Chapter 4

Getting Organized and Finding Time

4.1 TIME AND ITS LACK

Time is one resource we never seem to have enough of; when it runs out, there is no more to be had. Yet, despite its importance and scarcity, it is remarkably easy to waste. To *Homo sapiens*, procrastination is as easy as eating, sleeping, and breathing; even for the engaged entrepreneurial engineer, getting the most out of the working day is a difficult challenge. To make matters worse, it is remarkably easy to blame our time wastage on external factors and overlook the enemy within. Our clients, our bosses, our families, and our friends are easy scapegoats; although they and others are sources of added work and interruption, the real villains are our own lack of organization, our own lack of discipline, and our own misunderstanding of the pivotal role time plays in our lives. To combat these difficulties, we must examine the many ways people waste time and consider key techniques for gaining control of our schedules and of our lives.

4.2 EFFECTIVE WAYS TO WASTE TIME

The wasting of time is an old and venerable activity. Long before the beginning of recorded history, our cave-dwelling ancestors spent time rooting around the cave trying to find the mislaid flint stone so they could start the fire. After many a cave meal many a cave spouse had to nag the procrastinating other spouse to take the carcass outside. With civilization came new technological achievements and advancements in social structure that have helped raise time wasting to its current high art. With alphabets came the opportunity for junk reading, and with movable type came the opportunity for high-volume junk printing. The establishment of regular postal service opened the door for delivery of that junk printing as junk mail. The telephone and the computer have opened new vistas; we now have untold opportunities to send megabytes of useless trash around the world at the speed of light.

Social organization has been no less successful in improving the opportunities to waste time. Kin groups led to tribal organizations to nation-states, to corporations, and, finally, to that most time-waste prone of all organizations, the university.

Over these tens of thousands of years the variety of ways to dispose of every spare moment has grown tremendously; nevertheless, it is possible to categorize fairly broadly the ways to waste time:

1. Misplacing things
2. Procrastinating
3. Task switching
4. Never saying no
5. Reading everything
6. Doing everything yourself

In the remainder of this section, we examine these techniques and their effectiveness in some detail.

In a business that generates more than 10 pieces of paper a year, one of the most effective ways to waste time is *misplacing* documents you'll later need. Some individuals are quite systematic in their efforts to misplace important documents. These pile drivers have developed an especially effective means of losing any document through the utilization of the pile document retrieval system (PDRS). In this system, the user creates several 3-foot-high piles of recent and not-so-recent documents. When faced with a need for a particular document or approached with an information-retrieval query ("Do you have memo X?"), the PDRS adherent wheels around to the piles and utters four magic words: "It's in here somewhere." Ten minutes later the PDRSer promises to send a copy when he or she finds it. Sure—and the check is in the mail.

Another proven means to waste time is flat-out *procrastinating*. What the art of procrastination lacks in subtlety it makes up for in unrelenting ability to avoid even the simplest chore. There is room for difference of opinion on this matter, but I feel some of the most creative procrastinators today are those who practice the art in the name of "time management." These people adopt time management schemes with impossible prioritization plans, using multicolored pens, fancy notebooks, or the latest in personal digital assistant technology, only to tell you why the simplest task can't be accomplished in under two fortnights. It is difficult to imagine that procrastination might become any more refined than this, but we shouldn't underestimate the innovative capability of our species.

An equally useful yet somewhat more subtle time-wasting technique is that of *task switching*. Because most jobs require some time overhead to start or restart, task switching maximizes time spent on overhead activities and minimizes time spent on productive ones. When combined with a telephone ringing off the hook and co-workers wanting to talk about the White Sox or the Bears, task switching can achieve near-zero rates of productivity. At the same time, it is the

rare task-switching pro who can't get sympathy from co-workers and friends by complaining about all of the balls he or she must juggle.

Another way to make sure you rarely accomplish anything is *never saying "no"* when you are asked to do something. Even modest-size organizations have a large number of people sitting around with nothing better to do than to generate forms, surveys, report requests, and other trivia to occupy one's time. A perfectly reasonable time-killing strategy is to take all these requests seriously. Fill out that survey on company recreational policy; answer that letter regarding a charitable contribution to Poodles Without Puppies. The skillful practitioner could spend an entire career on information exchanges no more urgent than these.

