

# Time Management for System Administrators: A New Approach

by Thomas A. Limoncelli

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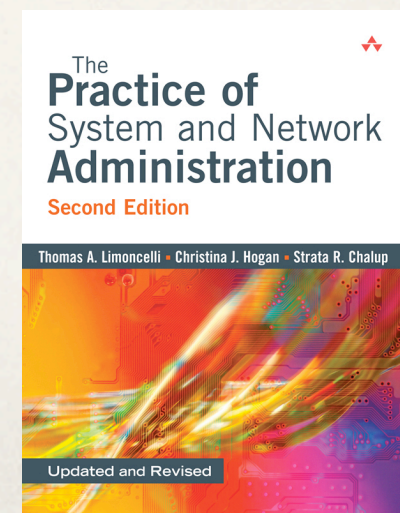
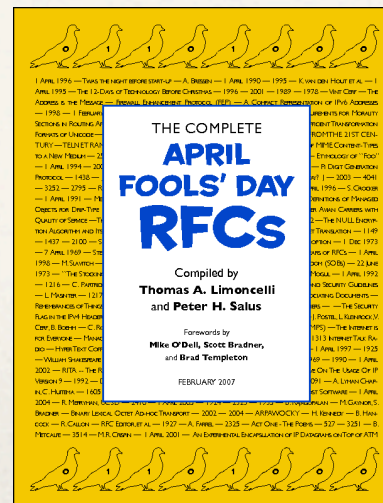
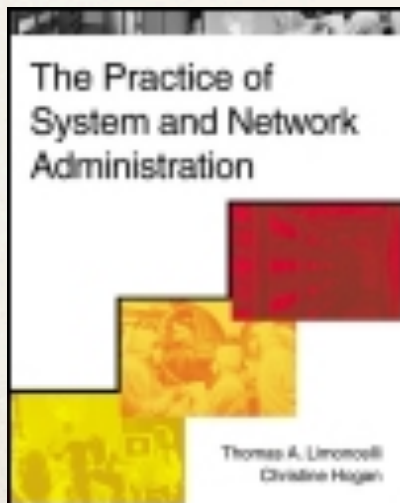
*Usenix LISA 2009, Baltimore, MD*

# Meeting with My Boss

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# Who is this guy?

- ❖ SA since 1988
- ❖ Work at companies such as Google, DFA, Lumeta, Bell Labs
  - Time Management for System Administrators**
  - The Complete April Fools day RFCs**
  - The Practice of System and Network Administration**
- ❖ <http://EverythingSysadmin.com>



# Introductions

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- ❖ Other qualifications:
  - ❖ Was a time-management disaster... *but I got better!*
- ❖ Audience poll: (show of hands)
  - ❖ Sysadmins / Managers
  - ❖ Unix / Windows
  - ❖ Senior / Junior
- ❖ What are your biggest time management issues?

# Why TM for Sysadmins?

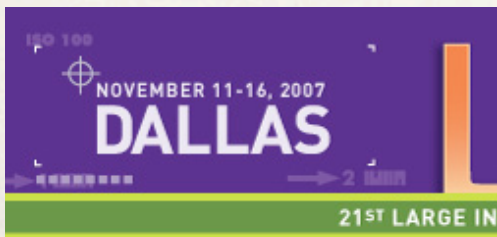
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- ❖ The problems are different:
  - ❖ Boss likes: When we get projects done. Customers like: When we are available.
  - ❖ Higher degree of customer interruptions.
  - ❖ More individual projects than we have time for.
- ❖ The solutions are different: We're geeks, we have geek tools.
- ❖ Lack of mentoring
  - ❖ Other careers have more opportunities for mentoring on these issues.
  - ❖ Our mentoring is technical.

Google NYC



Google HQ



# What I learned by mentoring

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- ❖ Conclusions:
  - ❖ Specific techniques work!
  - ❖ No “map” to fit them together.
- ❖ Developed a new approach:
  - Identify “type of day”
  - Pick appropriate tools
  - Change when surprises come



[http://www.mobius.be/webday/site/mobiusite/shared/Pictures\\_look\\_feelwebsite/approach\\_banner.JPG](http://www.mobius.be/webday/site/mobiusite/shared/Pictures_look_feelwebsite/approach_banner.JPG)



[www.ten.org.ir/images/our\\_approach\\_1.jpg](http://www.ten.org.ir/images/our_approach_1.jpg)

**How the day will end...**

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**...is determined by how we  
*approach* it at the beginning.**



# Overview

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1. Introduction
2. Tools needed for “Any Day”
3. Tools needed for “Meeting-Free Days”
4. Tools needed for “Mixed Days”
5. Tools needed for “Packed Days”
6. Summary

