

Time Management

Randy Pausch

Carnegie Mellon University

<http://www.randypausch.com>

At this talk you will learn to:

- **Clarify your goals and achieve them**
- **Handle people and projects that waste your time**
- **Be involved in better delegation**
- **Work more efficiently with your boss/advisor**
- **Learn specific skills and tools to save you time**
- **Overcome stress and procrastination**



= really important point

Remember that time is money

Ben Franklin, 1748

Advice to a young tradesman

Introduction

- Time must be explicitly managed, just like money
- Much of this won't make sense until later (too late?): that's why this is on the WWW
- Faculty vs. Grad Students vs. Undergrads
- Lightning pace, heavy on techniques

Outline

- **Why is Time Management Important?**
- **Goals, Priorities, and Planning**
- **TO DO Lists**
- **Desks, paperwork, telephones**
- **Scheduling Yourself**
- **Delegation**
- **Meetings**
- **Technology**
- **General Advice**

One Good Thief is Worth Ten Good Scholars:

- **Time Management for Teachers, Cathy Collins, 1987**
- **Career Track Seminar: Taking control of Your Work Day 1990**

Why Time Management is Important

- “The Time Famine”
- Bad time management = stress
- This is life advice

The Problem is Severe

By some estimates, people waste about 2 hours per day. Signs of time wasting:

- Messy desk and cluttered (or no) files**
- Can't find things**
- Miss appointments, need to reschedule them late and/or unprepared for meetings**
- Volunteer to do things other people should do**
- Tired/unable to concentrate**

Hear me Now, Believe me Later

- **Being successful doesn't make you manage your time well.**
- **Managing your time well makes you successful.**

Goals, Priorities, and Planning

- **Why am I doing this?**
- **What is the goal?**
- **Why will I succeed?**
- **What happens if I chose not to do it?**

The 80/20 Rule

- **Critical few and the trivial many**
- **Having the courage of your convictions**
- **Good judgment comes from experience**
- **Experiences comes from bad judgment**

Inspiration

“If you can dream it, you can do it”

Walt Disney

- **Disneyland was built in 366 days, from ground-breaking to first day open to the public.**

Planning

- **Failing to plan is planning to fail**
- **Plan Each Day, Each Week, Each Semester**
- **You can always change your plan, but only once you have one!**

TO Do Lists

- **Break things down into small steps**
- **Like a child cleaning his/her room**
- **Do the ugliest thing first**

The four-quadrant TO DO List



Due Soon

Not Due Soon

Important

1

2

**Not
Important**

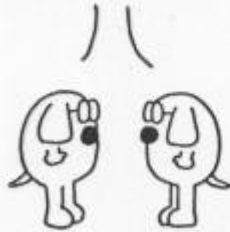
3

4

	1	2
Not Important	3	4

DOGBERT'S LAW OF BUREAUCRATIC GRIDLOCK

BUREAUCRATIC GRIDLOCK IS CAUSED BY PEOPLE WITH DIFFERENT PRIORITIES WHO PRACTICE GOOD TIME MANAGEMENT.



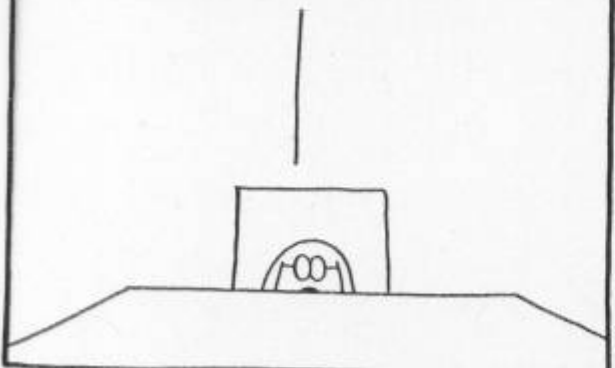
DID YOU GET THE INFORMATION I NEED FOR MY IMPORTANT PROJECT ?



NO. IT'S NOT IN MY TOP THOUSAND PRIORITIES.



DID YOU BRING THE INFORMATION I REQUESTED FOR MY IMPORTANT PROJECT.



NO, BECAUSE YOUR PROJECT DOESN'T MATTER TO ME.



THOSE TIME MANAGEMENT CLASSES SURE HAVE FREED UP OUR SCHEDULES.



