GeeXboX: An Introduction to Enna Media Center

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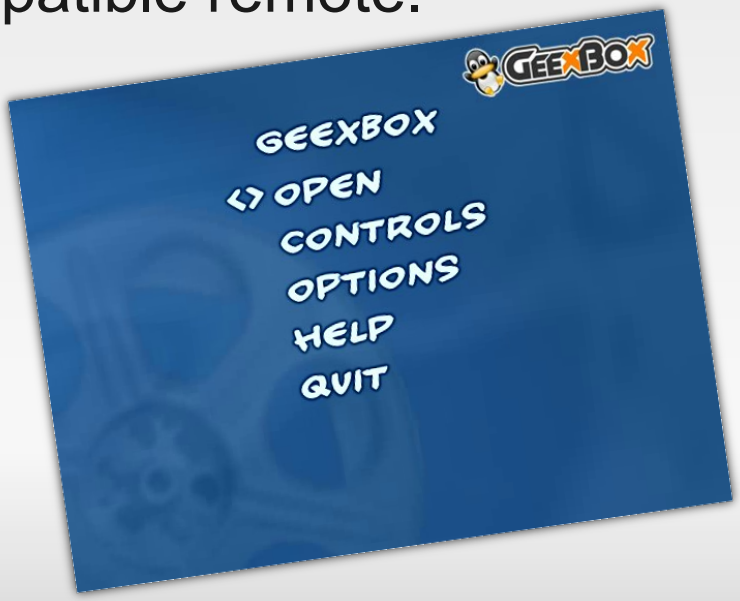
GeeXboX: An Introduction to Enna Media Center State of the Art

- GeeXboX is major Live-CD multimedia distribution since 2003.
- Turns your computer into full-featured Set-Top-Box:
  - Play any kind of multimedia content (audio, video, photos …)
  - From various locations: HDD, NFS, Samba, UPnP/DLNA …
  - Supports CDDA, DVD, Analog TV and DVB playback.
  - Fully controlable through LIRC-compatible remote.

- Originally created by a few MPlayer developers.
- GUI based on MPlayer OSD interface (i.e. limited).
- Downloaded by 2000+ users a day.

