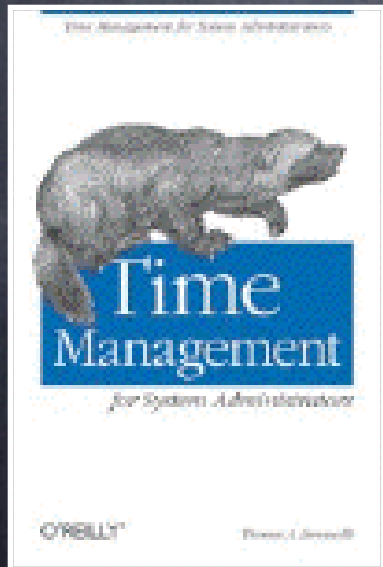


Time Management For System Administrators

Instructor: Tom Limoncelli

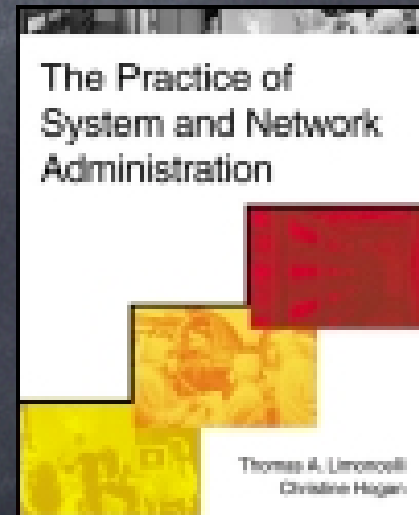
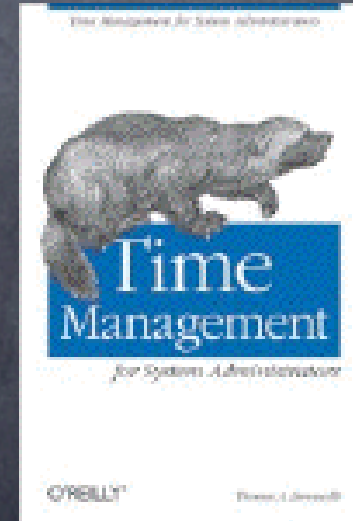


With material from:
"Time Management for Sysadmins"

<http://www.EverythingSysadmin.com>

Who is this guy?

- SA since 1988, UNIX since 1991
- Has worked at companies such as Google, Cibernet Corp, Dean For America, Lumeta, Bell Labs, AT&T/Lucent, Mentor Graphics.
- Books:
 - "Time Management for System Administrators"
 - "The Practice of System and Network Administration"
- Not (unreasonably) crazy



Meeting with My Boss

Poll: Rate your current TM skills?

0 = disaster

5 = expert

Poll: What are your time
management issues?

Why TM for Sysadmins?

- The problems are different
 - Higher degree of customer interruptions
 - ...and still expected to get projects done...
- The solutions are different
 - We're geeks, we can use tools
- Lack of mentoring
 - Other careers have more opportunities for mentoring on these issues.
 - Our mentoring is technical

What's covered?

- Dealing with Interruptions
- Using Routines to "think once, do many"
- The Cycle System for:
 - Todo lists
 - Calendar/datebook management
 - Long-term and life goals
- Prioritization
- Q&A and other tips

What's not?

- Tips on avoiding Procrastination
 - Excellent books on the market
 - Therapy can help
 - David Burn's "Feeling Good" has excellent advice
- Detailed instructions on how to use a PDA
- NTP: The Network Time Protocol

Get control over your life

1. Schedule your work
2. Prioritize what you do
3. Control the hours you work

Impossible? No, completely possible.

Principles of Time Management

Principles

- **One System:** Keep all time-management information in once place
- **Conserve Brain Power:** Avoid distractions, focus on one thing at a time
- **Use Routines:** Mass-produce things that you do often. Think once, do many
- **Same tools everywhere:** Use the same tools for your personal-life

Maintaining Focus

Focus

How long does it take to
complete a 2-day project?

Focus

- Focus is concentrated effort.
- "Users always bother me" == "I'm being prevented from maintaining focus"
- Interruptions are the natural enemy of focus.
- Returning from an interrupt is error-prone.

The uncluttered brain

- Our brain is only so big.
- It divides itself among all the things we are trying to focus on.
- Unclutter your brain.

