

Cove Apple Club

March 10, 2010



Apple in the News

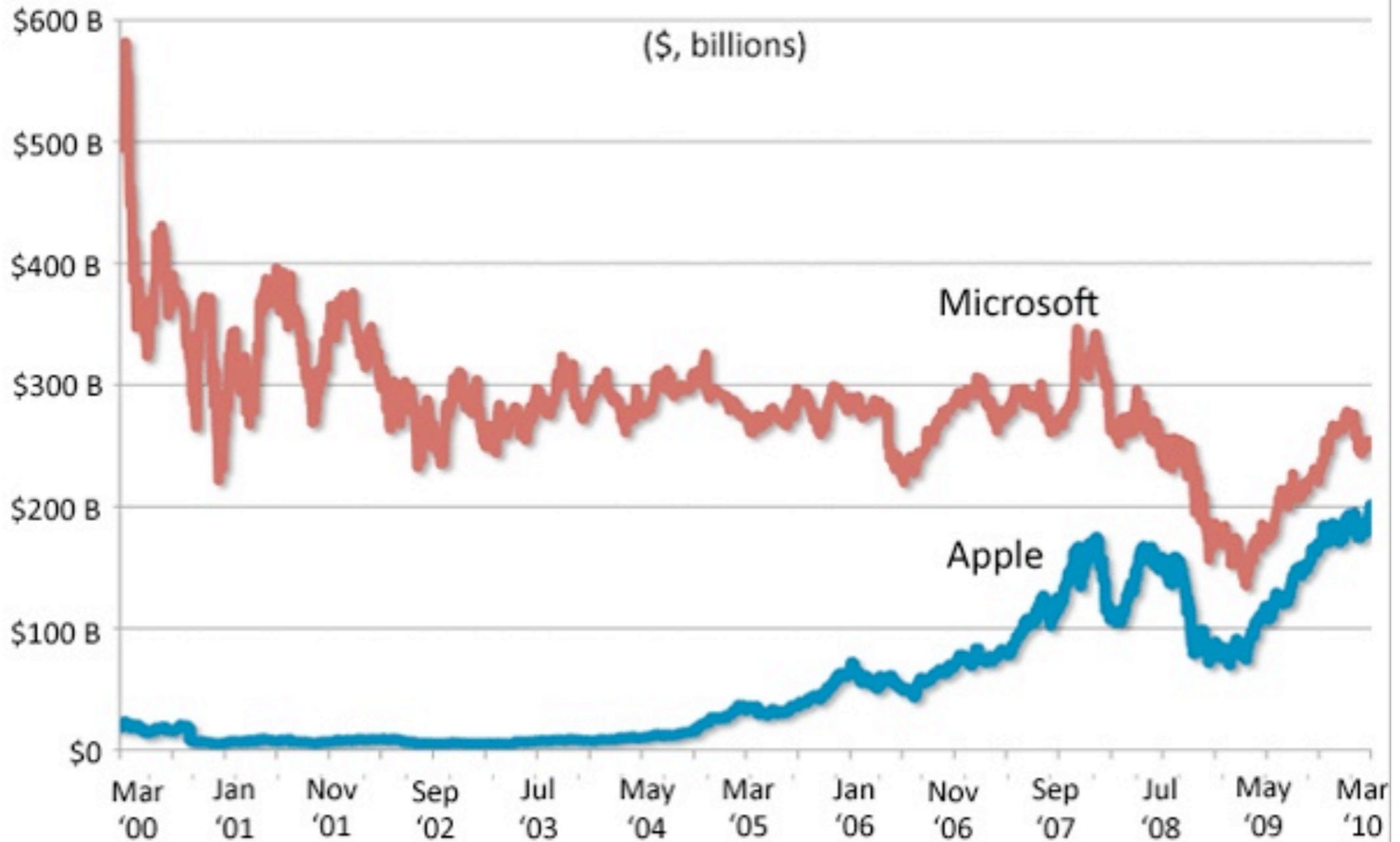
- ✦ *iPad drops April 3; pre-orders start this Friday*
- ✦ *FORTUNE names Apple the world's most-admired company for the third year in a row*

