X Composite

- X
- Composite
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- Composite
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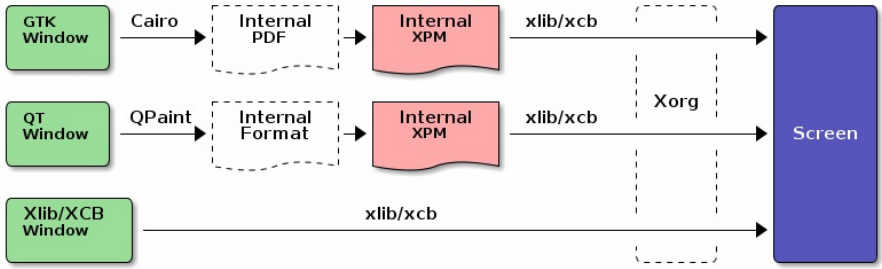
Linux X

X

X



X API GTK+ 3.0 Cairo Cairo PDF 1.4 GTK 2.0 Cairo xlib xcb X QT QPaint X GTK QT X

X X GDI+ Quartz Device Independence X (1,1) (0.5, 0.5) Unix Hater's Handbook X X subpixel-level anti-aliasing xterm urxvt GDI WMF Quartz PDF X Cairo QPaint Firefox Chromium X

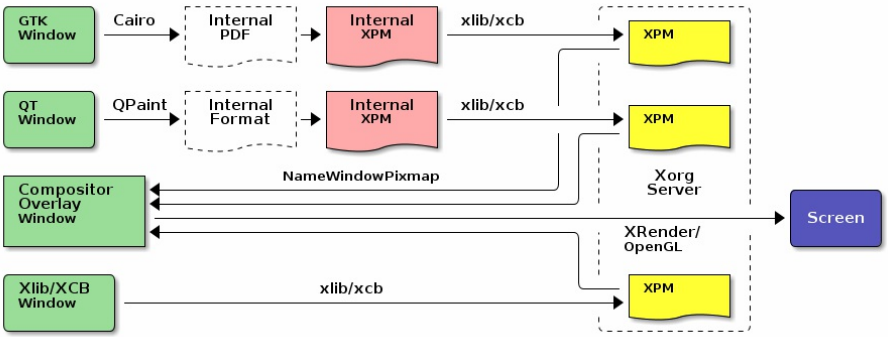
Composite

2004 X11R6.8 Xorg Composite The (Re)Architecture of the X Window System

Composite X

1. `RedirectSubwindows`
2. `NameWindowPixmap`
3. `GetOverlayWindow`
4. `CreateRegionFromBorderClip`

Composite X API Composite X



X Mac OS X

1. X XRender OpenGL/EGL X
2. `RedirectSubwindows` Mac OS X X
   mapped
3. X Windows 7 Aero Peak
4. Mac OS X OpenGL Surface
   device independent device dependent
   X X

Cairo QPaint PostScript
PDF XPM DPI
subpixel layout
Mac OS X 10.4 Mac OS X
10.5 Retina 2 X X Mac
OS X OpenGL Surface

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Composite API X
OverlayWindow OverlayWindow

Composite API

fcitx, ibus, scim **X**
top-level
ICCCM/EWMH X

X X XFixes
`SetWindowShapeRegion` API OverlayWindow
`ShapeInput` OverlayWindow
OverlayWindow OverlayWindow

X

1.
2. **X** X

Activity

Gnome 3 Gnome 3 Gnome 3

Composite X Mac OS X Exposé LG3D 3D

Sun Microsystems LG3D X Event Interception XEvIE API

> It has been suggested that this extension should not be used because it is broken and maintainerless.

Composite

Composite

1. Xorg Xorg Wayland
   slide the real story behind Wayland and X

> and what's the X server?
> really bad IPC
>
> X

2. X X

X API API IPC —— X Wayland

Wayland X

Wayland

The (Re)Architecture of the X Window System 2004 Composite X X OpenGL X GLX AIGLX DRI KMS Linux

so you want to build a compositor 2008 Clutter

Composite tutorial Qt

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