Build wayland on ubuntu 11.04

the original step from http://wayland.freedesktop.org/building.html

run the commands like below

```
export WLD=$HOME/install   # change this to another location if you
prefer
export LD_LIBRARY_PATH=$WLD/lib
export PKG_CONFIG_PATH=$WLD/lib/pkgconfig/:$WLD/share/pkgconfig/
export ACLOCAL="aclocal -I $WLD/share/aclocal"
export C_INCLUDE_PATH=$WLD/include
export LIBRARY_PATH=$WLD/lib
export PKG_CONFIG_ALLOW_SYSTEM_CFLAGS=1


export MESA_DEBUG=1
export EGL_LOG_LEVEL=debug
export LIBGL_DEBUG=verbose
export WAYLAND_DEBUG=1
```

wayland

```
    $ git clone git://anongit.freedesktop.org/wayland/wayland
    $ cd wayland
    $ ./autogen.sh --prefix=$WLD
    $ make
    $ make install
```

mesa based packages

```
    $ git clone git://anongit.freedesktop.org/git/mesa/drm
    $ cd drm
    $ ./autogen.sh --prefix=$WLD --enable-nouveau-experimental-api
    $ make && make install

    $ git clone git://anongit.freedesktop.org/git/xorg/util/macros
    $ cd macros
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://anongit.freedesktop.org/xorg/proto/glproto
```

```
    $ cd glproto
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://anongit.freedesktop.org/xorg/proto/dri2proto
    $ cd dri2proto
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

mesa, please install xcb-dri2, xcb-x11 dev packages

    $ git clone git://anongit.freedesktop.org/mesa/mesa
    $ cd mesa
    $ ./configure --prefix=$WLD --enable-gles2 --disable-gallium-egl
--disable-glx --with-egl-platforms=x11,wayland,drm --enable-gbm
--enable-shared-glapi --with-dri-drivers=i915,i965,i810 --enable-debug
--enable-dri --with-egl-driver-dirs=dri2,glx
    $ make && make install

libxkbcommon

    $ git clone git://anongit.freedesktop.org/xorg/util/macros
    $ cd macros
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://anongit.freedesktop.org/xorg/proto/xproto
    $ cd xproto
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://anongit.freedesktop.org/xorg/proto/kbproto
    $ cd kbproto
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://anongit.freedesktop.org/xorg/lib/libX11
    $ cd libX11
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://people.freedesktop.org/xorg/lib/libxkbcommon.git
    $ cd libxkbcommon/
    $ ./autogen.sh --prefix=$WLD
--with-xkb-config-root=/usr/share/X11/xkb
```

```
    $ make && make install
```

cairo-gl

```
    $ git clone git://anongit.freedesktop.org/pixman
    $ cd pixman
    $ ./autogen.sh --prefix=$WLD
    $ make && make install

    $ git clone git://anongit.freedesktop.org/cairo
    $ cd cairo
    $ ./autogen.sh --prefix=$WLD --enable-gl --enable-xcb
    $ make && make install
```

wayland-demo

```
    $ git clone git://anongit.freedesktop.org/wayland/wayland-demos
    $ cd wayland-demos
    $ ./autogen.sh --prefix=$WLD
    $ make
    $ make install
```

Trobleshooting

eglInitialize error

the egl driver does not find the correct one egl_dri2
This is the back trace:

```
#0  _eglAddUserDriver () at egldriver.c:482
#1  0x001428ad in _eglAddDrivers () at egldriver.c:563
#2  0x001428f4 in _eglMatchAndInitialize (dpy=0x805c3c0) at
egldriver.c:586
#3  0x00142a5b in _eglMatchDriver (dpy=0x805c3c0, test_only=0) at
egldriver.c:639
#4  0x0013b7cd in eglInitialize (dpy=0x805c3c0, major=0xbffff4b4,
minor=0xbffff4b0) at eglapi.c:323
#5  0x00561278 in init_egl (display=0x8055458, options=0x8051be6 "") at
compositor-drm.c:300
#6  drm_compositor_create (display=0x8055458, options=0x8051be6 "") at
compositor-drm.c:808
```

```
#7  backend_init (display=0x8055458, options=0x8051be6 "") at
compositor-drm.c:884
#8  0x0804f072 in main (argc=1, argv=0xbffff5e4) at compositor.c:2088
```

the egl drivers:

```
./src/egl/main/egldriver.c:69:} _eglBuiltInDrivers[] = {
const struct {
   const char *name;
   _EGLMain_t main;
} _eglBuiltInDrivers[] = {
#ifdef _EGL_BUILT_IN_DRIVER_GALLIUM
   { "egl_gallium", _eglBuiltInDriverGALLIUM },
#endif
#ifdef _EGL_BUILT_IN_DRIVER_DRI2
   { "egl_dri2", _eglBuiltInDriverDRI2 },
#endif
#ifdef _EGL_BUILT_IN_DRIVER_GLX
   { "egl_glx", _eglBuiltInDriverGLX },
#endif
   { NULL, NULL }
};
```

solution: make sure your already build egl_dri2 in your mesa's code if no, find out the root cause and re-configure it. In my platform, it is because of XCB related packages leaking.

permission error when building wayland packages

I always used root account to do all the operations, once I changed back to general account, I would meet lots of permission errors.
Just read the config.log to check which directory is used and may be in-accessible. Find out that root cause of accessing this directory. For example, in config.log, you may find -I/root/xxxxx. This is always brought by xxx.pc file. You need to check your pkgconfig file and find out the root cause. Correct them.

The permission for .libs like directories.
Please BE careful for that .xxx like directories. DO not use "chmod -R xxx **xxx/.*/***". This may change all the files' mods.
You'd better figure out that directories one by one or group by group and then change them directly.

cannot create display

In the function "connect_to_socket", socket fd can be created by "int socket(int domain, int type, int protocol)", but it can not connect to this socket.
The main problem is they don't share the same runtime directory. We can export "XDG_RUNTIME_DIR" in the server and client as the same directory. Or the "wayland-compositor" and the client should be it the same directory, because if the environment parameter is not set, it will set "." as the directory.

input device permission error when running wayland-compositor

Now the good way I tried is "sudo chmod 777 /dev/input/*"

keysym error message when running clients

Internal error: Could not resolve keysym SunProps/SunFront/SunOpen?
Not very important error.
Every thing can run OK with this error message.
Sun Props Key Introduction(Need somebody's help to explan this:))