AAPL

- ◆ *AAPL hit another 30-year high today of \$224.84, up 153% in 1 year and 4,789% since the return of Steve Jobs, the best-performing US equity during that period.*
- ◆ *Apple's market cap is now over \$203-Billion, more than Walmart, GE and Berkshire-Hathaway. Only Exxon-Mobil and Microsoft are worth more...and not by much.*



Market Capitalization: Microsoft Vs. Apple



Data: Yahoo Finance

Tonight's Topics

- ✦ *POP vs. IMAP: Learn it, love it, live it*
- ✦ *Hazel: Household Help for your Mac*
- ✦ *Numbers Everyone Should Know*



Hazel





Hazel

A Productivity Tool

Meet Hazel, your personal housekeeper.

<http://www.noodlesoft.com/hazel.php>

Basic Functions

1. Monitors and Manages Folders

With Custom Rules

2. Manages Your Trash

Auto-Delete after X-Days or Y-Size

3. Helps Uninstall Applications

Finds and Deletes Support Files

4. Finds & Deletes Duplicate Files

General Info

- Hazel is for sale for \$21.95
- I got mine from a MacHeist Bundle
- Note: *Hazel Installs to the Preference Pane*

Filter files based on:

- Name
- Extension
- Date Added
- Date Created
- Date Last Opened
- Date Last Modified
- Date Last Matched
- Kind
- Color Label
- Comment
- Keywords
- Size
- Contents
- Source URL/Address
- Subfolder Depth
- *Any Spotlight attribute*

Perform the following actions:

- Move file
- Copy file
- Rename file
- Sort into subfolder
- Set color label
- Add comment
- Add keywords
- Archive file
- Unarchive file
- Open file
- Make alias
- Reveal in Finder
- Import into iTunes
- Import into iPhoto
- Run **AppleScript**
- Run **Automator** workflow
- Run shell script
- Run rules on folder contents
- Send **Growl** notification

Additional Stuff

- Helps to learn and use Automator Scripts
- Use Apple Scripts if you want
- Learn and use Growl for Notifications

To the Demo...

About Hazel

“Organize your files using a familiar rule interface. Filter on the file’s name, type, date, the site or email address it came from and more. And do more than just file. You can set color labels, Spotlight comments, archive files and even import into iPhoto and iTunes. With it’s powerful rule interface, you can adapt Hazel to whatever your workflow may be. Hazel also cleans, sporting options to clean out incomplete and duplicate downloads.”

IMAP vs. POP E-mail

Presented by Mike Sullivan

Cypress Cove Apple Club

March 10, 2010

Why This is Important

- We all use e-mail
- E-mail is our most mission-critical app
- We want reliable access to ALL our e-mail anywhere, anytime, on any device

Why This is Important

- ...but most importantly of all:
- Computers break
- Laptops get stolen
- Houses burn down
- & ALL hard drives will fail, and ALWAYS at the “least convenient” time

2010!

It's ~~2008~~

Do You Know
Where Your
E-mail Is?

Is it on your Mac?



**Or is it on a managed server in
a commercial data center?**



my e-mail

POP

- Post Office Protocol (now: POP3)
- “Store-and-forward” system
- Your e-mail is held on the server until you download it to your client Mail app
- Your client Mail app must periodically “poll” the server to check for new mail

POP



you@yourdomain.com

A server at an ISP or hosting provider receives your e-mail for you and stores it until you connect

POP



you@yourdomain.com

A server at an ISP or hosting provider receives your e-mail for you and stores it until you connect



“pull”

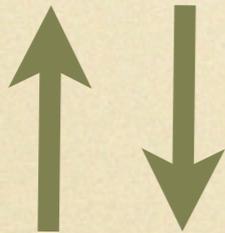
You use your computer's e-mail app to connect to your e-mail server and “pull” your new messages

