



Gecko 1.9

Developer Day

Tokyo, Japan

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- Gecko 1.8
 - Used by Firefox 1.5 and Firefox 2
- Gecko 1.9
 - Used by Firefox 3
- Gecko 2
 - Future versions



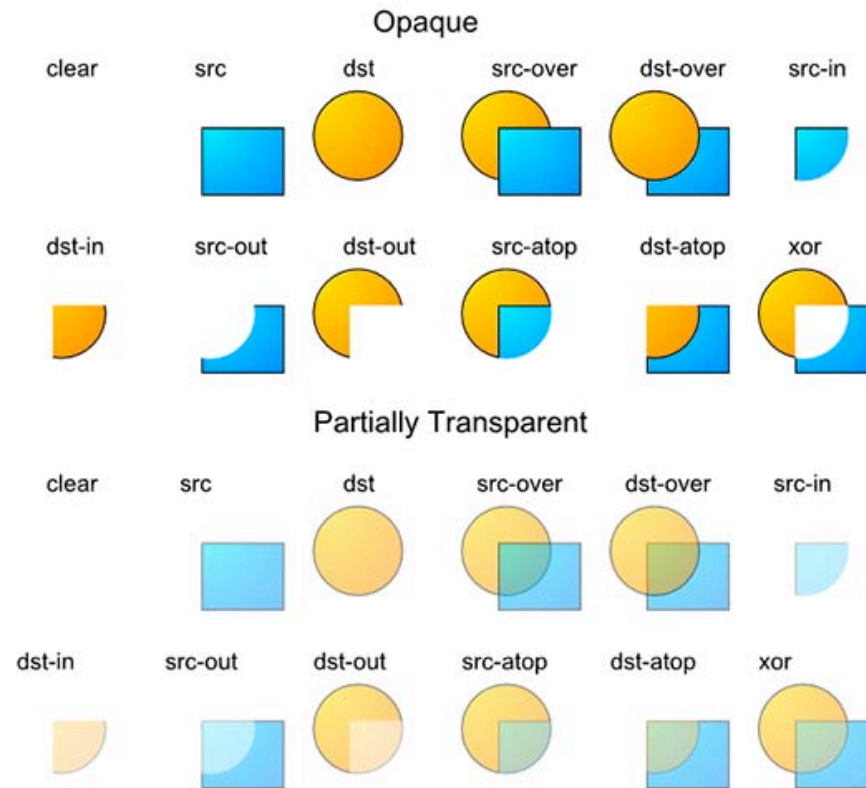
Graphics

Major changes
Many new features



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Porter-Duff Compositing

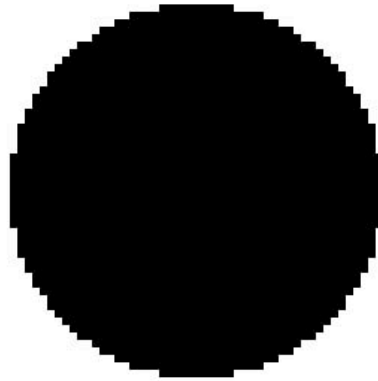




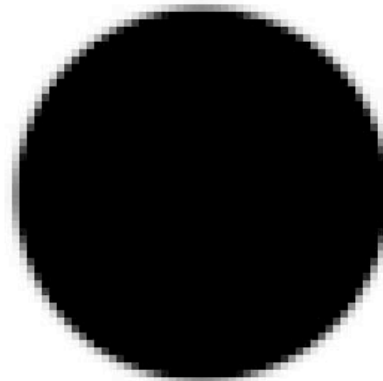
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Anti-aliased Drawing

Aliased



Anti-aliased





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Scaling and rotation





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Image color profiles





- Built on top of the PNG format
 - Backwards compatible with PNG
 - Similar functionality to GIF animations
- Specification by Vladimir Vukicevic and myself
 - http://wiki.mozilla.org/APNG_Specification
- Implementation by Andrew Smith
 - Student at Seneca college in Toronto
 - Done as Google Summer of Code project