S. Adams

Paperwork

- **Clutter is death; it leads to thrashing. Keep desk clear: focus on one thing at a time**
- **A good file system is essential**
- **Touch each piece of paper once**
- **Touch each piece of email once; your inbox is not your TODO list**



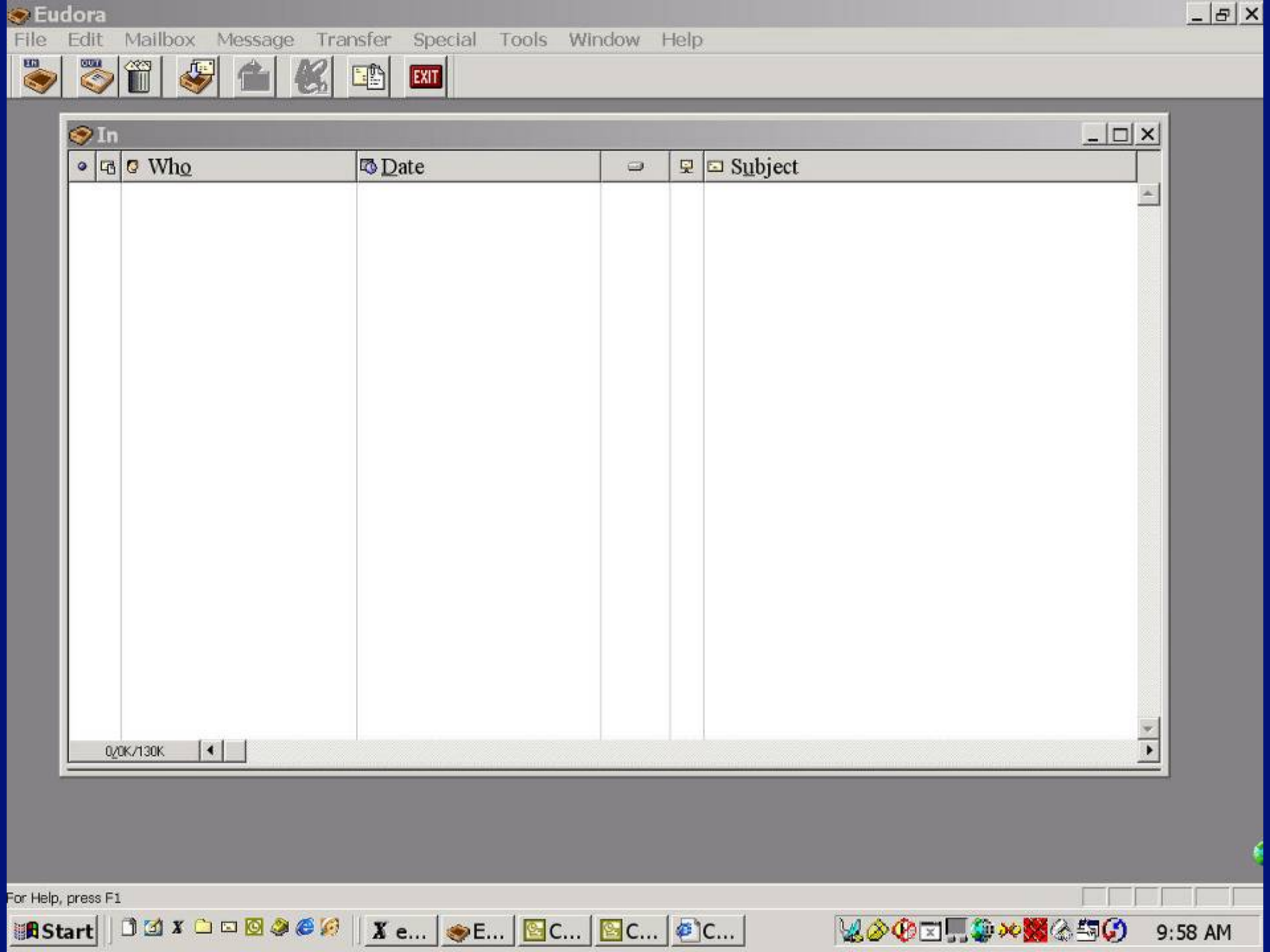
My Desk







1 Barry Lhormer thank you -> skylights
0 really account for my time: palm pilot program
1 Jane Prey: Steve & Wanda
1 NSF EHR directorate c:\pausch\RESEARCH\FUNDING\NSF\ehr/announcement.txt
1 SIGGRAPH paper on VR rig (need Dan & Asim packaging)
1 c:\pausch\RESEARCH\UntetherVR\OtherSystems.txt, especially Patti Denbrook at NRL
1 get funding (NSF and other) for Alice
1 look for a designer (cliff replacement); - Design masters ; - HCI Ph.D. - undergrad
1 update beneficiaries on retirement plans
1 wide FOV NTSC HMD
2 BVW: harden gloves/buttons, good screenshots in advance (press packet), camera rehearsal
2 Book Cohon, Lanier, Sutherland, Brooks <who else> for next year's BVW
2 Dan S. -> get out of teaching PUI in the future
2 ETC LONG TERM: we need faculty doing *real research*
2 Who are the 10 people to show the new Alice to? Jane Prey, Mark Stehlick, Jim Morris, Alan Kay
2 follow up email with Jinny Meade of Intel for ETC funding
2h order wedding pictures
3 Get Larry Niven to come to campus
3 Jai Will
3 Jai's investments
3 VR Build John Hench's Portal, All of Mary Poppins (penguins); stereo?; strob light transition; what can *only*
we* now do in VR?
3 turing test for video games: simple study
3h put up door knocker
3h thank you note to Jim Graham
4 update my Wil (do a real one)
5 write a paper w/Denny on all the ways we can quantify immersion
5 Acm and iee membership so i can be a fellow down the road mary shaw
5 Jai: appraise ring: thank you to Chad callsToAppraiseRingRickicki's boss
5 caller ID that projects caller's face...
5 plumber; overall water pressure): Bob Buerkle of Standard Plumbing (412)-621-5579 we had Jeff Toluseak (sp?)
6 Petra Fallaux - Dan Boyarski recommends her film/scene/camera angle lecture ; Petronella E Fallaux : Miller G
allery : pf0w+@andrew.cmu.edu : x3877
6 caitlin intel fellowship
6 take a drawing class
6h constantini - send BVW videotape and thank you note