POP



you@yourdomain.com

A server at an ISP or hosting provider receives your e-mail for you and stores it until you connect



You use your computer's e-mail app to connect to your e-mail server and "pull" your new messages



"delete"

Your computer tells the e-mail server to delete the messages it has sent, leaving **the only copy** of your mail on **your** computer

With POP E-mail:

- Your e-mail is mostly on *YOUR COMPUTER*
- **NO** off-site backup of the downloaded e-mail
- **NO** Webmail access to downloaded e-mail / folders / archives
- **NO** backup for your lost / stolen / broken computer
- **NO** replica of Sent messages or Drafts

...and that's bad because:

- Computers break
- Laptops get stolen
- Houses burn down
- & **ALL** hard drives will fail, and **ALWAYS** at the “least convenient” time

IMAP

- Internet Message Access Protocol (now IMAP 4r1)
- The authoritative copy of your e-mail is on the server; your mail app shows you a *replica* of it
- Server-side folders
- Server-side searches / filters / scripts
- Instant “push” of new e-mail to clients (mobile, desktop, etc.)

IMAP



you@yourdomain.com

A server at an ISP or hosting provider receives your e-mail and keeps a database file containing all your e-mail, folders, attachments, notes, etc.

IMAP



you@yourdomain.com

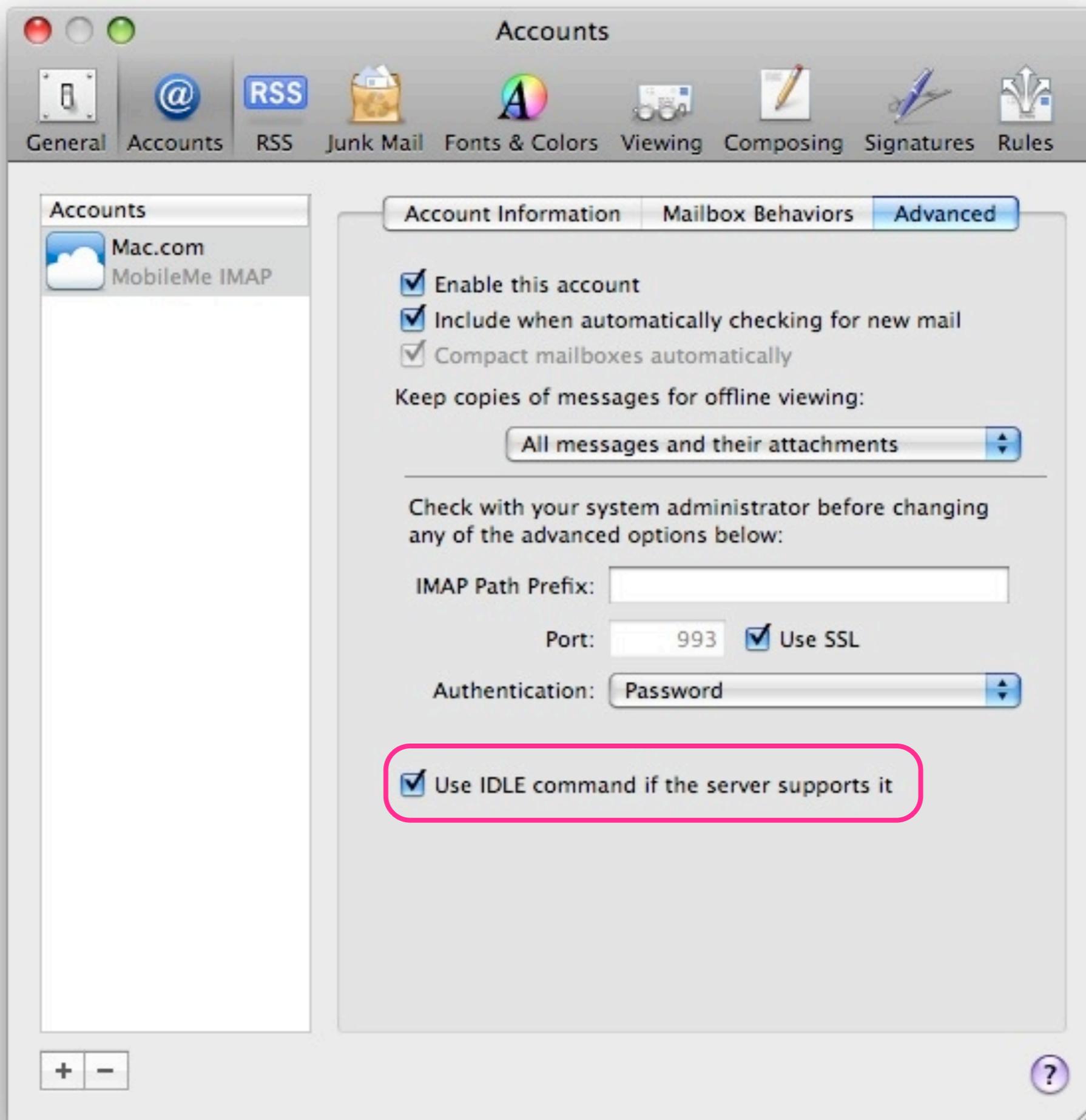
A server at an ISP or hosting provider receives your e-mail and keeps a database file containing all your e-mail, attachments, notes, etc.

