

Tools for the Lotus Notes Developer

(no, that is not Comic Sans)

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IamLUG 2013 Sponsors



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Kathy Brown

PSC Group

runningnotes.net

@RunningKathy

@NotesDevTips

Too many to list

Blackberry Today Podcast



Julian Robichaux

panagenda

nsftools.com

@jrobichaux

@chiasheep

TakingNotes podcast





Developer Tools!

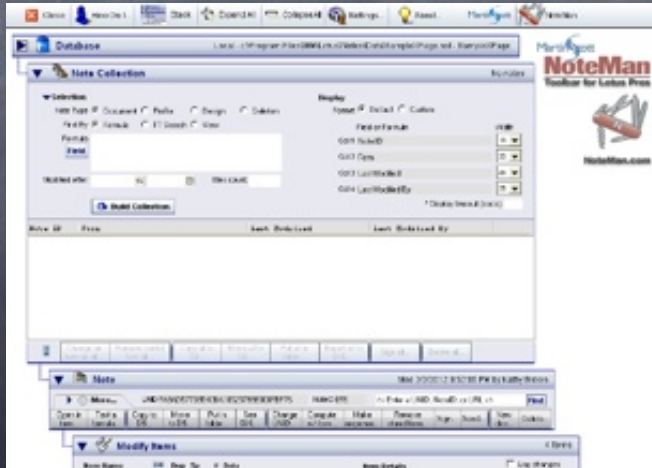
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- ◊ **Notes Client** ←
- ◊ Domino Designer
- ◊ XPages
- ◊ Java
- ◊ JavaScript
- ◊ Web Design and Prototyping
- ◊ Graphics
- ◊ Charts, Graphs, and Reports
- ◊ Networking and Web Services
- ◊ Relational Database Tools
- ◊ General Developer Tools
- ◊ Community Resources

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NoteMan

- <http://www.martinscott.com/Site.nsf/ID/Noteman>
- Editor, DocDelta, Design, ACL



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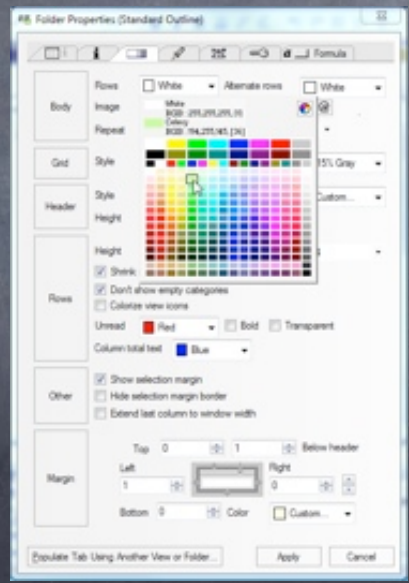
NoteMan

- What do you get for free?
 - See & sort a table of all field values, types, etc.
 - Print, forward and copy
 - See all doc readers and authors
 - Search a database by NoteID, UNID, formula and profile name
 - See a sortable view of profile docs
 - See a sortable view of design elements
 - Find a doc by URL
 - Test a formula on a doc

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ytria

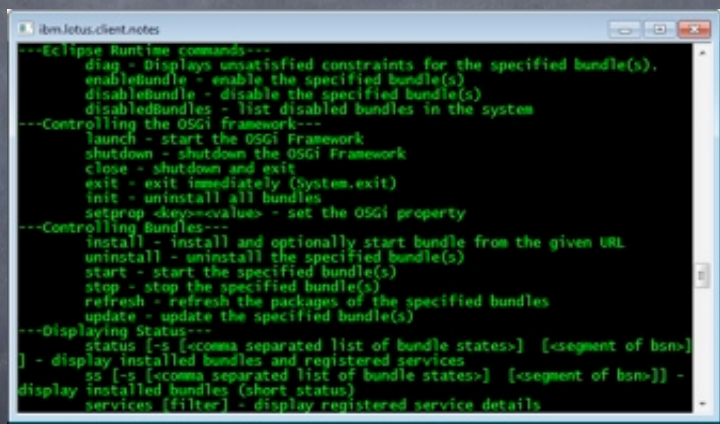
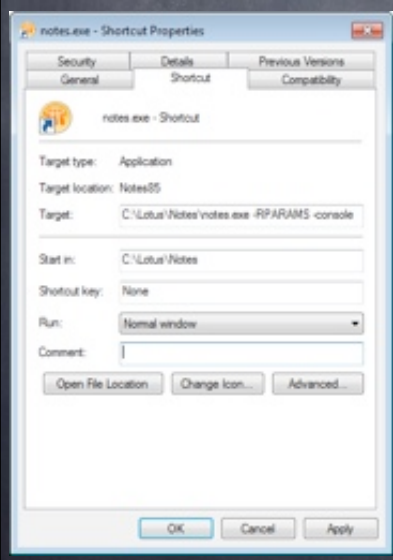
scanEZ
aclEZ
agentEZ
databaseEZ
replicationEZ
signEZ
viewEZ
actionbarEZ
etcEZ...



really nice way to change properties on multiple views/folders

<http://www.ytria.com>

OSGi Console



for output only, see:
Help - Support - View Trace

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Source Control

The image shows a Bitbucket repository page for 'staging' with options like Clone, Fork, Compare, and Pull Request. Below the repository details, there is a Mercurial advertisement with the text 'Work easier Work faster' and a description of Mercurial as a free, distributed source control management tool.

Agent Profiling

- Really easy to do
- To see the results, just right-click the agent and choose "View Profile Results"
- Works on triggered and scheduled agents
- LotusScript or Java

Options

Shared Private

Store search in search bar menu

Store highlights in document

Run in background client thread

Profile this agent

© RunningNotes

Search Test With Profiling Profile

04/12/2011 09:37:40 AM EDT
Elapsed time: 100 seconds
Methods profiled: 29
Total measured time: 99843 msec

Class	Method	Operation	Calls	Time
Database	OpenByReplicaID		4	17922
View	GetDocumentByKey		4	15313
Database	FTSearch		4	11593
Document	IsValid	Get	10	11315
Document	HasItem		70	9015
Document	IsDeleted	Get	10	8453
Document	NotesURL	Get	10	8358
Database	IsFTIndexed	Get	4	6984
Database	GetView		4	4875
Document	GetItemValue		52	4296
Session	GetDatabase		1	1703
MimeEntry	SetContentFromText		1	16

almost 50%

Agent Profile Before

© RunningNotes

Search Test With Profiling Profile

04/12/2011 10:59:33 AM EDT

Elapsed time: 10 seconds

Methods profiled: 28

Total measured time: 10204 msec

Class	Method	Operation	Calls	Time
Database	OpenByReplicaID		4	2752
Document	GetItemValue		102	2141
View	GetDocumentByKey		4	1696
Database	FTSearch		4	1484
Database	IsFTIndexed	Get	4	1251
Database	NotesURL	Get	2	781
Database	GetView		1	109
Document	HasItem		80	0
Name	Common	Get	30	0
Document	[expandedname]	Get	29	0
Document	FTSearchScore	Get	10	0
DocumentCollection	Count	Get	10	0

Agent Profile After

© RunningNotes

Teamstudio Profiler

File View Help

Total Time: 5.29414 seconds

Fn	Calls	Time + Chil...	Time	% Parent	Average
INITIALIZE	1	5.294	5.123	100.00%	5.123
GETSETTINGSOOC	1	0.158	0.158	2.98%	0.158
REPLACESUBSTRING	2	0.007	0.007	0.14%	0.004
GETBLOGENTRYASHTML	3	0.006	0.000	0.11%	0.001
GETFILEHEADER	1	0.005	0.000	0.11%	0.000

Children Source

Function Time: 0.005793 seconds

Fn	Calls	Time + Chil...	Time	% Parent	Average
MAKEALPHANUM	1	0.001	0.001	19.78%	0.001
GETRELATIVEURL	1	0.000	0.000	3.29%	0.000

Calls...