7 Six-sided IOWA cave connection (Get an ETC student there for the summer)
7 single height PCMCIA card with hard drive
8 shooting range on way to airport 494-2803
-----XEmacs: todo.txt 65% (Text PenDel)-----



Eudora

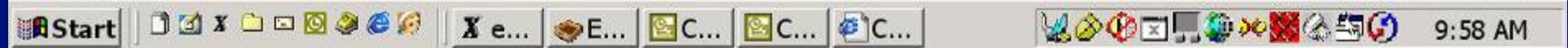
File Edit Mailbox Message Transfer Special Tools Window Help



Who	Date	Subject

0/0K/130K

For Help, press F1



	Mon, Oct 29	Tue, Oct 30	Wed, Oct 31	Thu, Nov 01	Fri, Nov 02	Sat, Nov 03	Sun, Nov 04
	David Woolley br		Halloween Halloween (United States)	MONTHLY STUFF NO TINA	Orlando lunches: Kyle, M TAD! Peter Thadd	visit Mom & Dad	EstiN. Anniversary PUMP Football Rain Date
7 am							
8:00	EXERCISE	EXERCISE	EXERCISE		EXERCISE		
9:00				Basketball			
10:00	Don & Janeen (ETC)	earth theater demo? dentist	Call Jane Prey (703-292) Ph.D. Student Meetings (Stage3)		9:45am-10 Jai Doctor visit		
11:00					Kodak conference call		Church
12 pm	Brad myers amulet (stage3)	SCS council					
1:00	Mocap (ETC)	PUT (NSH 1305)	ET tir	PUT (NSH 1305)			Steelers HOME Baltimore
2:00							
3:00	Randy S. (ETC)				Time Management Talk (5409)		
4:00	Sara Masters <mast410 Research Seminar	Alice Team (stage3)	Stage3 Meeting	CSD Faculty Meeting (Wean 4623) CSPR (We		Drive to Sheriffs	Football (Taylor Alderdice)
5:00	5:45pm-6:00pm drive ho					sheriffs	
6:00	cal "Steven Dow" HCII g				Drive Home		
7:00	Monday DINNER	Tuesday DINNER	Wednesday DINNER	Thursday DINNER	Friday DINNE		
8:00							
9:00	Steelers HOME Tennessee		West Wing Law & Order				
10:00							
11:00							

October 2001

M	T	W	T	F	S	S
24	25	26	27	28	29	30
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

November 2001

M	T	W	T	F	S	S
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

December 2001

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

January 2002

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

February 2002

M	T	W	T	F	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16







**Speaker phone:
hands are free
to do something
else; stress
reduction when
I'm on hold.**

Telephone

- **Keep calls short; stand during call**
- **Start by announcing goals for the call**
- **Don't put your feet up**
- **Have something in view that you're waiting to get to next**