“push”



The server “pushes” your e-mail to your Mail app or iPhone whenever it is online; the server’s database is replicated on your client or Webmail





IMAP



you@yourdomain.com

A server at an ISP or hosting provider receives your e-mail and keeps a database file containing all your e-mail, attachments, notes, etc.

“push”



The server “pushes” your e-mail to your Mail app or iPhone whenever it is online; the server’s database is replicated on your client or Webmail



IMAP



you@yourdomain.com

A server at an ISP or hosting provider receives your e-mail and keeps a database file containing all your e-mail, attachments, notes, etc.

“push”



The server “pushes” your e-mail to your Mail app or iPhone whenever it is online; the server’s database is replicated on your client or Webmail

ALL your e-mail (sent and received, filed or unfiled) is kept on the server, for access anywhere on any device.

IMAP



you@yourdomain.com

“push”



A server at an ISP or hosting provider receives your e-mail and keeps a database file containing all your e-mail, attachments, notes, etc.

The server “pushes” your e-mail to your Mail app or iPhone whenever it is online; the server’s database is replicated on your client or Webmail

ALL your e-mail (sent and received, filed or unfiled) is kept on the server, for access anywhere on any device. **The server has the authoritative copy of your e-mail and attachments.**

With IMAP E-mail:

- Your e-mail is stored on a **managed server**
- **ALL** of your e-mail is backed up
- **ALL** of your e-mail is available via Webmail, borrowed PCs, iPhones, new computers, etc.
- *Instant* **PUSH** e-mail to your iPhone / Mail app
- Storage of Sent e-mail and Drafts
- **ALL** of your devices & mail apps are in sync

Your Mac vs. IMAP E-mail

	Your Mac	Hosted IMAP Server
Connected to a fat pipe		
No single point of failure		
Maintained & monitored 24/7		
AC, fire protection, backups & upgrades by trained pros		

...and that's good because:

- Computers break
- Laptops get stolen
- Houses burn down
- & **ALL** hard drives will fail, and **ALWAYS** at the "least convenient" time

VACANCY



PLENTY of room!

So, why not migrate?

- You didn't know / care what IMAP was?
 - **Now you do!**
- Your ISP didn't offer IMAP?
 - **It's worth it to switch. Believe me, it is.**
- You have years of e-mail files on a POP server?
 - **Drag-and-drop it onto your new IMAP server!**

Demo

	Webmail Access	POP3 Client	IMAP Client	Security	Cost	Portable?
	✓	✓	Default	SSL	\$99/ year	Yes
	Default	✓	✓	SSL if set by option	Ad- supported	Yes
	Only	✓	No	During sign-in only	Ad- supported	Yes
	Only	No	No	None without special login	Ad- supported	Yes
Your Current ISP	✓	✓	Varies	Varies	w/Plan	No
Your Hosted Domain	✓	✓	Varies	Varies	w/Plan	Yes
Google Apps for Your Domain	✓	✓	✓	SSL if set by option	Free	Yes, on your domain

More information...