Show Function Combine Children

- INITIALIZE (Export Blog Entries to HTML File)
- GETSETTINGSOOC (BlogFunctions)
- GETFILEHEADER (BlogFunctions)
- GETBLOGENTRYASHTML (BlogFunctions)
- GETRELATIVEURL (BlogFunctions)
- MAKEALPHANUM (BlogFunctions)
- GETFILEFOOTER (BlogFunctions)

Help Close

© RunningNotes

<http://www.teamstudio.com/Develop/Profiler/tabid/184/id/2/Default.aspx>

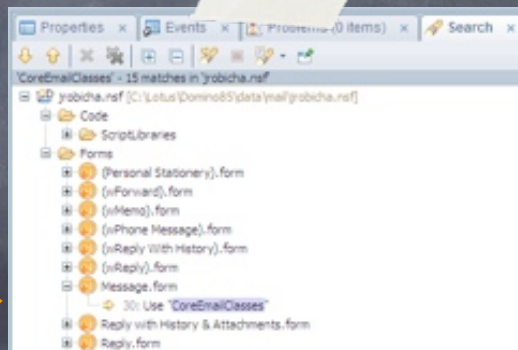
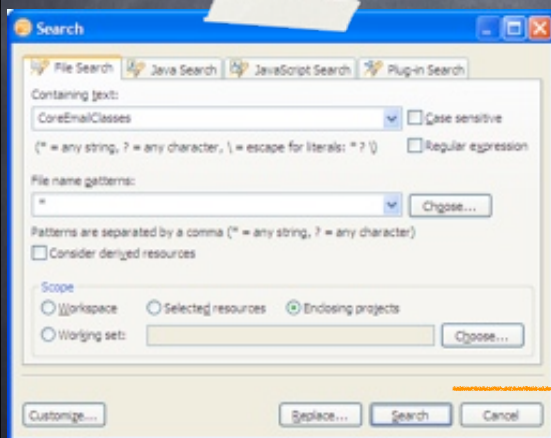
Error Logging

- Please, oh please, add error logging to your code
- I can virtually guarantee you will find errors you didn't know were happening
- Some options on OpenNTF:
 - OpenLog
 - Flow
 - Assono Framework



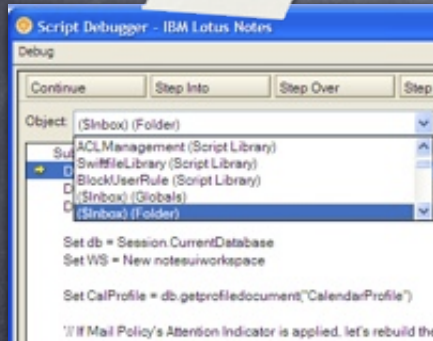
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DDE Search

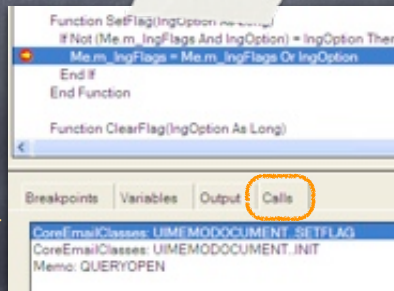


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LotusScript Debugger Tricks

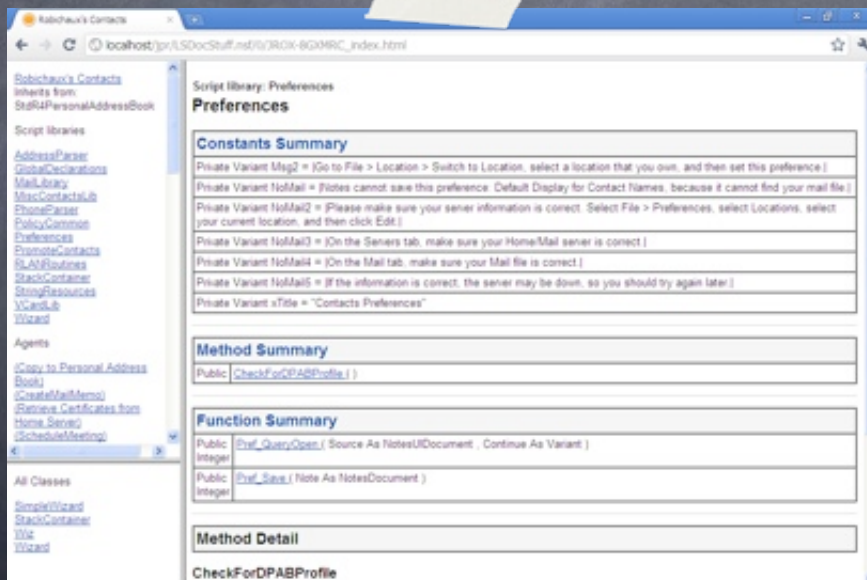


All the Script Libraries in play



Call stack

LotusScript.doc



Intermittent memory issues and hangs in Domino Designer

Technote (troubleshooting)

Problem

While using IBM Lotus Domino Designer, you are experiencing repeated hangs or symptoms of memory issues (such as the error, "JVM: Out of Memory") even though your machine has at least 2 GB of physical RAM. Although the problems are frequent, you are unable to link them to a particular set of steps. You may observe that the issues occur more often under certain conditions, but there's still an intermittent nature to the problem.

<http://www-01.ibm.com/support/docview.wss?uid=swg21617708>

Resolving the problem

Most likely, a set of default configurations for Notes/Designers' use of the JVM needs to be modified. The JVM is the runtime upon which Java programs execute. For Notes and Domino Designer, the JVM settings are stored in a file called `jvm.properties` that is located in the following path:

```
<Notes program
dir>/framework/rcp/deploy/jvm.properties
```

By default, the properties file has the following values:

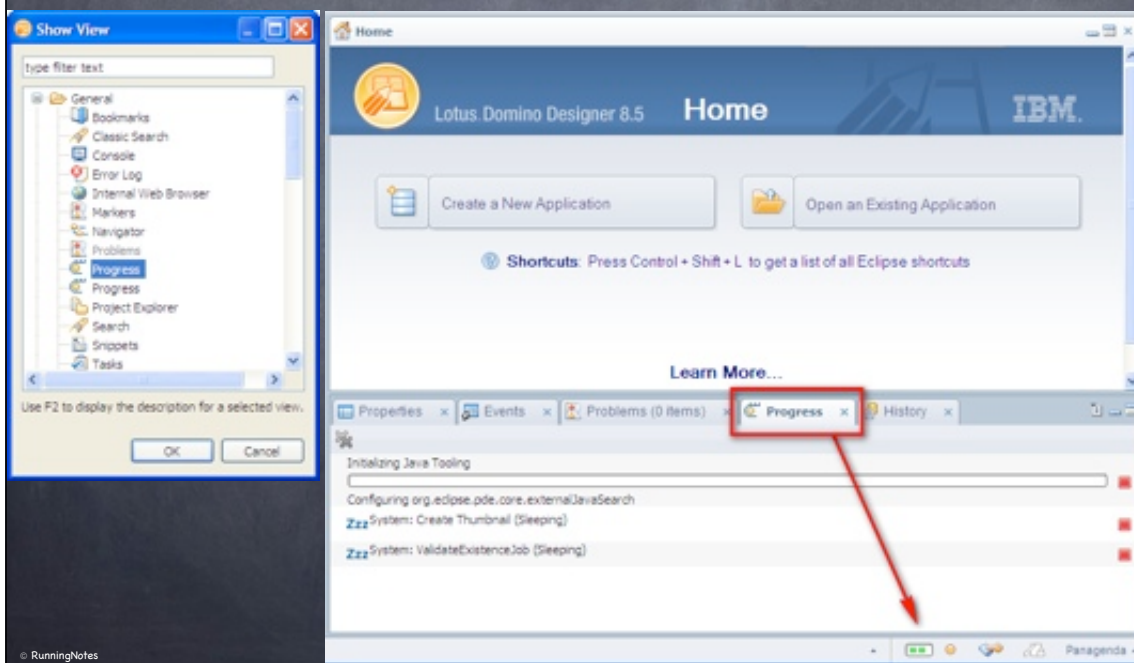
```
vmarg.Xmx=-Xmx256m
vmarg.Xms=-Xms48m
vmarg.Xmca=-Xmca8k
```

If you have at least 2 GB of physical RAM, close all instances of Notes, Domino Designer, and Domino Administrator, and then change the settings to the following values:

```
vmarg.Xmx=-Xmx1024m
vmarg.Xms=-Xms512m
vmarg.Xmca=-Xmca512k
```

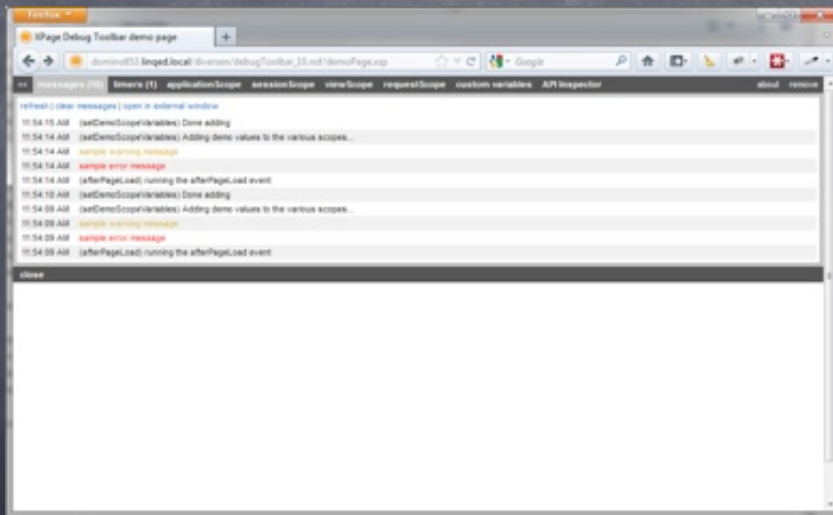
© RunningNotes

Show the Progress Tab



© RunningNotes

XPages Debug Toolbar



<http://www.openntf.org/p/XPage+Debug+Toolbar>

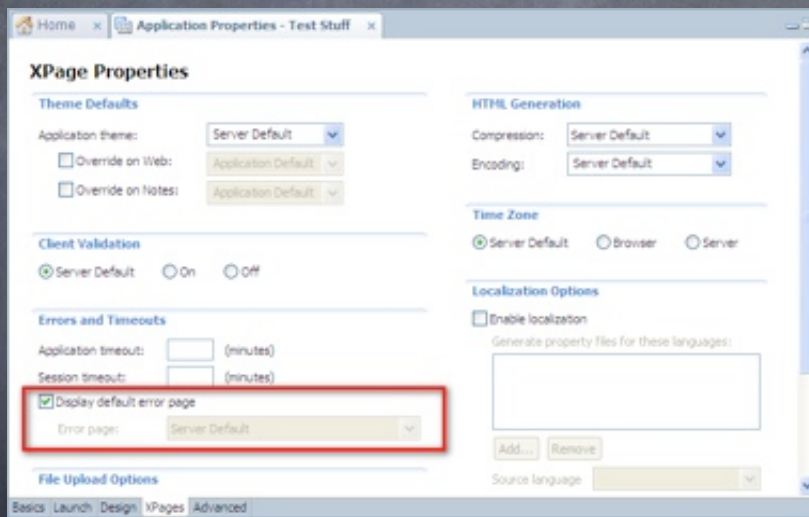
© RunningNotes

Print to Console

- `print("*****");`
- `print("Starting the OnClientLoad event");`
- `print("We got this variable: " + varName);`
- `_dump(someObject);`

