makes IIP's system superior to those offered by some of its competitors in the eyes of agents interviewed is the staff support provided by the home office.

IIP's Computer Marketing Services Department has 12 individuals who are responsible for new program development, supporting existing software, training, and servicing members of the users' group.

The department has 6 key functions:

- To provide IIP Micro Systems participants with technical assistance and training needed to properly and profitably exploit the micro software program.
- To test new system software packages for accuracy, acceptable sales appearance, and ease of use prior to field release.

- To write and maintain user documentation illustrating the proper operation of the system.

- To create and administer purchase discount programs for both hardware and software which is compatible with IIP Micro System specifications.

- To continuously investigate new products, programs, and ideas which may increase and enhance the creative and profitable application of microcomputers for the independent agent or general agent.

- To provide replacement processing and proposal services which are responsive to consumer needs and which conform with state compliance regulations.

In actual operation, this means being available by telephone for troubleshooting and getting software updates together as quickly as possible so that new releases can be put on diskette and distributed with the necessary documentation every other Friday.

At the same time, the staff is writing new packages aimed at more complete service, and improving and replacing existing programs, which are scheduled for 1983 and 1984 delivery.

The original plan was to have 30 percent of staff time devoted to direct support to the users' group with 70 percent devoted to new systems development. This would have worked if the users' group had grown at the anticipated rate, which was 200 members by year end. However, at the 5-month mark 300 agents had already signed up—a situation that has skewed the CMS workload considerably. Now 70 percent of staff time is spent on support with only 30 percent of the time left over for new application development.

Heinberg calls INA the most supportive company he's ever dealt with. "They're very generous with software and technical support on the telephone and they've also been very accommodating in supporting more than 1 brand of micro."

This decision has placed an unexpected workload on the CMS staff, especially in the case of new releases. Every time a new release of a system is issued, code must be written, diskettes duplicated, and documentation prepared and mailed out for 3 different systems instead of one.

FIELD OFFICE USE

INA Life Insurance Company has approximately 30 Field Management and Sales Offices to provide services and marketing assistance to its sales force of independent property and casualty agents, as well as a corps of general agents.

Unlike Investors Life, which markets through established networks of producers operating in the financial planning markets, INA Life has been associated with the property and casualty business. In fact, this company was originally created to serve as the "life company" of Insurance Company of North America, the flagship of the old INA Corporation. Its field marketing organization is patterned after the property and casualty model. That is, marketing representatives assigned to INA service offices calling on independent property and casualty agents. Each INA Life office has a mixed role-selling, processing new business, and servicing inforce business.

All insurance policies sold by the Property and Casualty Agent go through the regional service center on the way through the underwriting process, which takes place at the home office in Philadelphia. Once the home office receives all the necessary documents needed for an insurance application, the approved application goes back to the service center which sends it to the agent who is responsible for presenting the policy to the client and collecting any money due.

Most information queries from agents and clients on policies that are in force are relayed through these service centers to home office and back. This was done primarily by phone prior to last February 1983 when an IBM PC was installed in each center.

Because of the diverse functions of these offices, the computer installation was intended to be more than merely a sales device as is the case with Smith and Hienberg. These micros process administration as well as sales applications. In the project plan which was prepared last July, it was expected that the micros in



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these service offices would do the following:

Application	% of Time in Use
1. Proposed Production	50
2. Communications (Policy Service)	30
3. Word Processing	20

Because the universal life sales have been so successful, the systems are devoted almost exclusively to sales applications. Very little word processing, list management, or report generation is being performed. Computer Marketing Services is preparing recommendations aimed at improving the balance of the system's use. The major elements of this effort will be:

1. Increased training activity on administrative functions.
2. Addition of a second processing station in very high-volume offices.
3. Exploration into portable computers for marketing representatives.

A substantial investment has been made in commercial software, which it is hoped will be better used than it is currently. Forty licenses were purchased for WordStar/SpellStar and MailMerge at a heavily discounted price of \$20,000. In addition, communications software PC-Modem V1.4C is in use. To aid in the training effort, tutorial software was obtained to train operators in system fundamentals, WordStar, and communications.

Chicago Regional Marketing & Service Center

The INA Life Chicago Regional Marketing and Service Center in Oak Brook Terrace, Illinois, which services some 360 producing agents in Illinois, Wisconsin, Michigan, and Lake County, Indiana, reports significant business changes as a result of the advent of Universal Life Insurance and individually tailored, microcomputer-generated policy proposals.

The service center began using the IBM PC to prepare proposals for its producing agents in February 1983 and by June had booked as much in first-year premiums as it did in all of 1982—\$1.4 million, according to Charles Boak, Regional Manager.

