Mozilla

- Non-profit foundation
- Mission: open Internet, open standards
- Anyone can contribute content
- Anyone can contribute to the spec
- Anyone can contribute implementations
- Unusual for a non-profit:
  - Significant revenues
  - Product with 200M users
Firefox 3.1 Platform Goals

- Build on solid base of Firefox 3.0
- Finish features that missed 3.0
- Add CSS/DOM standard features where we need to catch up to other browsers
- Lead the way with new standards-based features the Web needs
- Performance, compatibility, standards-compliance, security (as usual!)
CSS2.1 Features

- `white-space:pre-line`
- CSS 2.1 generated content

```css
tr::before {
  display:table-cell;
  content:"Hello";
}
```
CSS3 Selectors

- Selectors
  - :nth-child(), :nth-last-child(), :nth-of-type(), :nth-last-of-type()
  - :first-of-type, :last-of-type, :only-of-type

- DOM API
  - querySelector, querySelectorAll
CSS Downloadable Fonts

- Demoable, but not landed yet
- Major issue: font format
  - EOT (Microsoft)
  - Plain font files (Webkit, Mozilla, Opera)
- Restrict font file links to same-origin
- Our position: EOT provides no significant additional protection
CSS3 Bling

- text-shadow
- box-shadow
- border-radius
- border-image
- column-rule
- word-wrap:break-word
  - Allows a word to break in the middle if there is nowhere else to break
Demos

- CSS3 selectors
- CSS3 border-radius/text-shadow/box-shadow
- CSS3 border-image
- Acid3
- SVG masking/clipping for HTML
- SVG filters for HTML
Color Management

- Performance work in FF3.1
- Will be enabled in some form (either tagged images only, or always)
HTML5 Drag And Drop

- Drag and drop content between Web apps and desktop apps
- Spec is mostly IE and Safari compatible
HTML5 Offline Apps

- Improvements to the offline apps support shipped in FF3
- Offline-enabled apps always loaded from offline cache
  - Faster loading
  - Resilience to network errors
HTML5 Worker Threads

- Create concurrent Javascript threads
- Long-running processing without blocking browser UI or page rendering
- Utilize multiple CPU cores
- Threads communicate by message passing --- no shared objects
- Can also do XHR
XHR And Access-Controls

- XHR uses same-origin policy by default
- W3C Access-Controls spec allows servers to opt into a relaxed policy
  - Serve XHR requests from anywhere
- Enables richer Web services, mashups etc
- Powerful generic mechanism
  - Also used for CSS font downloads
HTML5 Video And Audio

- Will ship in Firefox 3.1
- HTML5 spec
  - scriptable
  - streaming support
- Free Ogg audio and video codecs; no royalties, no restrictions
- Encouraging the spread of Ogg and other unencumbered formats
Javascript Performance

- Script performance matters! (see demos)
- Three Javascript JIT compilers announced
  - Tracemonkey
  - V8
  - Squirrelish Extreme
- Different designs, all fast
- Most players are moving fast
  - No-one has won yet
  - Don't believe everything you read in comic books
Standard 'Sunspider' JS Benchmark (ms)
JS Performance Demos

- Image processing
- Space Invaders emulator
Conclusion

- The open Web platform is accelerating
- Browser competition is alive
- Start taking advantage of open Web capabilities
- Exciting times!
- We're hiring!