Open Source Business Applications

David Uhlman

Customer Happiness Guru & CEO

Uversa Inc.

Presentation available on:

www.lintellect.org

www.uversainc.com

duhlman@uversainc.com

Why I'm worth you $65 Bucks

- Longtime contributor to many PHP, Linux and other open source projects

- I make a living with Open Source

- Lots of experience implementing ERP systems with fortune 500 companies

- Been core developer on many projects, OpenEMR, OP/EN, XRMS

- Technology executive at several *successful* open source companies.

Take 10 With You

- We've got more than 100 apps to cover
- I am going to move quickly, interrupt any time with questions
- My goal is to have you take home 10 applications to look at more closely, implement 1
- Open Source has some very compelling solutions for businesses of all shapes and sizes
- Ownership of software has intrinsic value

uversa
www.uversainc.com

Introduction

- Multi-national company with several divisions and satellite offices
- They build the best widgets in the business and need to coordinate all the different processes they have
- Marketing & Sales needs easy access to all the data stores
- IT has short time to market with new capabilities
- PWP uses a lot of Open Source all at once, you may not, but they make a good example.

Overview

- Linux Apps
  - There are a lot out there, here are the ones to watch
- Cross Platform Apps
  - Have your cake and eat it too
- ERP/Accounting
  - ERP is always hard, Open Source is no exception
- Web Apps
  - Great depth, great maturity

uversa
www.uversainc.com

Conventions

- Developer oriented software are identified by the tool icon

- Things to really look at have the eyeball icon

uversa
www.uversainc.com

Linux on the Desktop

- If you are still waiting for it to be ready it is time to try it

- Productivity usage profiles are 100% supported

- Power using profiles offer many compelling advantages if with the difficulties of using virtualization systems

- Reliability is a really nice thing to have

uversa
www.uversainc.com

Choosing A Desktop Distro

- Novell Linux Desktop (NLD)
  - Very polished, my choice, Ximian heritage
- Xandros
  - Nice bundling of Crossover, Windows like
- Fedora
  - Bleeding edge, very nice look and feel
- Redhat Enterprise Linux
  - A bit boring, rock solid, comparable to NLD
- Ubuntu
  - Lots of good features, easy install, a little shaky

Choosing a Server Distro

- Debian
  - Stable, easy to maintain, a little too conservative
- Did I mention Debian?
- Redhat Enterprise Linux
  - Vendor commitment to longevity
  - Very solid while also offering modernity

uversa
www.uversainc.com

Gnome

http://www.gnome.org

CELEBRITIES ONLINE

- Gnome is a "sexy" Desktop System, comes with a distro
- It has been customized by Ximian/Novell for business users, try Novell Linux Desktop
- Strong focus on simplified interface
- Very clean look and feel
- Real momentum behind development with applications like Evolution and Beagle

uversa
www.uversainc.com
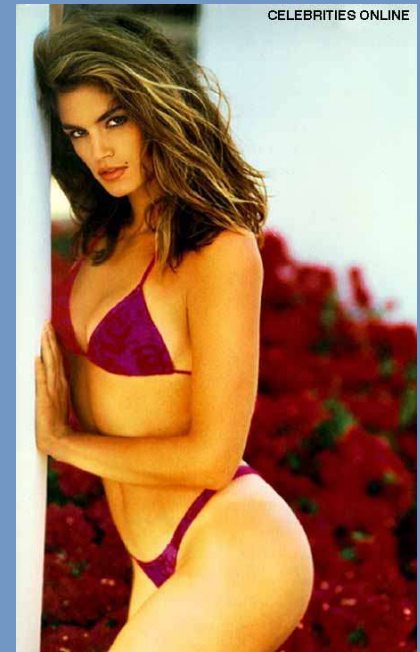
Evolution

- Outlook replacement for Linux
- Includes SPAM filtering
- Very nice virtual folders feature
- Can talk to Microsoft Exchange or Open Groupware (OGO) to offer complete calendaring/contacts/email
- Look for a Windows version in a 12-18 month timeframe

uversa
www.uversainc.com

Tomboy

- Note tracking application
- Semantic links are an intuitive way to collect information
- New solution to the Post It Notes problems
- Good Searching, integration with tools like Beagle
- Plays well with Evolution

uversa
www.uversainc.com

Beagle

http://www.gnome.org/projects/beagle

- Search tool for the Personal Information Space

- Semantic understanding Email, files, images ...

