COMPUTING FOR EXECUTIVES

BY JOHN W. CHADWICK

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Preface

The executive's greatest challenge is time! You must strive to use this limited personal resource effectively—to make a positive impact on your business. Computers have tremendous potential to amplify your executive talent; yet a common complaint is that learning a computerized system takes more time and effort than a skilled seat-of-the-pants approach. The secret to success in executive computing is to know when to delegate and when to do-it-yourself.

This book provides guidelines for decision and directions for programming at the executive level. It is intended to give busy managers and small business owners a quick handle on the appropriate solutions to their very real problems. Executive computing is as much an attitude as a technical skill, and it is hoped that the discussion in this book will help develop both. Effective use of executive computing now allows the small company to have many sophisticated management tools that previously could only be used by companies with large, specialized staffs. To stay on top, the progressive business owner or manager needs a firm foundation in this important new field.

Introduction

An exciting merger of traditional management concepts and burgeoning microcomputer power has created *executive computing.* This important new field will soon become a potent force, affecting the careers of millions of small businessmen, entrepreneurs, and corporate executives. Those who grasp the overall principles of executive computing and are able to apply them will have a real competitive advantage. Success in your chosen career path or business venture can be greatly enhanced by developing the right frame of mind and a few new skills.

Briefly, by the "right frame of mind" I mean don't be intimidated by hardware, software, or industry jargon. After all, computers are designed by humans, and specialists in computer design have the same brainwave patterns as anyone else. Even very complex situations become understandable when broken down into smaller elements. So relax! There's no magic. Open your mind and let the knowledge flow in!

Yes, there are some new physical skills you will have to learn or improve. Most input to computers is by keyboard, so improving your typing will make it easier to give instructions and enter data. You will need to know how to use reference books and follow instructions because computer programs are very specific and detail oriented—and fuzzy thinking has no place in business either. You will need to specify and structure your problems in a logical way, and you may be surprised at how this self-discipline can carry

over to your personal and business habits, with positive results. You will need to develop a feel for when to do it yourself, delegate to staff, or hire outside consultants—a natural extension of your management skills to computer-based activities. Let's pin down the concept and definition of executive computing.

An executive achieves results by managing the work efforts of others. Five functions of management traditionally taught are management planning, organizing, staffing, directing, and controlling. All of the qualitative and quantitative techniques developed by business schools are tools for you to use in performing those functions. Goal setting (personal and corporate) and time management are widely acclaimed techniques and also aimed at increasing your effectiveness. Management by objectives, project management, and goal setting all stress the need to identify critical activities, set priorities, and use your efforts as effectively as possible.

There are a couple of intriguing threads running through all these concepts. First, all workers in an organization have one thing in common—an equal allotment of time, 24 hours each and every day. No more and no less. If we all try to be equally involved and equally expert at all tasks, there is a very restrictive limit on the variety and amount of work that can be accomplished. In essence, organizations are reduced to subsistence levels (like primitive tribes), driven by Maslow's hierarchy of needs. It's easy to see how and why specialization takes place in the workforce. Working as a team of specialists increases the total scope of concepts and therefore the variety of work that can be accomplished. Specialization, however, also creates a mutual dependence among members of the team, and therefore creates the need for the executive, a quarterback to call the plays and to keep the team driving toward the goal line.

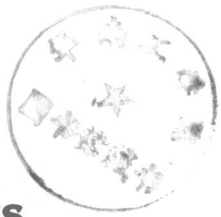
Second, there is the attitude that since our time is precious and limited, we must do those things that have the greatest positive impact on goal achievement, and delegate or forget about the rest. For instance, one time management approach suggests you make a list of "things to do today" and label each item "A" if it *must* be done today, "B" if it is important but could be delayed, and "C" if the item has no direct bearing on your goals. Then you are directed to forget about the Cs, delegate the Bs, and work on the As one item at a time until the A list is done.

The single profound concept that underlies this whole work philosophy is *personal productivity*. Your time is limited; you have specific talents and you have priorities. Therefore you must use all

tools available to achieve results. Simply put, to become a more effective executive you must increase your personal productivity! This same idea is behind many of the familiar inventions of our business world—the telephone, the photocopier, the dictating machine, and the calculator. The microcomputer is just one more in a long line of tools to increase your personal productivity.