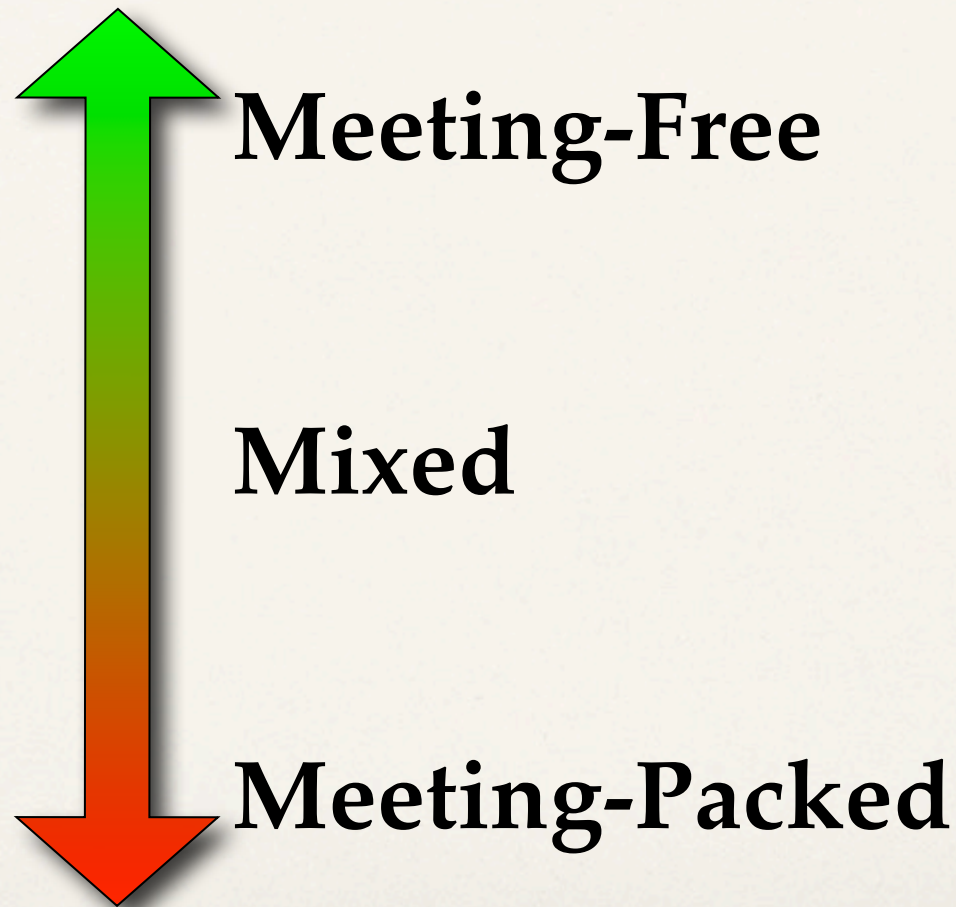
Please call out questions any time!

# 3 General Types of Days

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# Step 1: Identify “type of day”

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Create Event    Today Monday, Sep 7, 2009    Refresh    Print    Day    Week    Month    4 Days    Agenda

Quick Add

Tasks

NYC

Monday 9/7

9am 9 - PLAN

10am

11am

12pm 12:30p - LUNCH

1pm

2pm

3pm

4pm

5pm 5:30p - GO HOME!!!

6pm

« September 2009 »

S	M	T	W	T	F	S
30	31	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	1	2	3
4	5	6	7	8	9	10

► My calendars

► Other calendars

## “No Meetings”

Strategy: Focus on projects, do interrupts as needed.

Create Event   Today Wednesday, Sep 9, 2009   Refresh   Print   Day   Week   Month   4 Days   Agenda

Quick Add

Tasks

« September 2009 »

S	M	T	W	T	F	S
30	31	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	1	2	3
4	5	6	7	8	9	10

► My calendars

► Other calendars

NYC

9am 9 – PLAN ⌵

10am

11am 11 – 12p Team Meeting

12pm

1pm

2pm 2p – 3p Conference Call

3pm

4pm 4p – 5p Design Meeting

5pm

5:30p – GO HOME!!! ⌵

6pm

“Mixed”

Squeeze in important tasks between meetings.

Create Event   Today Thursday, Sep 10, 2009   Refresh   Print   Day   Week   Month   4 Days   Agenda

Quick Add  
Tasks

« September 2009 »

S	M	T	W	T	F	S
30	31	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	1	2	3
4	5	6	7	8	9	10

► My calendars  
► Other calendars

NYC

Thursday 9/10

9am 9 – PLAN Ⓜ  
9:30 – 12p Quarterly Review Meeting

10am

11am

12pm 12p – 1p LUNCH

1pm 1p – 2:30p Design Review

2pm

3pm 3p – 4p Phone call with Boston

4pm 4p – 5p VC with Mountain View

5pm 5p – One-on-One with my manager  
5:30p – GO HOME!!! Ⓜ









6pm

## “Packed With Meetings”

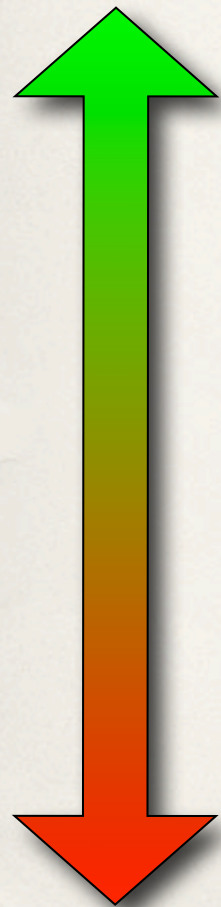
Manage meetings effectively + some multitasking.

# Step 2: Pick appropriate tools

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	Prioritized Todo List	Maintain Focus	Make most of limited time	Efficient Meetings
 <b>No Meetings</b>				
<b>Some Meetings</b>				
 <b>All Meetings</b>				

# “Special Days”



**out-of-office**

**half-day**

**emergency outage**

	Prioritized Todo List	Coverage	Make most of limited time	Comm., Shield, Follow-up
out-of-office	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
half-day	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
emergency outage	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>



# Chapter 2:

## Tools needed for *All Days*

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# What tools are needed all days?

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- ❖ Calendar:
  - ❖ Keeps our appointments so our brain doesn't have to.
- ❖ Todo List:
  - ❖ Things to do, tasks we've agreed to do. "Assures perfect follow-through"
- ❖ Prioritization Techniques

# Principles

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- ❖ **One System:** Keep all time-management information in one 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. The more practice you get, the faster things become “second nature”.