A close relative of never saying no is *reading everything* that crosses your desk. Important documents, like that 10,000-word article on Zimbabwean frazil ice, should not only receive a close reading from you but may even require a detailed proofing. Not only will this activity dispose of unneeded time, you'll have great fun in recalling third-grade glory days when you were spelling-bee runner-up.

The classic way to prove that you've arrived as a time waster is to try your hand at *broom grabbing*. This maneuver requires that you first hire good people and then do their jobs in addition to your own. This ploy earns bonus points for the successful stylist because you not only waste your entire day trying to do the work of your subordinates, you completely demoralize and alienate them in the process.

Though my tongue has been firmly in my cheek for much of this section, the satire belies a sympathy for our human condition and our propensity to waste time. We have all been pile drivers and procrastinators, had trouble saying no, read the unworthy, and grabbed the broom. The simple truth is that these time-wasting habits are some of the easiest counterproductive habits to acquire and among the most difficult to shake. Since our natural inclinations work against us, we need a helping hand, a guide to self-discipline; in short, we need a system. A comprehensive, seven-part system can help us gain control of our schedules. Although we have no control over the passage of time, we can control its use.

4.3 SEVEN KEYS TO TIME MANAGEMENT

With so many opportunities to waste time, it takes a special kind of systematized vigilance to gain control of our schedules and become as productive as possible. In this section, we consider a seven-point plan of attack against the forces of time wasting. The plan involves a two-pronged assault, a pincer movement combining rear action against physical disorganization and a frontal attack against the enemies of productive time use. In this way, we can hope to fight off loss of time and become as productive as we can.

Specifically, the seven parts of our fight against time wastage are these:

1. Find a place for everything and have everything in its place.
2. Work for Mr. To Do.
3. Sam knows: Just do it.

   4. A trash can is a person's best friend.

   5. Tune your reading.

   6. Manage your interruptions before they manage you.

   7. Get some help.

When these elements are used together, they are powerful medicine against the disease of time misuse.

4.3.1   A Place for Everything

The electronic office is upon us, and far from earlier promises of the elimination of paper, we are awash in a sea of computer-generated reports and are snowed under a veritable avalanche of laser-printed mail and memos. Much of this stuf does not deserve a second glance (and I wish the first were somehow avoidable), but some of it is germane and needs to find a home. The easiest thing to do with all this stuff is to put it in a pile on your desk. As more papers come in they, too, get added to the pile. For a time such a pile-oriented filing system works because information retrieval from a short stack is not too involved; but as the stack grows, the search time grows as well. It doesn't seem like such a big deal if viewed search by search, but suppose your stack grows to the point where a search for a single document takes an average of 3 minutes, and also suppose (conservatively) that you need an average of 10 documents per day. That means that you spend an average of at least 30 minutes per day searching through your piles. Assuming 5 days a week and 50 work weeks a year, this translates into roughly 125 hours, or almost 16 working days a year lost to shuffling through your pile. Almost all of that lost time is avoidable if you build your time management strategy on the bedrock of a good filing system.

   This draws us to an important conclusion: To use time wisely, create and use a filing system. The old proverb puts this in more memorable terms:

   Have a place for everything and have everything in its place.

There are two reasons—one physical and one psychological—why this is such an important tactic for good time management. Knowing where things are virtually eliminates the pile driver's pile shuffle, making you that much more efficient almost immediately. The second reason is that by putting things in their place you eliminate the stress of being literally surrounded by pending work. Of course, you must make sure you have a good way of knowing what still needs to be done after work has been filed away—and we will examine one approach to that problem in a moment—but the act of eliminating clutter in your work space can help reduce your worry about the many tasks you need to get done and let you concentrate on the job before you.

   I suppose there may be complex theories of how best to create a personal filing system, but the most important things are that you create one and that you use it. Whatever the system, it should be (1) organized in categories that match your work needs and (2) designed so it is easy to add new files. Over

time, it may become necessary to reorganize and recategorize; this will become evident as categories become overstuffed or go underused. Our discussion here is oriented toward the storage of physical pieces of paper, but the same principles apply to the organization of electronic files, as well. Electronic clutter can be every bit as nerve wracking and time consuming as physical clutter, and the efficient entrepreneurial engineer does what he or she can to manage it.