© RunningNotes

Displaying Errors



<http://www-10.lotus.com/ldd/ddwiki.nsf/dx/error-management-in-xpages.htm>

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Mobile Toolkits

- Lots to choose from:
 - <http://mobilecontrols.openntf.org>
 - <http://www.sencha.com/products/touch>
 - <http://phonegap.com>
- Check blogs and LUG presentations for examples
- Third party solutions:
 - Teamstudio, We4IT, etc.

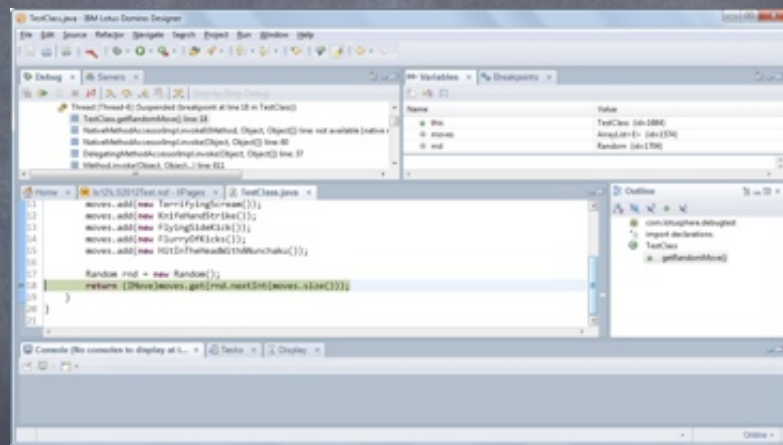
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Debugging

- Yes, you can debug Java in Notes agents and XPages

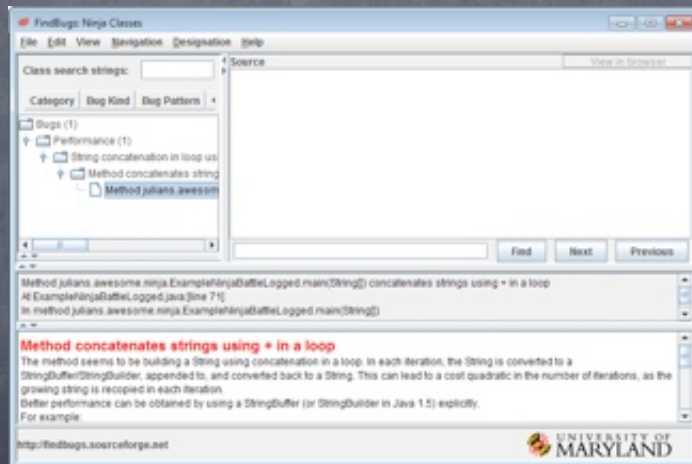


- See Julian and Mark Myers' Lotusphere presentation:
 - <http://londondevelopercoop.com/ldc.nsf/pages/goodies>

© RunningNotes

FindBugs

- Static analysis
- Bug categories:
 - Correctness
 - Bad Practice
 - Dodgy Code



<http://findbugs.sourceforge.net>

JUnit

- Unit testing!
- Yes, you can use JUnit with Notes agents and XPages
- See Julian and Mark Myers' Lotusphere presentation:
 - <http://londondevelopercoop.com/ldc.nsf/pages/goodies>



<http://www.junit.org>

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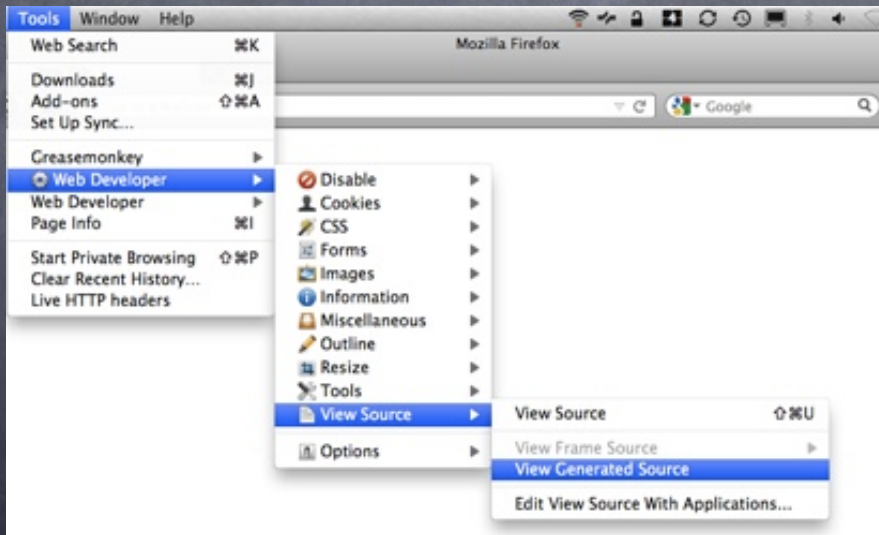
Firebug



<http://getfirebug.com>

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Firefox Web Developer



<https://addons.mozilla.org/en-us/firefox/addon/web-developer>

© RunningNotes

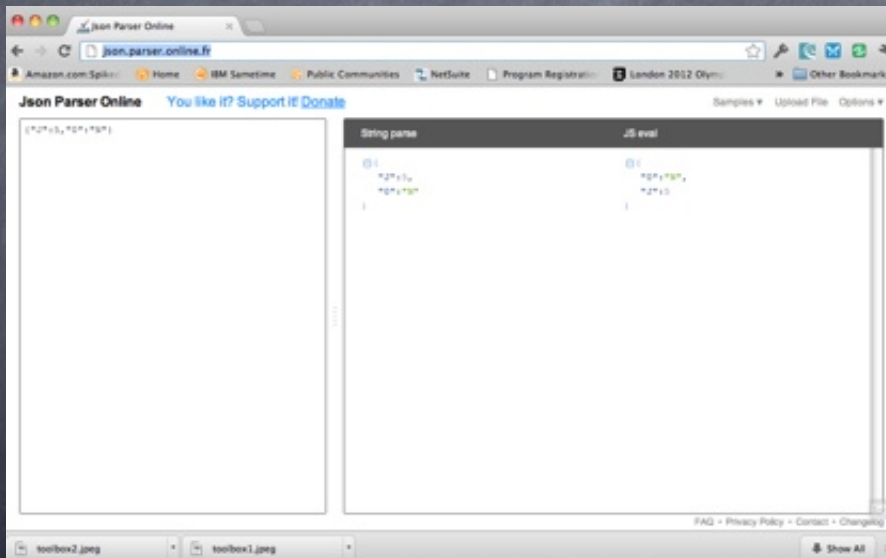
JSLint



<http://www.jslint.com>

© RunningNotes

json parser

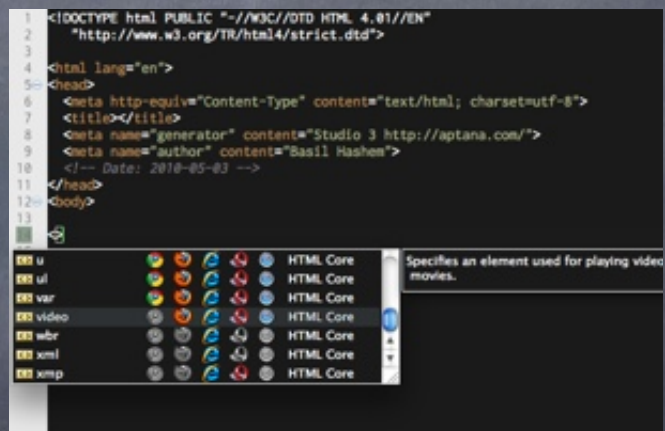


<http://json.parser.online.fr>

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Aptana

- JavaScript and CSS editor
- Which tags work with which browsers
- Content-assist (including Dojo, jquery, etc.)