# Calendar Management

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

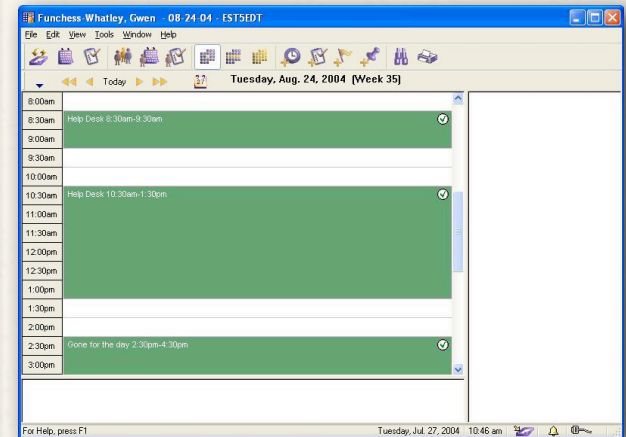
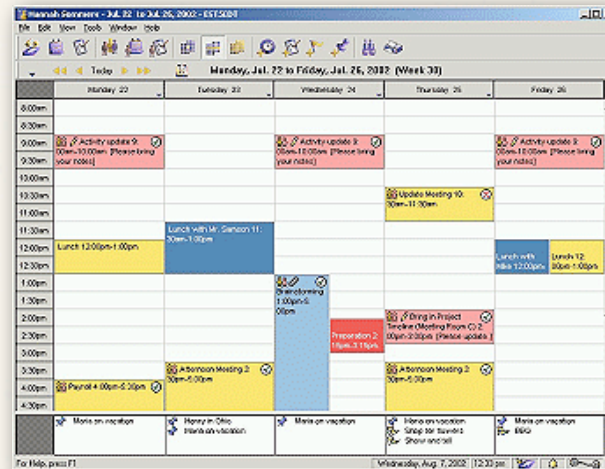
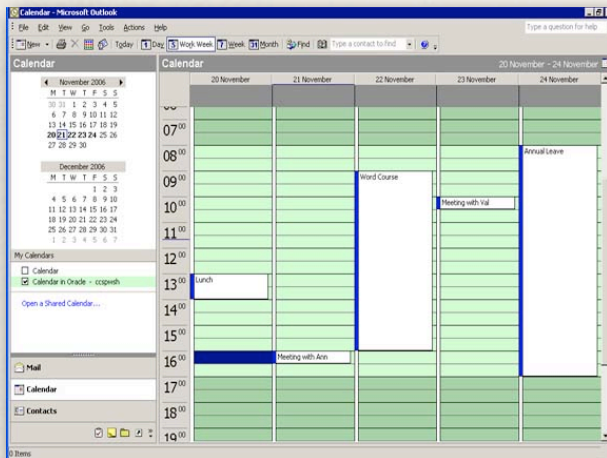
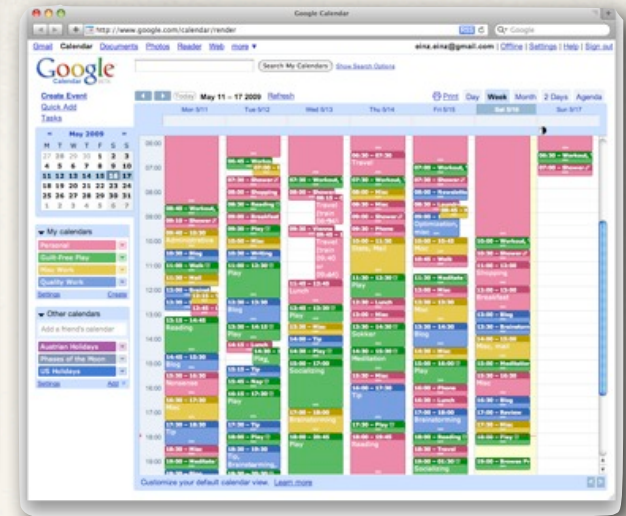
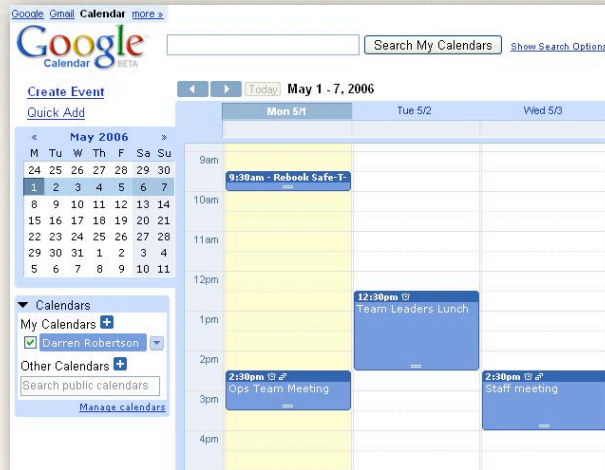
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*Date*

# Record all appointments, dates, events, meetings, etc.

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- ❖ One 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.
- ❖ Check for conflicts before agreeing to an appointment.



<http://8help.osu.edu/image.php/288>

[http://email.about.com/library/ec/pi/blpi\\_google\\_calendar.htm](http://email.about.com/library/ec/pi/blpi_google_calendar.htm)

[https://myhome.utpa.edu/quicktutorial/images/calendar\\_sync.gif](https://myhome.utpa.edu/quicktutorial/images/calendar_sync.gif)

[http://visibleprocrastinations.files.wordpress.com/2007/04/2006-05-01\\_calendar2.jpg](http://visibleprocrastinations.files.wordpress.com/2007/04/2006-05-01_calendar2.jpg)

[http://www.ucl.ac.uk/isd/common/mail/outlook/guide/outlook\\_images/oracle\\_calendar\\_13.jpg](http://www.ucl.ac.uk/isd/common/mail/outlook/guide/outlook_images/oracle_calendar_13.jpg)

JUL | JUN | MAY | APR | MAR | FEB | JAN

July

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

2003

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

JUL | JUN | MAY | APR | MAR | FEB | JAN

# How I mark calendar days

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- ❖ 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



**28**



10-11 cm meeting

noon all hands

2-2:30 mtg w/CIO group

7pm BZ board mtg

# Todo lists

Never forget a request; prioritize your work.