As a concrete example, I have listed the major categories of my own personal filing system:

- Correspondence (by name)
- Student files (by name)
- Course files (by class and year)
- Short courses (by title)
- Projects (by title)
- Proposals; requests for proposals (by title)
- Papers (by title)
- Paper reprints (by title)
- Personal business (by topic)
- Departmental business (by topic)
- College business (by topic)
- University business (by topic)
- Papers by others (by serial number)

You may wonder why I've shared this in all its gory detail. I remember that when I got my filing cabinet, shortly after taking my first job out of school at Stoner Associates, I was curious how other people organized their stuff. How is correspondence filed? How are project and proposal filing done? The system I have presented here is a cross between the things I learned at Stoner and some things I learned from my dissertation advisor. None of it is profound, but sometimes it is easier to design the mundane from other than a blank sheet of paper.

Although the list has been tailored to the needs of a college professor, there are a number of categories of general use. For example, everyone receives correspondence, and a good way to handle it is to have a single category, Correspondence. This category has individual files for frequent correspondents (by correspondent name) and miscellaneous correspondence files for ranges of the alphabet (A–F, G–M, etc.), where an individual letter is filed by correspondent name in the file folder with the appropriate range of the alphabet.

Student, course, and short-course files are peculiar to my line of work, but project and proposal files are probably necessary in yours as well. It is often useful to distinguish between active and inactive projects and proposals, relegating the inactive kind to deeper storage.

Professors are expected to publish or perish (I prefer the more positive exhortation, publish and flourish), and I keep my original papers in one category

and a fresh stack of reprints (ready to go out at a moment's notice) in another. Perhaps in your business it is important to have company literature ready to go out or perhaps copies of past reports or designs. Whatever is important to have available should probably be filed in its own category.

Often there are personal matters that require attention at work (salary review papers, benefits, etc.) as well as departmental and other organizational matters. I keep these in separate categories, and you may find a similar arrangement useful.

Finally, I should mention a word about filing technical papers. It is tempting to keep a file of papers by subject, and this is satisfactory for collections of 100 to 200 papers, but beyond that a more systematic method is necessary. Ben Wylie, my dissertation advisor, filed his papers by unique serial number and uses an ingenious system of cross-referenced index cards for retrieving papers by author, title, or subject. I've adopted the same serial-number system, but I use a computer database to cross reference the file records. I use that database online to help locate a needed reference at a moment's notice.

However you construct it, a filing system gives you a place to keep things out of your hair and a simple way to retrieve them. Take the occasion of the next exercise to plan a new or more appropriate file system.

Exploration Exercise

Plan a filing system appropriate to your current or future line of work. If you already use a filing system, make a list of its major filing categories. Consider what changes to your system would make it more useful to your current work situation.

4.3.2 Work for Mr. To Do

One of the worries you might have as a born-again time organizer is that if you file something in your spiffy new filing system—if you follow the put everything-in-its-place stricture—you'll be subject to another law of human behavior: Out of sight, out of mind. Without a systematic means of task tracking, this is a risk. The trick is not to depend on "mind" at all. The trick is to work for Mr. To Do.

We've all used to-do lists at one time or another, but the veteran time manager uses one with considerable zeal. Some time management books suggest elaborate prioritization schemes, multiple lists, fancy calendars, and so on. The tools of our trade will be much simpler: a monthly calendar, an $8\frac{1}{2} \times 11$-inch lined pad of paper, and a diary or their electronic equivalents. The calendar is simply used to record all events, appointments, and fixed-date deadlines. The pad of paper is used to track all activities, both to do and pending, as well as each day's activities. The diary is used to track who you talked to and what you did. Of course, in an age of ubiquitous personal computers and personal digital assistants, calendars, to-do lists, and diaries all have electronic counterparts. I

prefer to do my calendar electronically and my to-do list and diary in pen and paper. Perhaps you find it more convenient to do them all electronically, all on paper, or in some hybrid of the two. Regardless, the important thing is to find an arrangement that is convenient for you and well used.

