Eclipse on Broadway
the easiest way to run Eclipse on the Web

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Who are we?

Sopot

- Red Hat Eclipse Team
- Senior Software Engineer
- Committer in platform.ui & e4 project
- Fedora packager

Alex

- Red Hat Eclipse Team
- Technical Lead
- Committer in SWT & other eclipse projects
- Eclipse PMC member
- Fedora packager and Java SIG member
What is Broadway?

- HTML5 windowing system back-end
How is this related to Eclipse

- Eclipse on Linux uses GTK/GDK to draw
  - Swap the back-end for Broadway and draw on HTML 5
GTK on win32
How do you make it work?

- Start Broadway server
  - Broadwayd :5 (5 is arbitrary)
- Tell GTK to use broadway, not X11
  - Use environment variables

GTK

X11

Broadway

GDK_BACKEND=broadway
BROADWAY_DISPLAY=:5
Demo 1

- Plain SWT application
  - ControlExample
  - GraphicsExample
Demo 2

- Eclipse

Diagram:
- Eclipse DEMO
  - Platform UI
    - SWT
      - GTK
        - Broadway
Demo 3

- All inside a Docker container
  - Nicely packaged
  - Other OSes

```
docker pull sopotc/eclipse-broadway

docker run -it sopotc/eclipse-broadway
```

Fedora 23 docker container
Future work

- Most of the work will go into the SWT GTK port
  - Some code in SWT GTK references directly X11
  - Direct x11 calls need to be replaced with GDK calls
    - If not possible, provide per-backend implementations
  - Redrawing calls needs to be minimized
    - Only redraw when needed
  - Also valid for upper layers (platform, plug-ins etc.)
    - The less unnecessary redrawing, the better
THANK YOU! QUESTIONS TIME.