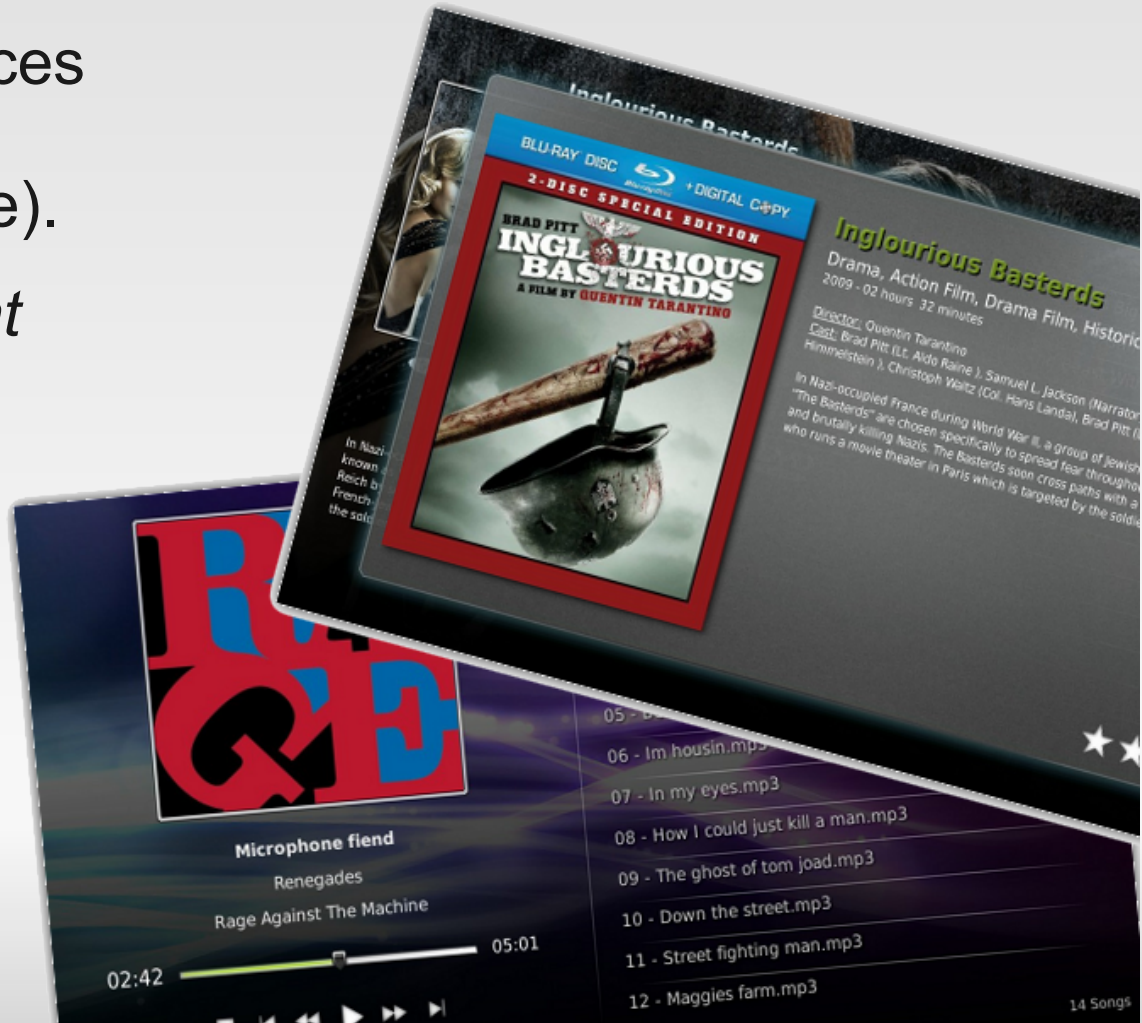


GeeXboX: An Introduction to Enna Media Center
History: Enna Origins

- Willingness to split GUI from Media Player.
- GeeXboX's MPlayer introduced many enhanced features:
  - DVDNAV, enhanced OSD menu, TV control, LCD display output, RTSP streaming …
  - Users requested these to be usable on regular distros.
