Jean Baptiste-Kempf

I'm excited to announce the release of VLC 1.0!

The world's most downloaded video player:
VLC: www.videolan.org/vlc
(free and open source)

VISUAL FACILITATION BY ROY BLUMENTHAL®
(C) ANTE STADER-RIEKE
Ecole Centrale Paris
VIA Centrale Réseaux

- Campus student association
- Internet acces through RENATER
- Token Ring

Network Upgrade

- How to pay for our new network?
- How to justify the needs for a faster network?
- 1995 : let's do video streaming!
Early history

1995 – 96 first project
   ➢ 2 years to complete

1998 project reboot
   ➢ Open Source
   ➢ Modularity
   ➢ Cross-Platform
   ➢ Network oriented
   ➢ Student project

2001 License Change
   ➢ ECP headmaster Agreement
   ➢ GPL v2 (or later)
VideoLAN Projects

VideoLan Client, VLC media player, VLC
VideoLan Server, VLS (dead)
VLCS (dead)
libdvdcss (DVD CSS decryption)
libdts, libdca (DTS decoding)
x264 (H.264 encoding)
libdvbpsi (TS files management)
libdvdplay (dead)
libdvbcasa (dvb encryption decoding)
VLMA (VLC automation)
VLC Skin designer
libbluray, libaacs (BluRay playback)
DVBlash, Multicat (DVB streaming solution)
VLMC (Video editor)
x262, x265
Collaboration

Teams meeting once per year
Using git since early 2007
Use of trac, phpBB and mediawiki
IRC and Mailing Lists

VLC Contributors

Core Team 5~10 people
600 over the lifetime
150 per year
Collaboration

Cathedral

Bazaar
Association VideoLAN

Creation
- 2009, decided in the VDD '08
- Libre/Free Software and Multimedia

Members
- VLC's core developers
- Important members

Supports
- Hardware for development
- Travel, Servers, Legal
- VideoLAN Dev Days
900,000 per day

More than 1.5B over VLC life time

1 every 6 Mac
Top 15 Windows

Most used French software
Support for DVDs

- Region independent
- Prevents forced subtitles (if desired)

... Blu Rays

- By default, non-encrypted only

... network streams

- Unicast, multicast, adaptive streaming

... external hardware

- Cameras, TV input, Satellite, ASI/SDI ...
Freedom

libVLC license

LGPL
Architecture

Small Core

- libVLCCore
- Light
- Memory, Network and Thread handling
- Module loading
- Clock / Synchronization

Simple Multimedia Framework

- LibVLC
  - bindings for C++, C#, Objective-C, Java, lua, Perl and Python
Completely modularized

- About 300 modules in a default installation
  - Codecs, IO, outputs, (de)muxers, filters, ...
  - Interested in adding new features? Add a module.

820,000 lines of code

- 120k in the core
- 700k for modules

80 external libraries

- Codecs, Output, Effects, Network
- 7M lines of code
  - 50% C, 41% C++
struct audio_output {
  VLC_COMMON_MEMBERS

  struct aout_sys_t *sys;

  int (*pf_start)(audio_output_t *, audio_sample_format_t *fmt);

  void (*pf_stop)(audio_output_t *);

  struct {
    void (*volume_report)(audio_output_t *, float);
    void (*mute_report)(audio_output_t *, bool);
    void (*restart_request)(audio_output_t *, unsigned);
  } event;
};

Also C99, C++, Obj-C, ASM, Lua
Network-oriented graph

Protocol → Format → Video Codec → Video Filters → Video Output

Audio Codec → Audio Filters → Audio Output

Subtitles Codec → Text Renderer

Codec

MetaData

Interfaces

Encoder → Encoder

Muxer

Stream
What you don't know about VLC

- Transcoding, Streaming
  - latency
- Mosaic/PiP generation
- Wall display
- Screencasting
- TS encryption and decryption (DVB-CSA)
- DVD and CD ripper
- Headless versions
- Karaoke, Midi, hardware decoder
- Scriptable and extensions
- Modules
VLC's extensions

Use cases:

- Automatic subtitle downloads
- Context information from Wikipedia, IMDB or Allociné
- Sharing on Twitter

Highly customizable

- Written in lua
- Publish and get them from addons.videolan.org
Service discoveries

Detects media automatically:

- Local files
- Network services
  - UPnP / DLNA
- Internet services
  - Resolves links to YouTube, Dailymotion, Vimeo, Apple Trailers ...

Highly customizable

- Written in lua
- Publish and get them from addons.videolan.org
Content Integration
VLC's screen casting
Dual webcam with alpha mask:
So I suppose my ability to accepting reality is a sign that I’ve matured.
Encrypted streaming

Supported formats for encryption & decryption:

- DVB-CSA
  - Satellite
- HTTPS — HTTP/TLS
- SFTP
- RTMPE
- HLS-AES
Karaoke & MIDI
Console & headless
Libcaca
Web interface
VLC for Android

Release in July 2012
- Beta on Google Play
- Limited countries
- ARMv7 only
- Numerous crashes
- Good feedback
- GPLv3
Project start
[Coalgirls]_The_Melancholy_of_Haruhi_Suzumiya_-_The_Melancholy_of_Haruhi_Suzumiya_L_(1280x720_Bluray).mp4
Evolution
VLC for iOS

- Requires iOS 5.1 or later device
  - iPhone 3GS
  - iPad
  - iPod touch 3rd gen.
VLC for iOS features

- Faster
- Multi-core decoding
- OpenGL shaders
- Retina Display
- Higher audio quality
- 10bits support
Future projects

VLC for Mobile OS
  ➣ Win8 / WinRT / WP8
  ➣ VLC for Firefox OS
  ➣ VLC for Ubuntu Phone?
  ➣ BB10 ?
  ➣ Chrome OS ?
Use it!
  - Promote to friends, family, groups
  - Spread the word

Report bugs

Translations
  - New and fixes

Code on VLC
  - Extensions
  - Modules

Code with libVLC
Thank You

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