- Builds on Google, Yahoo desktop search tools

- Still in developmental stages

uversa
www.uversainc.com

F-Spot

www.gnome.org/projects/f-spot

- Photo management they way it should be
- Offers time-line as well as category views
- Rapidly developing but should be "stable" within a few months
- Mouth watering user interface, very extensible categorization
- Plays well with other Gnome applications like Beagle
- TODO list includes photo stitching, camera plug and play, auto galleries, no printing right now

BLAM

http://imendio.com/projects/blam

- RSS Aggregator
- Simple design, simple implementation
- It aggregates RSS and it does a fine job of it
- Capable printing support
- Good controls on timing and feed notifications

uversa
www.uversainc.com

Planner

- Project management tool, was once known as MrProject, really

- Does a nice job for basic to intermediate project planning needs

- Not specific to technology projects, offer extensible options for resources and task hierarchies

- More than a little short of PMI compliance

- Multi-language support

uversa
www.uversainc.com

iFolder

http://www.ifolder.com

- Those Novell guys just won't quit
- Allows seamless file sharing and synchronization across platforms
- Linux support is young but feature complete
- Only peer to peer support possible with 100% Open Source
- Open Source server side system rapidly maturing

Red Carpet (zenworks)

http://www.novell.com/products/zenworks/linuxmanagement/
http://www.open-carpet.org

- Visual tool to do package management on Linux

- Used with NLD to subscribe to system updates

- Supports multiple "channels" which collect related groups of applications

- Channels are available for a most developmental projects, also for non-US projects

- Can be used in a business with the Open-Carpet Server, works with Fedora, SUSE, NLD

- Offers search of installed and available packages

- I don't like the new name

AutoPano-sift

http://user.cs.tu-berlin.de/~nowozin/autopano-sift

- Build panoramas from multiple images, photo stitching

- Very powerful tool which offers more support than you find in many commercial offerings

- Can produce very high quality results

- F-Spot will most likely absorb or re-implement this functionality

- Name needs work, check out behind-the-wall.com, support for Windows, Patent questions

uversa
www.uversainc.com

Mono

- Powerful Managed Runtime, Mono is a simile to Microsoft .NET but runs on Linux as well as Windows

- Supports C# programming language

- Plays very well with Gnome Desktop

- Evolution, Tomboy, Beagle, and iFolder all are written on Mono or have Mono components

- Mono is likely to power a lot of Gnome applications moving forward

uversa
www.uversainc.com

K3B
http://www.k3b.org/

- CD burning done right

- KDE based

- Ease of use comparable with EasyCD, Nero, etc.

- Nice features for creating CD's from downloaded images, auto MD5 checksum

- Supports DVD's as well, DVD+RW, DVD-RW

- Good support for generation of music CD's from MP3 or OGG

KDiff3

http://kdiff3.sourceforge.net/

- Visual merge tool for source code
- Offers side by side view of code
- Has basic auto-merge capabilities
- Point and click merging,
- Support to save to third tree
- Offers 3 way views
- KDE based

GIMP
http://www.gimp.org

- GNU Image Manipulation Program

- Best open source option for Adobe Photoshop like functionality

- Not as comprehensive as Photoshop

- Interface has some unusual characteristics that may be difficult for new users

- Support for Windows

- Large number of plugins

- Printing and color management is limited

Subversion
http://subversion.tigris.org

- Multifaceted Revision Control System
- Primarily for source code but also good for text/html
- Seamless upgrade from CVS
- Offers an apache module to abstract user access from system users
- Has different backends to support file based structures or Berkely DB
- Check out the Subversion Book Online

uversa
www.uversainc.com

Inkscape

http://www.inkscape.org

- Graphical tool, good for layouts
- Vector editing environment like Adobe Illustrator, Vector has a learning curve
- Standards based Scalable Vector Graphics (SVG) format
- Good performance, offers good print quality
- See Ted Gould's talk tomorrow at 11:30
- Better Windows support in v0.41
- Check openclipart.org, all SVG

uversa
www.uversainc.com

Scribus
http://www.scribus.net

- Desktop publishing and layout tool like Adobe Pagemaker
- Has good font control
- Production ready, stable, can product impressive results
- One of the few Open Source tools with real colorspace management
- Commercial support available

uversa
www.uversainc.com

RDesktop

http://www.rdesktop.org/ or with your Distro

- Connect to Microsoft Windows Terminal Services

- A great way to make Windows applications available to Linux desktops

  – Common candidates are QuickBooks, Microsoft Access & Visio, SQLServer Enterprise Manager

