

1-1-1988

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Recommended Citation

O'Brien, William G. (1988) "Near Term Computer Management Strategy For Hospitality Managers and Computer System Vendors," *Hospitality Review*: Vol. 6 : Iss. 1 , Article 2.

Available at: <https://digitalcommons.fiu.edu/hospitalityreview/vol6/iss1/2>

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Near Term Computer Management Strategy For Hospitality Managers and Computer System Vendors

Abstract

In his dialogue - Near Term Computer Management Strategy For Hospitality Managers and Computer System Vendors - by William O'Brien, Associate Professor, School of Hospitality Management at Florida International University, Associate Professor O'Brien initially states: "The computer revolution has only just begun. Rapid improvement in hardware will continue into the foreseeable future; over the last five years it has set the stage for more significant improvements in software technology still to come. John Naisbitt's information electronics economy¹ based on the creation and distribution of information has already arrived and as computer devices improve, hospitality managers will increasingly do at least a portion of their work with software tools."

At the time of this writing Assistant Professor O'Brien will have you know, contrary to what some people might think, the computer revolution is not over, it's just beginning; it's just an embryo. Computer technology will only continue to develop and expand, says O'Brien with citation.

"A complacent few of us who feel "we have survived the computer revolution" will miss opportunities as a new wave of technology moves through the hospitality industry," says Professor O'Brien. "Both managers who buy technology and vendors who sell it can profit from strategy based on understanding the wave of technological innovation," is his informed opinion.

Property managers who embrace rather than eschew innovation, in this case computer technology, will benefit greatly from this new science in hospitality management, O'Brien says. "The manager who is not alert to or misunderstands the nature of this wave of innovation will be the constant victim of technology," he advises.

On the vendor side of the equation, O'Brien observes, "Computer-wise hospitality managers want systems which are easier and more profitable to operate. Some view their own industry as being somewhat behind the times... They plan to pay significantly less for better computer devices. Their high expectations are fed by vendor marketing efforts..." he says.

O'Brien warns against taking a gamble on a risky computer system by falling victim to un-substantiated claims and pie-in-the-sky promises. He recommends affiliating with turn-key vendors who provide hardware, software, and training, or soliciting the help of large mainstream vendors such as IBM, NCR, or Apple.

Many experts agree that the computer revolution has merely and genuinely morphed into the software revolution, informs O'Brien; "...recognizing that a computer is nothing but a box in which programs run."

Yes, some of the empirical data in this article is dated by now, but the core philosophy of advancing technology, and properties continually tapping current knowledge is sound.

Keywords

William O'Brien, Near Term Computer Management Strategy For Hospitality Managers and Computer System Vendors, COBOL, IBM, FIU

Near Term Computer Management Strategy For Hospitality Managers and Computer System Vendors

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The computer revolution has only just begun. Rapid improvement in hardware will continue into the foreseeable future; over the last five years it has set the stage for more significant improvements in software technology still to come. John Naisbitt's "information electronics economy" based on the creation and distribution of information has already arrived and as computer devices improve, hospitality managers will increasingly do at least a portion of their work with software tools.

A complacent few of us who feel "we have survived the computer revolution" will miss opportunities as a new wave of technology moves through the hospitality industry. Both managers who buy technology and vendors who sell it can profit from strategy based on understanding the wave of technological innovation. It is already a factor in business successes—whether increased profits or better services to customers—and will become more important. For example, a restaurant owner may use an inexpensive simulation program to sharpen the menu mix and price strategy so that gross profit climbs even when sales stagnate. Or, one hotelier's telephone computer is reprogrammed to double as a guest message system. Perhaps an innkeeper saves the cost of a computer every year by knowing when it is cheaper to use a service bureau.