---

*Date*

**Where to keep the data?  
NotePad, PDA or PAA?**

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# Either works just fine

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	VIM	PDA	PAA
* One to-do list per day	Yes	Yes	Yes
* Kept in a single place	Yes	Yes	Yes
* With you all the time	Yes	Yes	Yes
* Easy to access	Yes	Yes	Yes

	Editor	PDA	PAA
Pros:	<ul style="list-style-type: none"> <li>+ Free.</li> <li>+ No refills</li> <li>+ Backups?</li> </ul>	<ul style="list-style-type: none"> <li>+ Beeps@appt</li> <li>+ Sync w / PIM</li> <li>+ Backups</li> <li>+ Easy 2 carry</li> </ul>	<ul style="list-style-type: none"> <li>+ Spontaneous</li> <li>+ Make your own system</li> <li>+ Theft is rare</li> </ul>
Cons:	<ul style="list-style-type: none"> <li>- Not always accessible</li> </ul>	<ul style="list-style-type: none"> <li>- Distractions</li> <li>- Inflexible</li> <li>- Upgrade\$</li> </ul>	<ul style="list-style-type: none"> <li>- No backups</li> <li>- Refills every year</li> </ul>

# PDA advice

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- ❖ The PalmOS “Todo” function is very simplistic.
  - ❖ Add DateBook VI ([www.pimlicosoftware.com](http://www.pimlicosoftware.com))
  - ❖ All “The Cycle” techniques are possible
- ❖ Other fine software:
  - ❖ iPhone: Appigo Todo ([www.appigo.com](http://www.appigo.com))
  - ❖ iPhone+Mac: OmniFocus ([www.omnigroup.com](http://www.omnigroup.com))
  - ❖ Mac: Life Balance ([www.llamagraphics.com](http://www.llamagraphics.com))
  - ❖ FranklinCovey software for Palm
- ❖ Tom’s list:  
<http://wiki.everythingsysadmin.com/twiki/bin/view/TM2SA>

# PAA Overview

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## 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





# Task Management

How to get it all done without going crazy (or forgetting anything important)

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*Date*

# “The Cycle”

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

**Memorize Everything**

-- VS --

**Zillions of Scattered Notes**

-- VS --

**The Never-Ending List of  
Dooooooooom**

# Why do “todo lists” fail?

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- ❖ 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 Dooooooooom!

# “The Cycle”

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- ❖ 365 “todo lists” per year
  - ❖ Doesn't rely on our brain
  - ❖ One place to keep everything
  - ❖ Prevents “list of doooooom”-like problems
- ❖ Keep it as simple as possible!
  - ❖ Even a NotePad user can do it!

---

Monday, April 14:

✦ ~~Task A~~ DONE

✦ ~~Task B~~ DONE

✦ ~~Task C~~ DONE

✦ Task D

✦ Task E

# Move to tomorrow

---

Monday, April 14:

+ ~~Task A~~ DONE

+ ~~Task B~~ DONE

+ ~~Task C~~ DONE

Tuesday, April 15:

\* Task D

\* Task E

# New item? Add to the list!

---

Monday, April 14:

+ ~~Task A~~ DONE

+ ~~Task B~~ DONE

+ ~~Task C~~ DONE

Tuesday, April 15:

\* Task D

\* Task E

\* Task F



# ...or tomorrow's list!

---

Monday, April 14:

✦ ~~Task-A~~ DONE

✦ ~~Task-B~~ DONE

✦ ~~Task-C~~ DONE

Tuesday, April 15:

✦ Task D

✦ Task E

Wednesday, April 16:

✦ Task F

# ...or tomorrow's list!

---

Monday, April 14:

✦ ~~Task-A~~ DONE

✦ ~~Task-B~~ DONE

✦ ~~Task-C~~ DONE

Tuesday, April 15:

✦ Task D

✦ Task E

Thursday, April 17:

✦ Task F

# The 4pm check

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- ❖ Pause to consider the remaining items
- ❖ Items due today:
  - ❖ Option 1: Call requester, negotiate extension
  - ❖ Option 2: Pawn off task to co-worker
  - ❖ Option 3: Work late

# Let's Practice!

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# Add the following items to your todo list

---

- ❖ Create account for “bob”
- ❖ Test new GCC release
- ❖ Report bug in product X
- ❖ Phone JP
- ❖ Add wiki page: new support hours

(No actual patents filed)

# Tom's Patented Marking System

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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

Commercial stationary uses a different notation and that's ok.

# Add the following items to your todo list

---

- ❖ Create account for “bob”      ⇐ Mark “done”
- ❖ Test new GCC release      ⇐ Incomplete (next day)
- ❖ Report bug in product X      ⇐ Mark “done”
- ❖ Phone JP      ⇐ JP will return in 2 days

# First sheet should look like:

	ABC	Prioritized Daily Task List
X		Create account for “bob”
—		Test new GCC release
X		Report bug in Product X
—		Phone JP
		Add wiki page: new support hours



# End of day: 1 item left!

	ABC	Prioritized Daily Task List
X		Create account for “bob”
—		Test new GCC release
X		Report bug in Product X
—		Phone JP
		Add wiki page: new support hours

# End of day: 1 item left!

	ABC	Prioritized Daily Task List
X		Create account for “bob”
—		Test new GCC release
X		Report bug in Product X
—		Phone JP
—		Add wiki page: new support hours

# Leave work with a smile

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- ❖ Clear your “todo” list at the end of the day by moving & marking.
- ❖ A System administrator’s work is never done. You can’t expect to finish all your tasks each day. However, you can be satisfied they have all been managed.

