

EFL Introduction

Openmoko

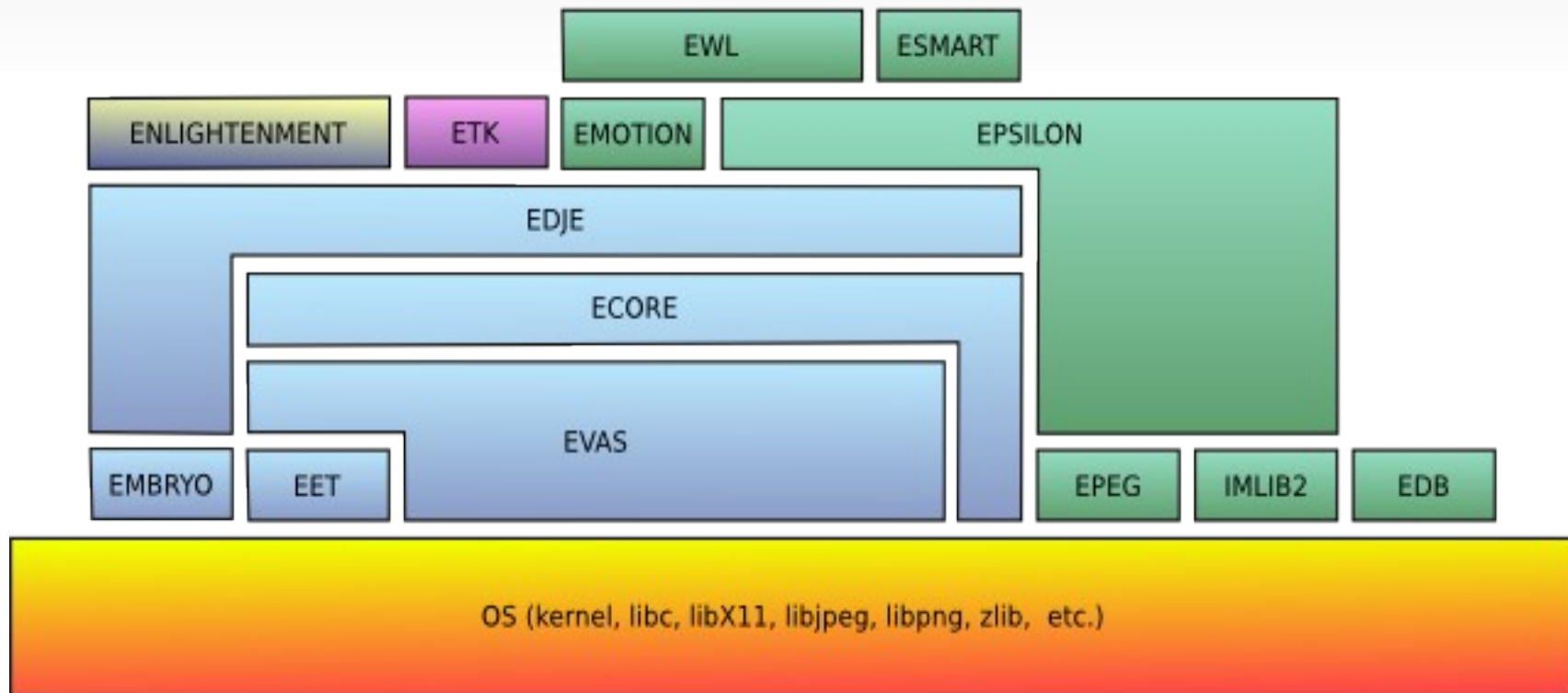
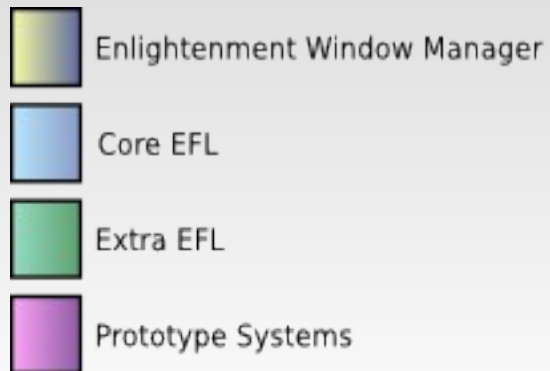
11/16 2007