The manager who is not alert to or misunderstands the nature of this wave of innovation will be the constant victim of technology. Perhaps a hotel spends \$100 per room on a high-tech security system that fails if an inebriated guest cannot find a slot on the television within 10 seconds of entering the room. Or it may buy an un-tested Property Management System (PMS) because of naive acceptance of premature vendor claims for artificial intelligence. An investment group spends \$60,000 on a state-of-the-art restaurant system but uses only 10 percent of capacity as an expensive cash register.

In an interview, Grace Hopper—the grand lady of computer management systems and creator of COBOL—had no patience with a reporter who began a question with, "Now that the computer revolution is over...." She cut him off with a flat statement that the computer revolution is just beginning. Most experts agree that computer technology is at the stage

automobile technology was at when Henry Ford first began mass production of good quality, affordable cars.

Admiral Hopper suggests that major changes lie ahead of us, that innovations up to now, impressive as they seem, are mere preface. The already ubiquitous IBM-PC may, in a surprisingly few years, come to be the Model T of computers. If the automobile analogy is valid, then exciting business opportunities lie ahead. Some opportunities will be individual, comparable with Conrad Hilton's purchase of the Mobley Hotel during the oil boom. Others will be part of great industry trends such as those which changed restaurant business as automobiles replaced horse-drawn trolleys.

No business executive of that period could have predicted such results of the automobile as the CB radio industry, but the more thoughtful ones did detect trends it was causing in business, such as the growth of the steel and rubber industries, road construction, and factory-based unionism. Others failed to distinguish trends, confusing steam locomotion, for instance, with the main stream of automotive technology. Some invested in technological absurdities such as water-fueled engines or improbable devices such as electric cars.

The executive of today faces a similar situation. The problem is to discern true trends and reject false ones. At the same time one must be alert to today's version of the water-fueled engine or electric car: the outright deception and the unrealizable dream. One needs a combination of hard-headed practicality and high imagination.

Several Strategies Exist for Managers

Computer-wise hospitality managers want systems which are easier and more profitable to operate. Some view their own industry as being somewhat behind the times² and plan to use systems in coping with federal and local regulation and with customer trends. They plan to pay significantly less for better computer devices. Their high expectations are fed by vendor marketing efforts and by incessant news of new developments in the computer industry.

On the negative side, managers see attempts by some vendors to try out experimental systems and half-baked ideas at their expense. They also see systems that reflect ignorance of or disinterest in the basic principles of hospitality.

An occasional manager may gamble on a risky system, hoping to leapfrog the competition. Most realize the tortoise always wins, but temptation for hare-like behavior can overwhelm the best judgment when a hospitality press article—by pure coincidence accompanied by an expensive, two page, full color advertisement—describes in "objective" terms how someone's new PMS (or security system, etc.) can work miracles. The clear implication is that the general manager who has not bought something like this system is incompetent. Naturally, the featured vendor sends copies of the journal to all the members of the board.

A manager who is shopping for computers has several choices. Each choice reflects a fundamental strategy.

• **Small software houses:** The hospitality manager should use caution in dealing with such firms. Technical improvements (primarily easier

programming languages and bigger memories) have encouraged start-up software houses to enter the hospitality field in large numbers. As the number of advertisements in any recent trade journal will show, there are too many firms in competition for the same business. Only a few can survive. Fewer still are big enough to be sued if they botch a job.

A hotel contracted for an accounting program from one such company. The price was low; there were innovative features and a fast technical hotline service. Seven months later, the company went out of business and the hotline telephone number was disconnected. The hotelier now has an accounting system that doesn't work and is paying a programming shop to extract business records from the mess.

The first mistake was dealing with a company whose financial stability or commitment was not established. Larger systems houses sometimes test the hospitality industry as a marketplace, but do not make any significant financial commitment. In either case, the hospitality manager can be left with an unsupported system.

The second mistake was in failing to recognize that accounting programs are one segment of the broad range of new software which can be purchased off the shelf. Shopping for software appliances is now much like shopping for physical appliances. The same common-sense question applies to both: "Do I buy a custom-built product or will a broadly marketed one do the job?"