- Apple Mail app: Help → Search for “IMAP”
- Read up on “Trick Out Google Apps for Your Domain” on Lifehacker.com
- or, have Mike over for a beer

IMAP vs. POP E-mail

Presented by Mike Sullivan

Cypress Cove Apple Club

March 10, 2010

Numbers everyone should know...

From a talk given by Jeff Dean

Google Fellow

Google, Inc.



Why is this so important?

Characteristics of Great Software

Users are attracted to the Macintosh in general and to Mac OS X specifically because they feel the combination offers a superior user experience over other platforms. Macintosh computers are stylish, flexible, easy to set up, easy to maintain, and powerful. Mac OS X combines a reliable core with an intuitive design, stunning graphics, excellent security, and the features users want. Third-party applications enhance this package by delivering specific vertical solutions with sophisticated features and behaviors that are consistent with Apple guidelines.

In the spirit of helping you deliver outstanding solutions in your software products, the following sections present some high-level goals to strive for in your software design.

For information about the technologies you can use to implement these design attributes, see [Mac OS X Technology Overview](#).

Note: Although achieving all of the goals in the following sections is desirable, doing so may not be practical or necessary in all cases. In the end, the needs of your user audience should guide you towards the most relevant choices. For more information about how to define your audience, see ["Know Your Audience."](#)

High Performance

Performance is the perceived measure of how fast or efficient your software is and it is critical to the success of all software. If your software seems slow, users may be less inclined to buy it. Even software that uses the most optimal algorithms may seem slow if it spends more time processing data than responding to the user.

Developers who have experience programming on other platforms (including Mac OS 9) should take the time to learn about the factors that influence performance on Mac OS X. Understanding these factors can help you make better choices in your design and implementation. For an overview of performance factors and links to information on how to identify problems, see [Performance Overview](#).