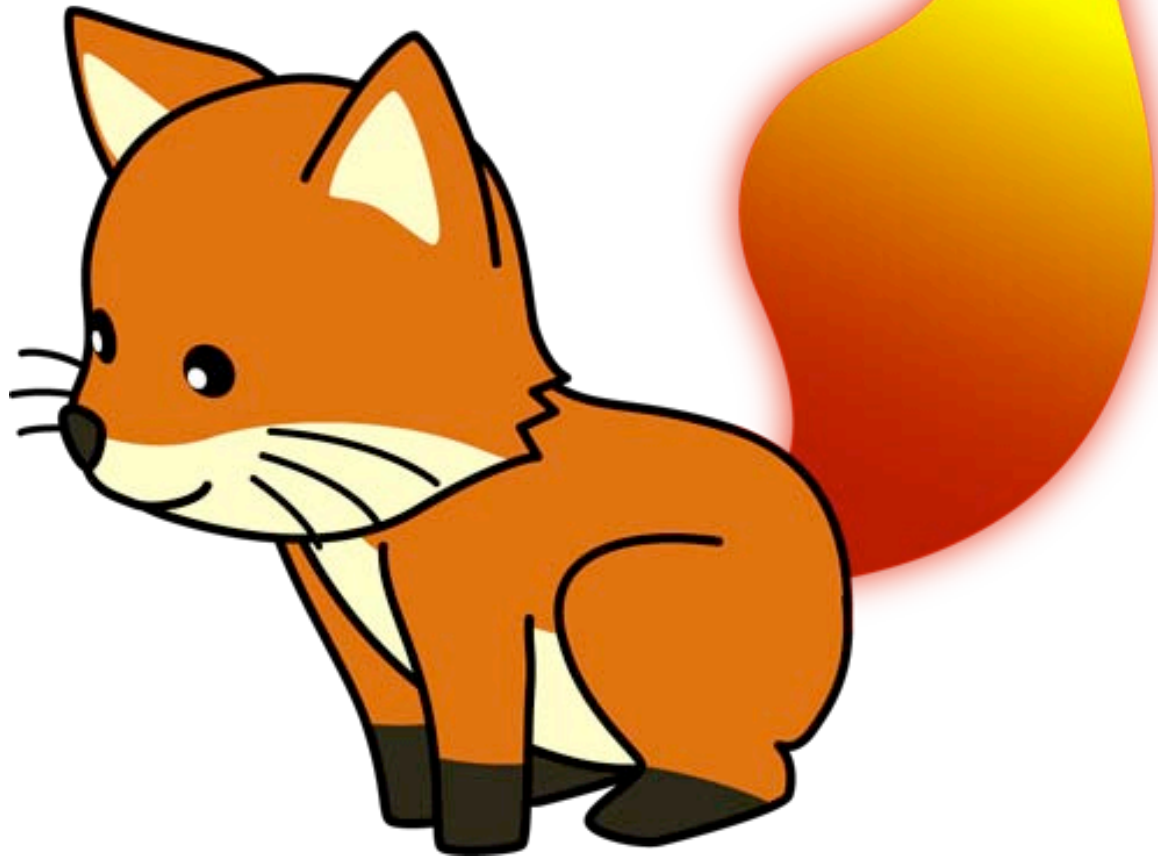
- `<foreignObject>`
 - Arbitrary HTML inside of SVG documents
- Filters, patterns, masks
- SMIL
 - declarative animation
- SVG Fonts
- Better text support