<http://www.apтана.com>

© RunningNotes

jQuery

- Re-style dynamically
- Cool datepickers
- Accordion menus
- Typeahead, Photo Galleries, Side Panel Slide-Ins, Website "Tour", Charting, Table of Contents menus, "Read More", and so much more
- <http://xomino.com>

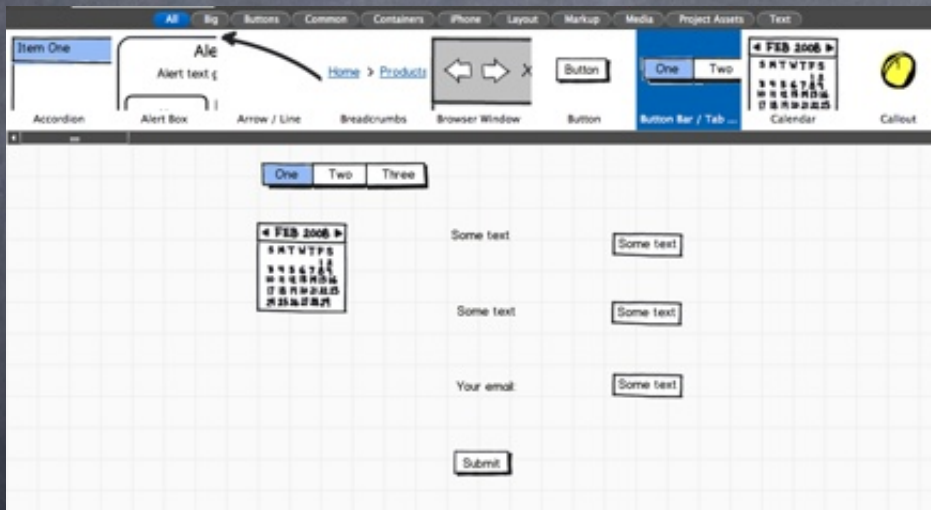
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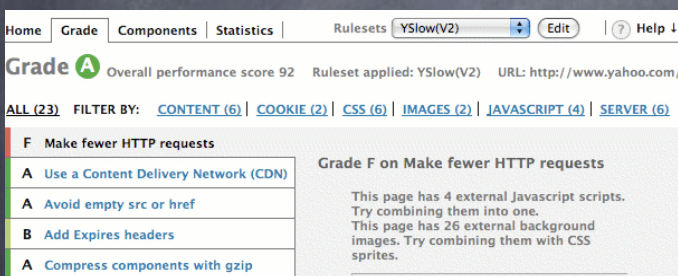
Balsamiq



<http://www.balsamiq.com>

© RunningNotes

yslow



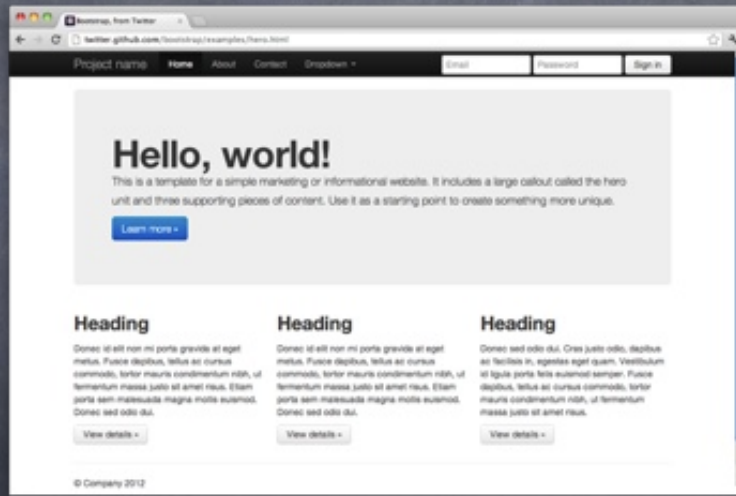
- Web page performance analysis
- Suggestions for improvement
- Chrome, Firefox, Safari, iPhone bookmarklet



<http://developer.yahoo.com/yslow>

© RunningNotes

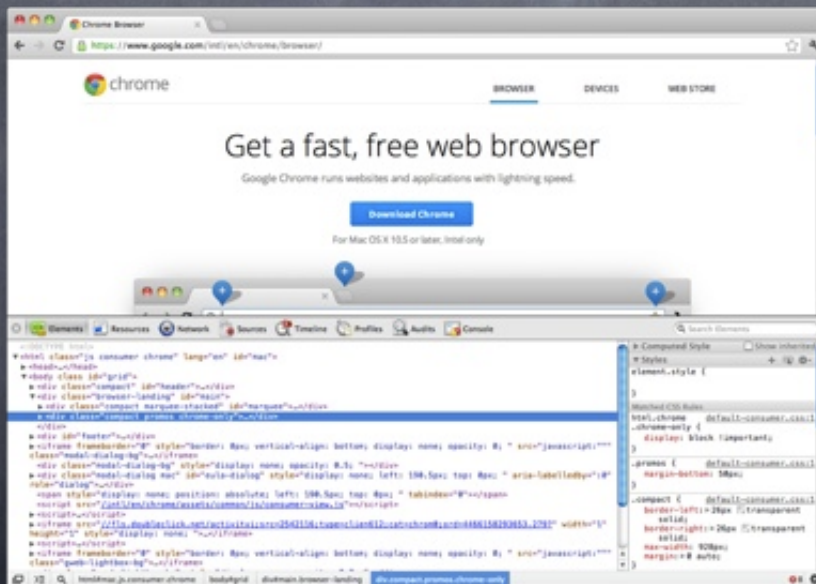
Twitter Bootstrap



<http://twitter.github.com/bootstrap>

© RunningNotes

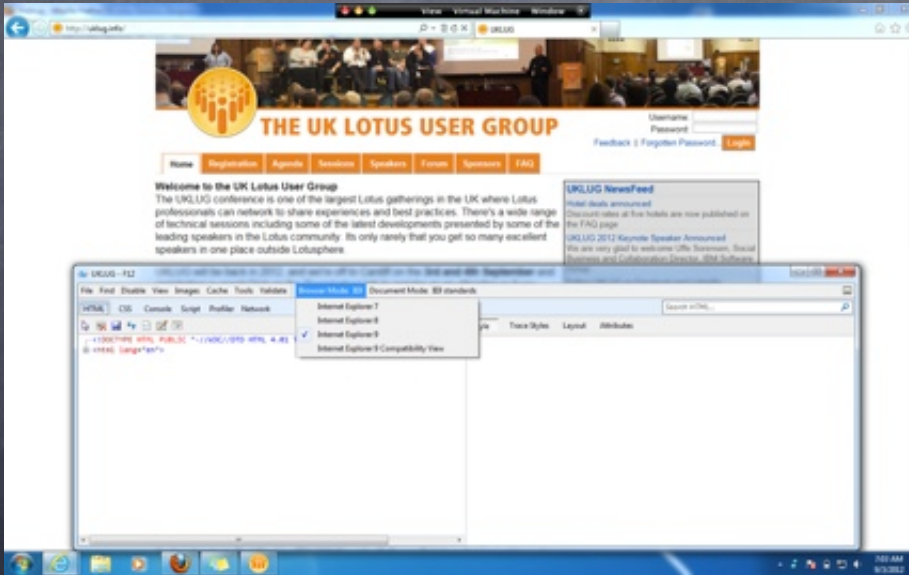
Google Chrome



<https://www.google.com/chrome>

© RunningNotes

ie developer tools



<https://browserling.com>

© RunningNotes

Firebug, again

- Change css directly on the page to "preview"
- Inspect HTML
- so much more



<http://www.w3resource.com/web-development-tools/firebug-tutorials.php>

© RunningNotes

iPhone Simulator

- Mac only
- Installed with XCode
- Not 100% the same as Mobile Safari on the iPhone, but as close as you'll get
- Simulate different IOS/iPhone versions



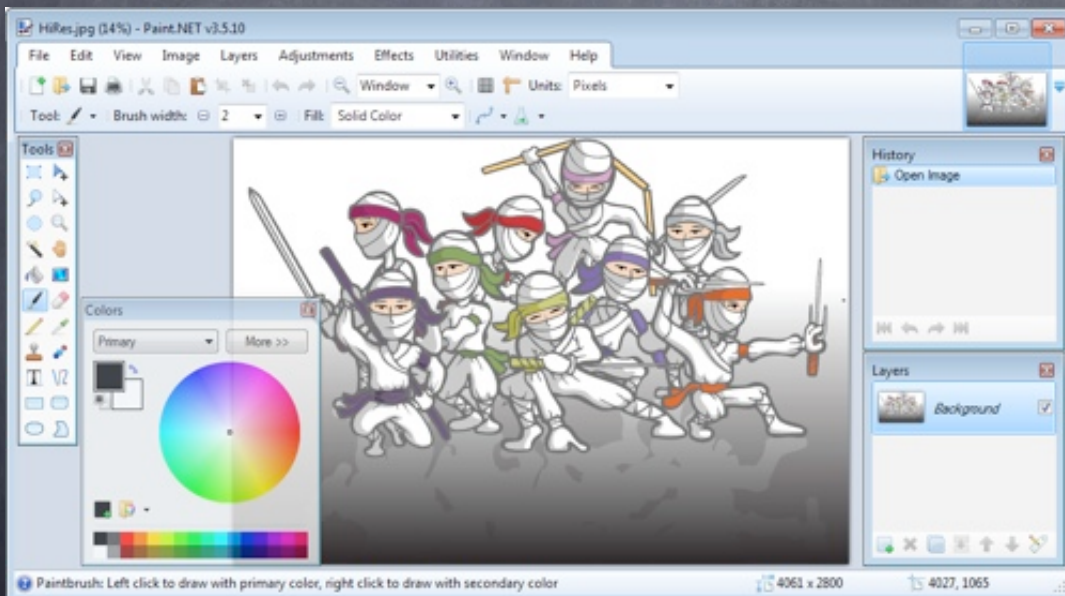
<https://developer.apple.com/xcode>

HALFWAY DONE!