Jeremy Chang

Agenda

- EFL library introduction
- Edje
- E_dbus
- Example
- Discussion
- Reference

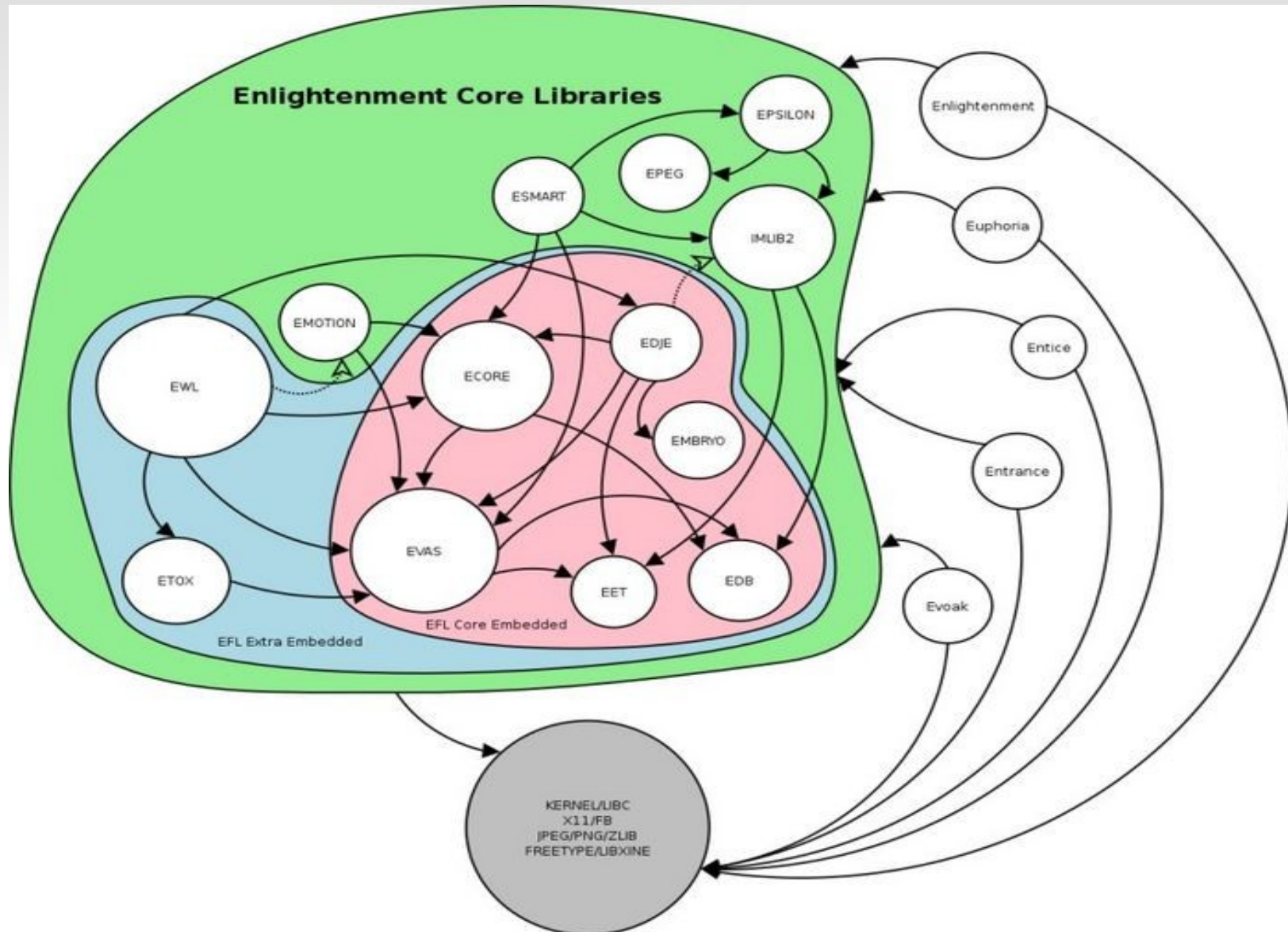
EFL stack diagram



EFL library

- Each Can be installed independently
- Each library can be used by itself
- Some Low level libraries are not graphical
- Some other libraries add value to Evas
- So it should be more like