Executive computing is defined as the blending of microcomputer technology with traditional management principles in order to increase the personal productivity of the executive. The remainder of this book is devoted to describing the fundamental principles of management and the available computer hardware and software, relating the elements of executive computing, developing decision guidelines, and giving you some tips on how you can take advantage of the power of executive computing.

The bottom line of executive computing is improved work performance, chances for business success, and the opportunity to enjoy the fruits of your labor.



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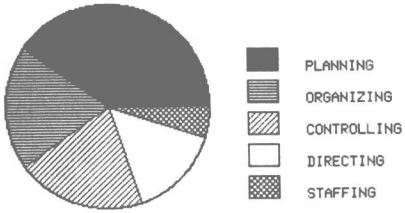

The Functions of an Executive

In order to stay competitive, today's executive (or manager, or business owner) must have a solid foundation of traditional management principles plus the spark and energy derived from applying the latest available technology to his profession. As illustrated in Fig. 1-1, the result can be a dramatic improvement in personal productivity and executive effectiveness. Five fundamental management principles have proven sound over the years and are traditionally taught in business courses. These are planning, organizing, staffing, directing, and controlling. This chapter reviews the basic principles and, as shown in Fig. 1-2, hints at some of the ways the executive computing approach can help you.

PLANNING

Planning involves selecting objectives for the firm, the department, or yourself as an individual, and setting the policies and procedures for achieving them. Effectiveness of all the other managerial functions depends on the quality of (or lack of) planning. Plans can be formal or informal, elaborate or simple, and they become the yardstick for performance measurement. One definition of a plan is as follows: a set of action steps for accomplishing a stated objective (or goal). The first requirement in planning is to establish objectives for the company, its subunits, and its individuals. (See Fig. 1-3.)

Then planning assumptions must be defined; for example,

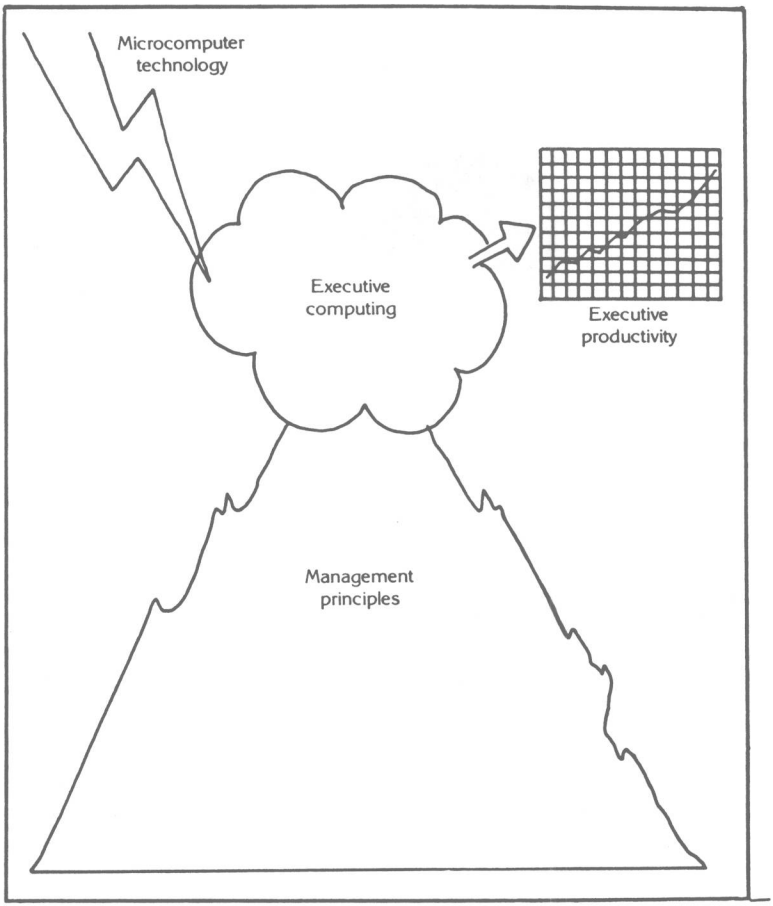

Fig. 1-1. Executive computing combines microcomputers and management.

expected population growth rates, cost of materials, market share, and so on. It is unlikely that a group of managers would agree completely on such planning assumptions, so compromises are usually made. The planning results, sensitivity to variations in basic assumptions is an area not often explored thoroughly because of the extensive recalculating and documentation it entails. Here is a prime opportunity to use the power of executive computing. Electronic spreadsheets are ideally suited to the sensitivity, or "what-if" analysis and will be discussed in detail later in this book.