Graphics Demo



Text Rendering

More Correct
Faster





- Correct glyph shaping

- Kannada

- Old

ಮುಖ್ಯ ಪುಟ

- New

ಮುಖ್ಯ ಪುಟ

- Arabic with vowel markings

- Old

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

- New

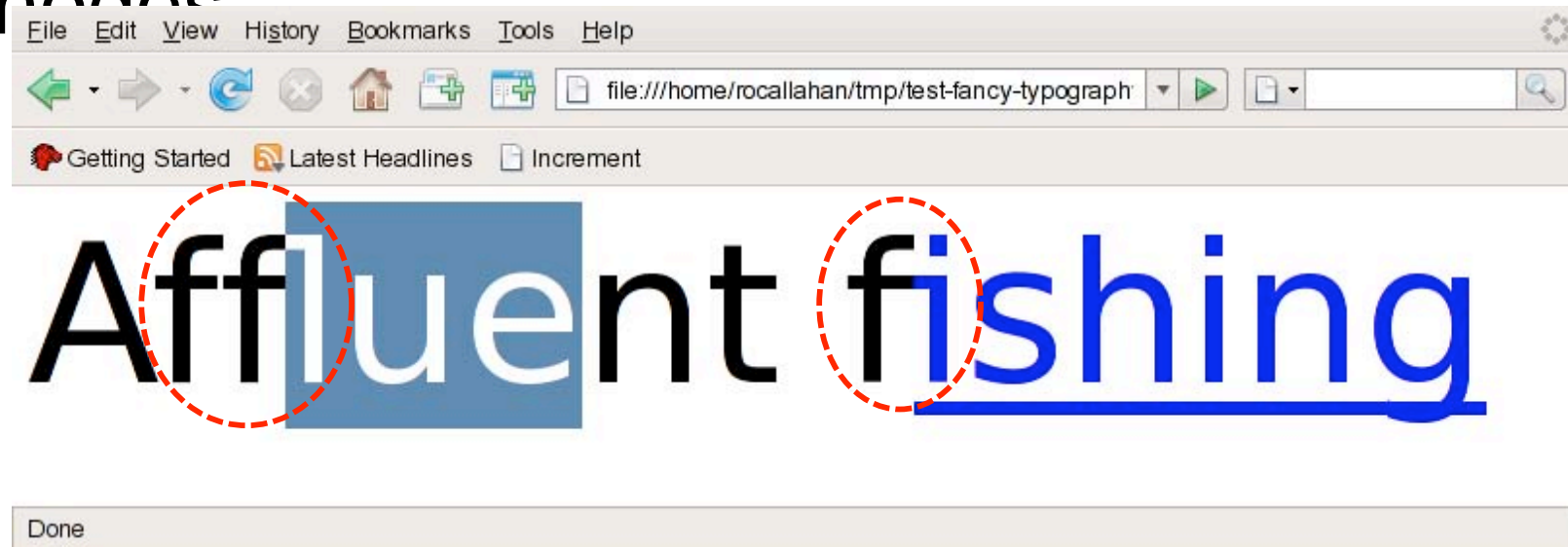
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Text Improvements

- Soft-hyphens in HTML
- Kerning and ligatures across DOM text nodes



Affluent fishing



- Better line breaking
 - UAX14

Layout

Standards support
New web APIs



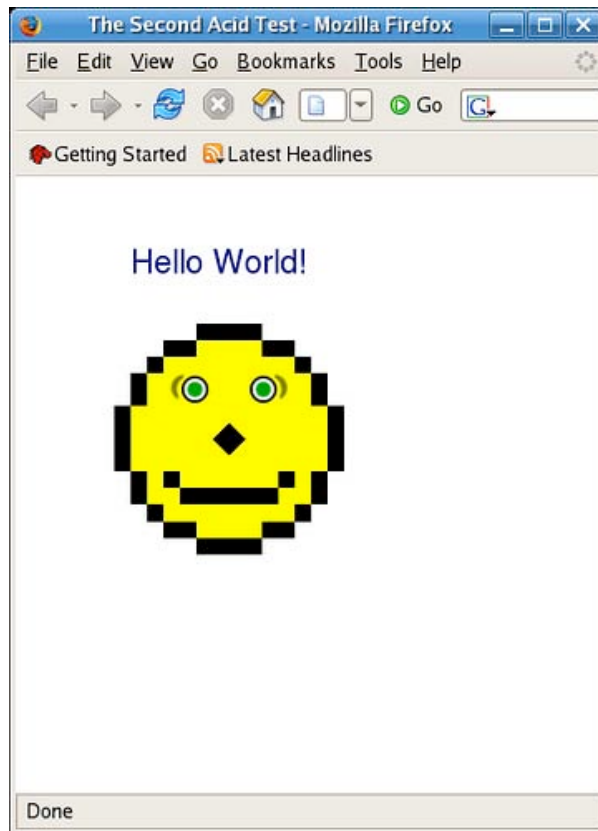


- Improved standards support
 - Fallback for <object>
 - z-index fixes
- More CSS3 selectors
 - :enabled, :disabled, :read-only, :read-write, :default
 - Better handling of CSS units
- XSLT
 - Big performance improvements
 - node-set() and regexp support
- inline-block, inline-table



Finally...