Focus problems we cause

- A messy desk
- Visually complex items in front of us
- Icons on our desktop, Instant messenger clients, music, stock tickers, news tickers, "you have new mail" notifiers, games, multitasking overload.
- Clean up your workspace -- Free your mind!

Redirecting Interrupts

- If someone wanted to interrupt you to ask a question, how do they find you?
- Does their web browser start-page tell them how to reach the helpdesk?
- Are proper channels properly clearly communicated?
- Can you re-arrange seating so they walk by your co-workers before they reach you?

Mutual Interruption Shield

- Take turns “fielding interruptions” with a co-worker to permit uninterrupted project time
- You field interrupts in the AM, they do it for you in the PM.

Change Official Structure

- Split into a tier 1 / tier 2 structure
 - Tier 1 -- "Customer facing"
 - Handles 80%, bumps 20% up to tier 2
 - Tier 2 -- "Project & Engineering"
- Physical layout:
 - Make sure customers must trip over "customer facing" people to get to Tier 2.
 - Move Tier 1 offices to high-traffic areas
 - keep Tier 2 relatively obscured

Peak time for focus

- When during the day can you focus best?
 - Different for each of us.
 - Do you know your peak hours?
- "First hour of the day"-Rule
 - The fewest interruptions happen the first hour of the day because nobody else
 - Therefore, don't use it for junk tasks like email.

Handling Interrupts without being a JERK

Principle

Saying "no" or "not now"

When someone makes a request,
they expect to be heard.

Corollary: They will be unhappy if
they don't feel heard.

Saying "no" with compassion

- How to say "no" without sounding rude?
 - Take the customers needs into account
 - "Say with action" (not words) that the request will be completed

For each request

Pick one:

- Record it
- Delegate it
- Do it

When to "record it"?

- I'm in the middle of another project
- Not urgent
- Not a "while you wait" request

When to "delegate"?

- Someone else can do it
- Too urgent to put off

When to "do it"?

- Emergency -- outage affecting multiple people.
- It's my job to react in this situation.
- Requests from my boss.

Tips for recording requests:

Three options: (of many)

- Create a "ticket"
- Write in your Palm/Dayplanner
- Have them create the ticket -- tell them the words to use

Helpdesk Software

- Always use ticket-tracking software.
 - If your employer doesn't use one, be the innovator that sets up such a system.
- Excellent free software is available, much of it is better than commercial products (Unless you are very, very big)
 - RT (Request Tracker): BestPractical.com
 - Trac: trac.edgewall.org

Helpdesk Software (2)

- Without software
 - Requests get lost
 - Management can't track progress
 - Customers can't track issues
 - Customers can't refer to a ticket number
- With software
 - Requests get tracked, not lost.
 - Users know status of issues.
 - Manager can track issues without bothering SAs
 - Claims of "I asked for this months ago" verified

Request Tracker (RT)

- <http://www.bestpractical.com/rt/>
- Free software... support contracts available.
 - Help support the software by purchasing a support contract.
- RT Essentials (book) from O'Reilly

Routines

Get into that old, boring
routine!

"I wish I never woke up this morning
Life was easy when it was boring."

Darkness, The Police

Turn chaos into routines

- Schedule key meetings the same time(s) each week
- "Gasoline on Sunday"
- "Empty water from A/C reservoir as you enter the building."

Developing your routines

- Repeated events that aren't scheduled
- When procrastinating takes longer than the task itself
- Things you forget often
- Low-priority tasks that can be skipped now and then but shouldn't be
- Maintenance tasks: IT is like gardening
- Relationship development

Good habits save time

- Hesitate before pressing ENTER.
- Write the test before the code.
- "ping" before and after disconnecting any cable.
- Always backup a file before it is edited.
- Check for keys before leaving car, house, office, secured area, etc.

Automatic "Yes" Answers

- Would this be a good time to save my work?
- Should I bring my PDA/PAA with me?
- Should I record this task/event/date in my PDA/PAA?
- Should I call now that I'm going to be late?

The Cycle System

The Cycle combines

- Maintaining a Todo list
 - Perfect follow-through / Never forget a task
- A Datebook/Calendar
 - Track appointments, commitments, events
- Long-term and Life Goals
 - Get where you want to go

Task management ("todo lists")

or

Perfect Follow-Through

Goal: Never forget a user's request

The "Todo List"

How do you remember user requests?