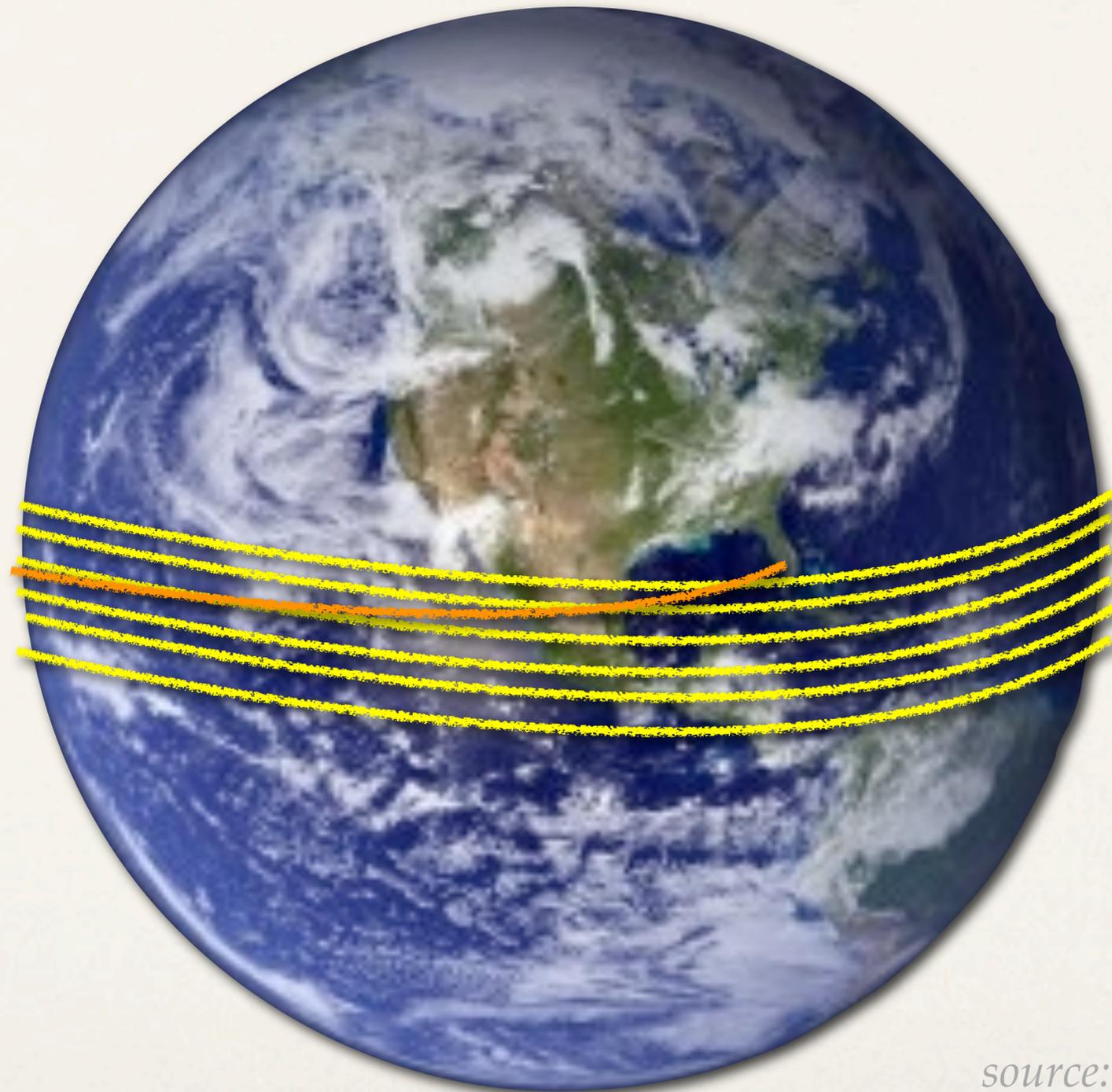
Here are some performance-related guidelines to keep in mind:

Time units used in modern CPUs

- ❖ Since 1980, computer CPU speeds have gone from kHz to Mhz to Ghz
- ❖ Computer processors tick off time in increments measured in “nanoseconds”
- ❖ A nanosecond is $1 / 1,000,000,000$ of a second, or 0.000000001 seconds, or 1×10^{-9} seconds
- ❖ During each tick, a modern CPU can process many instructions, for example, multiplying two numbers or comparing them to see if they are equal
- ❖ A new iMac’s Intel Core i7 CPU ticks 13,333,000,000 times in one second (4 cores x 3.33Ghz)

In one *second*...

...a photon can
travel 186,282
miles...