- Passes ACID2 test



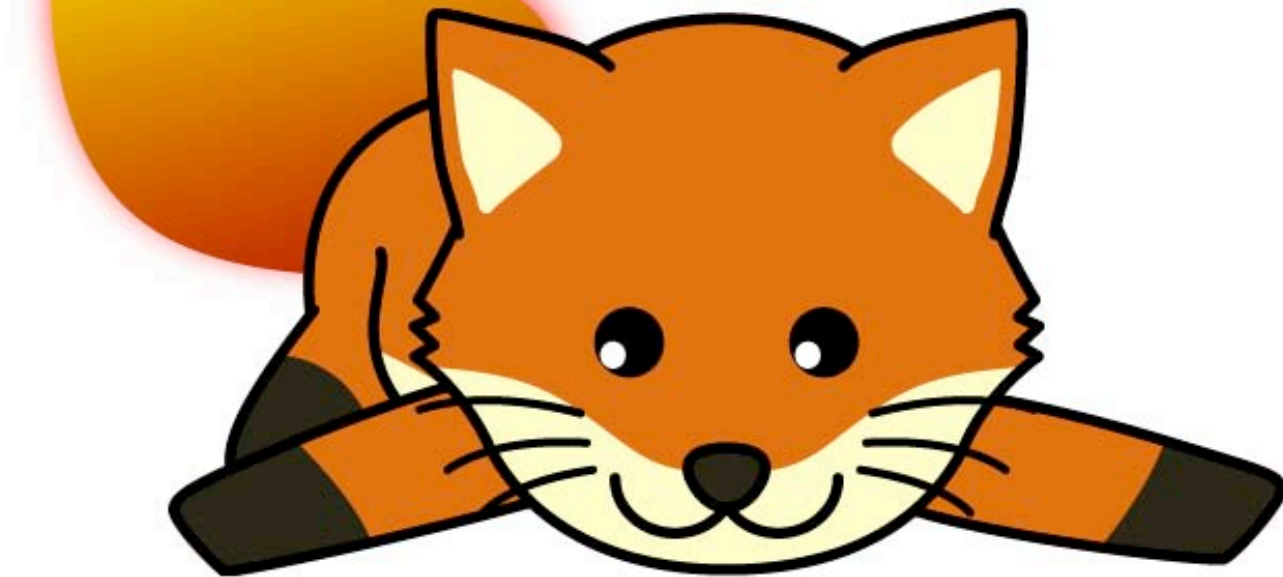


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New Web Advances

- New web APIs
 - Cross-site XMLHttpRequest
 - New canvas APIs
 - Text support
- Support for offline web apps
 - Offline storage
 - Offline status detection
 - Cache pinning of pages for offline

Additional Work





- Windows
 - Dropping support for Windows 95, 98, ME
 - Vista improvements
- Mac
 - Cocoa widgets
 - CoreGraphics
 - Keychain
 - Spotlight
- Linux ownership stuff(??)



- Updated password manager
- Extended Validation Certificate support
 - Guaranteed by the issuer that the owner of the certificate is the owner of the site
- Better phishing detection
- Improved platform for extensions
 - Extension signing

The Future

Mozilla 2





- Simpler code base
 - Smaller, faster, easier to approach and maintain
- Greater graphics capabilities
- Use of more modern language features
- Enhanced security
- JavaScript 2
 - JIT compilation using Tamarin



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The End

- URLs of interest:
 - <http://wiki.mozilla.org/Firefox3>
 - <news://news.mozilla.org/mozilla.dev.platform>
 - <http://www.mozilla.org/>
 - <http://www.mozilla-japan.org/>
 - <http://developer.mozilla.org/ja/>
- Questions?
 - Email: stuart@mozilla.com