For my to-do list, rather than elaborately classifying or prioritizing, I list two types of activities: to do and pending. To-do activities are those I need to do within the fairly immediate future. Pending activities are those I would like to do or those that must be done sometime down the road. With this scheme, every morning I review my activities of the previous day and create a list of the current day's activities. As each activity is accomplished, I take great pleasure in crossing it off both the daily and the pending lists; at the beginning of each week, I make a new sheet, updating the to-do and pending entries.

The calendar keeps track of dated activities and deadlines. Whenever an activity with a definite deadline comes in, it goes on the calendar and on the pending list. I check the calendar at the beginning of each week to see which activities are coming due. These are placed on the to-do list for the week, keeping me up to date.

I use the diary to keep track of who I talked to and what I did. To make it simple, I try to make entries in the diary as they happen. Sometimes this results in a somewhat messy diary, but I don't waste time writing and rewriting the same information. I also let my diary double as a technical notebook and do calculations and sketches for new technical ideas there as well. I find that bound notebooks of graph paper with numbered pages work well for both technical and written material. Keeping a written and dated record of your technical ideas is also useful in a patent filing. Pages from a business-technical diary can be notarized, and this is helpful if there is a legal question as to when an idea was developed.

The benefits of this system are several. Compared to many schemes, it requires little or no time overhead. Keeping track of your tasks on a to-do list helps clear your mind of the clutter of the many things you have to do. As the use of the filing system unclutters your physical space, task tracking unclutters your mental space. It also gives you a psychological boost every time you cross off a job that's done. Perhaps more importantly, by getting you to face what you do from day to day, it allows you to get a better sense of your productivity potential and to be better able to choose those things that are really important to your work.

Exploration Exercise

If you currently use a to-do list on a regular basis, stop using it for 3 days. If you do not currently use a to-do list on a daily basis, adopt the scheme just described for a 3-day trial period. After the experiment, write a short essay comparing and contrasting your experiences with and without the to-do list. Include a discussion of your perception of productivity, and cite any physical evidence of differences you experienced.

I don't want to bias your thinking, but if I get lazy and leave my list for a day or two, I can hardly wait to get back to it and get control of my working life. One of the easiest ways to keep your list under control in the first place is to get the little stuff done and off the list as soon as possible, and that's the next topic.

4.3.3   Sam Knows: Just Do It

My 6 years at the University of Alabama were happy and productive, and there I had the privilege of working with a great group of people. One of the lessons I learned came from a memorable mechanics professor and retired Army Reserve colonel, Dr. Sam Gambrell. Sam had the cleanest in-basket of any person I have ever known. Sam's in-basket was so clean that a piece of paper didn't even think about hitting his basket before he had a response completed and shipped out. I must confess that, at first, I thought it was a little silly to be so ruthless about incoming small stuff, but over the years I consciously tried to be a little bit more like Sam, and I began to see the wisdom of his ways.

Now I try to handle things as they hit my in-basket. If they're little, I just do them; if they're big, I file them and list them with Mr. To Do. There is some judgment required here, but I find when I refuse to let regular little stuff pile up, I keep a clearer calendar for the big things that need my attention. I should also confess that I can't quite live up to the example set by Dr. Sam, and from time to time I do get backed up with little things I should have handled quickly. Nonetheless, I know what I should do, and I try to keep clutter out of my basket and keep work flowing out the door.

4.3.4   A Trash Can Is a Person's Best Friend

One constant in business life is that more tasks come across your desk than you can or should do. The easiest way to handle some of them is simply to refuse to do them. The Almighty made junk mail and memos, but he also made pitching arms and wastebaskets, and we should use them. When a potential task first crosses your desk, ask whether you really need to do it; of course, as the new kid on the block, being too fussy can earn you the reputation of being uncooperative, so the new guy or gal needs to tread somewhat warily here. Even so, pay little mind to the junk mail, phone solicitations, and cold calls from salespeople—unless the products they are offering are necessary to what you're doing. Otherwise, let that useful two-letter word—no–together with the wastebasket (alias "the round file" or "file 13") unclog your schedule as fast as they can.