The next steps in the planning process require identifying and evaluating alternative courses of action. There are many mathematical and computational techniques from the field of opera-

tions research, formerly the province of corporate planning departments, that are now available to microcomputer users. Concepts like discounted cash flow, decision-making under uncertainty, linear programming, and a host of others, although familiar to most business school graduates, required far too much computation for the typical small business or professional office. Now with microcomputers to do the number crunching, you need not be as limited by time. There are many applications packages that you can purchase; or, with diligence and a little professional help, you may develop customized programs to fit your needs. We'll spend more time on software development decisions in later chapters.

The planning period can be long- or short-term; and the frequency of the planning cycle can vary widely. Typically, monthly, yearly, and five-year planning horizons are considered. However, with the microcomputer on your desktop there is practically no limit on choice of planning horizon or frequency. In general, you should use action steps to plan far enough into the future to foresee the

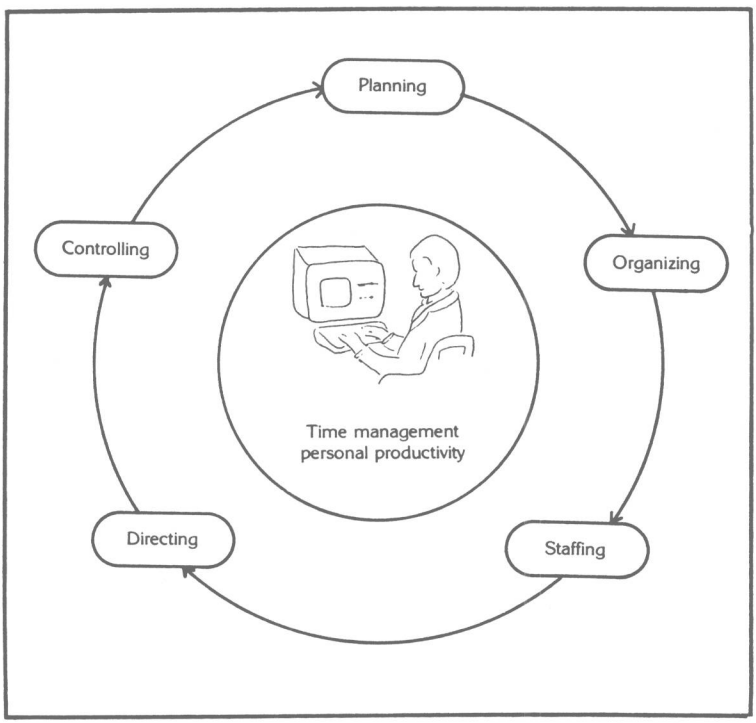

Fig. 1-2. The five functions of a manager can all be performed more efficiently when a microcomputer is used.