  - Were merged to upstream project over the years.
- GUI had to be portable, configurable and extensible.
  - Must support both Framebuffer and X11.
  - Had to be a standalone application, not GeeXboX-specific.
  - Should be able to control various media players.

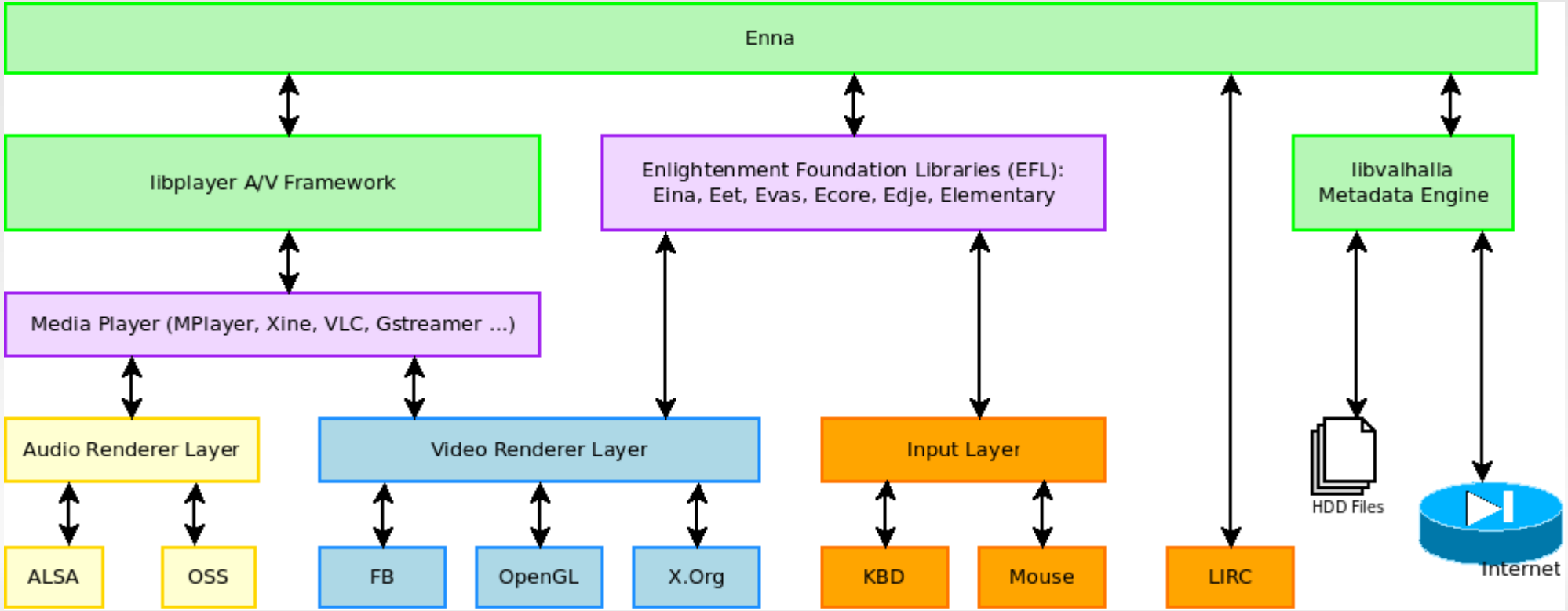
GeeXboX: An Introduction to Enna Media Center Overview