- Supports most but not all security and encryption configurations

uversa
www.uversainc.com

VNC, TightVNC, Ultr@VNC

http://www.realvnc.com/ or http://www.tightvnc.com/ or http://ultravnc.sourceforge.net/

- Alternative to Windows Terminal Services

- Can be used to do comprehensive remote desktop support

- Many flavors out there, Original VNC, TightVNC and Ultr@VNC

- Optional Active Directory, Encryption and compression modules

- Can be configured for system with minimal resources

- Licensing requirements often apply

Jabber
http://www.jabber.org

- Definitive Open Source Instant Messaging System

- If you are thinking about corporate IM look at Jabber

- If an IM system has a feature someone also implemented it for Jabber

- Standards based XML with great development documentation

- Many clients on all platforms available

uversa
www.uversainc.com

Eclipse
http://www.eclipse.org

- Comprehensive development environment for JAVA, PHP, C, C++, and more

- Powerful system of plugins for added capabilities, commercial plugins available as well

- Nice integration with CVS and Subversion

- I find its file and project management very helpful, especially when switching between multiple projects of different languages

- Has a large footprint

uversa
www.uversainc.com

OpenOffice
http://www.openoffice.org

- Definitive Open Source Office Suite, Word Processor, SpreadSheet, Drawing/Diagramming and Presentation Tool

- There are ways to generate OpenOffice documents from other applications such including some PHP

- MySQL (and other databases) and OpenOffice can be easily combined to add power to documents and spreadsheets

- Great compatibility with Microsoft Office

- Great online tutorials and documentation

FireFox

http://www.mozilla.org

- Definitive Open Source Web Browser
- Great feature set with tabbed browsing, elegant in page search, Google friendly and lots of extensions
- Reduced virus and spyware exposure, rapid (often hours) response to vulnerabilities
- If you haven't at least tried FireFox there is a real problem, please see me at the end of the presentation
- See firefox.dbltree.com for automated deployment

uversa
www.uversainc.com

Thunderbird
http://www.mozilla.org

- Companion email application to FireFox
- Covers all of the basic email features, good management of large amounts of mail
- High performance SPAM filtering
- Does not have calendaring yet
- Does not offer integration with Exchange yet

uversa
www.uversainc.com

NMap
http://www.insecure.org/nmap/

- Network scanning tool
- Well known and widely used, can auto-detect all of the nodes on a network
- Can be used to fingerprint systems to determine Operating System and other characteristics
- Is a great tool to examine firewall setup and to detect obvious security errors in server configurations
- Using it indiscriminately usually sets off alarm bells

uversa
www.uversainc.com

Nessus

http://www.nessus.org/

- Penetration testing application
- Simulates and replays known types of attacks on systems from a large database of attacks
- Can be setup to batch and automate testing of an entire server group
- Supports huge variety of daemons and protocols
- Database of attacks updated frequently
- Great for use on your own servers, probably illegal to use on anyone elses!

uversa
www.uversainc.com

Nagios

http://www.nagios.org/

- Network monitoring and mapping tool
- Can be used to visually map networks
- Good tool to audit network devices and manage this over time
- Email based notifications of outages
- Very configurable in methods used to track up or down status
- Support for plugins to work with custom applications
- Uncertainty in roadmap and direction

Cacti

http://www.cacti.net/

- Manageable front-end for monitoring a variety of systems uses SNMP and custom controls
- Uses the powerful RRDTool incremental datastore for efficient and fast storage of statistics
- Produces high quality graph output and automates scaling to make results effective
- Highly extensible with plugins and configuration, we have done custom plugins for bind and mysql
- Complex to initially setup

Zabbix

http://www.zabbix.com/

- Monitoring tool along the lines of Nagios and Cacti written in PHP

- Has an agent application that collects all the common metrics, can also use SNMP

- High quality output comparable to the other solutions

- Can be tied in to fault tolerance and redundancy systems

- Has nice support for application specific monitoring

- Interesting politics for patches, still under the GPL

Mambo
http://mamboserver.com

- Main Marketing Content, front pages of website
  - Great default templates, clean and crisp
  - Multi format delivery PDF, print, email
  - Media Oriented

- The sales guys can use it well. The designers like it. Very Easy.