Telephone

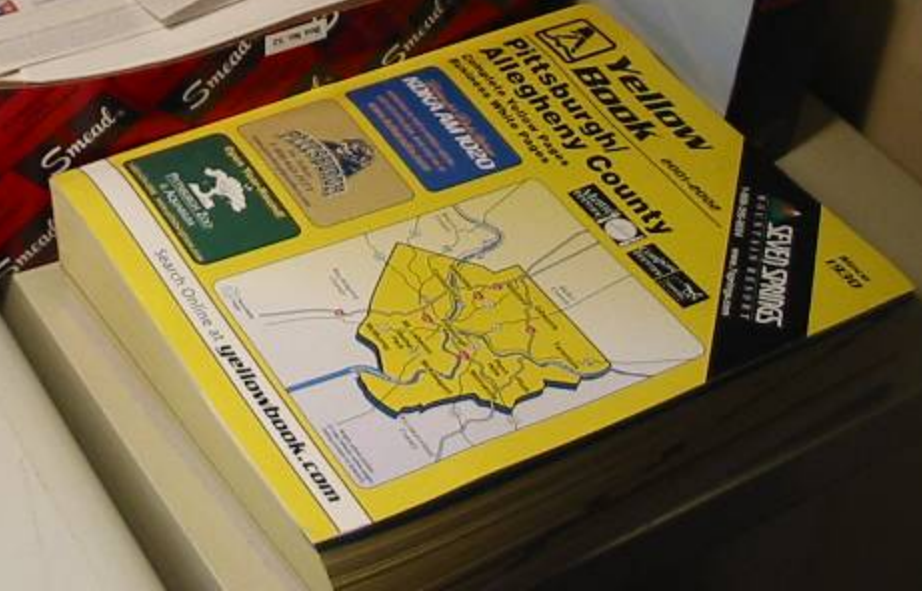
- **When done, get off: “I have students waiting”**
- **If necessary, hang up while you’ re talking**
- **Group outgoing calls: just before lunch and 5pm**

sonic
VOLUME
RANGE
FLASH
PROGRAM
AUTO
PAUSE












Marie Perle
Professor
German Literature, Linguistics, Translation and Theory
Department of Germanic Languages and Literatures

Carnegie Mellon University
School of Computer Information Institute
4000 Forbes Avenue
Pittsburgh, PA 15224-2801

Phone: +1 412-261-5574
Fax: +1 412-261-3188
e-mail: perlem@cmu.edu
<http://www.spryhw.com/~mper>



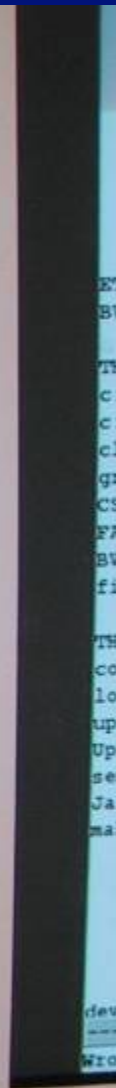




TINA

Stage 3
Meeting

October 2001 Program & Budget Review





Reading Pile

- **Only read something if you' ll be fired for not reading it**
- **Note that this refers to periodicals and routine reading, which is different than a research dig**

Office Logistics

- **Make your office comfortable for you, and optionally comfortable for others**
- **No soft comfortable chairs! I have folding chairs, some people cut off front legs**

Scheduling Yourself

- You don't find time for important things, you make it
- Everything you do is an opportunity cost
- Learn to say “No”

Learn to say “No”

- Will this help me get tenure?
- Will this help me get my masters?
- Will this help me get my Ph.D?
- Keep “help me” broadly defined

Gentle No's

- “I’ ll do it if nobody else steps forward” or “I’ ll be your deep fall back,” but you have to keep searching.
- Moving parties in grad school...

Everyone has Good and Bad Times

- **Find your creative/thinking time. Defend it ruthlessly, spend it alone, maybe at home.**
- **Find your dead time. Schedule meetings, phone calls, and mundane stuff during it.**

Interruptions

- **6-9 minutes, 4-5 minute recovery – five interruptions shoots an hour**
- **You must reduce frequency and length of interruptions (turn phone calls into email)**
- **Blurting: save-ups**
- **E-mail noise on new mail is an interruption -> TURN IT OFF!!**



Cutting Things Short

- **“I’ m in the middle of something now...”**
- **Start with “I only have 5 minutes” – you can always extend this**
- **Stand up, stroll to the door, complement, thank, shake hands**
- **Clock-watching; on wall behind them**

Time Journals

- **It's amazing what you learn!**
- **Monitor yourself in 15 minute increments for between 3 days and two weeks.**
- **Update every ½ hour: not at end of day**

