

# Omero: User Interfaces in the Plan B OS

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# Roadmap

- Problems
- Ideas
- Examples
- Issues & Lessons



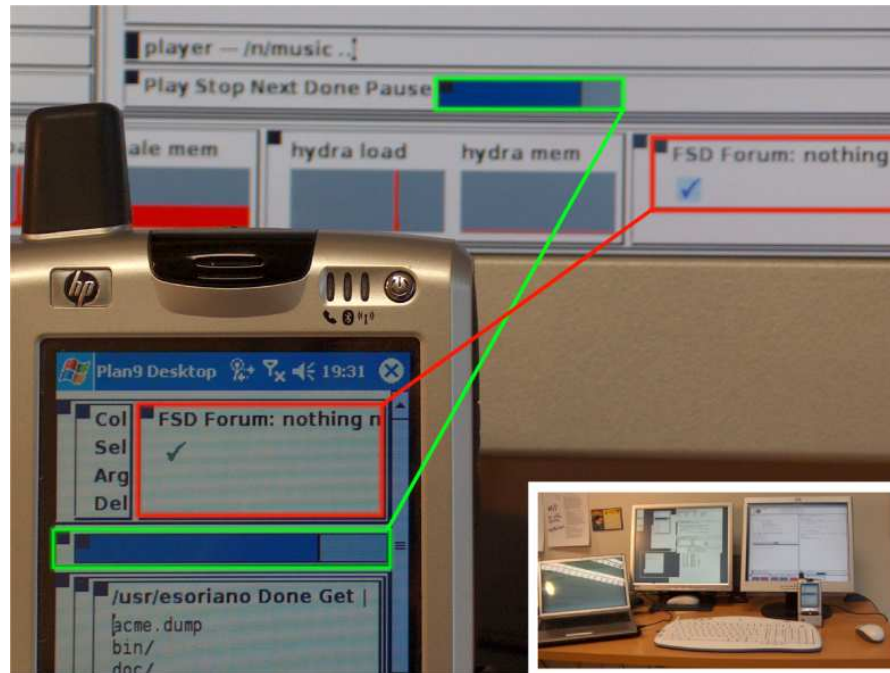
# Problems

## User Interfaces for Perv. Comp.:

- Combining old and new devices
- Programs for UI elements
- Generic tools for UI elements
- Giving control to users



# Target environment



# A omero screen

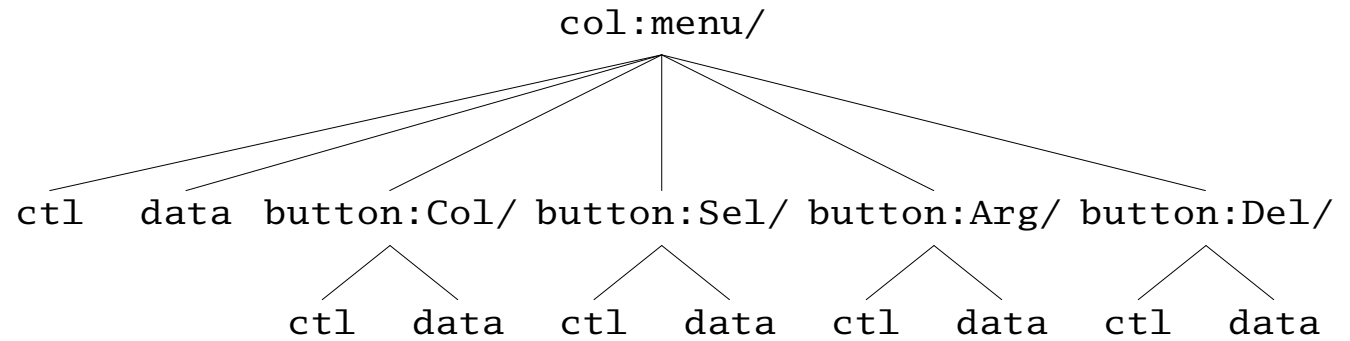
The screenshot displays a desktop environment with the following widgets:

- Top Row:**
  - A vertical menu with options: Col, Sel, Arg, Del.
  - A cartoon fish icon.
  - Three 'Weather' widgets for 'madrid', 'alicante', and 'jaen', each showing a sun icon.
  - A circular analog clock.
- Second Row:**
  - 'whale load' and 'whale mem' (empty graphs).
  - 'aquamar load' and 'aquamar mem' (graphs with red bars).
  - 'nautilus load' (graph with red bars).
  - 'hydra load' (empty graph).
- Third Row:**
  - 'atlantis' widget with sub-items: nautilus, sargazos, victim.
  - 'pwr:136lamp' widget with sub-items: pwr:136light, who:136.
  - 'Mail' widget with a crown icon and sub-items: javierb, andresl.
  - 'who' widget with two small portraits and sub-items: paurea, sareval.
- Bottom Section:**
  - player** window: Shows a playlist of 12 MP3 files, including '01.·Donde·esta·el·pais·de·las·hadas.mp3' through '12.·El·ladron·de·discos.mp3'. It includes playback controls: Play, Stop, Next, Done, Pause.
  - Terminal** window: Shows a shell prompt `/usr/nemo Done Get | oban` and a block of text: `[usr/nemo fortune 1609] Done |` followed by `Nobody goes to the theatre unless suffering`, `[rom acute bronchitis.`, and `assert(np);`. It also has playback controls.
  - oban** window: Shows a grid with three blue dots and playback controls: `oban -`, `B: 0 W: 6.5 T: 0 Playing: W Mode: Edit`, and `Play Bigger Smaller Print Put Get Chcol Undo`.

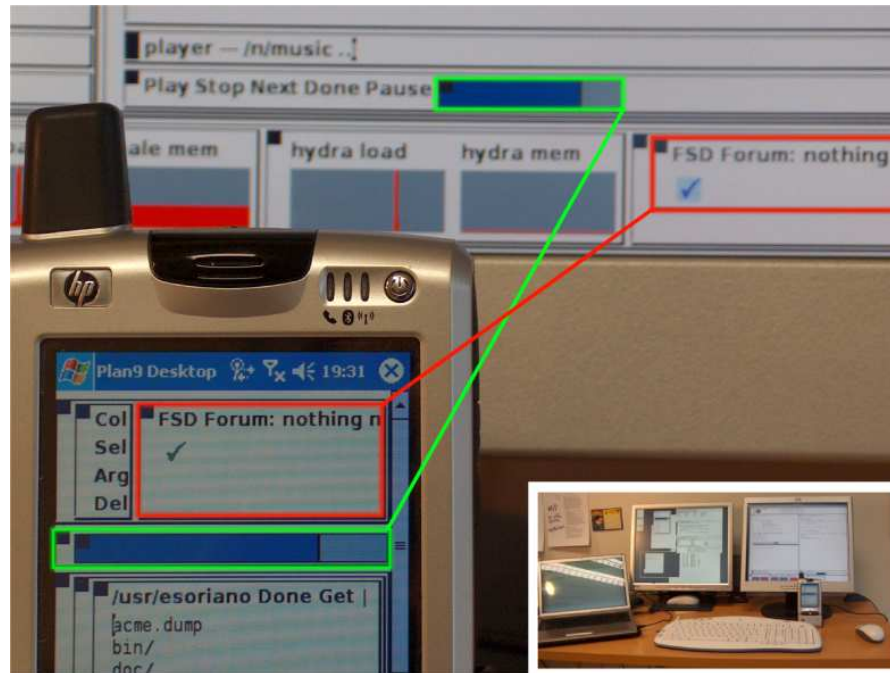


# UI elements as files

■ Col
Sel
Arg
Del



# Users move and copy controls



# Programs move and copy controls

```
cd /dev/screen1/col:player
tar c * |
{ cd /dev/otherScreen/row:wins ;
  tar x
}
```





## More things can be done:

- search for buttons:

```
du -a /devs/screen | grep 'button:'
```

- press a button:

```
echo press >/.../button:Play/ctl
```

- Change its label:

```
echo pause >/...button:Play/data
```



# Complexity

Tools get easy:

- clock: 98 lines of C
- player: 482 lines of C

Service gets easy:

- omero: 7052 lines of C



# Issues

Aliens, mostly.

- An omero for the web
- UI automations



# Questions?

More information via our httpd

<http://lsub.org>



...we call our logo “The fish”