- Great performance for such a dynamic system.

- 500+ Live Sites

Mambo Continued

- Templates compatible with Macromedia Dreamweaver, CSS Driven
- Interactive services, modules, components, "mambots" not very mature
- WYSIWYG Oriented
- Strong Commercial Supported
- Soon to be 100% web standards compliant
- Needs a more flexible security framework
- Security issues with default file permissions

uversa
www.uversainc.com

Comments on Mambo

What are the issues to keep
in mind given the recent licensing
controversy with Mambo?

Mambo assumes a certain set of
needs, may not work well for
everyone

uversa
www.uversainc.com

TYPO3
http://typo3.com

- Breaks the CMS "mold"
- Flexible content and layout system
- WYSIWG oriented layout and content editing
- Content is put into a hierarchy, this is reflected in the navigation
- No HTML necessary, very powerful for novice users
- Clean object oriented code
- Hard to break out of system
- Default templates don't offer much

Postnuke

- Set the tone for Content Management Systems
  - Module for almost every need
  - Very easy to install
  - Works on almost any version of PHP
  - Performance is mediocre
  - Forking has slowed development, codebase is is need of rewriting to take advantage of advancements in PHP.
  - All sites tends to look similar, often too "busy"

uversa
www.uversainc.com

When to use Postnuke

- Thousands of modules out there, one your needs can be met closely with a few of them use Postnuke

- Example modules that meet common needs
  - PostCalendar (Now Included)
  - ContentExpress

- Postnuke has a lot of modules for really obscure needs, wedding chapels, boyscout troops, alien abduction fan clubs, etc.

Xoops
http://xoops.org

- Started as fork from Postnuke
  - Completely rewritten in clean object oriented code
  - Sleak, less "busy" than Postnuke
  - All major modules are available, forums, downloads, good integrated search
  - Good performance through caching
  - 30 minutes to a departmental intranet, forum, document store, serial content out of the box
- Uses Smarty!

uversa
www.uversainc.com

Xaraya
http://xaraya.com

– Good job board system & built in gallery

– Very strong layout controls, great use of CSS, XHTML compliant

– Support for development within phpEclipse

– Anything is possible for layout but it takes some work

– Lots of high quality documentation

– Flexible RSS handling and integration

– Close to a 1.0 release

– Lightweight, Good Performance

Envolution
http://www.envolution.com

- Very good Nuke module compatibility
- Built in caching for performance
- Fast Encompass theme system
  - High quality themes available
- Not as mature as Postnuke
- Good candidate for vertical customization e.g. corporate intranet portals

uversa
www.uversainc.com

Open Publisher
http://open-publisher.net

- Document oriented, geared toward a lot of wordy content

- Very flexible look and feel by using Smarty, default templates are examples only

- Hierarchy for access control, efficient

- Easy to have many contributors and editors

- Default templates don't offer much

- Project maintenance is in question

Smarty
http://smarty.php.net

- Very impressive system, simple and obvious but why didn't I think of it

- Can be bolted on to almost any existing project

- Disparate projects using Smarty are easy to bring together seamlessly

- Excellent performance do to template compilation

- Controversy, doesn't PHP do templating?