TIME LOG

	ACTIVITY	BUSINESS FUNCTION	NOTES
TOTAL			
7:00- 7:15			
7:15- 7:30			
7:30- 7:45			
7:45- 8:00			
8:00- 8:15			
8:15- 8:30			
8:30- 8:45			
8:45- 9:00			
9:00- 9:15			
9:15- 9:30			
9:30- 9:45			
9:45-10:00			
10:00-10:15			
10:15-10:30			
10:30-10:45			
10:45-11:00			
11:00-11:15			
11:15-11:30			
11:30-11:45			
11:45-12:00			
12:00-12:15			
12:15-12:30			
12:30-12:45			
12:45- 1:00			
1:00- 1:15			
1:15- 1:30			
1:30- 1:45			
1:45- 2:00			
2:00- 2:15			
2:15- 2:30			
2:30- 2:45			
2:45- 3:00			
3:00- 3:15			
3:15- 3:30			
3:30- 3:45			
3:45- 4:00			
4:00- 4:15			
4:15- 4:30			
4:30- 4:45			
4:45- 5:00			

TIME LOG

	ACTIVITY														BUSINESS FUNCTION	NOTES				
	TOTAL	READING	DICTIONATION	PAPERWORK	PHONE CALLS	CONSULTATIONS	MEETINGS	INSTRUCTIONS	TRAVEL	PLANNING	OTHER	SALES	PURCHASING	PRODUCTION			FINANCING	PERSONNEL	CUSTOMER REQ. HANDLING	ADMIN. FUNCTIONS
7:00- 7:15																				
7:15- 7:30																				
7:30- 7:45																				
7:45- 8:00																				
8:00- 8:15										X								X		CHATTING
8:15- 8:30	X																	X		INCOMING MAIL
8:30- 8:45		X																X		MAIL
8:45- 9:00				X								X								MISC. PHONE CALLS
9:00- 9:15	X																		X	READING NEWSPAPER
9:15- 9:30	X																		X	READING TRADE JOURNAL
9:30- 9:45									X										X	COFFEE BREAK
9:45-10:00								X											X	COFFEE BREAK
10:00-10:15				X										X						ACME - WARRANTY PROBLEM
10:15-10:30				X					X											SAW RICHARDSON
10:30-10:45				X					X											"
10:45-11:00				X																WORK ON SALARY SCHEDULE
11:00-11:15				X										X						"
11:15-11:30				X														X		WEEKLY REPORT
11:30-11:45				X							X									SAW OFFICE MACHINE SALES-PERSON
11:45-12:00						X												X		LUNCH WITH RICHARDSON
12:00-12:15				X											X					"
12:15-12:30				X											X					"
12:30-12:45				X											X					"
12:45- 1:00				X											X					"
1:00- 1:15						X												X		RETURN TO OFFICE
1:15- 1:30				X														X		RETURNED MISC. PHONE CALLS
1:30- 1:45				X														X		"
1:45- 2:00				X														X		MET WITH BOSS
2:00- 2:15				X														X		"
2:15- 2:30																		X		PERSONAL ERRANDS
2:30- 2:45									X									X		"
2:45- 3:00						X												X		TRAVEL TO SEE JOHNSON
3:00- 3:15						X												X		JOHNSON MEETING
3:15- 3:30						X												X		"
3:30- 3:45						X												X		RETURN TO OFFICE
3:45- 4:00						X												X		CHAT WITH BOBBS
4:00- 4:15		X																X		DICTIONATION ON SALARY SCHEDULE
4:15- 4:30	X																	X		READ PM NEWSPAPER
4:30- 4:45				X														X		SAW MURPHY RENEW PROCEDURES
4:45- 5:00				X														X		"



Fred Brooks' Time Clocks

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30 am					
11:00 am	33-107 DH 2315		33-107 DH 2315		33-107 DH 2315
11:30 am					
12:00 pm					
12:30 pm		15-211 DH 2315		15-211 DH 2315	
1:00 pm	15-211 SC 203		15-211 SC 203		
1:30 pm					
2:00 pm		18-240 DH 2315		18-240 DH 2315	
2:30 pm					
3:00 pm					
3:30 pm		18-200 DH 2210	18-200 SH 206	18-200 DH 2210	
4:00 pm					
4:30 pm					
5:00 pm		33-107 WeH 5403		33-107 WeH 5403	
5:30 pm					
6:00 pm					
6:30 pm					
7:00 pm					
7:30 pm					
8:00 pm			18-240 HH 1303		
8:30 pm					
9:00 pm					
9:30 pm					