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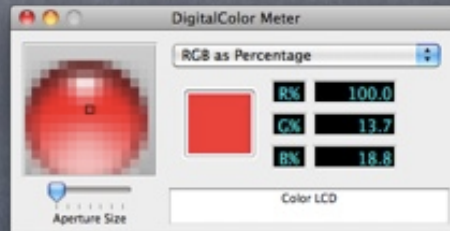
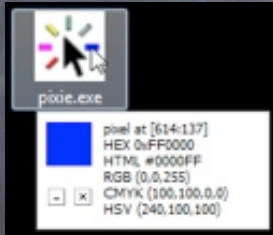
Paint.net



<http://www.getpaint.net>

© RunningNotes

color pickers



- Pixie for Windows
 - <http://www.nattyware.com/pixie.php>
- DigitalColor Meter for Mac
 - just type "color" in Mac's search bar

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screen capture

- SnagIt (Windows and Mac)
 - <http://www.techsmith.com/snagit.html>
- Faststone Capture (Windows)
 - <http://www.faststone.org/FSCaptureDetail.htm>
 - Used to have a free version
- Shift-Control-4 (Mac)

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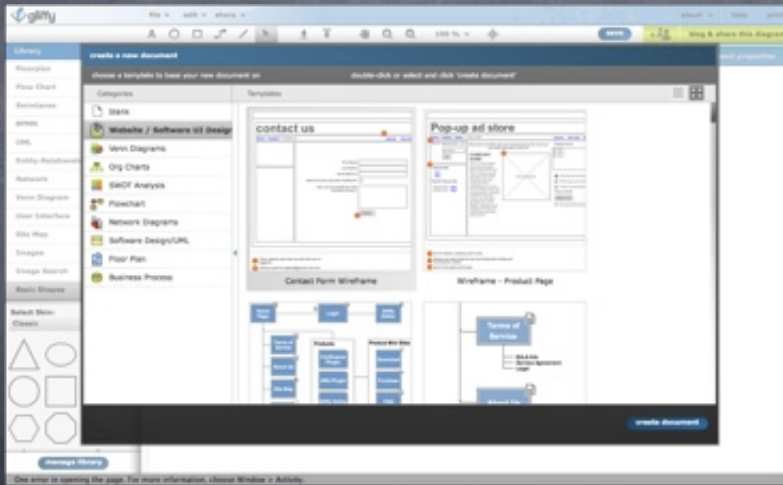
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Dojo Charts

- Start with Paul Withers' blog entries:
 - <http://www.intec.co.uk/dojox-charting-tutorial-part-one-background-and-generic-code>
 - <http://www.intec.co.uk/tag/dojox-charting>
 - http://www-10.lotus.com/ldd/ddwiki.nsf/dx/Dojox_Charting_for_XPages
- For additional reference:
 - <http://dojotoolkit.org/documentation/tutorials/1.6/charting>
- NOTE: make sure you test a lot with your specific version of Domino

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gliffy



<http://www.gliffy.com>

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jFreeChart

See Julian's
LS 2012
Show 'n Tell
slides for
examples and
information



<http://www.jfree.org/jfreechart>

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jqPlot



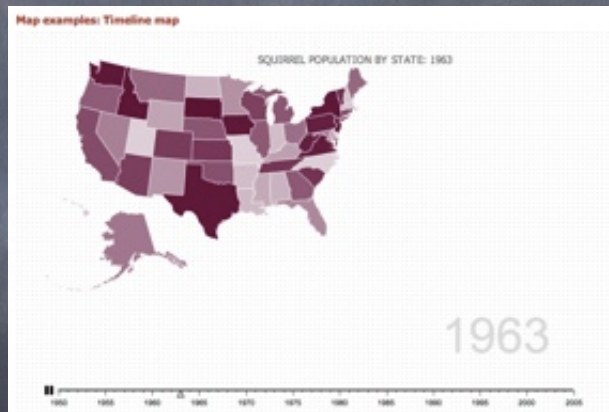
<http://www.jqplot.com>

© RunningNotes

amcharts / ammaps



Charts are now
JavaScript or
Flash



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<http://www.amcharts.com>

NotesSQL

- Still works with 8.5
- Treat Notes views like relational db tables
- Any ODBC reporting program can use a Notes database as a data source



<http://www.ibm.com/developerworks/lotus/products/notesdomino/notessql>

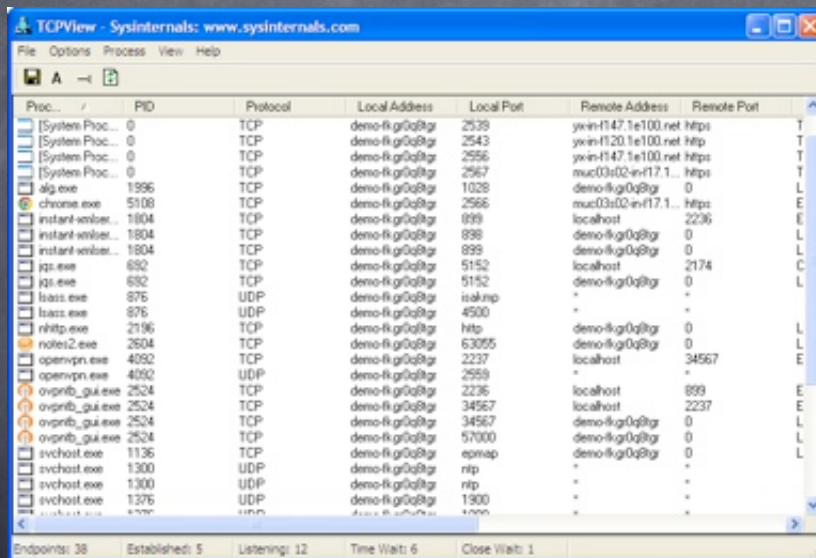
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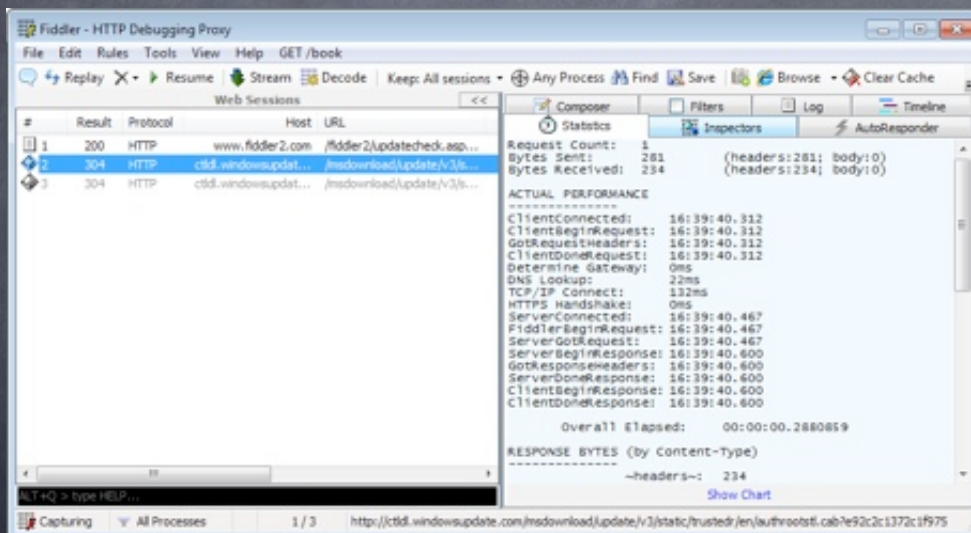
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TCPView



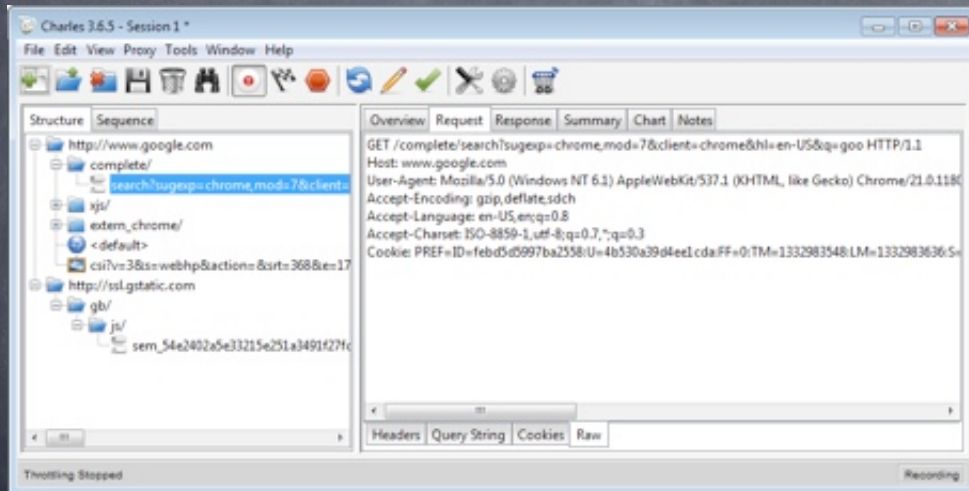
<http://technet.microsoft.com/en-us/sysinternals/bb897437>