- Enna is a Media Center application for your Home Theatre PC.
- Designed to be GUI for GeeXboX v2 release.
- Meant to run on low-resources and embedded computers (250 kB binary only + theme).
- GUI relies on *Enlightenment Foundation Libraries* (EFL).
- Multimedia playback capabilities and metadata information retrieval rely on GeeXboX *libplayer* and *libvalhalla* projects.



GeeXboX: An Introduction to Enna Media Center Software Architecture

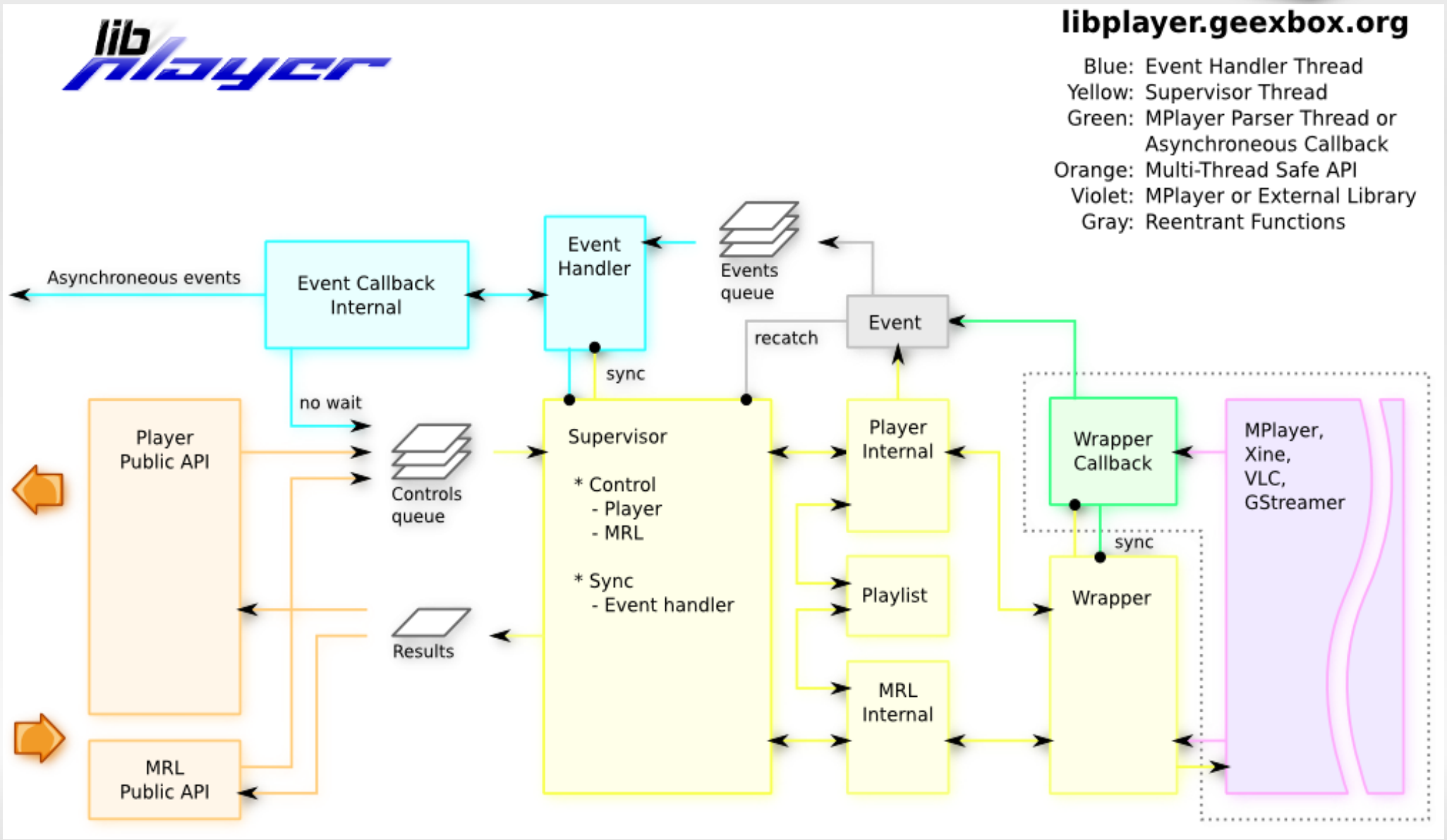
- Built on EFL and GeeXboX multimedia libraries (*libplayer* and *libvalhalla*).
- Provides many abstraction layers.