Many software houses do not understand the hospitality industry. One otherwise excellent restaurant program is marred by misspelling of common restaurant terms. In this respect, the older specialized vendors of dedicated systems have an advantage.

- **Dedicated Systems.** Some managers prefer to buy a turn-key computer which requires no prior computer experience on the part of the owner. The vendor provides software, hardware, and training. Vendors of such dedicated systems perform a valuable service as a bridge to mainstream computer technology for managers who lack computer experience.

In the past the hospitality manager was dependent on turn-key vendors in order to progress technically. There was even a fear that such vendors would not be able to remain in business from lack of sales to the hospitality community. In Europe, hospitality executives are still being urged to take a diffident approach and not offend these system vendors. They are told they must "... insure that the relatively few companies providing such systems do not withdraw into more responsive market sectors."³

Now specialized vendors no longer have the option of withdrawal. They face competition both from software houses and from the large general purpose computer vendors.

- **Big mainstream vendors:** From the point of view of mainstream computer vendors—whether IBM, NCR, or Apple—there is a huge potential market in the hospitality industry. In the United States alone, just the food service segment employs over eight million people and has sales approaching 5 percent of the gross national product. International competition is forcing computer makers to look for new markets. They, like

hospitality people, view the industry as a technologically backward and ripe market. This threatens vendors of complete turn-key hospitality computer systems who have held a protected niche in a vertical marketplace.

Hospitality is relatively untouched by the computer revolution. We can still dine in most restaurants or buy a hotdog at a hockey game without seeing much evidence of mainstream computer technology. The devices we do see are often made by specialized companies, not by the giants such as IBM, Univac, Leading Edge, or AT&T. This situation cannot last: When a Burroughs executive vacations or dines out, his mind does not shut off.

• **Roll your own:** Powerful new 32 bit CPUs such as the Intel 80386 can do almost any normal business task. New memories and 60 megabyte hard disks are inexpensive. General purpose computers can take on the function of any specialized computer. Even in peripherals there is new choice. For example, a restaurateur may buy a relatively expensive, durable kitchen printer or a cheap mass produced printer. In the latter case, the printer may be regarded as a throwaway item. The final ingredient in this recipe for change is that it no longer requires any great technical skill to assemble a general purpose computer system from standard displays, system units, printers, and the like. A variety of programs are available to complete a system.

Consider a familiar example: A buyer of a Smith-Corona Personal Word Processor (in fact, a small specialized turn-key computer system) has the alternative of a personal computer, a printer, and a word processing program. The same can or soon will be said for a wide range of devices employed in the hospitality industry: door locks, oven controls, room thermostats, telephone switchboards. If the device is already partly computer controlled, the task of substituting a general purpose computer is easier.

Now vendors of hotel and restaurant information systems face a similar competition. A specialized computer system can be thought of as an appliance, albeit a large and expensive one, for doing certain tasks in an establishment. The alternative is a program running on a general purpose computer.

Within each large company are groups that argue for various marketing strategies, including that of providing software to the hospitality industry. The IBM commitment to the Westin Bonaventure project in Los Angeles is an example for other large computer vendors.

• **New Approach:** The traditional approach of specifying software, then obtaining the hardware, is now open to question. Previously, hospitality managers were advised to take this approach because there was a wide diversity of computers and operating systems. The odds were against a given program running on a given computer. In those days, one had to first find a program that matched the needs of the property, then find a computer upon which it would run.

Whether the choice is a dedicated turn-key or a general purpose computer, the advice is, at the very least, open to question. The proper approach is to consider the computer as a common medium for a variety

of programs. IBM has forced other companies to follow the lead into what has become a de-facto standard for all business computer systems. Even the bothersome questions of memory size and amount of disk storage now reduce to whatever space the current generation of programs requires. (As of this writing, that would be one megabyte of main memory and 40 megabytes of hard disk storage. A rule of thumb is to double these figures every two years.) One vendor of restaurant information system programs said, "We sell records; any good machine will play them."

