What's New In Firefox 3.1

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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

```
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 offfline 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
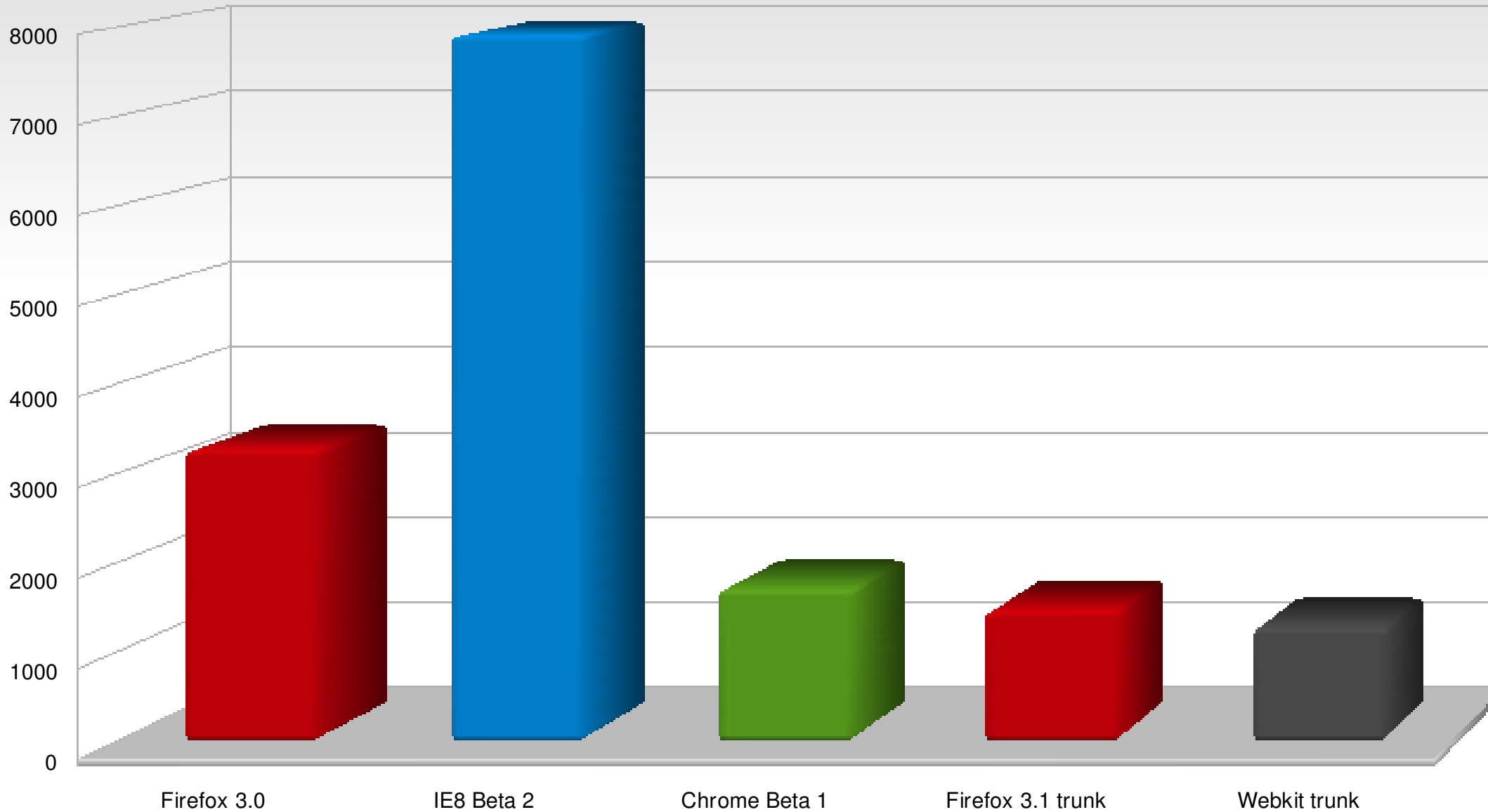 - Also used for CSS font downloads

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

  - Squirrelfish Extreme

- Different designs, all fast

- Most players are moving fast

  - No-one has won yet

  - Don't believe everything you read in comic books

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!