EFL network diagram



EFL list

- Evas
- Edje
- Ecore
- Eet
- Embryo
- Epeg
- Epsilon
- Esmart
- EWL
- Imlib2
-
-

Evas

- powerful canvas
- image based, not vector based
- not resolution independent, but has imlib2
- State-aware / Keep track of what is rendered
- can run on X11, OpenGL, Xrender, framebuffer
- No need to deal with redraw or repaint
- makes why EFL speed is fast

Edje

- unique
- split into UI and logic part
- makes Animation, effect
- like CSS and content
- MVC spirit

Ecore

- Like Glib, provide all the low-level stuffs
 - data structure
 - IPC
 - helper class
 - network
 -
- glue together other libs
- not graphical
- main()

Eet

- single theme compressed file
- no need to uncompress and install to a directory
- On the fly

Embryo

- Script language
- Script the interface (Edje theme)
- add power to Edje
-

Epeg & Epsilon

- Thumbnail libraries
- Epeg
 - help search Jpeg image only
- Epsilon
 - not only Jpeg but also PNG, all other supported by imlib 2
 - even take advantages of Epeg for Jpeg images

Esmart

- Container
- Transparent Ap
- helper lib for Edje

EWL

- like GTK+, Qt
- a widget set
- based on X protocol

Imlib2

- Image loading
- Image convert, create, setColor, text draw.
- Image handling
-

Emotion

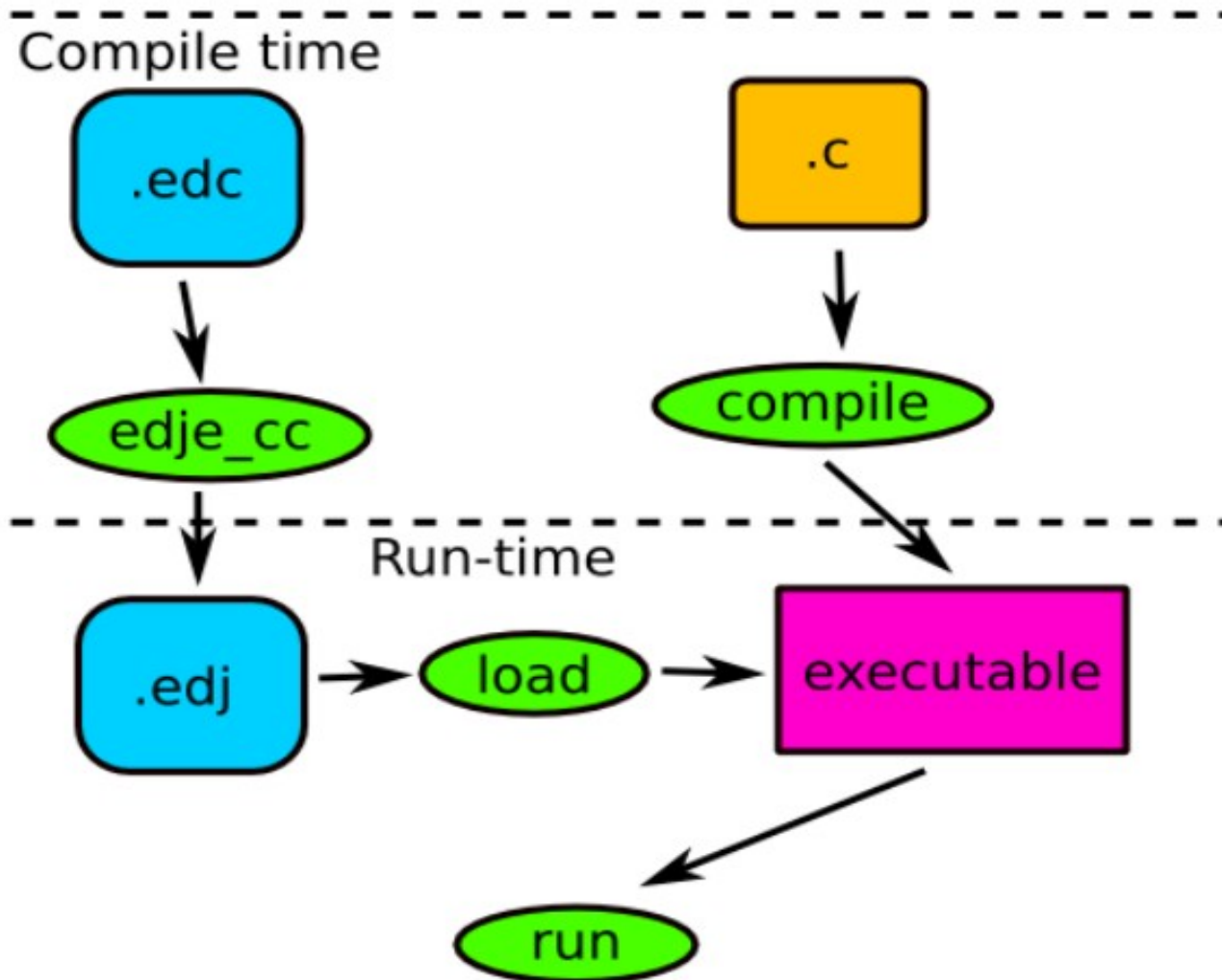
- video lib
- based on xine

Edje

Edje

- a layout engine
- Server all the purpose of visual elements for E17
- Animation/Effects library
- an IDL
- Logic and Appearance separator
- Theming framework