• **Training is changing.** The hospitality manager will have to train people to cope with devices that have no physical existence, which consist solely of information stored in a computer memory chip. Previously, one who wished to build a device, say a clock, used physical tools and metal. Now we can get the same effect by writing a program. In the years immediately ahead, the computer will become so common that it will be, in effect, a medium in which appliances, which will be used by a variety of people, can be built.

For the present, training is more a question of attitude than specific knowledge which will grow obsolete. Attitudes are formed by experience. Good managers need to insure that employees get continuing exposure to software tools as they develop. Spreadsheets and word processors make a good beginning for a training program. However, the long term objective should not be merely to teach particular skills, however valuable. Our industry must teach its people to cope with the intangible software appliance as a concept.

Industry Has Rising Expectations

Established system vendors face a crisis in customer confidence. Hospitality people are asking overdue, pointed questions. For example, operators who run a spreadsheet or word processor on a home system ask why it will not run on the far more expensive system at work. Why, they ask, does the home system have half a million bytes of storage while the business system has only half of that? How can the office system be the latest in technology?

They know what a computer can and should do. For instance, a well known New York restaurant uses an IBM PC to print delightful colored menus in a few minutes. This kind of experience has led to discontent with some rigid systems that "were designed for hospitality applications."

They know that some systems are as unreliable, balky, costly, and temperamental as pre-Model T cars. They tell stories of mysteriously missing guest checks, of panics when the power went off, of disastrous system crashes when someone entered a negative ingredient cost, of outrageous maintenance charges, of the time the IRS implied a file had been erased deliberately.

Such stories do not appear in the advertisements of any vendor of computer systems and seldom in the pages of any hospitality trade journal. But they get around. Clearly, today's operators have learned, hopefully from someone else's problems. Because of this kind of experience, first hand or related at various conventions, the type of computer informa-

tion system which is acceptable to today's hospitality business has changed and will change even more in the immediate future.

In the past, discontent associated with having put money into a less than satisfactory system was assuaged by the knowledge that inflation would soften the expense of the mistake, perhaps make it possible to show a profit. Today, we are sending a message to the vendors: "We would like something better."

There are immediate needs that system vendors can fill for the hospitality industry.

- **IRS Pressures:** The Internal Revenue Service has also purchased new computers; oversights or arithmetic errors can trigger computer audits. The best way to counter a computer is with another computer. With a good set of computer records and a decent query structure, almost any (unreasonable) question can be answered immediately.

IRS probing of the hospitality industry will become more detailed. The IRS states that tip reporting by restaurant employees under the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 is only 32 percent. It estimates that compliance by operators lags considerably. In 1984, only 50,000 establishments filed Form 8027. The IRS estimates that over 100,000 should have filed and has a "compliance program" to go after the delinquents.⁴ The possible tax loss from "knockdown" or holding out cash receipts is of great concern to tax enforcement officials. It seems possible that the IRS might eventually take the position that lack of a computer information system constitutes negligent record keeping.

- **Consumer group pressures:** Joliet, Illinois, became the first city to require that food service establishments post fat content of meals. Bell-weather city San Francisco has an ordinance requiring all fast food restaurants to provide ingredient and nutritional information. The traditional defense that such demands impose an unreasonable burden on the small business person will become untenable as computer technology becomes more understood and used by the relatively upscale segment of the public that dines out most. Nutritional databases are already available at small cost,⁵ the computer point of sale systems are common, all that remains is to tie the two together.

The U.S. Government is beginning to respond to pressures by groups such as the Washington-based Center for Science in the Public Interest which petitioned that ingredient and nutrition information be placed on fast food packages.⁶ As long as jogging shoes continue to sell well, it is wise to assume that the country is on a course toward better health and nutrition. For both the hospitality industry and the computer industry, there is ample challenge in the trend.