Zillions of Scattered
Notes

vs.

The Never-Ending List
of Dooooooooom

Why do "todo lists" fail?

- We rely on "known-faulty" hardware
 - (Our brain forgets)
- We don't keep them all in one place
 - Many scattered pieces of paper
- We keep many lists
 - Half are out of date
- We keep one master list
 - Too big, too scary
 - The Never-Ending Todo List Of Doooooooooom!

How to make "todo lists" work?

- One to-do list per day
- Kept in a single place
- With you all the time
- Easy to access

Which is better?

	PDA	Planner
Pros:	<ul style="list-style-type: none">+ Alarms & Beeps+ Integrates w/ PIM+ Easy backups+ Easy to carry	<ul style="list-style-type: none">+ Free-form+ Spontaneous+ Make your own system+ Theft is rare
Cons:	<ul style="list-style-type: none">- Not as spontaneous- Many distractions- Inflexible- Upgrades \$\$\$	<ul style="list-style-type: none">- No backups- Refills every year

Anatomy of a Planner

- Front Pocket
- Lost + Found info
- Month-view Calendar
- "Page Per Day" Sheets
- "Info Sheets" section
- A-Z sections
- Big enough to fit a folder, or small enough to fit a 8.5x11 sheet folded in half.

Getting the most out of a Palm Pilot

- The PalmOS "Todo" function is very simplistic.
- The techniques in this class are more easily done with added Palm software:
 - DateBook V (www.pimlicosoftware.com)
 - Life Balance (www.llamagraphics.com)
 - FranklinCovey software for Palm

Managing Tasks

Left Side

- One page per day
 - Pre-printed with dates
- Daily Task List
 - Status, ABC, Task
- Appointment Schedule

Right Side

- "Record of Events"
- Wide-open space for
 - notes, ideas, diagrams
 - special check-lists
 - "Things to pack" lists
 - "What to bring" lists

Exercise: Todo Items

Add these 6 items to your "Daily Tasks" area

Create account for new user "Bob"

Test new GCC

File bug report: netscan off-by-1 error

JP: demo of new VPN system?

Add web page: new support hours

Cricket: monitor new router

Tom's Item Marking System

X Done

— Moved to future day

NO Decided not to do it, record why & who told

- Delegated, record "to whom"

<May 14> More info on May 14's page

FranklinCovey uses a different notation and that's ok

Exercise:

Manage Todo Items

1. Mark 1st item: "Done"
2. Mark 2nd item: Moved to next day (just didn't get it finished)
3. Mark 3rd item: "Done"
4. Mark 4th item: Moved 2 days (He's on vacation)

First sheet should look like:

	AB	Prioritized Daily Task List
X		Create account for new user "Bob"
—		Test new GCC
X		Report bug: netscan off-by-1 error
—		Call JP: demo of new VPN product
		Add web page: new support hours
		Cricket: monitor new router

End of day: 2 items left!

	AB	Prioritized Daily Task List
X		Create account for new user "Bob"
—		Test new GCC
X		Report bug: netscan off-by-1 error
—		Call JP: demo of new VPN product
		Add web page: new support hours
		Cricket: monitor new router

Move last 2 items

	AB	Prioritized Daily Task List
X		Create account for new user "Bob"
—		Test new GCC
X		Report bug: netscan off-by-1 error
—		Call JP: demo of new VPN product
—		Add web page: new support hours
—		Cricket: monitor new router

Leave work with a smile

- Clear your "todo" list at the end of the day by moving & marking.
- Leave knowing you've "managed" all items.
- Benefit of paper planner: Physical effort to move items an incentive to get them done.

Calendar Management

Goal: Never miss an appointment, meeting, or social event

Write down appointments, dates, events, etc.

- 1 place for all calendar info, including social events.
- Review at the start of the day, through out the day, and before you go to sleep.

JULY				
Sun	Mon	Tues	Wed	
		1	2	
6	7	8	9	
13	14	15	16	
20	21	22	23	
27	28	29	30	

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2003				
Thurs	Fri	Sat	Sun	
3	4	5		
10	11	12		
17	18	19		
24	25	26		
31				

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AUG	SEP	OCT	NOV	DEC
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How I mark calendar days

- Top line: Birthdays days, scheduled vacations (for me and others)
- Middle: appointments throughout the day
- Bottom line: night activity ("Date with Chris", "Board Meeting", "Laundry")

27

Chris bday

Bob out until 30th →

10-11 cm meeting

noon all hands

2-2:30 mtg w/CIO group

7pm BZ board mtg

28

→

Priorities

Goal: Get the important stuff done, let everything else slide.