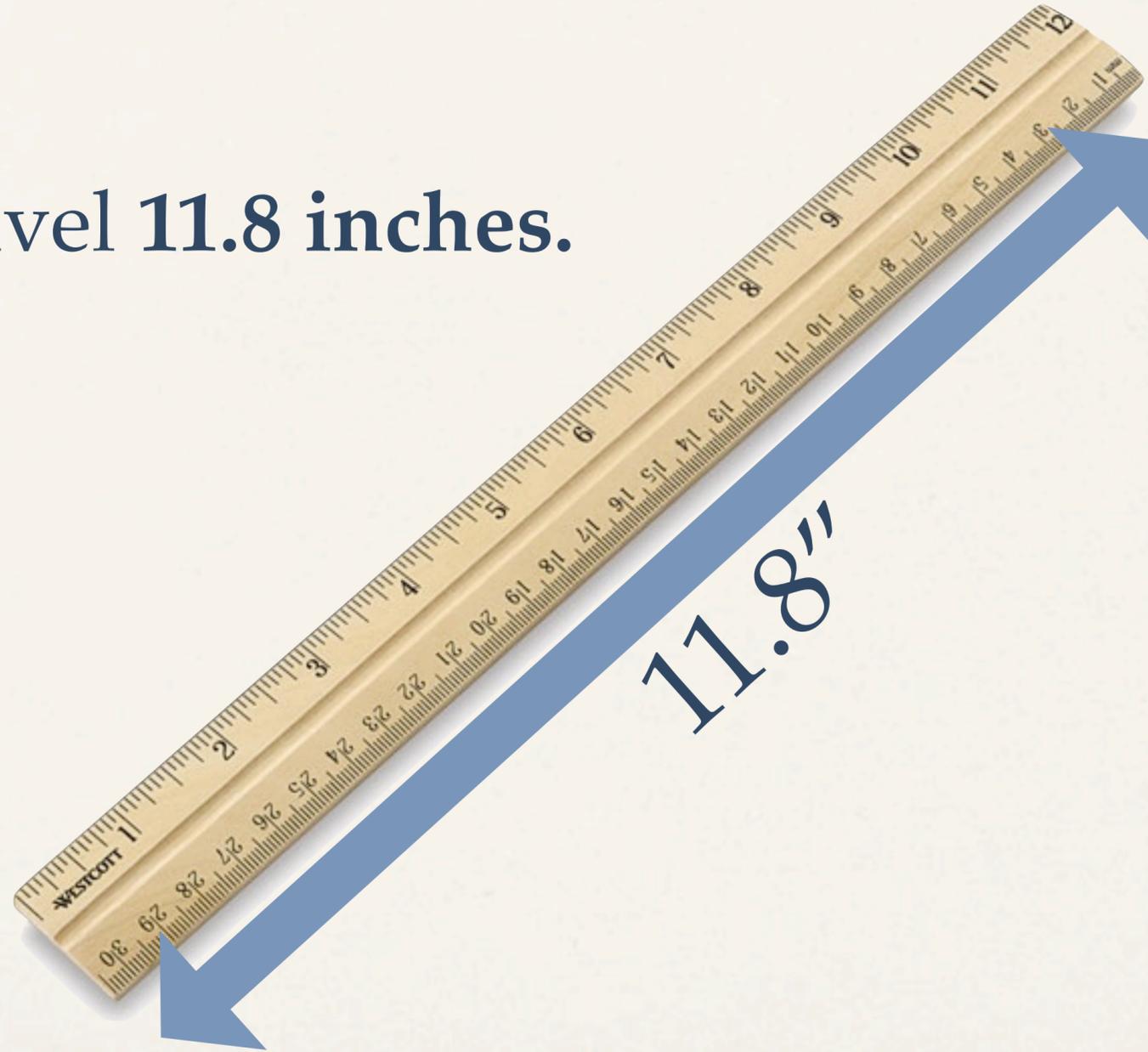


...a distance
equal to $7\frac{1}{2}$
times around
the Earth

source: $c \times 1s = 299.792km = 186,282 \text{ mi.}$

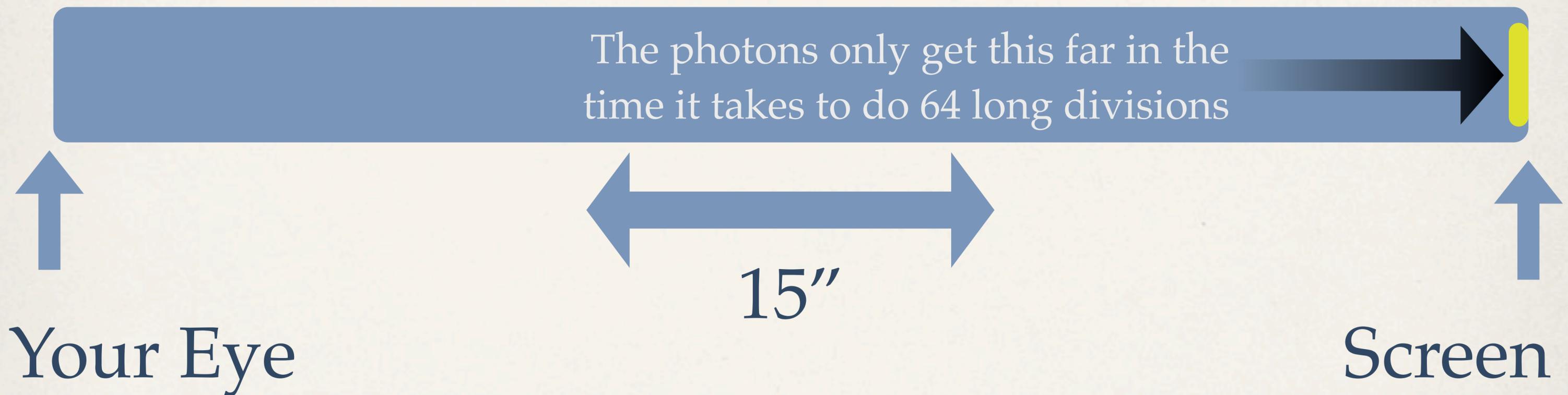
In one *nanosecond*...

...a photon can travel **11.8 inches**.



source: $c \times 1ns = 299.8 \text{ mm} = 11.8in$

Put another way, the photons that leave your monitor screen when your iMac starts doing 64 long divisions only get 0.2" closer to your eyeballs when the computations are finished.



objects in diagram are to scale

source: $c \times 1ns = 299.8 \text{ mm} = 11.8in$

Operation	Time in ns	Time in sec.	If 1ns = 1 sec., time in D:H:M:S
Read from L1 CPU Cache	0.5	0.0000000005	1 / 2 second
Branch mis- predict	5	0.000000005	5 seconds
Read from L2 CPU Cache	7	0.000000007	7 Seconds
Read 1k from fast RAM	100	0.0000001	1 minute, 40 seconds
Compress 1k Bytes	10,000	0.00001	2 hours, 46 minutes

source: Jeff Dean, Google, Inc.

Operation	Time in ns	Time in sec.	If 1ns = 1 sec., time in D:H:M:S
Send 2k Bytes over 1Gb LAN	20,000	0.00002	5 hours, 33 minutes
Read 1Mb sequentially from fast RAM	250,000	0.00025	2 days, 21 hours, 26 minutes, 40 seconds
1k Byte Round-trip Inside Same Datacenter	500,000	0.0005	5 days, 18 hours, 53 minutes, 20 seconds