Present Trends Provide Challenges

Many experts no longer speak of the computer revolution. Instead, they refer to the "software revolution," recognizing that a computer is nothing but a "box" in which programs run. Two hotels with the same physical system may get radically different results. One has the better program. The hospitality market, as viewed by some vendors, is at a fork

in the road. Some feel it will become a market for a type of computer which may be thought of as an appliance for running an establishment. Others doubt whether there is justification for a hospitality business to buy a specialized box. For instance, should a restaurateur buy an appliance computer or a general purpose computer which can run software appliances?

• **Appliance computers:** One concept advocated by the dedicated computer vendor is that of the "appliance computer." The first and only significant generalization of the idea by mainstream vendor was in Apple's Macintosh computer. The idea was eventually rejected as Apple moved this computer to an open architecture and encouraged third party software. We already see some devices which use appliance computers in very limited ways, such as the microcomputer controlled programmable oven or the talking dishwasher.

The other view is that increasingly sophisticated operators will more and more come to regard the computer as a general purpose medium in which software appliances will work. This fundamental difference will dominate the competitive struggle to come in the near term.

The new clock builder works with programs inside a new medium—the computer. One more step, that of burning the program into a read-only chip (ROM), is required to construct a digital watch. It is an easy matter to construct any of a variety of special purpose pocket calculators such as for wine vintage, language translation, or Hurst restaurant menu analysis.

Designers of restaurant equipment work in this new medium. For instance, the designer of a energy conserving, programmable oven can either build an appliance computer into his device or he can plug it into a general purpose computer. In either case, the computer is a medium in which at least part of the invention was built.

Many other workers can use this new medium. Artists already paint on computer screens; animated menu terminals can be placed in restaurants. Hotels and restaurants will have walls decorated with flat screen computer graphic displays of the programs of commercial artists.

• **Advantage of software:** A software appliance, regardless of where it is housed, evolves to take on functions which its physical counterpart cannot perform. Compare the digital and mechanical watches. One could predict that hospitality software appliances will similarly surpass their physical counterparts. In retrospect, the specific new features will seem obvious; now they are not at all apparent. Indeed there is a great deal of profit to be made by being the first to recognize, implement, and market such new features.

The price of mass-produced, general-purpose computers is falling rapidly. One reason is intense competition among mainline computer vendors. Another reason is the economics of volume production. The vendor of dedicated equipment, designed solely for some particular hospitality service, is at a disadvantage. For a given capability, the cost of the general-purpose machine is lower. It is interesting that the power of the CPU is no longer a major factor in the cost price of widely-used business machines. In volume production, the cost of a new CPU drops to in-

significance. The clear implication is that far more powerful software is in the offing.

It is clear that this is a period of transition. Not clear are the specific outcomes of the period of technical innovation that lies immediately ahead. Anyone who could accurately predict what computer system the hotel industry would prefer five years from now, or even what major features the system will have, would be in an enviable financial position. Flawed crystal balls allow us to look only at general trends visible within the hospitality industry.

There is competition between the new software appliance and the old hardware appliance. This is a new way of viewing the computer. The computer box will be regarded as the medium in which a software tool functions. Computers increase in power and their costs come down by a factor of two every two and a half years. The capability of a \$2,000 computer is already more than is needed for most business purposes. The limitation and controlling factor is now software. One can view the hardware as the medium within which a software appliance functions. All of us will learn to deal with software technology just as our grandparents learned to deal with automobiles.

No one dreamed the automobile would spawn drive-in restaurants, motels, and a new travel industry. Who would have thought it possible to locate a restaurant more than a few blocks from a trolley line?

The hospitality industry, along with the rest of the world, has reached another such fundamental turning point. Now computers promise to cause changes just as far reaching and difficult to predict. Opportunity and growth are ahead. History tells us that reality will exceed our expectations by a wide margin. What we cannot expect is a pause in the pace of change.

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