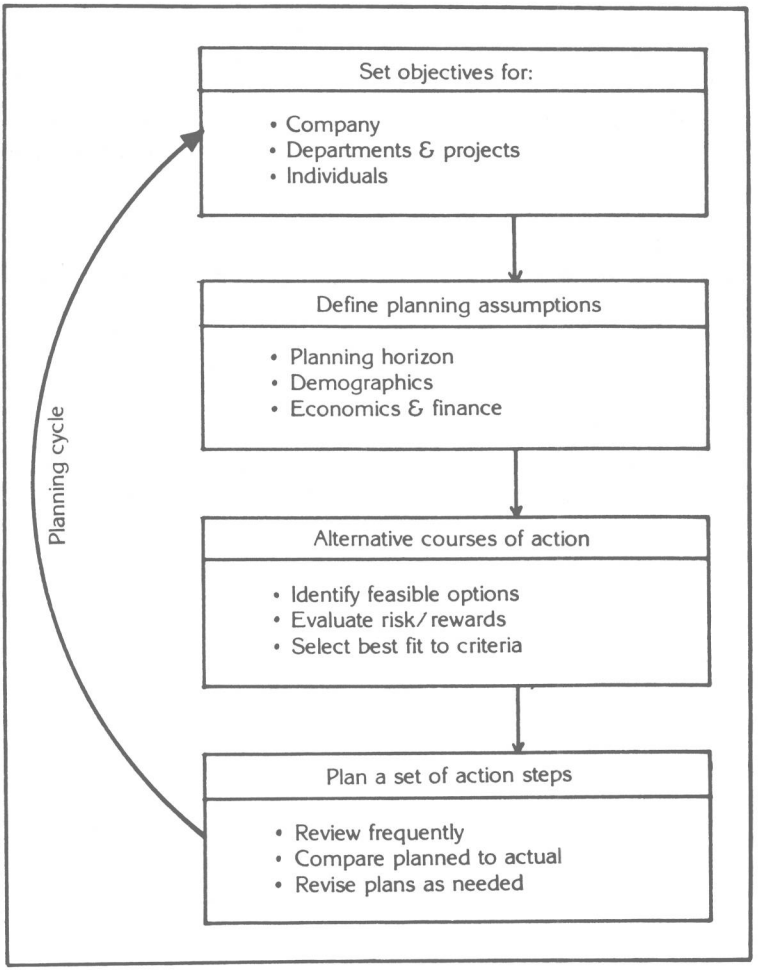

Fig. 1-3. Planning is one of the five functions of a manager.

fulfillment of the commitments involved in a decision made now. In other words, you are not really planning for future decisions, but rather planning the future impact of today's decisions. For example, if you have set a personal sales goal for the next twelve months, the appropriate planning horizon is (obviously) one year, and the action steps in your plan will work toward fulfilling the sales goal. During the next planning cycle you will review past performance and other factors in choosing the next goal and evaluating the action steps required to achieve it.

Another important principle to observe is flexibility. "Plans

are made to be changed" is a cliché worth remembering. Even the best plans are really estimates of future results. There are many forces at work in the business environment; some are subject to your control but more are beyond your influence. Therefore a plan is only an educated guess at future business conditions. When conditions change, or performance doesn't match projections, you must first be able to detect deviations from intended results and then make corrections by modifying your plans. Here again is an ideal application of executive computing: by comparing your job-cost and scheduling data base to your plan you can detect deviations, and by "what-if" analysis you can explore ways to get back on the intended path. Until recently, sophisticated critical path scheduling and costing techniques have required much more effort than an individual could produce. New software packages that run on your microcomputer have brought these powerful methods to your fingertips.

Many surveys and research studies have shown the importance of planning, and, paradoxically, the severe limits on time available for planning. The typical manager is usually hardpressed to keep up with daily operations, and finds very little time for thinking about next year. By greatly increasing the sophistication of analysis and reducing the computational time involved, executive computing can tremendously improve your personal productivity as a planner.

Your effectiveness as an executive occurs at your personal level. Once an overall course of action has been chosen, no matter what the size of the company, managers of each segment of the firm must make and execute the subplans necessary for converting the overall plan to reality. This chain reaction continues on down until there is a specific plan for each derivative activity of the main plan. In a large corporation, this can involve many layers of organization; for a self-employed professional, the top and bottom are the same level; but in either case, business success depends on the effectiveness of the individual.

ORGANIZING

In order to accomplish goals, carry out plans, and work effectively as a team, work activities must be intentionally *organized.* Rapid technological changes have greatly increased the variety of organizational approaches that can work effectively. Decentralization without loss of control is made much easier by rapid feedback from data bases, multi-user computer networks, and electronic mail. Organization along project, rather than functional, lines is

easier because sophisticated planning and control techniques can be set up quickly and monitored almost continuously by the executive.

