

CPE 802

Open Source Office Productivity Tools

Meeting 10

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Housekeeping

- No meeting on Wednesday July 12
- Last class will be on Friday July 14
- Exam is on Thursday, July 27, 2006 at a location and a time to be advised
- As always, if you have questions about anything in this class or about FLOSS, you are encouraged to contact me via email at h.pillay@ieee.org

OSS Audio and Video Systems

- Audio and video are an area in which there is a very active level of work and debate being undertaken
- Numerous standards bodies – both public and private, and open and proprietary standards for audio and video systems
- Probably the most well known is Moving Picture Experts Group (MPEG) – officially ISO/IEC JTC1/SC29 WG11

MPEG background - I

- MPEG-1: Initial video and audio compression standard. Later used as the standard for Video CD, and includes the popular Layer 3 (MP3) audio compression format.
- MPEG-2: Transport, video and audio standards for broadcast-quality television. Used for over-the-air digital television ATSC, DVB and ISDB, digital satellite TV services like Dish Network, digital cable television signals, and (with slight modifications) for DVD video discs.

MPEG background - II

- MPEG-3: Originally designed for HDTV, but abandoned when it was discovered that MPEG-2 was sufficient for HDTV.
- MPEG-4: Expands MPEG-1 to support video/audio "objects", 3D content, low bitrate encoding and support for Digital Rights Management. Several new (newer than MPEG-2 Video) higher efficiency video standards are included (an alternative to MPEG-2 Video), notably, Advanced Simple Profile and Advanced Video Coding.

MPEG background - III

- MPEG-7: A formal system for describing multimedia content.
- MPEG-21: MPEG describes this future standard as a multimedia framework.

JPEG

- <http://en.wikipedia.org/wiki/JPEG> - Joint Photographic Experts Group
- Formed around the same time as MPEG
- Creates lossy images
- Not good for line drawings – PNG and GIF are better

Non encumbered formats

- Ogg from the Xiph.org foundation
- It is a definition of a container of audio/video content.
- Can do both streaming of audio/video and file compression
- Totally patent free and freely implementable

Substitution Equivalents

Feature	Current	OSS Equivalents
Office Suite	MS Office	
Email server	MS Exchange	
Database	MS SQL Server	
LDAP	MS Active Directory	
Desktop	MS Windows	
Email client	MS Outlook	
Web Browser	MS Internet Explorer	
IDE	MS Visual Studio	
Video Player	MS Media Player	
Desktop		
Publishing	Adobe Pagemaker	
Audio Editing	Audacity	

Substitution Equivalents

Feature	Current	OSS Equivalents
Office Suite	MS Office	OpenOffice/KOffice
Email server	MS Exchange	Sendmail/Postfix/etc
Database	MS SQL Server	MySQL/Postgres
LDAP	MS Active Directory	RedHat Directory Server
Desktop	MS Windows	Linux
Email client	MS Outlook	Thunderbird, Evolution
Web Browser	MS Internet Explorer	Firefox/Mozilla/Opera
IDE	MS Visual Studio	Eclipse
Video Player	MS Media Player	Kaffeine
Desktop		
Publishing	Adobe Pagemaker	Scribus
Audio Editing	Audacity	Audacity

Web 2.0 and Open Source

- What is Web 2.0
 - A labeling of the way users experience the web that is different from when the web first saw light of day
 - Built on technology that has been around for about 10 years now
 - Core to the Web 2.0 is the set of tools called – AJAX

AJAX

- Asynchronous Javascript and XML
- Javascript has been available in browsers from early on
- Was called LiveScript by Netscape and renamed to Javascript to ride on the Java name
- Allows for running of code within a browser
- Not very powerful from a language richness point of view, but able to provide good enough experience

Why Ajax works - I

- The idea behind Ajax is that when a user changes a small part of the web page, there is no need to reload the whole page
- Only tiny changes need to be transmitted to the server and the browser can respond far quicker
- The reality of Software as a Service (SaaS) is now closer

Why Ajax works - II

- The technology is 100% open sourced and complies with standards and does not allow a company to dominate (embrace and extend)
- The client end – browsers/PCs – have gained significantly in speed and with broadband connections, the time for Ajax is now

Why Ajax works - III

- Open source mantra
 - Release Early, Release Often
 - Many eyeballs make bugs shallow

Examples of Web 2.0

- My Google
- My Yahoo
- Google Maps
- Writely.com
- Spreadsheets.google.com