fiddler



<http://www.fiddler2.com/fiddler2>

Charles Web Proxy

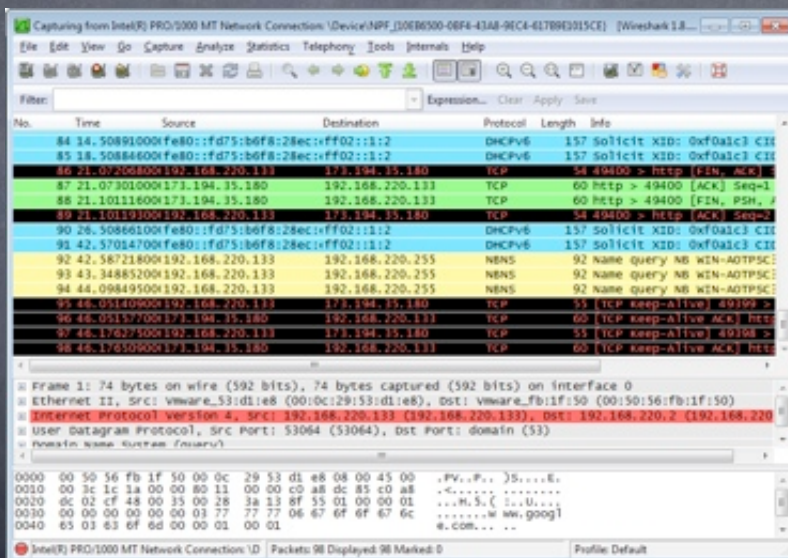


multi-platform, throttling, DNS spoofing, not free

<http://www.charlesproxy.com>

© RunningNotes

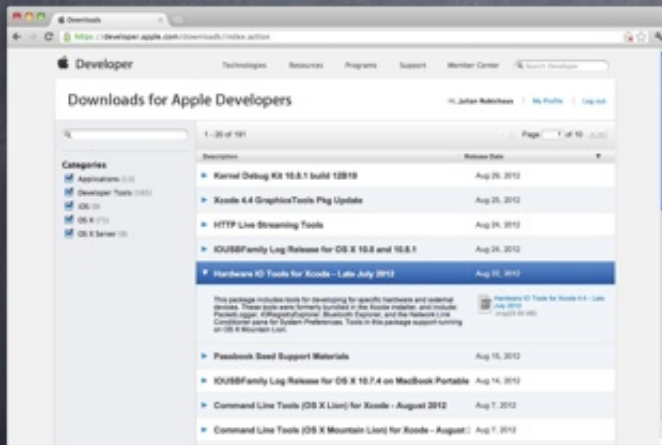
Wireshark



<http://www.wireshark.org>

© RunningNotes

Apple Network Link Conditioner

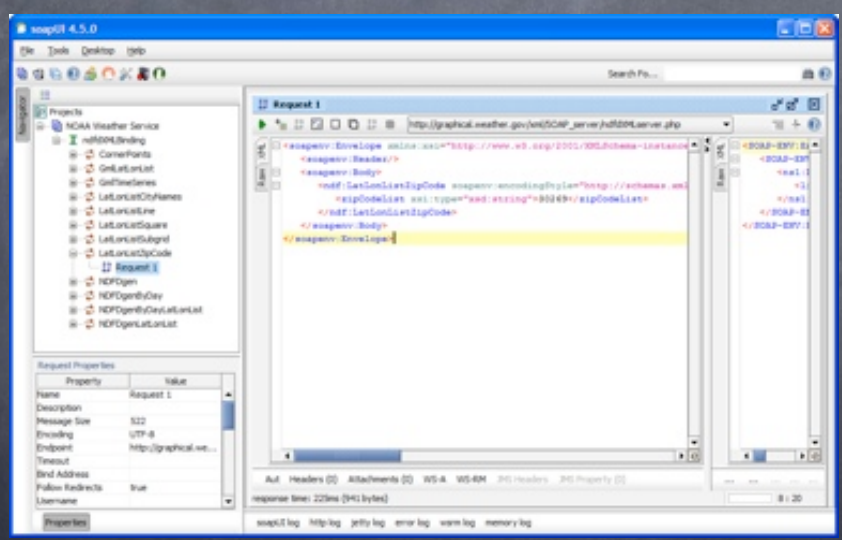


- Preset Profiles
- 3G, Average Case
 - 3G, Good Connectivity
 - 3G, Lossy Network
 - Cable Modem
 - DSL
 - Edge, Average Case
 - Edge, Good Connectivity
 - Edge, Lossy Network
 - ✓ WiFi, Average Case
 - WiFi, Good Connectivity
 - WiFi, Lossy

<https://developer.apple.com/downloads>

© RunningNotes

SoapUI



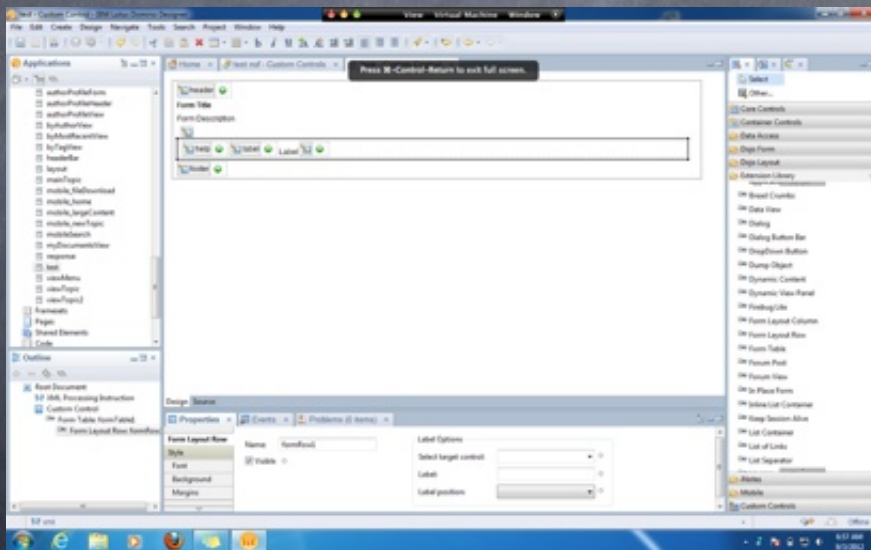
<http://www.soapui.org>

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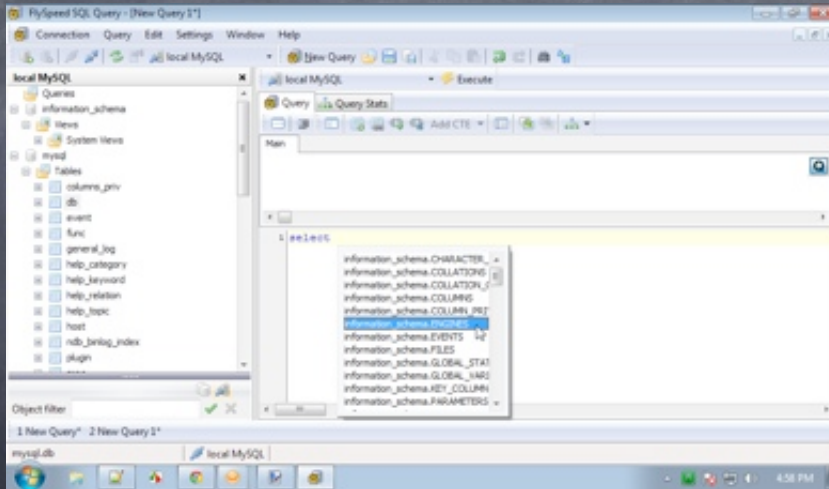
XPages ExtLib JDBC



<http://extlib.openntf.org>

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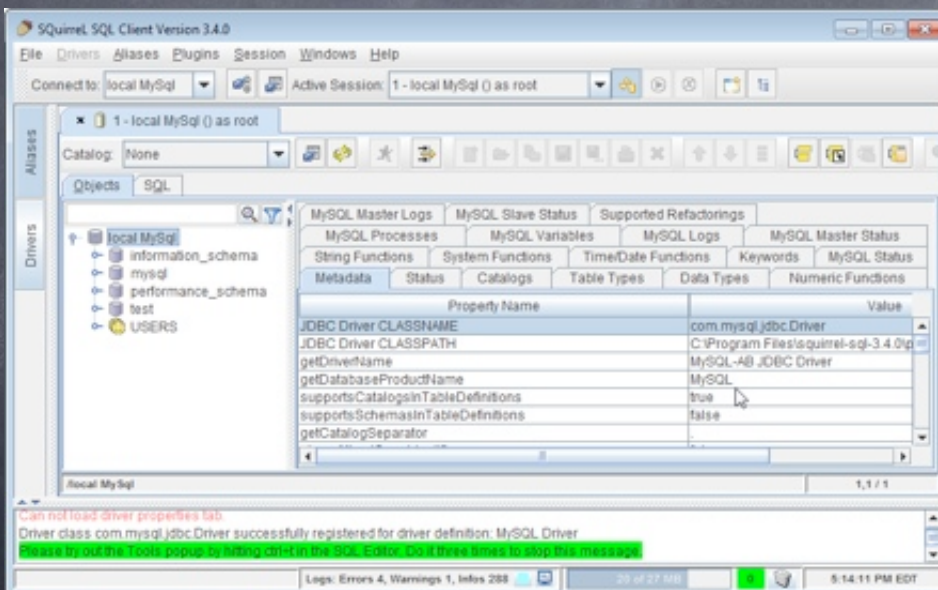
FlySpeed SQL Query (ODBC)