# Control your time!

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- ❖ Schedule your work
- ❖ Prioritize what you do
- ❖ Control the hours you work

# More work than one 8-hour day?

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- ❖ At start of day, estimate amount of work in hours.
  - ❖ Few items: easy to estimate
  - ❖ Many items: write estimates and total
- ❖ Move low-priority items to next day.
  - ❖ Start the day with just 8-hours of work.
  - ❖ Or “n” hours if you have meetings, appointments.

# Super overloaded?

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

# Finish all of today's tasks?

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- ❖ Get a head-start on tomorrow's work
- ❖ Reward yourself by...
  - ❖ working on a fun project
  - ❖ working on a low priority project
  - ❖ Coffee break!
- ❖ Go home early (?)

# Working with tickets

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- ❖ Schedule n-hours of “doing tickets” each day
- ❖ Use the todo list as a cache of tickets
- ❖ Your “working set”



# Projects and Tickets

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- ❖ “Glenn”, 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.
- ❖ Too many interruptions? Told me to go away (politely)
- ❖ Fewer interruptions? Extra time for projects.

# Merge work & personal databases

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- ❖ One unified calendar -- include social plans
- ❖ Only use a second calendar if you have a “classified work-life”
- ❖ Use calendar to allocate time for fun:
  - ❖ Plan a “date night” or “family night”
  - ❖ Hobby or personal project
    - ❖ Tom’s 2007 goal: See more movies!

# Prioritization

Make sure the important stuff happens.

---

*Date*

# What's so bad about FIFO?

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- ❖ 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

---

*Date*

# What do customers expect?

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- ❖ They want everything NOW but what do they expect?
- ❖ Some requests should be quick...
  - ❖ Reset a password
  - ❖ Assigning an IP address
  - ❖ Anything small impeding their work
  - ❖ “Hurry up and wait” things (order now, receive later)
- ❖ Some requests take a long time...
  - ❖ Installing a new PC
  - ❖ Creating a new service
- ❖ Emergencies: SAs will drop everything for major outages

# FIFO-based Priority

Task	Description	Customer Expectation	Actual Duration
T1	Add new CGI area to www	1 hour	30 min
T2	Create new account	Next day	20 min
T3	Debug minor NetNews issue	10 min	25 min
T4	Give IP addr to user	2 min	5 min
T5	Install new server	Next day	4 hours
T6	Order a software package	1 hour	1 hour
T7	Reset Password	1 min	10 min

- Time: 360 minutes

## Evaluation:

- All tasks completed
- T4+T7: Unhappy!

# Expectation-based Priority

Task	Description	Customer Expectation	Actual Duration
T7	Reset Password	1 min	10 min
T4	Give IP addr to user	2 min	5 min
T6	Order a software package	1 hour	1 hour
T1	Add new CGI area to www	1 hour	30 min
T2	Create new account	Next day	20 min
T5	Install new server	Next day	4 hours
T3	Debug minor NetNews issue	10 min	25 min

No  
change!

- Time: 360 minutes

Evaluation:

- All tasks completed
- Happy customers!

Much  
better!



# Summary

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

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

# Priorities

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- ❖ 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!

# Day 2: Not enough time!

	ABC	Prioritized Daily Task List	
	A	Test new GCC	2
	A	Add wiki page: new support hours	1/2
	B	Write design for new office	4
	C	Delete (after archiving) 50T	5
	B	Find 3 new SAN vendors to bid	3
	C	Install new IDS system in test lab	8

# Get control over your time

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- ❖ Schedule your work
- ❖ Prioritize what you do
- ❖ Control the hours you work
  
- ❖ Impossible? Completely possible.

# It only works if you use it!

---

- ❖ Carry todo-list everywhere
  - ❖ Smart Phone always with ya
- ❖ Always mark your calendar.
- ❖ Start each day by prioritizing and planning.

# Summary of The Cycle

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- ❖ Morning:
  - ❖ (Add any repeating items, etc.)
  - ❖ Too much to do? Prioritize!
- ❖ Work items in FIFO or prioritized order
- ❖ Take breaks
- ❖ “The 4pm routine”

# That's the Cycle!

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❖ Questions?

# Routines

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# 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

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- ❖ 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

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- ❖ 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

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- ❖ 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

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- ❖ 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?

# Chapter 3: Tools for a “Meeting-Free Day”

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# “No meetings” Days

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- ❖ Goals:
  - ❖ Maximize project time
  - ❖ Give customers attention they need
  - ❖ Do any recurring tasks (daily, weekly, etc.)
- ❖ Techniques:
  - ❖ Start the day: “Invest 5 minutes” to prioritize and plan
  - ❖ Maintain focus
  - ❖ Handle customer requests intelligently
  - ❖ Take breaks as needed

**Start the day: “Invest 5”**  
**Prioritize and mark “time blocks”**

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# Maintaining Focus

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*Date*

# Focus

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

# Focus

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- ❖ 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

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- ❖ 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

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- ❖ 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!**

# Multitasking

---

- ❖ Too much multitasking is a distraction
- ❖ Multitasking while talking to someone
  - ❖ ...is rude, makes conversation take longer
- ❖ When is multitasking appropriate?
  - ❖ Waiting for long batch jobs

# Interrupts from others...

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# Redirecting Interrupts

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- ❖ 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

---

- ❖ Each person picks a time of day to be the interrupt shield.
- ❖ While shielded, you have productive project time.