OsCommerce
http://www.oscommerce.com

- Gold Standard in e-commerce
  - Real time shipping quotes USPS, FedEx, UPS, Real time billing, many credit card modules
  - Template support
  - Huge number of excellent contributions, patches
- Developers can be difficult to work with
- No consensus on templating
- 1400 Official installations, I can count at least 22,000 worldwide

uversa
www.uversainc.com

OsCommerce Continued

http://www.chainreactionweb.com/info/hosting/
oscommerce-hosting.php

- All of the popular contributions
  - Administration logins in database
  - Dynamic thumbnails
  - Gift voucher/certificate
  - Multiple addresses
  - Phone order entry/customer entry
  - Cross sales, if you like this you will like…
  - Secure download delivery
  - Lots more…

ERP/Accounting
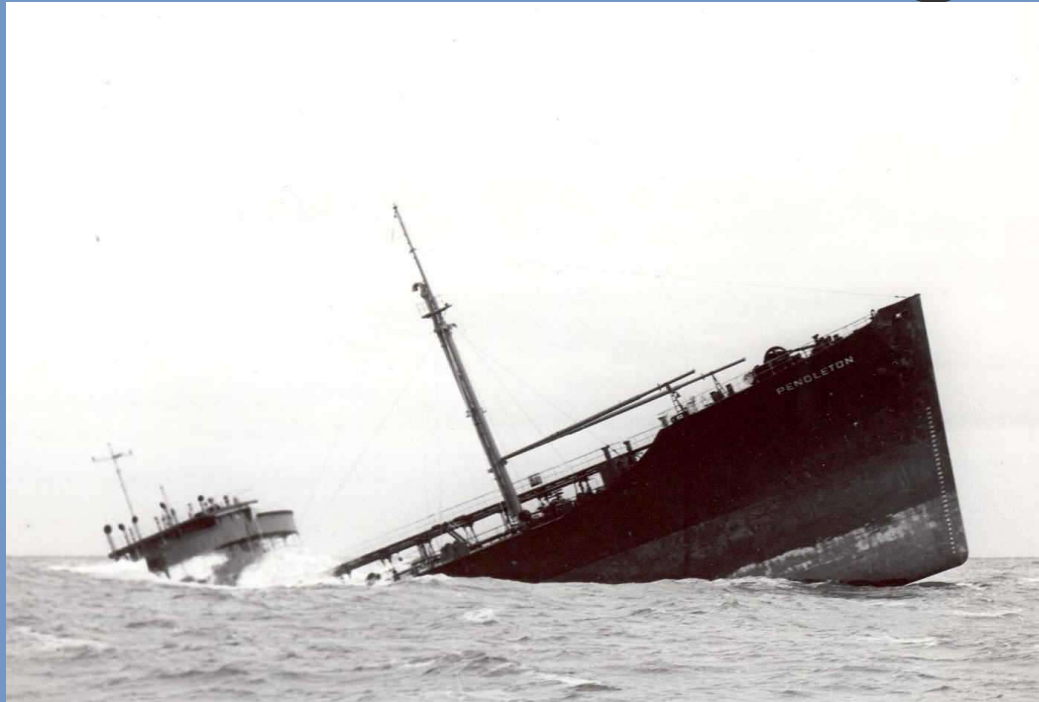
- ERP is a really hard thing to do right with Open Source or Proprietary software
- ERP implementation takes a large organizational commitment
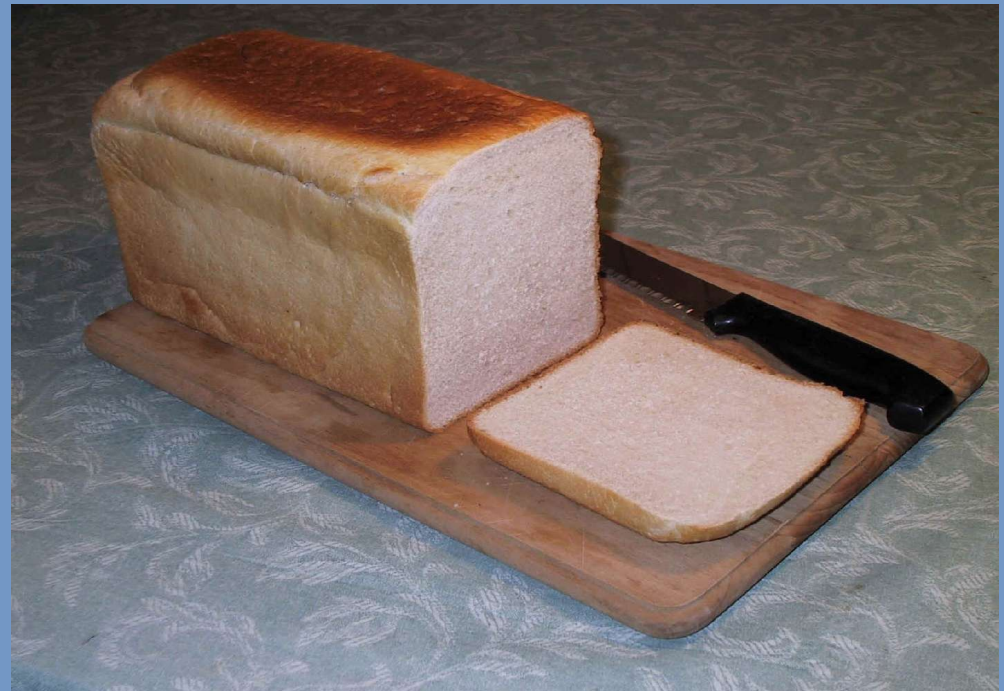
uversa
www.uversainc.com