Priorities

- Mark every todo item with an A, B, or C priority
- A -- Must be done today (due date is today)
- B -- Today, lower priority
- C -- Everything else!

The Daily Plan

- Review calendar entries
 - Block out time for meetings, events
- Enter repeating items
- Plan your todo items:
 - Mark A, B, and C priorities
 - Write in estimated time for each item
- Total "A Time" -- Is it more than an 8-hour day?

Not enough time for "A" priorities?

- Break projects into steps
 - List time for today's step
 - Add this item to each day's "todo list"
- Re-prioritize
- Ask boss for advice

Exercise: Plan This Day

- First, schedule today's appointments:
- Today's calendar:
 - 10-11am weekly staff meeting
 - noon-1 lunch
 - 3-4pm Change Management Review Board Meeting

8	
9	
10	MEETING
11	
noon	LUNCH
1	
2	
3	CMRB
4	
5	
6	
7	
8	

8	
9	Plan my day
10	MEETING
11	
noon	LUNCH
1	
2	
3	CMRB
4	
5	Go home!
6	
7	
8	

Plan this day (2)

- Today's todo items:
 - (old) Test GCC: 40 minutes
 - (old) Add new web page: 20 minutes
 - (old) Add router to Cricket config: 30 minutes
 - Fix netnews: 45 minutes
 - Add disk to server: 2 hours
 - Set up new IDS system: 3 days (next step is 60 min)
 - Install phone for new-hire (starts next month): 1 hour

Plan

	AB	Prioritized Daily Task List
	A	Test new GCC (40 min)
	A	Add new web page (20 min)
	B	Add router to Cricket (30 min)
	C	Fix netnews (45 min)
	A	Add disk (2 hours)
	A	Setup IDS (3 days)
		Phone for new-hire (1 hour)

Plan

	AB	Prioritized Daily Task List
	A	Test new GCC (40 min)
	A	Add new web page (20 min)
	B	Add router to Cricket (30 min)
	C	Fix netnews (45 min)
	A	Add disk (2 hours)
	A	Setup IDS (3 days)
	C	Phone for new-hire (1 hour)

Plan the tasks

- Fit the "todo" items into your day

Plan

	AB	Prioritized Daily Task List
	A	Test new GCC (40 min)
	A	Add new web page (20 min)
—	B	Add router to Cricket (30 min)
—	C	Fix netnews (45 min)
	A	Add disk (2 hours)
	A	Setup IDS (3 days)
—	C	Phone for new-hire (1 hour)

Exercise results:

- What did your day look like?
- Did your day plan exceed 8 hours?
 - How did you manage the overage?
- How many items were moved to the next day?

Early and Late

- Finish a task early?
 - Reward yourself by working on
 - A fun project
 - A low priority project
 - Coffee break!
- Task take longer than planned?
 - Re-schedule, re-plan
 - B and C priorities can be completed later

Tip: How do you split your time?

- A sysadmin was directed to "split your time evenly between helpdesk and projects". When he planned his day, he added a "todo item" called "interrupts" which was always 50% of his time.
- 3 hours -- "Interrupts"

Repeated Tasks

- PDA: Used "repeated tasks".
- Planner: Use "info" page to list repeating events (daily/weekly/monthly lists). Copy items in at the start of each day, week, month.

Principle

If it has to be done every
day, do it first.

Corollary: If it has to be done today, do it early.

Anecdote: Changing backup tapes.

Principle

Start Every Day By Planning

Tip: Schedule fun things too

- One unified calendar -- include social plans
- Plan a "date night" or "family night"
- Only use a second calendar if you have a "classified work-life"

Life Goals

Get what you want out of life!

Rocks, pebbles and sand

If you put the sand into the jar first, there is no room for the pebbles or the rocks. The same is true for your life: If you spend all your energy and time on the small stuff, you will never have room for the things that are important in life.

<http://www.juliaferguson.com/cool.html>

Make time for the big things

- When do we have time for big things?
 - Taking a long vacation
 - A week writing code to save months of labor
 - A Google 20% project
- Answer: Never!