4.3.5   Tuning Your Reading

To make the "go, no-go" decision to keep something or pitch it, we often have to read some document, brochure, or other piece of written material to get enough information to know whether something is important or not. In addition, many

tasks in the course of the business day have a necessary reading component. On the other hand, just because some amount of reading is necessary does not mean that every business reading task requires the full attention you might put into the reading of a textbook or a novel.

In fact, business reading requires that you have different speeds, that you tune your reading to the task at hand. Unfortunately, years of engineering schoolwork have taught many engineers to read at a methodical and often fairly slow speed, to absorb, for instance, all the material in some fluids or electromagnetics text. In business, this approach is wasteful, and just recognizing that different materials deserve different levels of attention can help.

A simple way to tune your reading is to think of reading at three basic speeds:

1. Skimming
2. Scanning
3. Reading

When you skim, your eyes should move from titles, to headings and sub-headings, to figures, charts, and tables, perhaps taking in important introductory and summary sentences at the beginnings and endings of appropriate paragraphs. Before reading any document in more detail, use a preliminary skim to derive a road map upon which more detail can be charted during a second pass; this should become a regular habit with everything you read for business.

A scan is more comprehensive than a skim; it should cover all elements of a document, not word for word, but as fast as you can while still feeling that you have passed through the whole thing. Speed-reading books teach scanning techniques—for example, the S-curve wiggle down the page and sighting whole word groups instead of single words—and such books and courses can be useful in building your scanning ability. I disagree with some of the speed-reading literature when it makes the overzealous claim that everything can and should be read at scanning speeds. Highly technical material, legal documents, contract specifications, and the like must be read and reread at no faster than near-spoken speeds; and, to be honest, recreational reading is more fun at slower speeds. Nonetheless, scanning is effective for much business material.

I will use the term reading to denote your normal textbook reading speed. How fast do you read when it is important for you to remember all of the material that you cover? I think that speed-reading books are somewhat deceptive in this matter by implying that there is little loss in comprehension with faster scanning rates. They "cheat" by defining comprehension as the percentage of correct answers to a superficial multiple-choice quiz given immediately following a reading. Full comprehension cannot be measured by multiple-choice exams; it comes from deeper readings than are possible with a scan. The speed readers do have a point, however, and much of what comes across an engineer's desk deserves little more than the type of scan taught in their books.

Experiment with skimming, scanning, and reading in the following exploration exercise.

Exploration Exercise

Take a five-page document from work, school, or home and give it successively (1) a skim, (2) a scan, and (3) a reading. Time each activity, and after each write down everything you can recall. At the end of all three activities, write a short paragraph comparing the amount learned in the successively more comprehensive readings. Consider under what circumstances the incremental knowledge gained would be worth the additional expenditure of time.

In general, it is best to approach a reading task with a skim followed by a scan and, if the information is sufficiently important, one or more readings.

4.3.6   Managing Interruptions

Almost every time management book that I have read exhorts you to manage interruptions; in a vacuum, this is good advice. The time waste of interruptions is both direct—coming from the expenditure of time on things you hadn't planned—and indirect—coming from the waste of unintended task switching and the associated overhead required to get back to the task at hand. Therefore, all other things being equal, interruptions should be avoided. But all other things are never equal. You don't live in a vacuum; you live in a world of co-workers, clients, bosses, and family members, all of whom have some legitimate claims to a portion of your time. You risk being seen as unfriendly, uncooperative, or worse if you are overly zealous in the protection of your time. If your engineering degree is newly minted, these warnings are especially important because you are low person on the totem pole, and part of the reason you have been hired is to make life easier for your senior co-workers; being unavailable can be a step toward being unemployed.

On the other hand, disruptions can be managed—albeit carefully. There are a number of ways to hold them at bay. The phone is a primary interrupter, and forwarding your calls to a receptionist or secretary during key work periods can help control phone interruptions, at least for a time. In our electronic age, many people use an answering machine, although some are old-fashioned enough that they prefer that their callers talk to a real person, not a whirling strip of magnetic media. Either way, once messages are taken, you are in control and can decide whether and when to return calls. Of course, your callers may likewise be unavailable when you return their call, thereby starting a nice game of telephone tag. Electronic mail can be useful in this regard, allowing a message to get through to an individual without directly interrupting that person. On the other hand, e-mail opens all kinds of avenues for wasting time, and many electronic messages deserve the electronic equivalent of the round file that receives so much of your other kind of mail.