## Without Shield

	You	Co-Worker
AM	Frustrated by constant interruptions	
PM		

## With Shield

	You	Co-Worker
AM	Shield	Projects
PM	Projects	Shield

# Org structures based on this

---

- ❖ 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

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# 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



# Other ways to record request

---

- ❖ Create a “ticket”
- ❖ Write in your PDA or todo-list system
- ❖ Have them create the ticket -- tell them the words to use

# When to “delegate”?

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

# Effective Delegation

---

- ❖ Three things to explain to “stucky”:
  - ❖ What you expect the end-result to include
    - ❖ A specific, measurable result?
    - ❖ A checklist?
  - ❖ The resources / authority
  - ❖ A deadline
    - ❖ Let them suggest a date. If it’s acceptable, say “Ok, I’ll expect this to be done by [insert date].”
    - ❖ Record the deadline

# When to “do it”?

---

- ❖ Emergency -- outage effecting multiple people.
- ❖ It's my job to react in this situation.
- ❖ If it takes less than 2 minutes (“the 2 minute rule”)
- ❖ Requests from my boss.

# 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.)

# Task Batching

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# “Fixed Length” tasks first

---

- ❖ Fixed Tasks: Takes a certain amount of time
- ❖ Expanding tasks: Expands to fill time available
- ❖ Example 1:
  - ❖ It is 5pm. Leave to meet friends at 7pm.
  - ❖ Need to do 2 things before you leave:
    - ❖ Take out the trash before you leave
    - ❖ Practice Guitar Hero II
- ❖ Example 2:
  - ❖ Backup tapes must be changed each day.

# Batching

---

- ❖ Batching: Do similar tasks in a group
- ❖ Examples:
  - ❖ Do all DNS-related tickets at once
  - ❖ Do all (certain kind of tickets) once a day / week
    - ❖ Make exceptions for emergencies
  - ❖ Start all new employees on Mondays
  - ❖ Weekly “walk-around” to stay in touch with users



# Sharding

---

- ❖ Sharding: Break large quantities into chunks, or shards
- ❖ Term comes from Map-Reduce (Hadoop)
- ❖ Examples:
  - ❖ Visit 10 machines each morning until (task) complete
  - ❖ Schedule PC upgrades by hallway or department
  - ❖ Clean 1 / 8th of the storage room until complete

# Elastic Tasks: Set a stop-point

---

- ❖ Elastic tasks: Tasks that stretch to fill all time (if you let them)
  - ❖ Examples: email, netnews, reading blogs, chatting with coworkers at the watercooler
- ❖ The solution: Set a “stop point”
  - ❖ Say to yourself:
    - ❖ “I’m going to stop reading email in 10 minutes”
  - ❖ Look at your watch, set a timer, do whatever it takes.
- ❖ What if I’m not done?
  - ❖ Don’t worry... the email will be there when you come back.

# Declare a “fix-it day”

---

- ❖ Stop working on bigger projects to do tasks that have been lingering for too long
- ❖ Personal examples:
  - ❖ Inventory all the PCs
  - ❖ Clean the house
- ❖ Team Examples:
  - ❖ documentation fix-it day
  - ❖ find and fix slow PCs day
  - ❖ fix all the SSL certs day
  - ❖

# Email

---

- ❖ **Strategy:** Use filters so there is one Inbox to read that is important.
  - ❖ 00.MustRead -- all things “to you”, from “important people”, and on urgent mailing lists
  - ❖ 5x.listname -- one per mailing lists
  - ❖ Inbox -- everything else

## Daily plan:

- ❖ Read “00” when busy. “Inbox” when you have time.
- ❖ Everything else as recreation, or scheduled for a particular time blocks

# And take breaks

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- ❖ Take breaks. Your brain needs a rest. Really.
- ❖ Henry Ford, king of working people to death invented the coffee break because he found that people are more productive when they take breaks.

# Tools for a “Some Meetings” Day

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# Goal: Squeeze productivity into the gaps between meetings.

---

- ❖ First thing: Review Todo list, prioritize, circle things that “have to be done today”
- ❖ Everything else:
  - ❖ Move to next day.
  - ❖ Notify people if this means adjusting deadlines.
- ❖ Between meetings:
  - ❖ Focus on those “key items”.
  - ❖ Get right to work.
  - ❖ No socializing.

# How to get out of meetings

---

- ❖ Send a delegate.
  - ❖ Why is entire team attending?
  - ❖ Send a delegate to take notes.
  - ❖ Load up delegates with points to make.
  - ❖ Have delegate get you if certain topics come up.
- ❖ Announce “I can only stay for the first half”.
- ❖ Reschedule the meeting for some other time.



# Chapter 4: Tools for a “Packed Day”

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# “Packed Day”

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- ❖ Goals:
  - ❖ Efficient Meetings
  - ❖ Some multi-tasking
- ❖ Techniques:
  - ❖ Start the day: “Invest 5 minutes” to prioritize and plan
  - ❖ Reschedule + communicate if deadlines need extensions
  - ❖ Take breaks as needed

# Goal: Efficient meetings

---

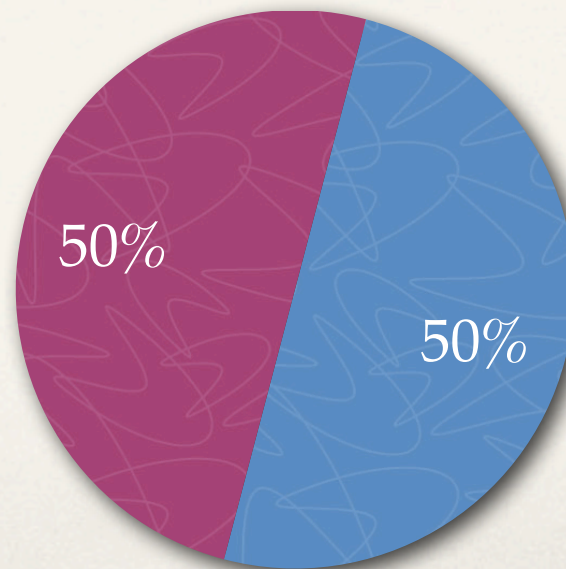
1. All meetings should be a good use of your time.
  - ❖ Ones that aren't should be reformed or cancelled.
2. When I'm in a meeting, I should participate to my fullest.
  - ❖ I should have a reason for being there.
  - ❖ I should focus on this reason.