GeeXboX: An Introduction to Enna Media Center libplayer

- libplayer is a multimedia A/V abstraction layer framework.
- Provides a generic API to control various multimedia players:
  - MPlayer, through FIFO-based slave-mode.
  - Xine
  - VLC (experimental)
  - GStreamer (experimental)
- Fully thread-safe.
- Player controls and notification are offloaded to frontend.
- Supports most of currently available A/V renderers:
  - Audio: *ALSA*, *OSS*
  - Video: *Framebuffer*, *OpenGL*, *SDL*, *VDPAU*, *X11*, *XVideo*

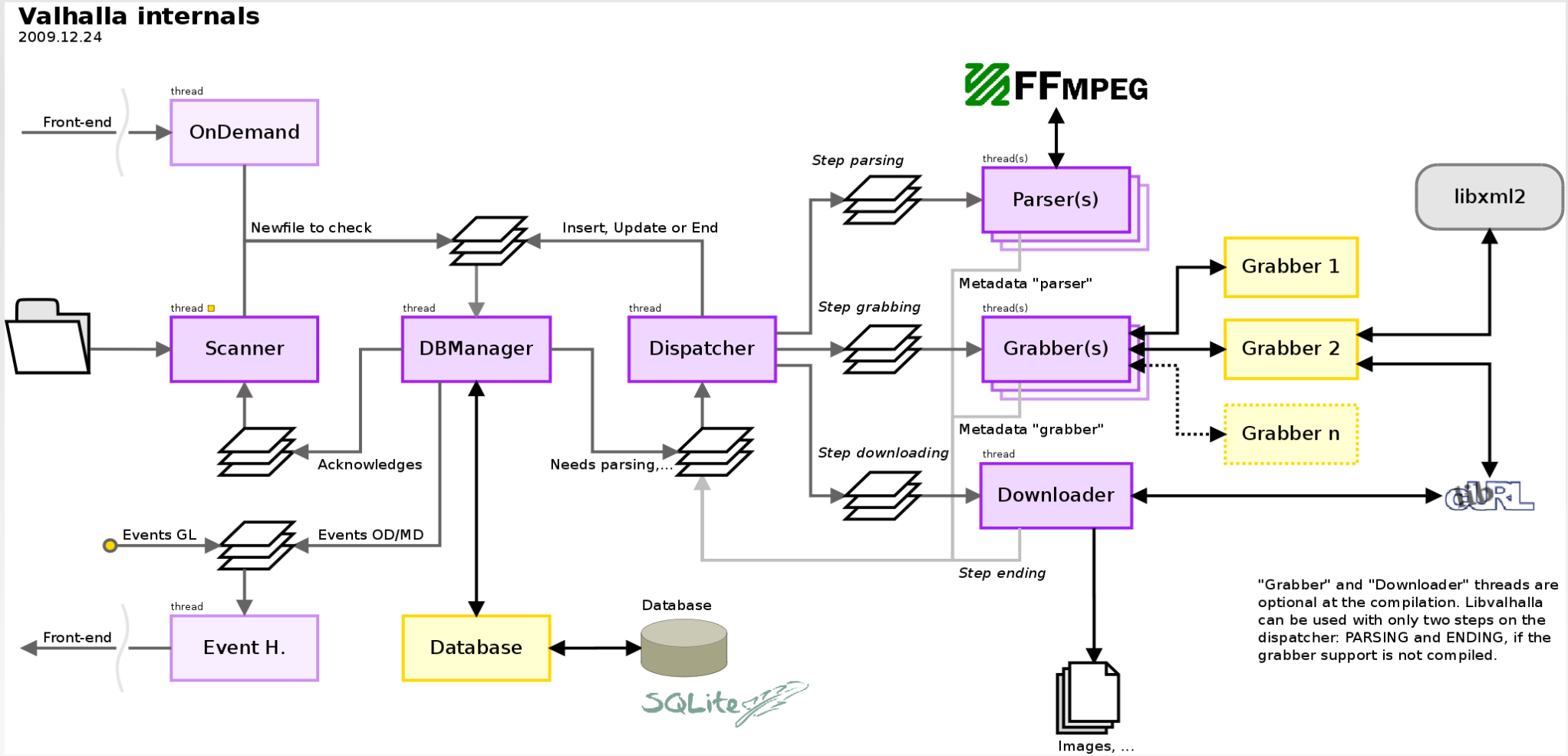
GeeXboX: An Introduction to Enna Media Center libplayer Architecture



GeeXboX: An Introduction to Enna Media Center libvalhalla

- libvalhalla is a tiny media scanner library:
  - High-performances multi-threaded implementation.
  - Supports both background and on-demand operations.
  - Stores information in SQLite database.
  - Parses A/V stream properties through FFmpeg.
  - Features many on-line grabbers for automatic retrieval of covers, lyrics, synopsis, list of actors …
- Currently supported grabbers:
  - Offline: *EXIF, FFmpeg* and *NFO.*
  - Online : *Allocine, Amazon, ChartLyrics, ImDB, Last.fm, LyricWiki, TheTVDB, TheMovieDB and TVRage.*

GeeXboX: An Introduction to Enna Media Center libvalhalla Architecture



GeeXboX: An Introduction to Enna Media Center Enna (1/2)

- Designed with embedded considerations in mind (low footprint).
- Meant to be user convenient and plug-and-play.
- Module based and skinnable.
- Main modules:
  - Music Player
  - Movies & TV Shows Player
  - Photos Viewer
  - Weather forecast
  - Online eBook Reader from various content providers.

GeeXboX: An Introduction to Enna Media Center Enna (2/2)