Unwanted visitors can be partially controlled by closing your door or putting up a signal or sign at your cubicle at times when concentration is essential. Here again some caution should be exercised because always shutting out visitors can cut you off from your co-workers. Another way to control unwanted interruptions is to find a hiding place where you can work undisturbed. Much of this book was written in coffee shops and libraries, away from the phone and from my desk. Again, such methods should be used sparingly, lest you gain an unwanted reputation for being unfriendly (or for frequenting coffee shops during business hours).

Within reason, then, interruptions can be at least partially managed, but it is important to monitor the effect of your efforts on those around you. If you control interruptions by disconnecting from your network, you've lost more than you've gained. On the other hand, if you can keep interruptions under control, you're going to accomplish more in less time and be a happier camper, having greater productivity and better control of your schedule.

4.3.7   Getting Help

Another stock piece of advice in the time management literature is to delegate your work to others. It is true that managers must give jobs to others, let them do the work, and avoid grabbing the broom. However, a new engineer is not going to have anyone to delegate anything to, and sitting around complaining about that fact is counterproductive. In fact, griping about lack of assistance is one of the worst ways to waste time. Getting the job done is job one, and to get it done requires learning the secrets of personal productivity.

Nevertheless, even the new kid may have some opportunities to save time by working through others. Secretaries can be helpful, but the old-fashioned secretary has become an endangered species. Moreover, in this day and age, with a computer on every desk, it's questionable whether the usual back and forth with a secretary on something like straight typing is the fastest way to go. I find it useful to work with well-trained people who know my system and preferences, but using pool staff can be less productive than doing it myself. Of course, whether this is true for you depends on how fast you type; just make sure that when you get "help" it really does.

Doing rough documents through dictation is another way to use the help of others to make your life easier. At first, using dictation equipment takes some getting used to, but after some practice short letters can be completed on the first trial and longer documents will require only modest corrections. Dictation can be especially useful in initiating a rough draft. The raw text generated by dictation can be edited, cut and pasted, and interpolated with new text in the generation of a first draft. As modern speech recognition has improved, talking drafts straight into a computer has become more prevalent and can open up opportunities for productive use of driving or travel time.

SUMMARY

In this chapter, we've examined ways to waste and to save time. The primary key to personal organization is to "have a place for everything and have everything in its place," which requires the establishment and use of a personal filing system where all your business papers can find their final resting place.

Once you have a place for everything, the next most important key is to work for Mr. To Do. Keeping a simple to-do list of current and pending activities, together with things on today's agenda, will force you to face your time use (or abuse) squarely; the list will act as a kind of higher authority to keep you accountable. Beyond these two key activities, a number of other techniques can be adopted to keep your to-do list more manageable and to prevent unnecessary interruptions from diverting you too much. Some caution is required in adopting time management techniques that affect others to make sure the activity doesn't weaken your relationship with the people important in your work life; if reasonable care is taken to monitor this, you can save time and be viewed as a team player simultaneously.

EXERCISES

1. Interview an individual whom you judge to be an effective time manager. Write a brief essay summarizing the key techniques used by that person to help make him or her more effective.

2. Interview an individual whom you judge to be an ineffective time manager. Write a brief essay identifying the key ways he or she wastes time.

3. Identify the elements of your process of personal organization. What elements do you use? Diary, calendar, to-do list, filing system, or other? How frequently do you use them? Write brief paragraphs identifying three ways in which your current organization encourages effective time use. Write brief paragraphs identifying ways in which your current system encourages time misuse.

4. Based on your answer to number 3, design a new process of personal management. Write a short report detailing the design and its rationale.

5. Based on your answer to number 4, implement the new process of personal management and use it for 2 weeks. Write a short report on its benefits and shortcomings. Based on that analysis, modify the design and implement the changes.

6. Write a paragraph identifying your stand on the potential conflict between time management and human relations alluded to in this chapter. Is there a conflict? Which is more important? It might be helpful to consider specific incidents, hypothetical or empirical.

7. For 1 week practice what Sam Gambrell preaches, doing little things immediately and filing others for further consideration. Write a brief paragraph describing your experiences.