<http://www.actedbsoft.com/overview-querytool.html>

© RunningNotes

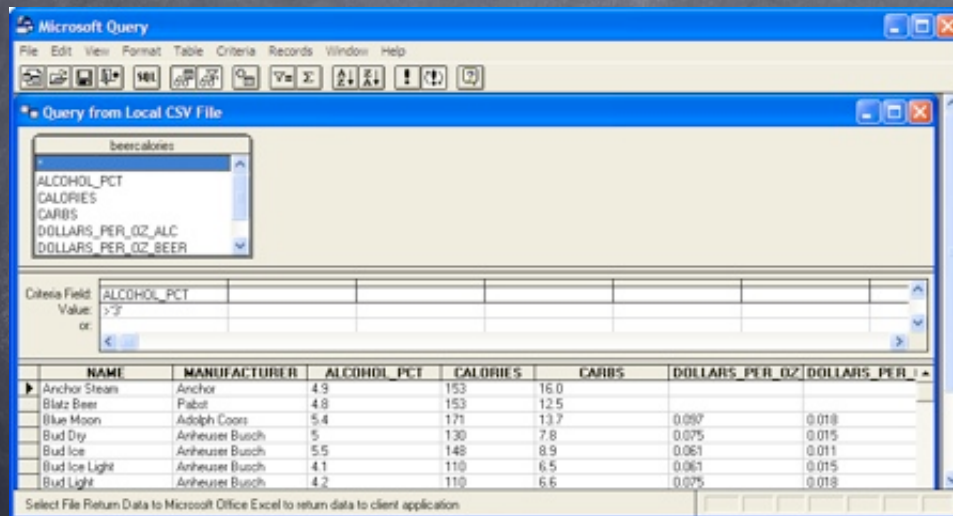
SquirrelSQL (JDBC)



<http://www.squirrelsql.org>

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Microsoft Excel (really)



Data - Import External Data - New Database Query

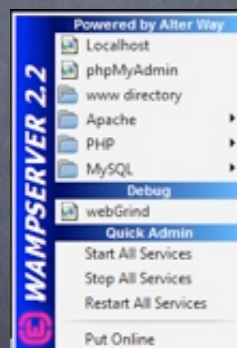
© RunningNotes

WAMP (has MySQL)

- Apache
- MySQL
- PHP
- PHPMyAdmin
- SQLBuddy

- Easy install

- Great for quick testing of MySQL



<http://www.wampserver.com>

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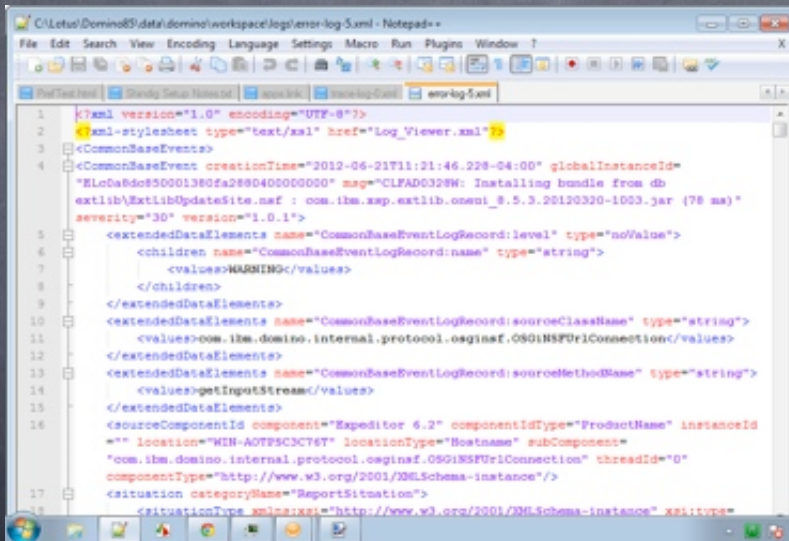
VMWare



<http://www.vmware.com>

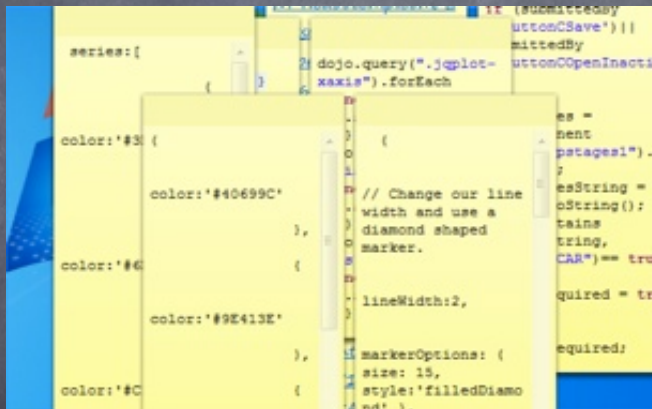
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Notepad++

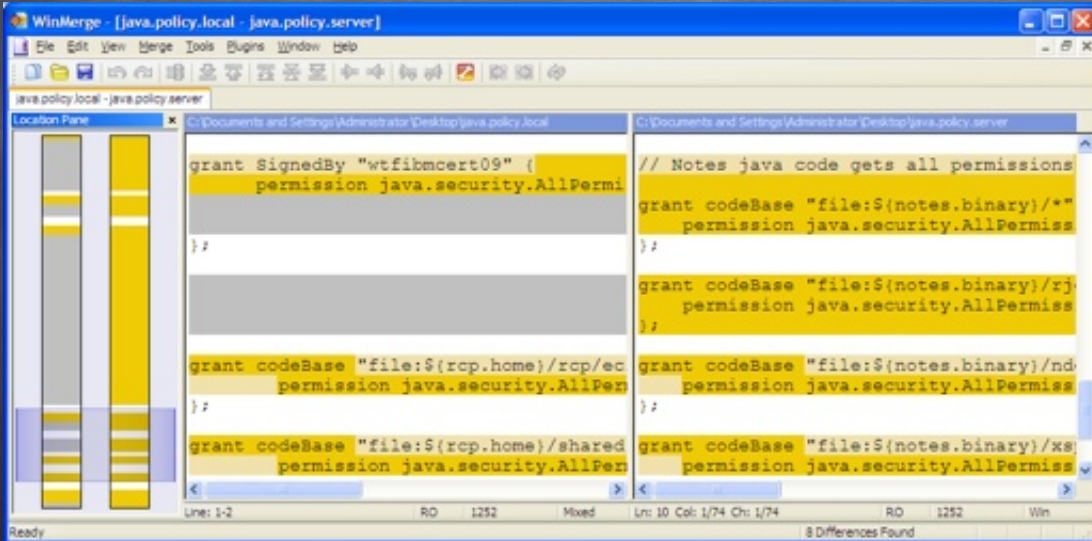


<http://notepad-plus-plus.org>

Sticky Notes



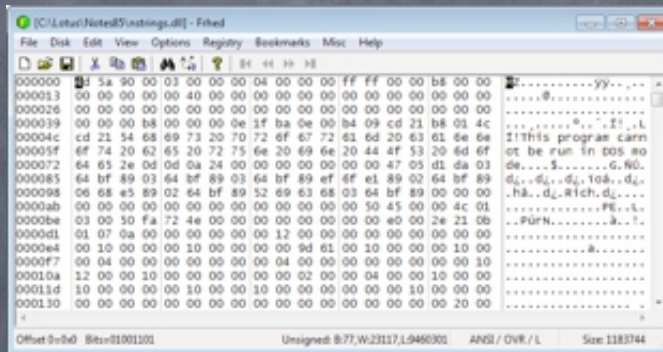
WinMerge (diff tool)



<http://winmerge.org>

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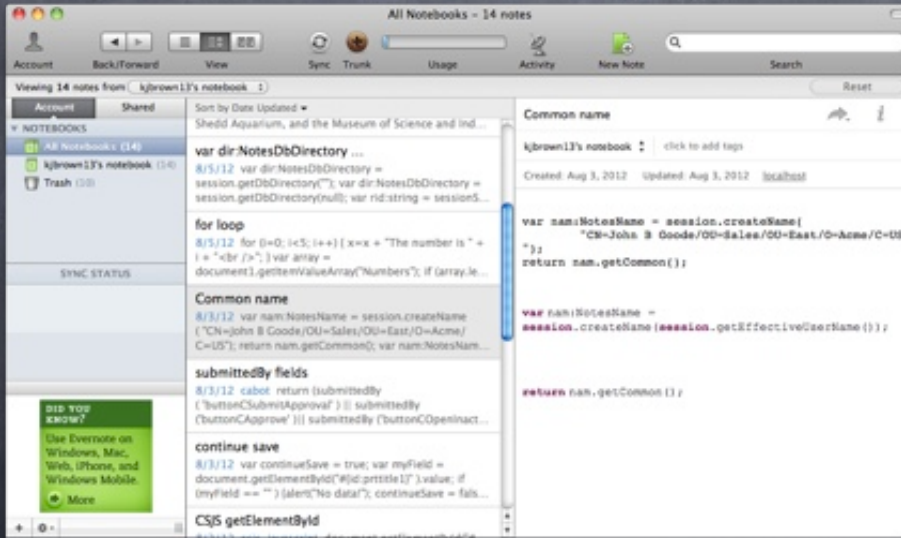
hex editor