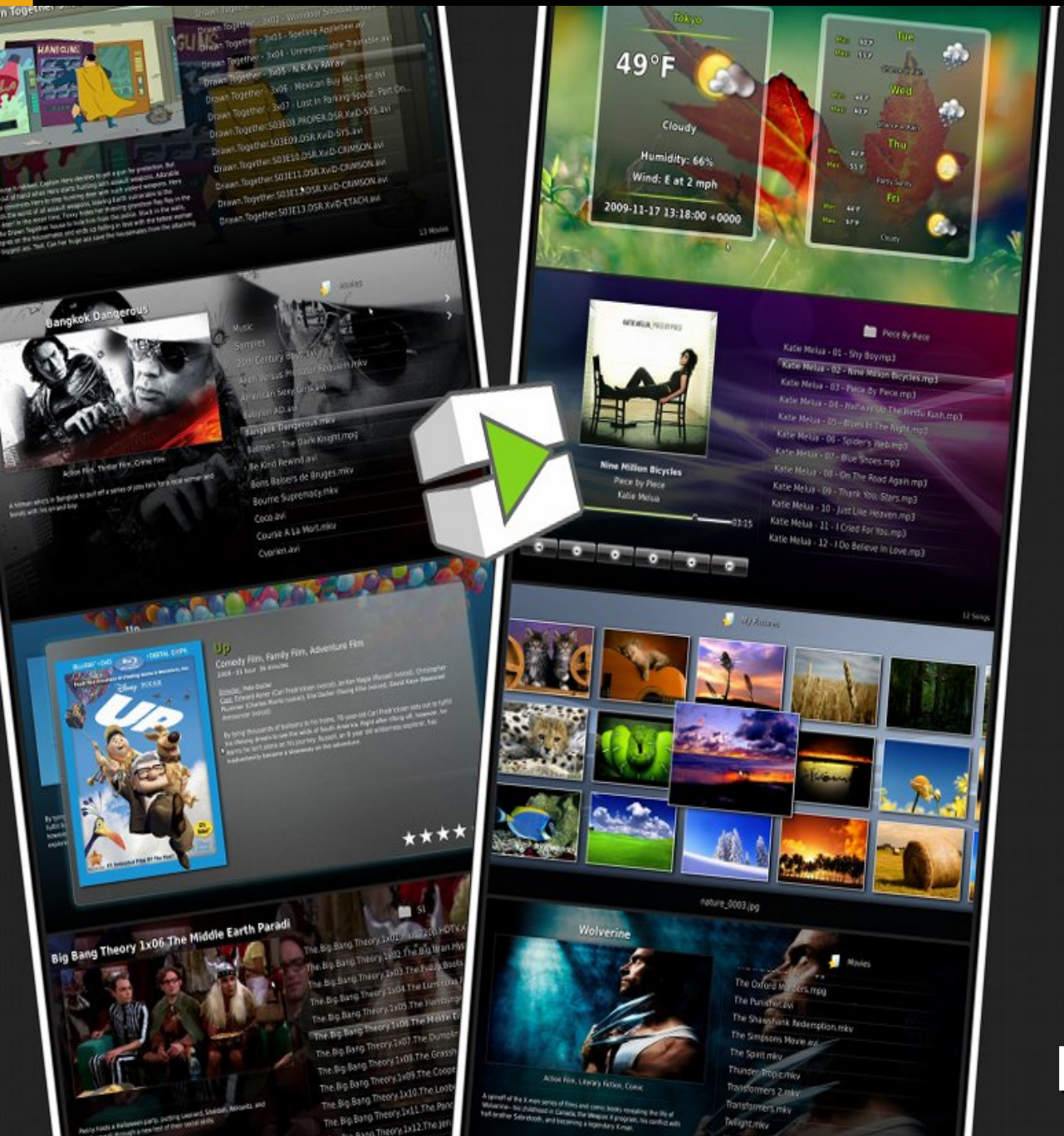
- Supported Media Browsers: *Local disks, CDDA, DVD, Database, SHOUTcast, Podcasts and UPnP/DLNA*.
- Dynamic media detection through UDEV library.
- Controllable through keyboard, mouse, touchscreen and remote.

- Mid/Long-term expected features:
  - Port to Windows and OSX.
  - TV support through VDR skin.
  - YouTube browsing.
  - Netflix VOD Partnership.
  - Instant Messaging (*Telepathy*).
  - VoIP Telephony.
  - Video Conference and TelePresence ...

GeeXboX: An Introduction to Enna Media Center Conclusion

- Young: first release (0.4.0) was made on 2th January 2010.
- Next one is due by Spring with many feature enhancements.
- First users feedback was quite impressive.
- Will be key part of GeeXboX 2.0 release (so long waited for).
- Still many competitors: XBMC / Boxee, Meedio, Win MCE ...
- Will support dedicated hardware: Beagleboard, N900 … (looking for sponsor and partnership).
- Enna development is really cool: feel free to join :-)
- More details on:
  - Enna: http://enna.geexbox.org/
  - GeeXboX: http://www.geexbox.org/

GeeXboX: An Introduction to Enna Media Center
That's all folks ...



Thanks

http://enna.geexbox.org/