ERP/Accounting Continued

- Open Source has capabilities for:
  - Services Companies in technology or other industries
  - Mail Order Companies or Brick 'N Click with a small or medium supply chain and a reasonable number of physical locations
- Open Source is a very powerful integration hub
- There are a large number of enterprise capable databases now!

uversa
www.uversainc.com

ERP/Accounting Continued Again

- Whole Product
- 100% Solution
- Dependencies!
- What is missing?
- Customization is cost effective and very manageable with Open Souce. Short time to market is also very attainable.
- Don't be afraid to customize

Gnu Enterprise

- Thick client system to build custom forms
- Growing base of canned functionality
- Has several large scale implementations
- Large amount of customization and implementation needed
- Beginning to have some real accounting possibilities
- Still getting there
- Good developer community with some very smart people behind it

GnuCash
http://www.gnucash.org

- Only game in town for 100% Open Source Desktop accounting

- Successfully used by many people to do their personal and small business accounting

- Lacks a lot of flash and gimmicks found in QuickBooks lacks a couple key payroll, tax features

- Support for QFX and most bank imports

Think Vertical

- Is it a credible alternative to proprietary systems in the field?
- Solve a specific need
- Drop in or custom fit?
- Commercial Support
- Length of time in market
- Age of market
- Future changes in market
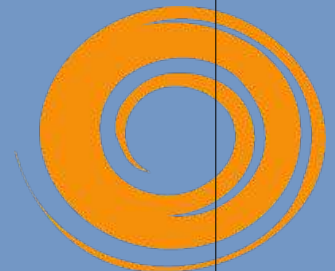- Time to market strategic advantage

uversa
www.uversainc.com
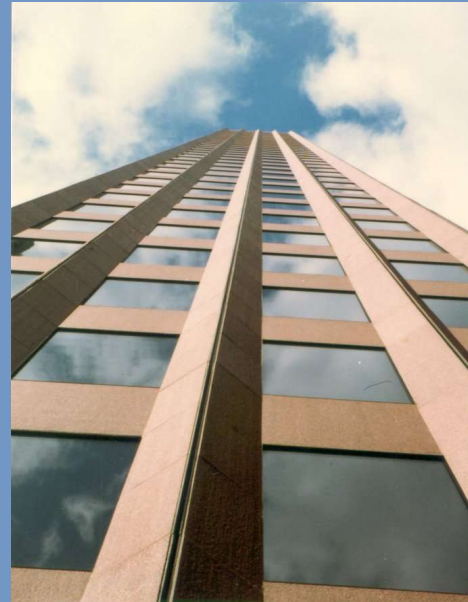
ERP Pitfalls, Open Source or Not

Convince me what ERP does
for us again, really, and why
should we spend
so much for it?

What kind of organizational
mindset does it take to pull
it off successfully?

It's all in the processes!