Large organizations traditionally have used a departmental structure that groups workers by function, process, product, territory, or other logical arrangement. The need for departmentalization, though, is rooted in a human limitation known as *span of control* or *management span.* This principle, simply stated, says that one person can effectively manage the activities of a limited number of others, usually somewhere between five and fifteen. Obviously, if each person can only manage five others, then a large organization must have many levels of management. Along with that comes the inefficiency, communication difficulty, rules and regulations, and bureaucracy that we recognize as cumbersome. At the opposite end of the spectrum, consider the small office of one or two professionals. If each tries to do everything (write advertising copy, type letters, assemble the product, call on customers) his or her potential is severely limited. If they hire outside services to augment their efforts (an advertising agency, a secretarial service, a manufacturer's rep) they are faced with the same span of control problems large corporate managers have.

The solution? You guessed it, executive computing!—Word processors, electronic mail, timesharing networks, data bases, and spreadsheets are all tools available to the modern manager. The biggest limitation on span of management is the need for personal contact with superiors and subordinates to be sure that instructions are received correctly, delegated properly, and followed. To the extent that microcomputers can make communication more efficient, you can deal with a larger number of people and achieve better results. In the past, efficiency required close physical proximity. Now the ability to communicate more information more rapidly and in usable formats has enabled people to work together even though they may be in different offices or cities. There is a definite trend toward working at home, both in the so-called "electronic cottage industries," and with executives of large corporations. Portable computing equipment makes it possible for the traveling executive to stay in touch with his responsibilities, and even participate in conferences involving large amounts of detailed information and decision-making. Widely scattered project teams can be assembled to complete a specific job and quickly disbanded when the problem has been solved—all by using local or timesharing networks. Even where physical proximity is required, such as with a contractor who has several buildings underway, the mi-

crocomputer is extremely useful in scheduling human resources, delivery of materials, and financial control.

As illustrated in Fig. 1-4, executive computing has the potential for increasing the span of management, minimizing the number of management levels, and greatly augmenting your ability to communicate with others. Having a desktop computer, and even knowing how to use it, won't automatically make you a good manager; but it can provide detailed support and allow you to concentrate on the interpersonal skills that are most effective. You can be sure that computer graphics and databases will become as commonplace as the interoffice memo. The executive who can operate with comfort in that environment will surely have an advantage in career growth and business success.

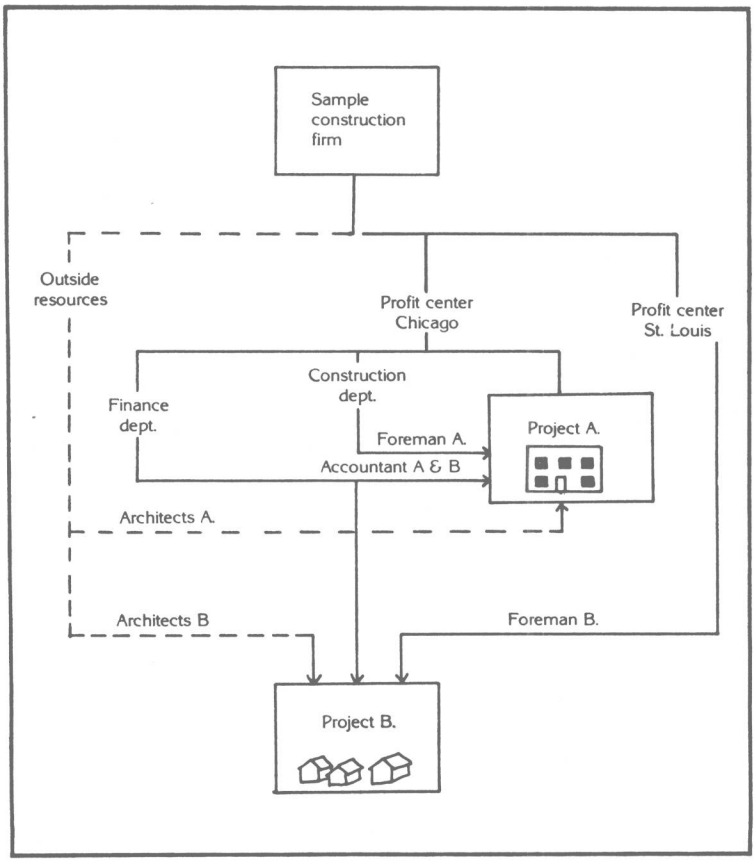

Fig. 1-4. Organizing is one of the five functions of a manager.