So what do we do?

- We make time.
- We schedule the vacation a far in advance.
- Weeks before we...
 - Train the person that covers for us.
 - Update documentation
 - etc.
- Other "big projects" require the same.

Life goals:

- Goals should be measurable: "Lose 20 pounds by January", not "Lose weight"
- Don't be afraid to dream
- What do you want to accomplish...
 - 1 month from now?
 - 1 year from now?
 - 5 years from now?
 - In your lifetime?

Exercise: Life goals

- Spend 5 minutes writing down your 1m, 1y, 5y, life goals.
- Write 1-2 per category (1 work, 1 personal)
- Nobody will be seeing these, feel free to write the secret goal that you may be embarrassed to share.

Actions to achieve goals:

Category:	Goal:	Actions:
1 Month		
1 Year		
5 Years		
Lifetime		

Goal-planning is a life-time task

- Keep your list in your planner
- Add new ideas when you think of them
- Review it periodically
- This 5 minute exercise wasn't enough time
 - Week-long workshops, weekend retreats, family discussions, etc

Routine: 1st day of month

- Re-read list of goals (keep copy in dayplanner)
- Sprinkle action items into your schedule that bring you closer to these goals.
- PAA: Do it when you load the next month of paper into your organizer
- PDA: Schedule a recurring event called "Monthly Goal Review"

Yearly:
Review and revise goal list

Prioritization

What's so bad about FIFO?

- Distraught over what order to do tasks on your todo list?
- What's so bad about FIFO?
- Benefit:
 - it's easy
 - older items tend to "bubble" up to the top and get higher priority
 - sounds great!

Prioritize based on customer perception

Prioritizing tasks so that users think you're a genius



What do customers expect?

They want everything NOW but what do they expect?

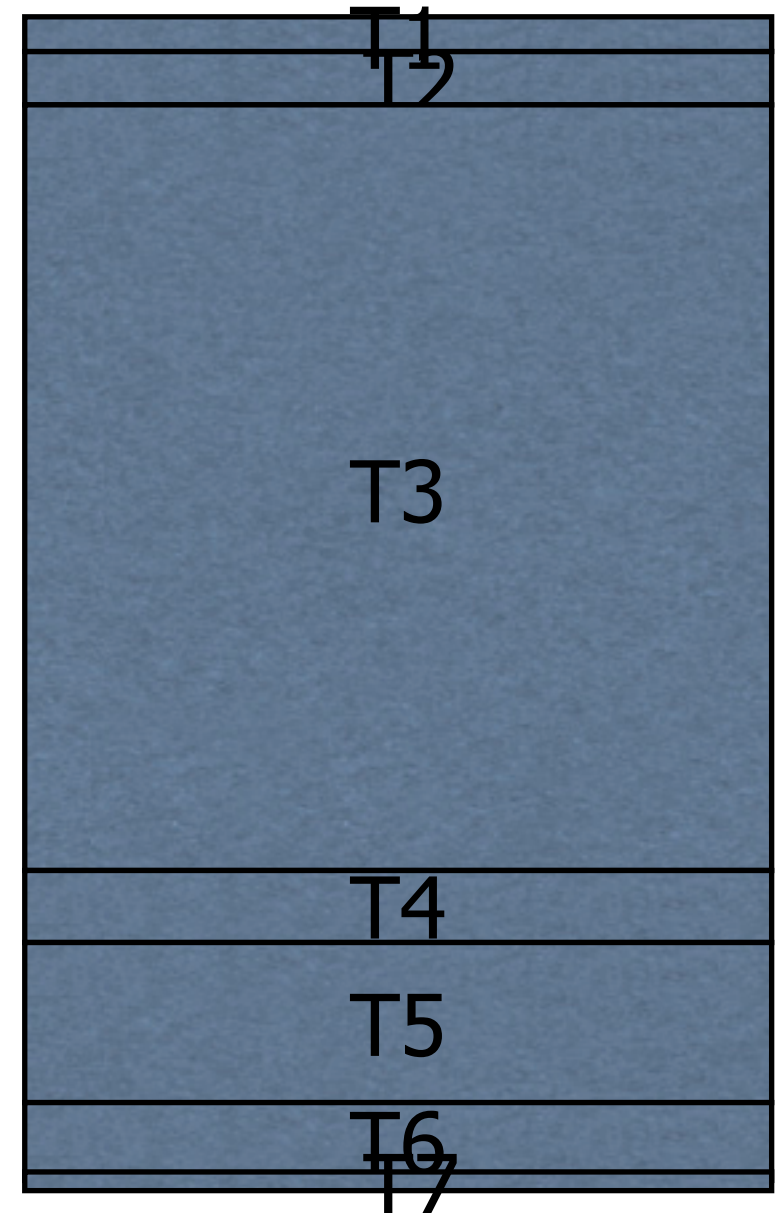
- Some requests should be quick...
 - Assigning an IP address
 - Reset a password
 - Something small impeding their work
- Some requests take a long time...
 - Installing a new PC
 - Creating a new service
- SAs will drop everything for major outages