Edje Concept



Some samples

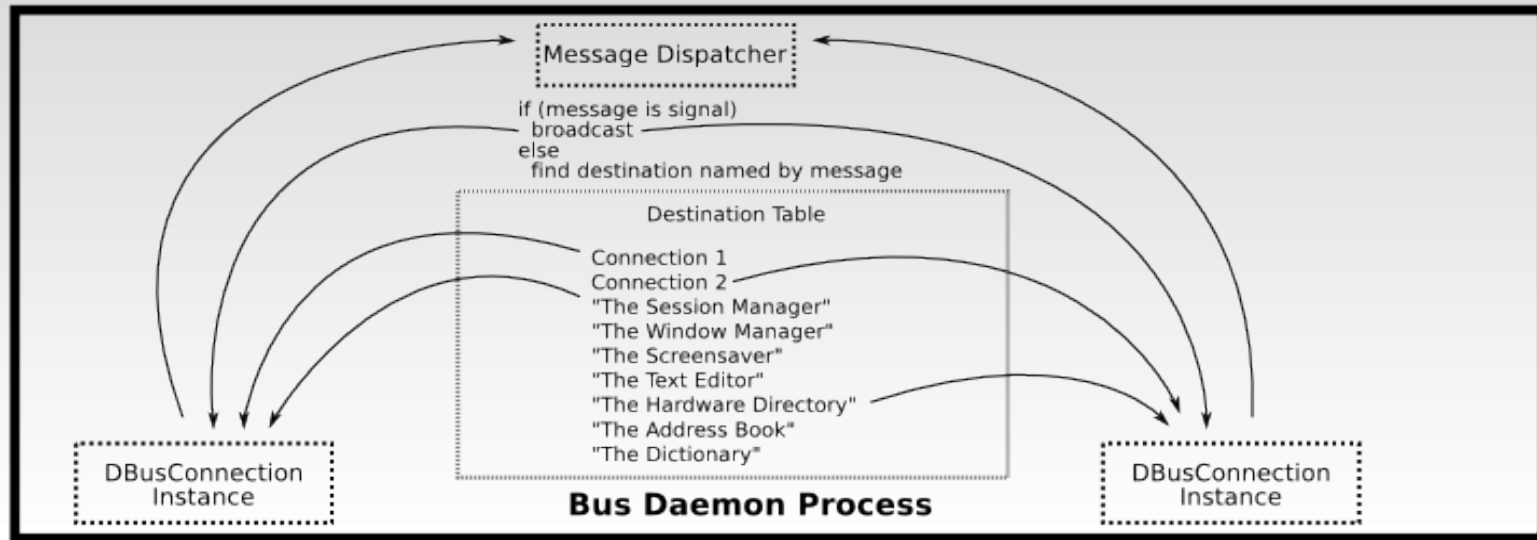
E_dbus

- dbus wrapper, like glib-dbus
- dbus
 - raw library – libdbus
 - dbus daemon as a router
 - IPC, freedesktop project
 - purpose:
 - Session wide
 - System wide
- Used with Ecore and E applications

Usage (for client)

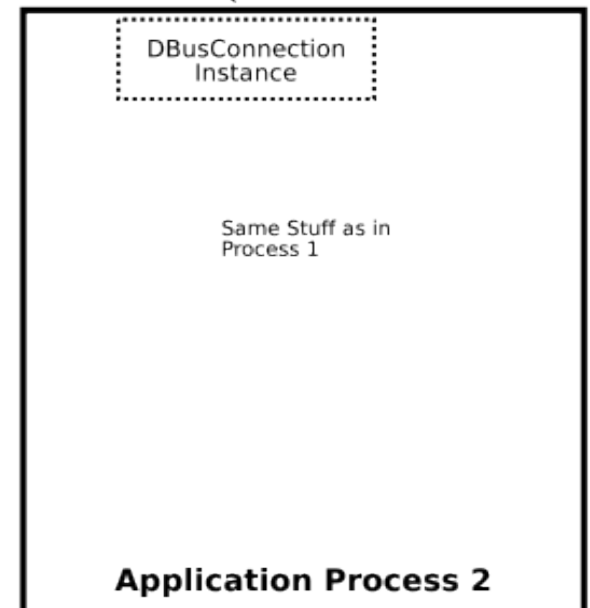
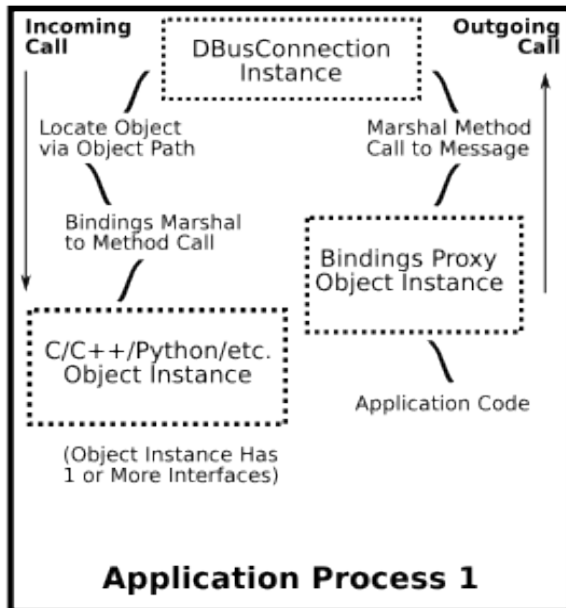
- Active poll
 - get connection
 - get proxy
 - create message
 - Send message / call method (marshal)
 - get args of reply message (get return value)
 - unrefer msg, proxy, connection.....
- Callback
 - receive signal and handle

dbus concept



Socket (Bidirectional Message Stream)

Socket (Bidirectional Message Stream)



Discussion

- Questions?
-
-

Reference

- EFL
 - Doc/API
 - <http://web.enlightenment.org/p.php?p=docs&l=en>
 - Wiki
 - http://wiki.enlightenment.org/index.php/Main_Page
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