rewriting xserver/glx/
ajax@redhat.com

motivation:
two glx implementations

motivation:
~~two~~ four glx implementations

motivation:

~~two~~ ~~four~~ seven glx implementations

motivation:
... that know what a DRI driver is

motivation:

... so it's hard to use GL internally

```
void
__glXDisp_Vertex3fv(GLbyte * pc)
{
    CALL_Vertex3fv(GET_DISPATCH(),  ((const GLfloat *) (pc + 0)
                   ));
}
```

```c
typedef void (GLAPIENTRYP _glptr_Vertex3fv) (const GLfloat *);

#define CALL_Vertex3fv(disp, parameters) \
    (* GET_Vertex3fv(disp)) parameters
static inline _glptr_Vertex3fv
GET_Vertex3fv(struct _glapi_table *disp)
{
    return (_glptr_Vertex3fv) (GET_by_offset(disp, _gloffset_Vertex3fv));
}

// ...

void
__glXDisp_Vertex3fv(GLbyte * pc)
{
    CALL_Vertex3fv(GET_DISPATCH(),  ((const GLfloat *) (pc + 0)
                    ));
}
```

```c
#define GET_by_offset(disp, offset) \
    (offset >= 0) ? (((_glapi_proc *)(disp))[offset]) : NULL
#define SET_by_offset(disp, offset, fn) \
    do { \
        if ( (offset) < 0 ) { \
            /* fprintf( stderr, "[%s:%u] SET_by_offset(%p, %d, %s)!\n", */ \
            /*          __func__, __LINE__, disp, offset, # fn); */ \
            /* abort(); */ \
        } \
        else { \
            ( (_glapi_proc *) (disp) )[offset] = (_glapi_proc) fn; \
        } \
    } while(0)


// ...

typedef void (GLAPIENTRYP _glptr_Vertex3fv) (const GLfloat *);

#define CALL_Vertex3fv(disp, parameters) \
    (* GET_Vertex3fv(disp)) parameters
static inline _glptr_Vertex3fv
GET_Vertex3fv(struct _glapi_table *disp)
{
    return (_glptr_Vertex3fv) (GET_by_offset(disp, _gloffset_Vertex3fv));
}

// ...

void
__glXDisp_Vertex3fv(GLbyte * pc)
{
    CALL_Vertex3fv(GET_DISPATCH(),  ((const GLfloat *) (pc + 0)
                    ));
}
```

forget that noise

```c
void
__glXDisp_Vertex3fv(GLbyte * pc)
{
    glVertex3fv((const GLfloat *) (pc + 0));
}
```

38 files changed, 3322 insertions(+), 41288 deletions(-)

```
   text      data       bss       dec       hex  filename
 403310     13704      7488    424502     67a36  libglx.so.old
 257701     16536       264    274501     43045  libglx.so
```

old backends:
dri1, dri2, drisw, proxy, agl, wgl

new backends:
agl, egl, glx, wgl

Driver interface is a Mesa detail

open issues:
egl still not entirely agnostic

open issues:
win, quartz, proxy not done yet

open issues:
Xorg not done yet

open issues:
libGL in xserver is icky

open issues, kinda, not really:
DRI1 must die