# Who's responsible for how effective/efficient a meeting is?

---

● Attendees

● Facilitators



# Meetings run better when: (Attendee responsibilities)

---

- ❖ Meetings start on time.
  - ❖ Arrive on time.
  - ❖ Quiet and ready to go.
  - ❖ A/V needs ready before meeting starts.
- ❖ Everyone pays attention.
  - ❖ Not reading email, chatting online.
- ❖ Hold back from funny comments.
  - ❖ Unless it the meeting needs some life.

# How to “pay attention”

---

- ❖ Unable to pay attention?
  - ❖ Offer to be the note-taker.
  
- ❖ Unable to resist email / IM?
  - ❖ Don't bring your laptop.
  - ❖ Offer to take notes (if your laptop is projecting, you won't be reading email)

# Meetings run better when: (Facilitator responsibilities)

---

- ❖ Have a written agenda.
- ❖ Meetings start on time.
  - ❖ Arrive on time.
  - ❖ A/V needs ready before meeting starts.
- ❖ End on time

# Different meeting types

---

- ❖ Information:
  - ❖ Make your announcement then start Q&A.
  - ❖ Use Google Moderator.
- ❖ Discussion:
  - ❖ Facilitator is there to moderate, make sure everyone gets their thoughts expressed.
  - ❖ Tries to get closure (a decision) after people have talked enough.
- ❖ Status:
  - ❖ Give each person 1 minute. Time them.
  - ❖ No discussion until everyone has spoke.



# Let agenda manage themselves:

---

- ❖ Use a Google Doc, Wiki, or other shared document
  - ❖ At top:
    - ❖ Write goal of meeting, time, who should attend, etc.
  - ❖ Agenda for next meeting:
    - ❖ (anyone can log in and add / comment)
  - ❖ Agenda and notes for past meetings (in reverse chronological order)
- ❖ No agenda 12 hours prior? Automatic cancel.

## “Weekly GSI Team Meeting” Meeting Guidelines:

- Weekly. 30 minutes but book 1 hour just in case.
- Who should attend: all core GSI members, plus TLs and PjMs involved in GSI.
- First meeting of each month includes updates from all the Tech Leads
- How the agenda is built:
  - Anyone can add items to the agenda via the shared doc
- No new agenda items after 5pm the previous day.
- No agenda by 5pm PST? Meeting automatically cancelled.
- Default Agenda:
  - Announcements (if any)
  - First meeting of each month: Each TL gives a report (accomplishments, projects, and help needed)
  - Remainder of agenda items from shared doc.

## Agendas and Notes:

Agenda for  
next meeting

### 2009-09-02 Weekly GSI-Team Meeting

- (bill) Review agenda for annual summit
- (mary) The new monitoring system

Notes from  
previous  
meeting

### 2009-08-26 Weekly GSI-Team Meeting

- Attendees: bill, mary, joe, sara, mar, tom, bob, julie
- Announcements:
  - Bill will be out of office all November
- Discussion of new monitoring thresholds:
  - mary: too many false-alarms
  - Decision: No alert until 4 consecutive missed pings.
- Where to put new server:
  - Much discussion.
  - Decision: Rack 3 in room 2.

Notes from  
even earlier  
meetings

### 2009-08-19 Weekly GSI-Team Meeting

# Other tips:

---

- ❖ Facilitator decides:
  - ❖ Order of agenda items
  - ❖ Laptop policy
- ❖ Only invite people that are needed.
- ❖ Facilitator should not be the note-taker. Too distracting.

# How to have shorter meetings.

---

- ❖ Schedule 30-minute meetings, not 60-minutes.
- ❖ Meeting ends early?
  - ❖ Don't ask, "is there anything else?" Just say "we've reached the end of the agenda. Thank you." and leave.
- ❖ Feed people: Mouths busy with food don't talk. (Unless you want to encourage discussion.)

# Dealing with bad facilitators.

---

- ❖ Either reform them, or stop attending their meetings.
- ❖ Either way, let them know. *IN PRIVATE.*
- ❖ Explain the problems:
  - ❖ Meetings are longer than needed.
  - ❖ Meetings are unfocused.
- ❖ Suggest the Agenda Wiki, shorter timeslot, etc.

=====  
My meeting policy  
=====

After spending too much time in meetings I realized that if everything else can be budgeted away (travel, computing resources, etc.), I can introduce a new meeting policy for myself.

Budget  
=====

I have a budget for recurring meetings. The budget stands at 12.5% of my working time (40 hours per week  $\Rightarrow$  5 hours of meetings, i.e. one per day). Weekly meetings are not supposed to take more than 7.5% (i.e. I have 3 hours of weekly meetings per week), and the other 5% (two hours) are reserved for less-often meetings.

Confused? Current weekly meetings:

- \* all-team meeting, one hour
- \* team-leads meeting, one hour

And I have one hour left for weekly meetings.

Loopholes:

Of course, the budget above doesn't deal with non-recurring meetings. I'll see about those if they happen to become a problem.

Meeting times  
=====

Due to my current timezone and the teams I'm working with, all recurring meetings will be restricted to a specific time slot: after 15:00 Zürich time.

Non-recurring meetings are restricted to the same time slot, exceptional cases (people traveling here, etc.) being, of course, an exception.

Furthermore, Mondays and Fridays are not favorable to meetings. I can have meetings on those days, but I won't be happy.

Meeting types  
=====

Of course, there are different meeting types/purposes, so treating all the same is not right. However, I'll make it simple: any 'meeting' whose purpose is not:

- \* to solve a technical problem
  - \* a collaboration that will result in a design document
- is a meeting, and is a subject of the above rules.