Operation	Time in ns	Time in sec.	If 1ns = 1 sec., time in D:H:M:S
HD Seek	10,000,000	0.01	3 months, 24 days, 11 hours, 46 minutes, 40 seconds
Read 1Mb from fast HD	30,000,000	0.03	11 months, 12 days, 15 hours
Send 1 packet CA → Netherlands → CA	150,000,000	0.15	4 years, 9 months, 2 days, 8 hours, 40 minutes

Operation	Time in ns	Time in sec.	If 1ns = 1 sec., time in D:H:M:S
Blink your eye once	500,000,000	0.5	15 years, 10 months, 1 week, 20 hours, 53 minutes, 20 seconds

Did you know...?

- ❖ Mac OS X puts your keyboard to sleep *between keystrokes* to save power?
- ❖ Your Mac is typically running over 400 execution threads *simultaneously*?
- ❖ The processor and camera inside the Magic Mouse captures and analyzes 4,000 high-resolution infrared photos *per second*, providing more processing power inside your mouse than in a roomful of high-end PCs from the late 1990s?
- ❖ ...and all of this goes on without us having to know anything about it...*but now we do!*

Numbers everyone should know...

From a talk given by Jeff Dean
Google Fellow
Google, Inc.



Mission: Mothership!

✿ *Date set for Wednesday, April 7*

✿ *Full info on our Web site: CoveAppleClub.com*

*AAPL is up 15.8%
since our last visit!*



Cove Apple Club

March 10, 2010

