netlabs.org - The Voyager Project

A Workplace for the 21th Century

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netlabs.org - Open Source Software for OS/2 and eCS

Warpstock Europe 2006, Cologne, Germany

Outline

1. History
2. The Voyager Project
3. Voyager Components
4. Roadmap

Warning

This is not a very technical presentation!
(Please don’t leave the room now ;-)

One Year Ago

After last years presentation:

- Joy
- Shock
- *Why Voyager, my eComStation works just fine!?*

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eCS and OS/2 works just fine ^{TM}

- Might be true nowadays
- Might be hidden for many users
- We (the developers) know the technical limitations
- Annoying kernel limitations and bugs
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Motivation, Other Issues

It’s not just about the hardware. . .

- The valuable stuff is done by the same few people
- Motivation is not what it used to be for various reasons
- It is annoying and frustrating to
  - write device drivers
  - code around bugs
  - port software and toolkits
  - know that the work will be useless in a few years
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Conclusion

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If we do *business as usual* it will not go on one day.

Wouldn’t it be nice?

We can now either fall into depression or come up with some idea.

Why not

- rewrite what we like?
- profit from existing Open Source Software?
- *do it right* ourself?
- start the whole idea on eComStation?

Thus the idea of Voyager was born!

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The Idea I

The Story so Far...

- Long process of thinking about the future for several years
- First idea with Kernel of MacOS X in Summer 2004
- First presentation of that idea at Developers Workshop 2005 in Dresden
- Reconsideration of this idea because it doesn't solve the main problem: Desktop

The Idea II

- New idea with OpenGL based Desktop with well known toolkits, developed at SYSTEMS fair in Munich
- Talks to various people and first presentation of that idea at Warpstock Europe 2005 in Dresden
- Presentation of first concept and design studies at Developers Workshop 2006 in Biel, Switzerland
- License decision during Summer 2006

The Idea III

- First 0.1 release of *The Design of Voyager* released to the public for Warpstock Canada 2006

What Voyager *is not*

- Voyager is **not** the OS/2 and eCS killer!
- netlabs.org will **not** stop development for eCS software
- Voyager is not something you can use right now (yet)
- It is not vaporware

The Goal

There are many free desktop environments available, like KDE and GNOME. Our focus is different:

- SOM like object model, binary compatible (unlike everything else out there on Unix-like systems)
- Provide a WPS like desktop environment (*OS/2 Feeling*)
- Well integrated applications (drag & drop, CUA, etc)
- Focus on localization right from the beginning (Unicode/UTF-8/16/32)
- Keep unique ideas like IOProcs and re-implement them
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- Development of Voyager should be possible on many platforms, starting on eCS
- Support for the most popular Unix-like systems is required
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The Vision

There is more to do…

- A team of interested developers might start working on an OS/2 compatibility layer for Unix-like systems
- In long term we need a new kernel (discussion is open)
- Most of the OS/2 coders don't like the Linux design so other options are preferred
- If you can help out on that project, you are very welcome :)
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Why *The Voyager Project*?

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- NASA Spacecraft: Probe since 1977, longest-lasting mission of NASA, visited Jupiter and Saturn and provided detailed images of them
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- Netlabs Object Model (SOM)
- Voyager Desktop (WPS)
- Cairo (GPI/GDI, what Peter loves ;)
- GTK+ (GUI Toolkit, PM)
- Triton (Multimedia Subsystem, MMPM/MMOS2)

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- Neptune (Window Manager for Cairo and Xlib)
- OpenGL based Cairo backend
- Xorg OpenGL device drivers (no Xlib necessary in mid-term)

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- There are some design documents from IBM itself (published in ACM)
- There is quite some documentation available written by former IBM employees
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- This is the base for a WPS like desktop
- Chris: Status? :-)

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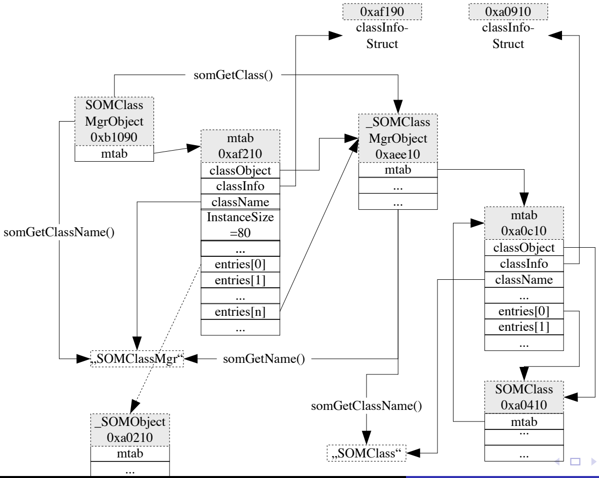
NOM Design

SOMClassMgrObject layout



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Things that work right now:

- Binding files creation (IDL compiler)
- Class creation from IDL files
- Subclassing
- Explicit metaclasses
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- Class replacement
- Dynamical loading of classes (have to be linked in atm)
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Difference to SOM:

- Use of an environment pointer in each method call (CORBA exception handling)
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A WM has to take care of

- the open client windows
- the client stacking order
- the client to virtual desktop assignment
- the session
- multiple screens
- client decorations
- ...

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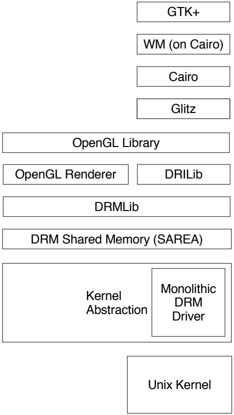
Xorg OpenGL Design



Simplified design of the Xorg OpenGL backend (taken from official docs), Xlib stripped out

Some Ideas

People do ask for binary compatibility. We see the following options:

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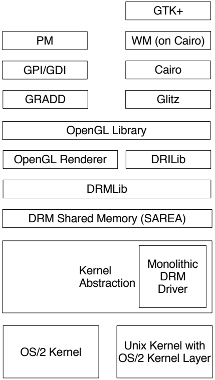

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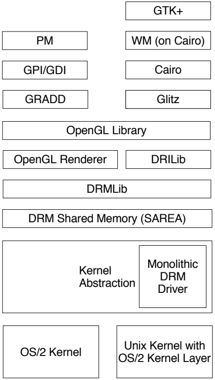

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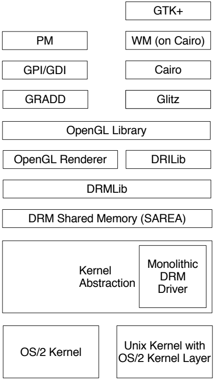

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Q&A

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