This is the “meeting budget” a co-worker recently announced for himself.

# Chapter 5: Tools for a “Out of Office”

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# “Out of Office”

---

- ❖ Goals:
  - ❖ Coverage
  - ❖ Keep others informed.
- ❖ Techniques:
  - ❖ Review upcoming Todo lists.
  - ❖ The OOO countdown
  - ❖ Set appropriate messages.



# Short-term Out Of Office:

---

- ❖ 1-2 days
- ❖ Check Todo List.
  - ❖ Manage “due date” items.
    - ❖ Contact requester, renegotiate date or delegate.
    - ❖ Might be better to do with your boss than requester.
  - ❖

# Long-term Out of Office

---

- ❖ Vacations, trips, etc.
- ❖ Establish a “count-down”:
  - ❖  $x$  days in advance:
    - ❖ Announce to boss, others.
    - ❖ Plan coverage (co-worker, clerk, etc.)
      - ❖ Coverage doesn't have to be perfect. Just recurring todos, common tasks.
    - ❖ Timeline should be written, have manager signoff.
  - ❖ Communication:
    - ❖ If/ when any email announcements, etc.

# Long-term OoO (pt 2)

---

- ❖ Training:
  - ❖ Train those that will cover for you.
  - ❖ Update documentation.
  - ❖ Have them practice
- ❖ 7 days prior:
  - ❖ Coverage people should do all tasks at least once.
- ❖ 1 day prior:
  - ❖ No “root” or “administrator” access for you!
  - ❖ Set “vacation” message on email, voicemail, etc

# On Return...

---

- ❖ Checklist:
  - ❖ Disable “vacation” message on email and VM
  - ❖ Meet with coverage people.
    - ❖ Identify gaps in documentation, other issues.
  - ❖ Enumerate tasks left for when you return.
    - ❖ Hopefully a ticket is filed for each.
  - ❖ Announce you have returned (reply-all to previous announcement email? walk around saying “hi”?)

# Chapter 6: Tools for a “Half Day”

---

# Half Day

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- ❖ Example: The half-day before Thanksgiving
- ❖ Goals:
  - ❖ Don't drop any high-priority issues / deadlines.
  - ❖ Leave on-time.
- ❖ Techniques:
  - ❖ Prioritize and schedule.
  - ❖ Limit elastic tasks.
  - ❖ Communicate, coverage, etc.
- ❖ Special case: day before holiday:
  - ❖ Often nobody gets work done. Is a party. Plan for this!

# Chapter 7: Tools for an “Emergency Outage”

---

# Day 3:

	ABC	Prioritized Daily Task List
	B	Phone JP
	A	Add wiki page: new support hours
	C	Ticket catchup (3 hours)
	A	Upgrade Oracle for Sales group



# Emergency Day

---

- ❖ Was going to be a normal day, then a major outage happens.
- ❖ Goal:
  - ❖ Solve the outage!
- ❖ Techniques:
  - ❖ Be visible to customers.
  - ❖ Be focused.
  - ❖ Know when to accept help.
  - ❖ Communicate the management chain and/or customers.

# Techniques

---

- ❖ Respond visibly:
  - ❖ Match customer expectation:
    - ❖ They want to see action - so do something visible
    - ❖ “we’re down” web page, signs on wall, “*running SAs*”
- ❖ After initial diagnosis, communicate.
  - ❖ Inform management (hourly?)
  - ❖ Review “todo list” -- Renegotiate “A” priority items.
    - ❖ Ask boss to do the negotiations. Excuse you from mtgs.
    - ❖ Benefit: keeps boss out of your hair.

# Other tips...

---

- ❖ Accept help from others.
  - ❖ I've seen many sysadmins try to "go it alone" or not accept help during an outage. Accept offers of help.
  - ❖ Even a "second pair of eyes" is a powerful thing.
- ❖ Know when you are tired.
  - ❖ Assign external person to force you to take breaks.
  - ❖ Work in shifts for multi-day outages.
- ❖ Fix the urgent problem, save the long-term fix for later.
  - ❖ "Quick fix" is ok.
  - ❖ Schedule long-term fix for next maintenance window.

# Post mortem and preventions

---

- \* After an emergency, publish a “Post Mortem”
- \* Goal:
  - \* Document what went wrong, what went right, can can be done to prevent this in the future.
  - \* Non-Goal: to place blame.
- \* List:
  - \* What went wrong
  - \* Timeline (pages, actions taken, emails sent, etc.)
  - \* Core problems
  - \* Preventions for the future:
    - \* List ticketId assigned to each recommendation
  - \* People involved

# Summary

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- ❖ Plan how you will approach your day:
  - ❖ Meeting-Free / Mixed / Meeting-Packed
- ❖ Use appropriate tools:
  - ❖ All: Todo list + Calendar
  - ❖ Meeting-Free: Focus
  - ❖ Mixed: Squeeze in tasks where you can.
  - ❖ Meeting-Packed: Efficient Meetings
- ❖ Meeting efficiency:
  - ❖ Depends on YOUR activity and FACILITATOR'S planning.

# Life Goals

Get what you want out of life!

---

*Date*

# 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
- ❖ 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

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- ❖ 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:

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---

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”

# Q&A

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**What are you going to do with  
all this free time?**

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# REVIEW:

---

- ❖ List 3 techniques you found most useful
- ❖ Circle the one you commit to doing

More tips:

[www.EverythingSysAdmin.com](http://www.EverythingSysAdmin.com)

[wiki.EverythingSysadmin.com](http://wiki.EverythingSysadmin.com)



Please be verbose on the evaluation forms!

# Time Management for System Administrators: A New Approach

by Thomas A. Limoncelli

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Usenix LISA 2009, Baltimore, MD