Course	Sec	Units	Professor	Course Name
15-211	E	12.0	Blum, Goldstein	Fundamental Structs of Computer Science I
18-200	C	12.0	Hoburg	Mathematical Foundations of EE
18-240	B	12.0	Thomas	Fundamentals of Computer Engineering
33-107	G	12.0	Meyer, Feenstra	Physics for Engineering Students II
80-210	A	9.0	Scheines	Introduction to Logic

	Monday	Tuesday	Wednesday	Thursday	Friday
10:30 am					
11:00 am	33-107 DH 2315		33-107 DH 2315		33-107 DH 2315
11:30 am					
12:00 pm					
12:30 pm		15-211 DH 2315		15-211 DH 2315	
1:00 pm	15-211 SC 203		15-211 SC 203		
1:30 pm					
2:00 pm		18-240 DH 2315		18-240 DH 2315	
2:30 pm					
3:00 pm					
3:30 pm		18-200 DH 2210	18-200 SH 206	18-200 DH 2210	
4:00 pm					
4:30 pm					
5:00 pm		33-107 WeH 5403		33-107 WeH 5403	
5:30 pm					
6:00 pm					
6:30 pm					
7:00 pm					
7:30 pm					
8:00 pm			18-240 HH 1303		
8:30 pm					
9:00 pm					
9:30 pm					



Course	Sec	Units	Professor	Course Name
15-211	E	12.0	Blum, Goldstein	Fundamental Structs of Computer Science I
18-200	C	12.0	Hoburg	Mathematical Foundations of EE
18-240	B	12.0	Thomas	Fundamentals of Computer Engineering
33-107	G	12.0	Meyer, Feenstra	Physics for Engineering Students II
80-210	A	9.0	Scheines	Introduction to Logic

Using Time Journal Data

- **What am I doing that doesn't really need to be done?**
- **What am I doing that could be done by someone else?**
- **What am I doing that could be done more efficiently?**
- **What do I do that wastes others' time?**

Procrastination

*“Procrastination is the
thief of time”*

Edward Young
Night Thoughts, 1742

Balancing Act

“Work expands so as to fill the time available for its completion”

Parkinson's Law

Cyril Parkinson, 1957

Avoiding Procrastination

- **Doing things at the last minute is much more expensive than just before the last minute**
- **Deadlines are really important: establish them yourself!**

Comfort Zones

- **Identify why you aren't enthusiastic**
- **Fear of embarrassment**
- **Fear of failure?**
- **Get a spine!**

Quit Making Excuses...



Delegation

- **No one is an island**
- **You can accomplish a lot more with help**
- **Most delegation in your life is from faculty to graduate student**

Delegation is not dumping

- **Grant authority with responsibility.**
- **Concrete goal, deadline, and consequences.**
- **Treat your people well**
- **Grad students and secretaries are a faculty member's lifeline; they should be treated well!**

Challenge People

- **People rise to the challenge: You should delegate “until they complain”**
- **Communication Must Be Clear: “Get it in writing” – Judge Wapner**
- **Give objectives, not procedures**
- **Tell the relative importance of this task**



Sociology

- **Beware upward delegation!**
- **Reinforce behavior you want repeated**
- **Ignorance is your friend – I do not know how to run the photocopier or the fax machine**

Meetings

- **Average executive: > 40% of time**
- **Lock the door, unplug the phone**
- **Maximum of 1 hour**
- **Prepare: there must be an agenda**
- **1 minute minutes: an efficient way to keep track of decisions made in a meeting: who is responsible for what by when?**



Technology

- **“Computers are faster but they take longer” --Janitor, UCF**
- **Secretaries are better than answering machines; where are the costs & benefits of a technology? (transcription)**

Technology



Laptop computer (and docking station)

- You can scavenge time & work anywhere
 - At CMU, you still have internet access
 - one machine in your life is the right number
-
- **WWW; only do things once (post them)**
 - **Google (now with image search!)**
 - **ACM Digital Library (I haven't been in the library in over five years)**

Randy's Magic E-Mail Tips



- Save all of it; no exceptions
- If you want somebody to do something, make them the only recipient. Otherwise, you have diffusion of responsibility. Give a concrete request/task and a deadline.
- If you really want somebody to do something, CC someone powerful.
- Nagging is okay; if someone doesn't respond in 48 hours, they'll probably never respond. (True for phone as well as email).