In this region, too, Universal Life has replaced most permanent forms of life insurance, such as whole life, adjustable premium whole life, life paid up at age 90, family plan, and double protection to 65, for example.

However, Boak admitted that this relatively easy replacement business will not last forever. "There are only so many old policies out there." Nevertheless, at the moment, the PC makes it easy to sell this new life insurance and easy to beat the competition—especially those competitors whose companies don't yet offer Universal Life or the type of computer support that INA Life has made available with the PC and the free, specialized software.

According to Boak, the marketing and service center is giving its insurance agents 1-day turnaround time on proposals. And, feedback from agents has been very positive. To date, 4 have been so impressed with the systems that they have installed their own.

Unlike the South Carolina agents, here the PC is being used for proposals because the state-required replacement forms are so long and complex. Replacement proposals are provided by a unit in the Home office.

Secretary Peggy Rannals, who spends a large part of her work week at the machine, estimates she prepares about 400 to 500 Universal Life Proposals per month.

As for whole life, whole life with an annuity rider and term combined, that number is only about 60. Most of these proposals go between the service center and the agents via the U.S. Postal Service.

The service center also uses its PC as a terminal to help agents and customers obtain policy information from the home office mainframe.

In addition, equipped with WordStar, the PC comes in handy for

preparing production bulletins, ordinary correspondence, and mailing labels.

Boak's only expressed dissatisfaction lies in the fact that his office is only able to tap "about 3 percent of the PC's full potential because the necessary software has not yet been provided." When the software is ready, however, a second PC will be installed so that 1 secretary can prepare proposals while the other communicates with the mainframe in Philadelphia to obtain policy-owner service information.

INA MAINFRAME ENVIRONMENT

Since the early 1960s, INA has relied on large centralized mainframe systems for recordkeeping and data processing for all its insurance businesses.

Most of the processing for the corporation's life insurance businesses (as opposed to casualty) is handled in a large center in Voorhees, New Jersey, a Philadelphia suburb, where a 16M-byte IBM S/370/168, an 8M-byte IBM 4341, a 16M-byte IBM 3033, and a 32M-byte IBM 3081 are installed. If necessary, all this processing can be switched to a similar center in Thornton, Colorado, in 1 day. Processing is interchangeable, and satellite transmission facilities link the 2 sites.

End users interact with the mainframe in 1 of 2 ways. If they want to write their own code or use canned packages to create simple programs, they can come in via Quest, an INA timesharing system. Until recently, Quest (not an acronym) was actually IBM's Virtual Storage/Personal Computing facility. However, the company is in the process of switching over to Virtual Machine/Conversational Monitoring System, an older system with broader capabilities.

Quest also gives end users access to Pending and Activity Reports, which show new and previous entries to the pending file, and contains such information as the Life Office Cost Center, account number, policy number, mode and frequency type, submission date, issue date, number of days from submission, and pending reasons.

A second facility, IBM's Customer Information Control System (CICS) enables end users to query the company's various databases of policy holder information. This system controls access to information on existing policies, such as specific coverages, expiration dates, cash values, surrender quotes for a cash value policy, and loan repay quotes, for example.

Field office personnel as well as home office personnel often access this data at the request of the insured themselves.

Most home office users are tied directly to the mainframes via 3270 terminals. However, end users with PCs gain entry in 1 of 2 ways: if equipped with a modem only, they come in looking like a dial-up customer.

The other alternative is to come in through a product called Irma, which, when hooked up to a 3270 controller, makes the PC look like a full-screen 3278 terminal.

Daily Processing

All new business and policy issue work is done in an online real-time environment. However, policy updates are captured online but run in the evening in batch mode.

About 84 terminals support the work of the life insurance businesses, while the corporation as a whole depends on around 1,000 such units to conduct its daily business.

Micro Systems—A Departure

The Individual Products Group's Computer Marketing Services unit was the first INA unit to launch a full-blown development effort in micros, and some company officials see their activity as a possible prototype for effective microcomputer use in other organizations within the corporation.

Joe Bradley, Director of Life Systems, points out that although every operation that can presently be done on the micros can also be done on the mainframe using a dumb terminal, the micros working in standalone mode can do a better job.

As for future micro development within the corporation, Bradley



Personal/Microcomputer User Case Studies

Cigna Corporation Case Study

says the explosion of micros and their capabilities have come on so fast that the corporation hasn't yet had time to react.

One unit within data processing is studying electronic mail, voice mail, and also piloting an electronic calendar, and word processors are installed in every department. However, other

business priorities stand in the way of devoting the time necessary to come up with a top-down, all-encompassing micro policy at the moment.

• END