Nola and Derivatives

- First comprehensive Open Source accounting package
- Original Nola code not maintained
- Web based system, flexible, multi-user scalable
- Project is not maintained
- EzyBiz, ARIA, OsSuite all extended NOLA and have some amount of support today

uversa
www.uversainc.com

Ezybiz
http://ezybiz.sourceforge.net

- Offers a complete general ledger solution with options for product and services

- Actually used in production, some in the medical field, some in ecommerce shops

- Not an off the shelf solution but best bet for web based accounting

- Now has web service interface for customer, invoice and payment synchronization in CVS

- Improved reporting coming soon

uversa
www.uversainc.com

phpaga
http://phpaga.sourceforge.net

- Developers are responsive
  - Good base platform, Partially OO
- Suited to invoicing for services companies
- Project based management could be extended for Activity Based Costing
- Extensible payment framework, could connect to ERP or credit card auth, etc.
- Some Language Issues, tailored to european markets

Specialty Applications

- Offer well seasoned solutions to recurring needs

- Used within each department or company wide

- Usually on intranet or are a customer communication aid

- These are all proven systems I have used in production environments

SourceForge/Freshmeat

- If it is Open Source and it is credible it will be on SourceForge and or Freshmeat

- Great search tools on keywords

- SourceForge requires some level of Open Source License, Freshmeat does not

- http://www.sourceforge.net

- http://www.freshmeat.net

- Also checkout tigris.org

uversa
www.uversainc.com

XRMS
http://xrms.sourceforge.net

- Sales force automation - Customer relationship management
  - responsive developers, codebase is easy to work with
  - Feature rich, competitive with SFA/CRM of salesforce.com
  - Mobile device support
  - Comprehensive reporting
- Forthcoming integration with Asterisk VOIP phone software makes for a killer app
- Name is very hard to remember

uversa
www.uversainc.com

XRMS Continued

- Exports to LDAP for synchronization with mail clients

- Stay tuned for real time LDAP interaction

- Manage campaigns, opportunities and track response metrics

- Record of customer contact, impressive when automated with Asterisk

- Document storage

uversa
www.uversainc.com

PHPCollab
http://www.phpcollab.com

- Collaborative development and project management system.
  - Document management
  - Web link management, distribution
  - Good reporting including Gantt charts with JpGraph
  - Clunky Navigation
  - Great documentation
  - Separate client views, managed Discussions
  - Notification system

uversa
www.uversainc.com

PhpBB2
http://www.phpbb.com

- Definitive user forum software
  - Postnuke, Xoops, Xaraya module
  - Turn-key
  - Good themes, good usability
  - Multi-language support
  - High profile, active development
    - Gentoo forums prove it works well
    - Invented BBCode markup
  - Performance is hard to scale, ask Gentoo
  - Sometimes CMS is overkill, just use a forum

uversa
www.uversainc.com

Mantis
http://www.mantisbt.org

- Bug tracking system
- Email notification
- Similar to BugZilla, much easier to install and use
  - RSS Feeds
  - Uses PhpMailer
  - Saved Queries
  - Support for PHP on Windows
  - BBCode markup support
  - Moving to Smarty Templates

uversa
www.uversainc.com

phpESP
http://phpesp.sourceforge.net

- Easy survey package
- Automatically and graphically build online surveys
- Generates standalone PHP files
- Includes reporting and charting or capability to export to csv/tsv
- This is a really useful tool
- xNuke module

uversa
www.uversainc.com

phpESP Continued

- Smart, intuitive and easy to use interface
- Surveys can be packaged for distribution
- Support for Smarty Templates
- Default themes aren't great, look harder and be impressed
- Scales well to thousands of respondents

uversa
www.uversainc.com

phpAdsNew
http://phpadsnew.com/two

- Internet advertising bureau system
- Very Impressive Interface
- High quality documentation
  - Banners, images, texts, DHTML in campaigns
  - Targetting and capping of impressions or click-throughs
- Pay for play support
- Good reporting and statistics
- Internet advertising is very complicated!

phpWiki

http://phpwiki.sourceforge.net

- Wiki System in PHP
  - Popular and easy to install
  - Great as "thought management" system
- Auto relation of content with Wiki language
- Often used for spontaneous documentation
  - Many user driven sites build documentation this way for better or worse
- Put in the hands of engineers and see what happens

uversa
www.uversainc.com

WordPress
http://wordpress.org/about/features

- General blogging software
  - Support for tracebacks, pingbacks, compatible with Moveable Type, Blogger, Zempt
- Lightweight with clean CSS themes
- Standards compliance, XHTML, RSS, XML-RPC, important for syndicated content
- Successor of b2/cafelog
- Support for pings on Weblogs.com or Blo.gs