FIFO Prioritization

Task	Description	Expectation	Actual Work	Time Completed
T1	Reset password	1 minute	10 minutes	9:10am
T2	Create new user account	Next day	20 minutes	9:30am
T3	Install new server	Next day	4 hours (+1 for lunch)	2:30pm
T4	Add new CGI area to web server	1 hour	30 minutes	3:00pm
T5	Order a software package	1 hour	1 hour	4:00pm
T6	Debug minor NetNews error	10 min	25 minutes	4:25pm
T7	Allocate IP address	2 min	5 minutes	4:30pm

Result:

- All tasks completed
- T7 very unhappy

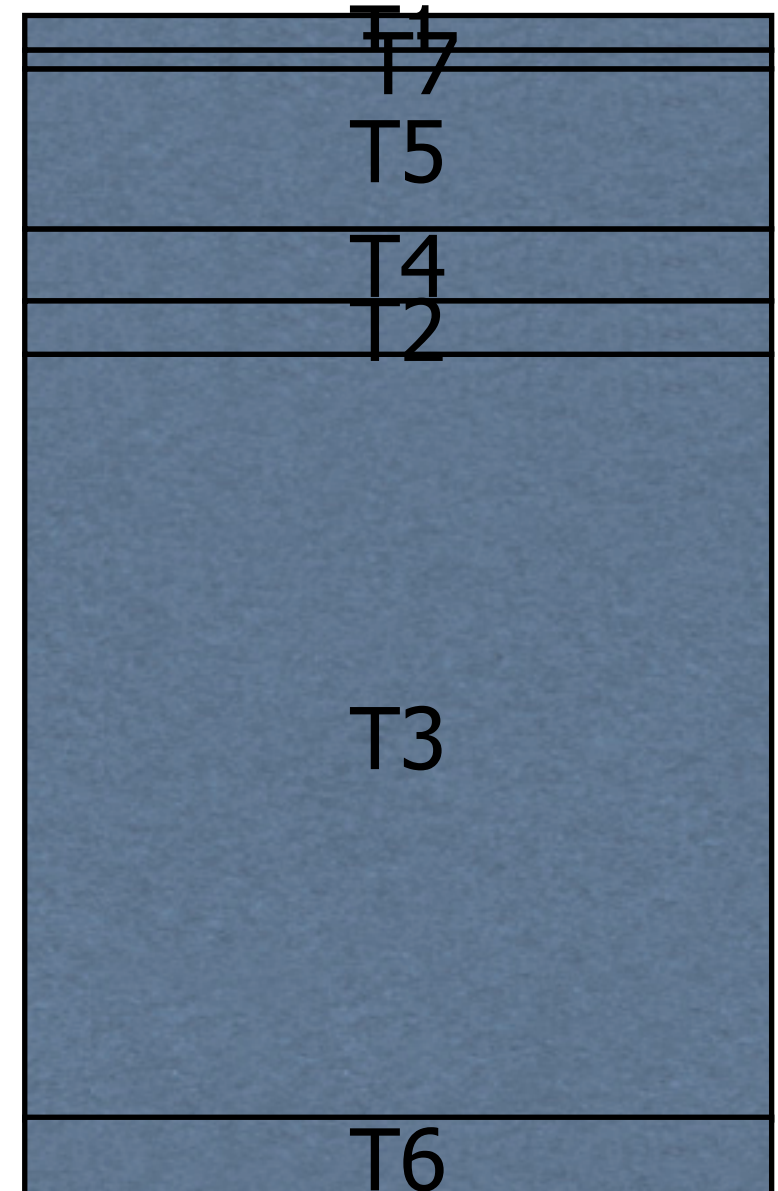


Expectation-based Priority

Task	Description	Expectation	Actual Work	Time Completed
T1	Reset password	1 minute	10 minutes	9:10am
T7	Allocate IP address	2 min	5 minutes	9:15am
T5	Order a software package	1 hour	1 hour	10:15am
T4	Add new CGI area to web server	1 hour	30 minutes	10:45am
T2	Create new user account	Next day	20 minutes	11:05am
T3	Install new server	Next day	4 hours (+1 for lunch)	4:05pm
T6	Debug minor NetNews error	10 min	25 minutes	4:30pm

Result:

- All tasks completed
- Much happiness



Summary

- In both cases:
 - All tasks completed
 - (You did the same amount of work)
- In second case:
 - Customers much happier

You did the same amount of work, but people were happier with your performance

A More Realistic Situation

- Usually one can not plan entire day
- New requests spread over day
- We can still use this technique:
 - No matter what, permit the interruption
 - Use 'expectation model' to decide if request is done now or is put "on hold".
 - If it takes less than 2 minutes, it's just faster to do it now.
 - If "expectation" is "it can't wait", do it now.
 - Else... create ticket/send email to yourself.

Be creative

- Pre-allocate your next 2-3 IP addresses
- Keep common sysadmin apps running
- Automate, automate, automate
- Create self-service versions:
 - sudo shell scripts that check inputs do request
 - CGI scripts that check input then sudo
 - (Note: Such scripts may result in security holes. Validate inputs, and be paranoid.)

Two or more sysadmins