- Choices include:
 - Frhed for Windows
 - <http://frhed.sourceforge.net>
 - HexEdit for Mac
 - <http://hexedit.sourceforge.net>

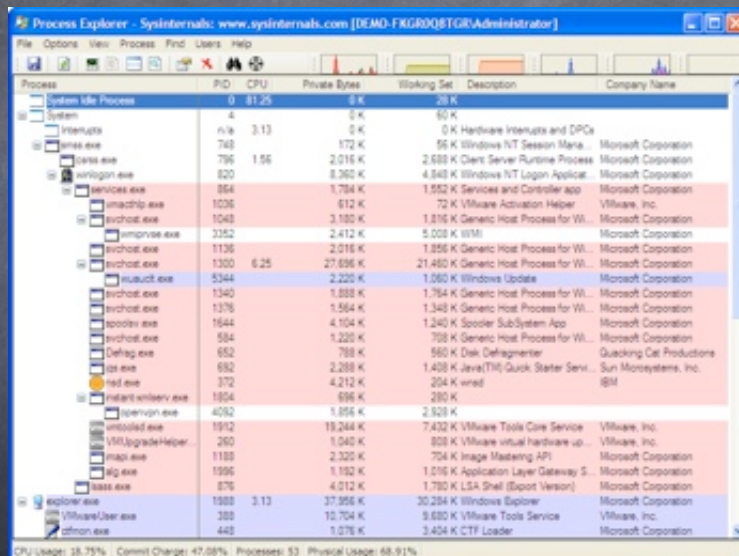
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Evernote



<http://evernote.com>

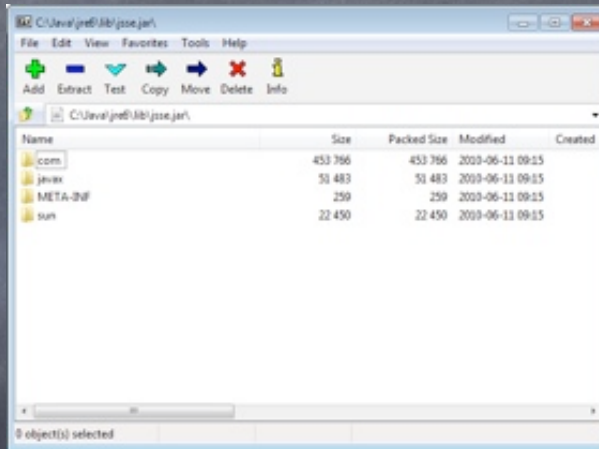
Process Explorer



<http://technet.microsoft.com/en-us/sysinternals/bb896653>

7Zip

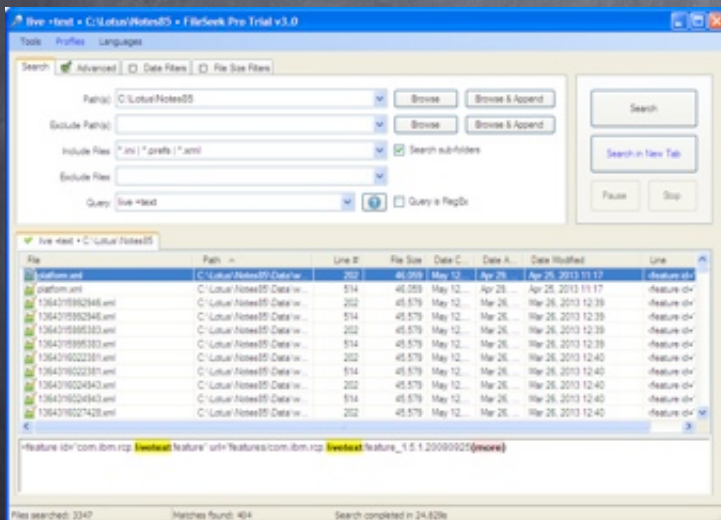
- MUCH faster than native Windows zip/unzip
- gzip and tar files
- easy viewing of JAR files too



<http://www.7-zip.org>

FileSeek

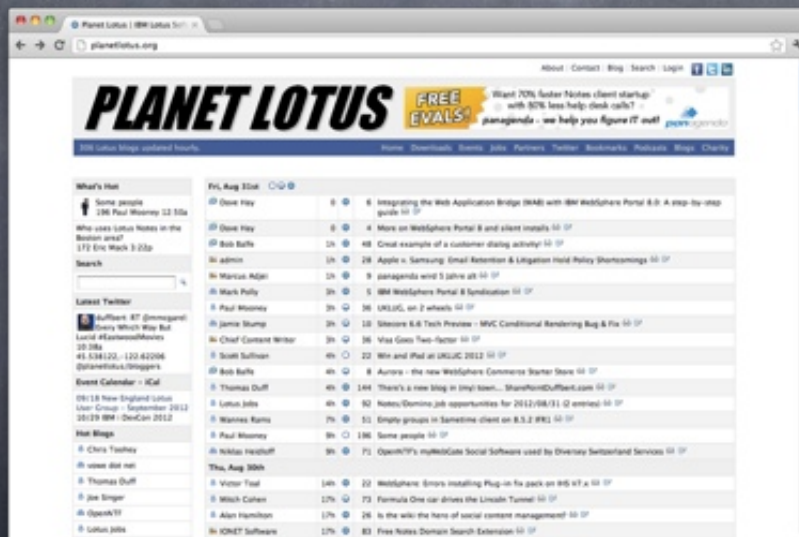
- Very fast search for text in files
- More accurate than Windows search
- More options than Windows search
- Better than Windows search in every way



<http://www.fileseek.ca>

- Lotus Notes Client
- Domino Designer
- XPages
- Java
- JavaScript
- Web Design and Prototyping
- Graphics
- Charts, Graphs, and Reports
- Networking and Web Services
- Relational Database Tools
- General Developer Tools
- **Community Resources** ←

PlanetLotus

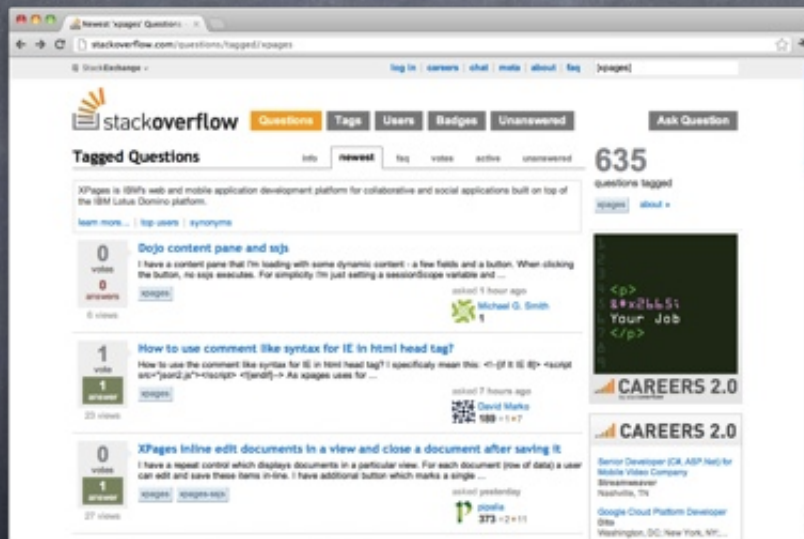


OpenNTF



<http://www.openntf.org>

StackOverflow



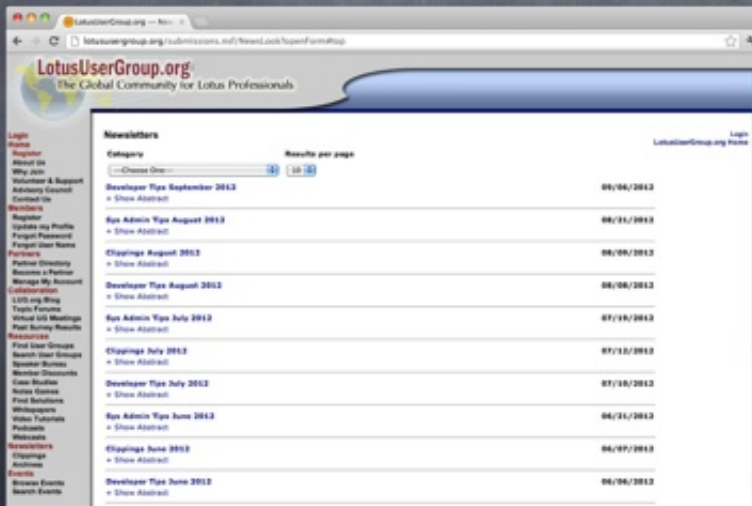
<http://stackoverflow.com/questions/tagged/xpages>

LUGs (duh)



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LotusUserGroup SocialBizUg.org Newsletters



<http://lotususergroup.org>

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BleedYellow



<http://www.bleedyellow.com>

Skype



<http://www.skype.com>

Twitter



<https://twitter.com>

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THANK YOU!

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