SimpleAssets
http://simpleassets.sourceforge.net

- Physical and intangible asset management system
  - Support for software license tracking based on seats or persons
  - Track IP Addresses
  - Good import/export functions
  - Wedge barcode support
  - Nice interface, tallies values
  - HTML or Excel reports
  - Needs barcode printing
  - Not currently maintained

uversa
www.uversainc.com

Webmail

- Highly personal, preferences come strongly into play
- Requirements
  - IMAP or POP
  - Seamless HTTPS, authentication integration
  - Good security track record
  - Support for mobile devices
- I have tried many, squirellmail, xgroupware, and so on. I always come back to Horde

uversa
www.uversainc.com

Horde
http://horde.org

- Personal Application Framework
  - Webmail, Contact Management, Calendaring
  - CVS viewer, file managment, time tracking, mail filter
  - RSS aggregator, stickits, presentation builder
  - Bookmark manager, form builder, NNTP client
  - Well audited code, clean design
  - Support for LDAP
  - Supports IMAP, POP3, Also over SSL
  - Comprehensive feature set
- Is it groupware? Do want groupware?

uversa
www.uversainc.com

General Tools

- Drive an invaluable business need
- Contribute to longterm ROI
- Help in future-proofing
- Enabling technologies make strategic advantage possible
- These tools don't offer much standalone they are enablers

uversa
www.uversainc.com

ADODB
http://adodb.sf.net

- Indispensable Database Abstraction Layer
  - Very Good Performance
  - Optional PHP extension written in C for maximum performance
  - Supports MySQL, PostgreSQL, Interbase, Informix, Oracle, MS SQL 7, Foxpro, Access, ADO, SAP DB, SQLite, Sybase, DB2 and Generic ODBC
  - Plenty of documentation and tutorials available
  - PHP5 Support

uversa
www.uversainc.com

PHPMailer
http://phpmailer.sf.net

- Programmatic Automated Mail Sender
  - Multiple TOs, CCs, BCCs and REPLY-TOs
  - Multipart/alternative emails non HTML clients
  - SMTP authentication, Redundancy
  - Word wrap, HTML email
  - Works with Sendmail, qmail, Postfix, Imail, Exchange, Mercury, Courier
  - Works on any win32 or *nix platform
  - Custom mail headers
  - Embedded image support

uversa
www.uversainc.com

phpMyAdmin
http://www.phpmyadmin.net/home_page

- Database Management for MySQL
  - Add, Edit Tables & Databases
  - Visual Privilege Management
  - Process Reporting
  - Table Relation Display
  - Support for Data Grid entry
  - Saved queries
- Don't miss the "hidden" features
  - Data dictionary, table comments, relation handling
- Also available for PostgreSQL, Oracle

phpDocumenter
http://phpdocu.sourceforge.net

- Automatically create PDF's, API docs, Tutorials, Multi-language, Customizable Documentation from Code Comments

- Similar to JavaDoc, compatible

- PHP5 Support

- Broad compatibility with other documenters

- Fast (except for PDF)

- Installable from PEAR

- Integrated into PHPED

uversa
www.uversainc.com

phpGACL
http://phpgacl.sourceforge.net

- Access Control Library, building momentum
  - Role Based Access Control (RBAC) framework
    - Very powerful permissions system
    - Easy once implemented
    - Automated testing tools
    - Offers infinite comprise of granularity
    - Drop in use with existing projects
  - Management interface built with Smarty templates for easy customization.
  - RBAC is complicated, usually takes a couple of tries to get right

uversa
www.uversainc.com

Wrap up
There is A LOT of Great Open Source Out there!

- Look for a clean code base and code documentation.

- Popularity is important, unpopular projects die on the vine.

- Sourceforge.net, Freshmeat.net, tigris.org, planet.gnome.org

- Google is a great source, try and reference existing projects to find alternatives

Parting Gift

- I wish there was time to talk about these but check them out yourselves.
- Check out these <u>very addictive</u> Linux games
- Frozen Bubble
  - http://www.frozen-bubble.org/
- Maelstrom
  - http://www.devolution.com/~slouken/Maelstrom
- Chromium
  - http://www.reptilelabour.com/software/chromium