

Omero: User Interfaces in the Plan B OS

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Roadmap

- Problems
- Ideas
- Examples
- Issues & Lessons



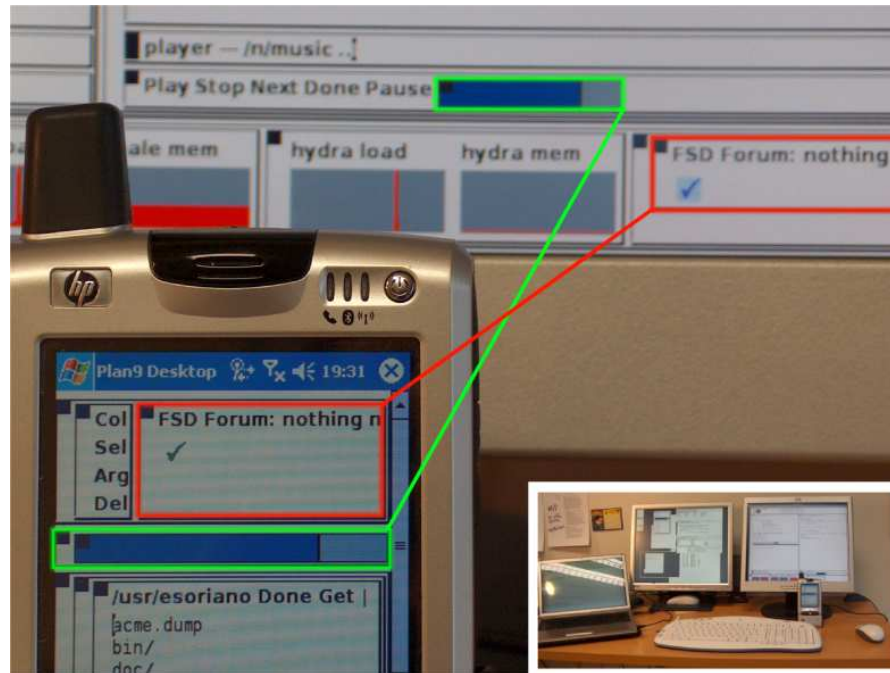
Problems

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

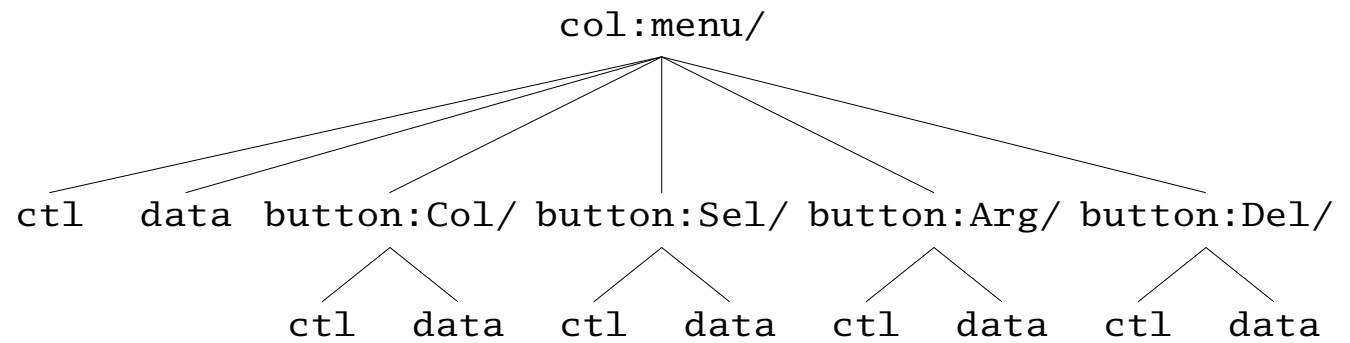
The screenshot displays a desktop environment with the following widgets:

- 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:**
 - Two empty rectangular boxes labeled 'whale load' and 'whale mem'.
 - Two red bar graphs labeled 'aquamar load' and 'aquamar mem'.
 - A red bar graph labeled 'nautilus load'.
 - An empty rectangular box labeled 'hydra load'.
- Third Row:**
 - A list of names: atlantis, nautilus, sargazos, victim.
 - A 'pwr:136lamp' widget with 'pwr:136light' and 'who:136'.
 - A 'Mail' widget with a crown icon and names 'javierb' and 'andresl'.
 - A 'who' widget with two small portraits and names 'paurea' and '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 like 'Play Stop Next Done Pause'.
 - Terminal** window: Shows a shell prompt with the command `/usr/nemo Done Get | oban` and its output: `[usr/nemo fortune 1609] Done |` followed by the text: `Nobody goes to the theatre unless suffering from acute bronchitis. assert(np);`. It also has playback controls.
 - oban** window: Shows a grid with three blue dots and playback controls. The status bar indicates: `B: 0 W: 6.5 T: 0 Playing: W Mode: Edit`.

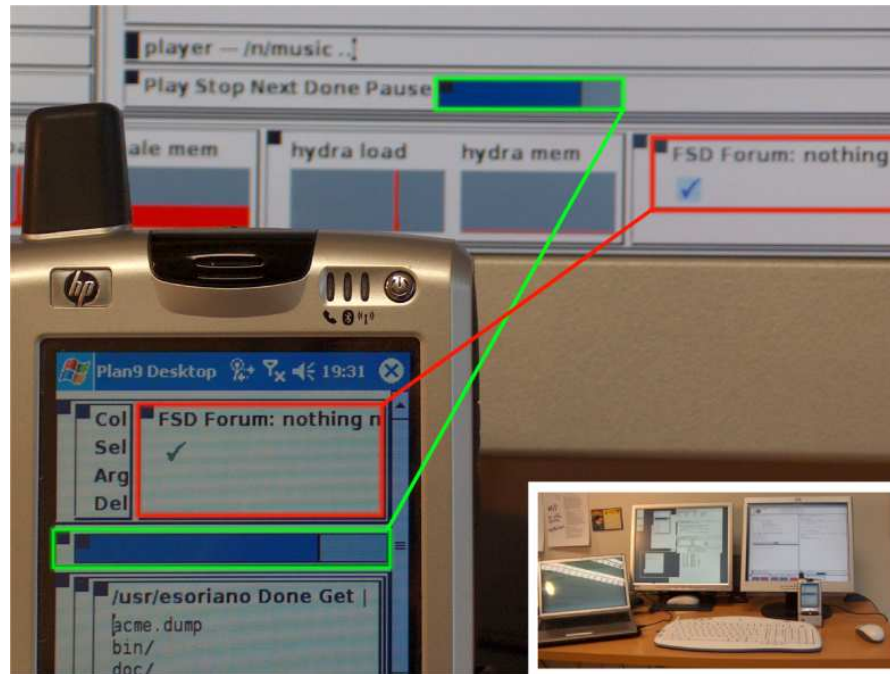


UI elements as files

■ 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”

