X.org myths

(and why you shouldn't always believe them)

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Problem statement

- *«Is it just me or does X seem big, slow, bloated, and old? It can't keep up with pretty environments like GNOME»*

  seen on Slashdot

- *«X windows has always been bloated and slow, it is the culprit. Let's face it: the community has to ditch this abomination and rewrite the 'graphical interface' from scratch.»*

  seen on OSNews

Myth #6

- Starting X takes time
  - Takes 30 seconds, sometimes more

Myth #6 rebuttal

- Starting X takes time
  - This is gnome/KDE startup time, actually
    - Use fluxbox, or twm, and see the startup time
    - But don't blame X !

Myth #5

- Network transparency makes X slow
  - Because you have to send everything through sockets
    - (even when you're running locally)
      - (even for huge windows)
        - (even for HD movies)

Myth #5 rebuttal

- Network transparency makes X slow
  - Shared memory extensions provide a no copy transfer for local rendering
    - It is fast !

Myth #4

- Screen hotplug is not possible

Myth #4 rebuttal

- True...
  - Until randr 1.2, which will allow that

Myth #3

- X leaks memory
  - Over time, X eats up more and more memory

Myth #3 rebuttal

- X leaks memory
  - X allocates pixmaps (i.e. images) for the client applications
  - Use xrestop to find who's eating all that pixmap space
    - Like top, but shows X pixmap usage :

```
xrestop - Display: localhost:0
          Monitoring 14 clients. XErrors: 0
          Pixmaps:  150159K total, Other:     105K total, All:  150265K total

res-base Wins  GCs Fnts Pxms Misc   Pxm mem  Other   Total   PID Identifier
1c00000   681   40    1 1024   93   104823K     20K 104843K  5438 Mozilla Firefox
1400000     8   57    1  144  109    24323K      5K  24328K   ?   Sans nom1 - OpenOffice.org Impress
0e00000     4   25    7   49    5    12190K      7K  12198K  2525 XMMS - 13826. Tchaikovsky - Piano Concerto
```

Myth #2

- X uses all my memory

```
top - 11:32:52 up 68 days, 16:25,  5 users,  load average: 0.38, 0.44, 0.35
Tasks: 154 total,   1 running, 151 sleeping,   0 stopped,   2 zombie
Cpu(s):  2.3%us,  0.7%sy,  0.0%ni, 97.0%id,  0.0%wa,  0.0%hi,  0.0%si,  0.0%st
Mem:   1035080k total,   987372k used,    47708k free,   175276k buffers
Swap:  1951888k total,    18196k used,  1933692k free,   239168k cached

  PID USER      PR  NI  VIRT  RES  SHR S %CPU %MEM    TIME+  COMMAND
 4427 root      15   0  237m  88m  11m S  0.7  8.7 141:02.73 Xorg
```

Myth #2 rebuttal

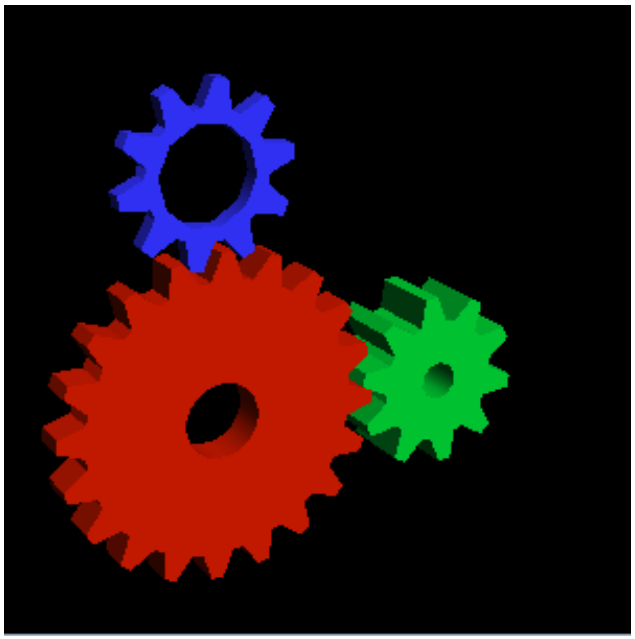
- Even on a clean startup, X uses all my memory
  - This memory is not used, just attached to the process
    - This is the AGP aperture
      - 64, 128 or 256MB
      - It is attached to X
      - But it is not actually used (unless you start using 3D)
      - So it's not eating up that memory

Myth #1

- glxgears is a reliable 3D benchmark

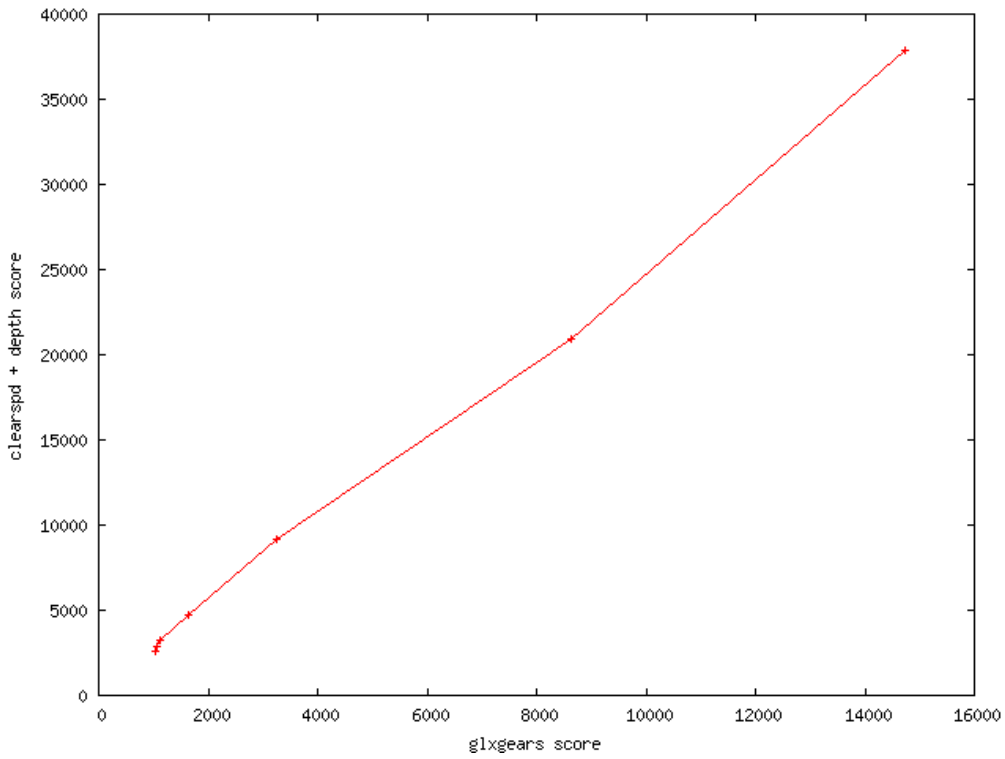
  « The 3D acceleration seemed slow on this system. This is the test.

  $ glxgears -iacknowledgethatthistoolisnotabenchmark »



Myth #1 rebuttal

- glxgears is a reliable 3D benchmark
  - Does not even use texturing
  - Very few vertices, very small window
  - Insane framerate, so high-per-frame overhead
  - Benchmarks show that glxgears scores are related to buffer clear scores :



Conclusion

- Lots of misconceptions
  - Hopefully fixed now
- We have to look for new myths
  - I nominate the following :
    - X.org eats babies
    - I don't like the “X” name
    - <Add yours here>

Questions ?