Care and Feeding of Advisors

Time Management Advice

- **Get a day timer or PDA**
- **Write things down**
- **When's our next meeting?**
- **What's my goal to have done by then?**
- **Who to turn to for help?**
- **Remember: advisors want results !**

Care and Feeding of Advisors

Life Advice

- **They know more than you do**
- **They care about you**
- **They didn't get where they are by their social skills -> take the initiative in talking with them!**

General Advice: Vacations

- **Phone callers should get two options:**
 - If this can't wait, contact John Smith at 555-1212
 - Otherwise please call back June 1
- **This works for Email too!**
- **Vacations should be vacations.**
 - It's not a vacation if you're reading email
 - Story of my honeymoon...



General Advice

- **Kill your television** (how badly do you want tenure or your degree?)



- Turn money into time – especially important for people with kids or other family commitments

- **Eat and sleep and exercise.**
Above all else!



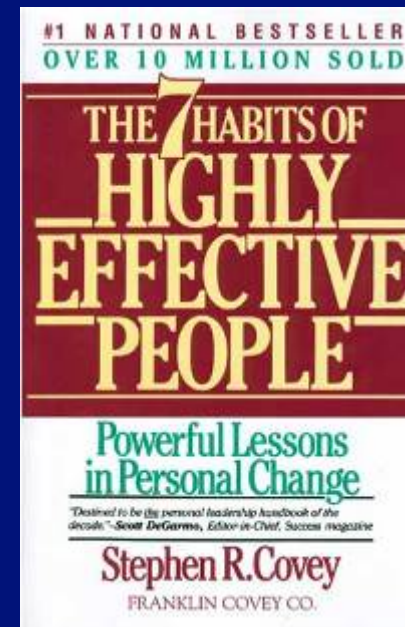
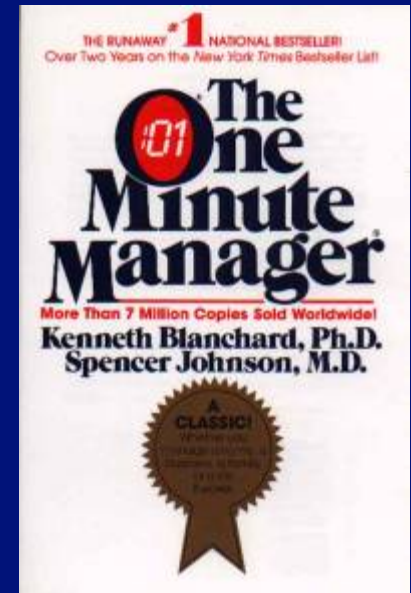
General Advice

- **Never break a promise, but re-negotiate them if need be.**
- **If you haven't got time to do it right, you don't have time to do it wrong.**
- **Recognize that most things are pass/fail.**
- **Feedback loops: ask in confidence.**



Recommended Readings

- The One Minute Manager, Kenneth Blanchard and Spencer Johnson, Berkeley Books, 1981, ISBN 0-425-09847-8
- The Seven Habits of Highly Effective People, Stephen Covey, Simon & Schuster, 1989, ISBN 0-671-70863-5



Action Items



- **Get a day-timer (or PDA) if you don't already have one**
- **Start keeping your TODO list in four-quadrant form or ordered by priorities (not due dates)**
- **Do a time journal, or at least record number of hours of television/week**
- **Make a note in your day-timer to revisit this talk in 30 days (www.randypausch.com). At that time, ask yourself “What behaviors have I changed?”**

Time Management

Randy Pausch

Carnegie Mellon University

<http://www.randypausch.com>

Appendix:

- **Stephen Covey's "Seven Habits"**
- **Advice I have for working in groups.**

The Seven Habits

From “The Seven Habits of Highly Effective People: Restoring the Character Ethic” by Stephen R. Covey, Simon and Schuster, 1989

1. **BE PROACTIVE:** Between stimulus and response in human beings lies the power to choose. Productivity, then, means that we are solely responsible for what happens in our lives. No fair blaming anyone or anything else.
2. **BEGIN WITH THE END IN MIND:** Imagine your funeral and listen to what you would like the eulogist to say about you. This should reveal exactly what matters most to you in your life. Use this frame of reference to make all your day-to-day decisions so that you are working toward your most meaningful life goals.

The Seven Habits

From “The Seven Habits of Highly Effective People: Restoring the Character Ethic” by Stephen R. Covey, Simon and Schuster, 1989

- 3. PUT FIRST THINGS FIRST.** To manage our lives effectively, we must keep our mission in mind, understand what’s important as well as urgent, and maintain a balance between what we produce each day and our ability to produce in the future. Think of the former as putting out fires and the latter as personal development.
- 4. THINK WIN/WIN.** Agreements or solutions among people can be mutually beneficial if all parties cooperate and begin with a belief in the “third alternative”: a better way that hasn’t been thought of yet.