- A two-person team can use this technique to organize their work:
 - One person handles interrupts in the AM
 - The other handles interrupts in the PM
- Larger groups can structure their organization around this concept:
 - Divide day into n even blocks
 - Each SA takes interrupts during their block

Organizing a Large IT Group

- Organize team into "Tier 1" (front line) and "Tier 2" (back line)
- Tier 1
 - Initial contact for customers
 - Passes long-term or difficult requests to Tier 2
- Tier 2
 - Handles issues from Tier 1
 - Otherwise is project-focused

"The Cycle" Summary

- 5 minutes each morning: Build a todo list
 - List relevant "life goals/long-term goals"
 - (from our long-term list)
 - Block out today's meetings/appointments
 - (from our calendar)
 - List the todo items for the day
 - (from our todo list)
- Prioritize
- Work the list
- At the end of the day:
 - Push unfinished items to the next day

Cycle Tips

- Always bring your PDA/PAA with you.
- Always record things in your PDA/PAA or HelpDesk software
- Work from the todo list.
- Bring it! Record it! Work from it!

That's the *Cycle!*

Questions?

What do we do?

Everything we do:

- Simple things, done once
- Hard things, done once
- Simple things, done often
- Hard things, done often

Rarely

Easy

Hard

Often

Rarely

Manually

Easy

Hard

Often

Rarely

Document

Easy

Hard

Often

Rarely

Easy

Hard

Automate

Often

Rarely

Easy

Hard

Purchase

Often

Rarely

Manually

Document

Easy

Hard

Automate

Purchase

Often

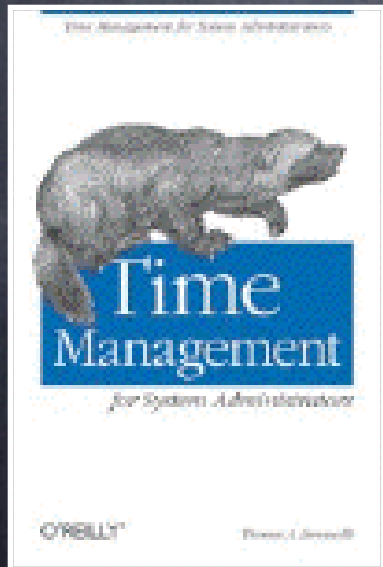
REVIEW:

- Work from a todo list
 - Start a new list each day.
 - One place, kept with you always.
 - Record ALL tasks.
 - A/B priorities, X=done, -=moved
- Live by your calendar (work & social)
- Start each day by planning:
 - Record scheduled appointments
 - A/B/C priorities, client perception first
 - "Plan your day, then work the plan"

Thank you for attending!

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With material from:
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<http://www.EverythingSysadmin.com>