1: Electron

Electron

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2: Electron?

- Tiling
- Keyboard-driven
- Scriptable?
- Replacement for Rio
- Not terrible?
3: Rio?

- Overlapping windows
- Exclusively mouse-driven
- Not configurable
- Replacement for 8 1/2
- Terrible
4: Why?

- Rio is basically unuseable on laptops
- Hypothesis: more people would use plan 9 if the WM was less alien
  - And the shell
    - And the editor
- To test this: write one!
5: How?

- Lots of C, pretty much
- Plan 9 I/O multiplexing looks queasily alien to anyone not from there
- "select() is evil, use threads!"
  - Plan 9 "threads" are "coroutines"
  - Plan 9 "procs" are "threads" with optionally-shared memory
- Many good examples to look at, though
6: Plan 9 I/O

- One proc per file descriptor
- Procs communicate over synchronizing ordered channels
- `alt()` construct
- `srv()` construct
- `ioproc()` helper
- All I/O is blocking!
7: Window System Contract

- Serve a bunch of devices in /dev and /mnt/wsys
- Provide cons, cursor, mouse, ...
- Also consume cons, mouse, ...
- Multiplex draw, or not
- It should be obvious how this nests!
8: Basic Design

- Server proc: calls `srv()` on `/dev/{...}`
- I/O procs (mouse, keyboard): `read()` on `/dev/{mouse,kbd,...}`
- For each window: window I/O proc (for reads/writes to `/dev/wctl`, `/dev/win`, etc)
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9: Questions?

Questions?