The Seven Habits

From “The Seven Habits of Highly Effective People: Restoring the Character Ethic” by Stephen R. Covey, Simon and Schuster, 1989

- 5. SEEK FIRST TO BE UNDERSTANDING, THEN TO BE UNDERSTOOD. Most people don't listen. Not really. They listen long enough to devise a solution to the speaker's problem or a rejoinder to what's being said. Then they dive into the conversation. You'll be more effective in your relationships with people if you sincerely try to understand them fully before you try to make them understand your point of view**

Seven Habits

From “The Seven Habits of Highly Effective People: Restoring the Character Ethic” by Stephen R. Covey, Simon and Schuster, 1989

- 6. SYNERGIZE.** Just what it sound like. The whole is greater than the sum of its parts. In practice, this means you must use “creative cooperation” in social interactions. Value differences because it is often the clash between them that leads to creative solutions.

Seven Habits

From “The Seven Habits of Highly Effective People: Restoring the Character Ethic” by Stephen R. Covey, Simon and Schuster, 1989

- 7. SHARPEN THE SAW.** This is the habit of self-renewal, which has four elements. The first is mental, which includes reading, visualizing, planning and writing. The second is spiritual, which means value clarification and commitment, study and meditation. Third is social/emotional, which stress management includes service, empathy, synergy and intrinsic security. Finally, the physical includes exercise, nutrition and stress management.

Tips for Working in Groups

By Randy Pausch, for the Building Virtual Worlds course at Carnegie Mellon, Spring 1998

- **Meet people properly. It all starts with the introduction. Then, exchange contact information, and make sure you know how to pronounce everyone's names. Exchange phone #s, and find out what hours are acceptable to call during.**
- **Find things you have in common. You can almost always find something in common with another person, and starting from that baseline, it's much easier to then address issues where you have difference. This is why cities like professional sports teams, which are socially galvanizing forces that cut across boundaries of race and wealth. If nothing else, you probably have in common things like the weather.**

Tips for Working in Groups

By Randy Pausch, for the Building Virtual Worlds course at Carnegie Mellon, Spring 1998

- **Make meeting conditions good. Have a large surface to write on, make sure the room is quiet and warm enough, and that there aren't lots of distractions. Make sure no one is hungry, cold, or tired. Meet over a meal if you can; food softens a meeting. That's why they "do lunch" in Hollywood**
- **Let everyone talk. Even if you think what they're said is stupid. Cutting someone off is rude, and not worth whatever small time gain you might make. Don't finish someone's sentences for him or her; they can do that for themselves. And remember: talking louder or faster doesn't make your idea any better.**

Tips for Working in Groups

By Randy Pausch, for the Building Virtual Worlds course at Carnegie Mellon, Spring 1998

- **Check your egos at the door. When you discuss ideas, immediately label them and write them down. The labels should be descriptive of the idea, not the originator: “the troll bridge story,” not “Jane’s story.”**
- **Praise each other. Find something nice to say, even if it’s a stretch. Even the worst of ideas has a silver lining inside it, if you just look hard enough. Focus on the good, praise it, and then raise any objections or concerns you have about the rest of it.**

Tips for Working in Groups

By Randy Pausch, for the Building Virtual Worlds course at Carnegie Mellon, Spring 1998

- **Put it in writing.** Always write down who is responsible for what, by when. Be concrete. Arrange meetings by email, and establish accountability. Never assume that someone's roommate will deliver a phone message. Also, remember that "politics is when you have more than 2 people" – with that in mind, always CC (carbon copy) any piece of email within the group, or to me, to all members of the group. This rule should never be violated; don't try to guess what your group mates might or might not want to hear about.
- **Be open and honest.** Talk with your group members if there's a problem, and talk with me if you think you need help. The whole point of this course is that it's tough to work across cultures. If we all go into it knowing that's an issue, we should be comfortable discussing problems when they arise – after all, that's what this course is really about. Be forgiving when people make mistakes, ⁸² but don't be afraid to raise the issues when they come up.

Tips for Working in Groups

By Randy Pausch, for the Building Virtual Worlds course at Carnegie Mellon, Spring 1998

- **Avoid conflict at all costs. When stress occurs and tempers flare, take a short break. Clear your heads, apologize, and take another stab at it. Apologize for upsetting your peers, even if you think someone else was primarily at fault; the goal is to work together, not start a legal battle over whose transgressions were worse. It takes two to have an argument, so be the peacemaker.**
- **Phrase alternatives as questions. Instead of “I think we should do A, not B,” try “What if we did A, instead of B?” That allows people to offer comments, rather than defend one choice.**