Making AJAX crawlable

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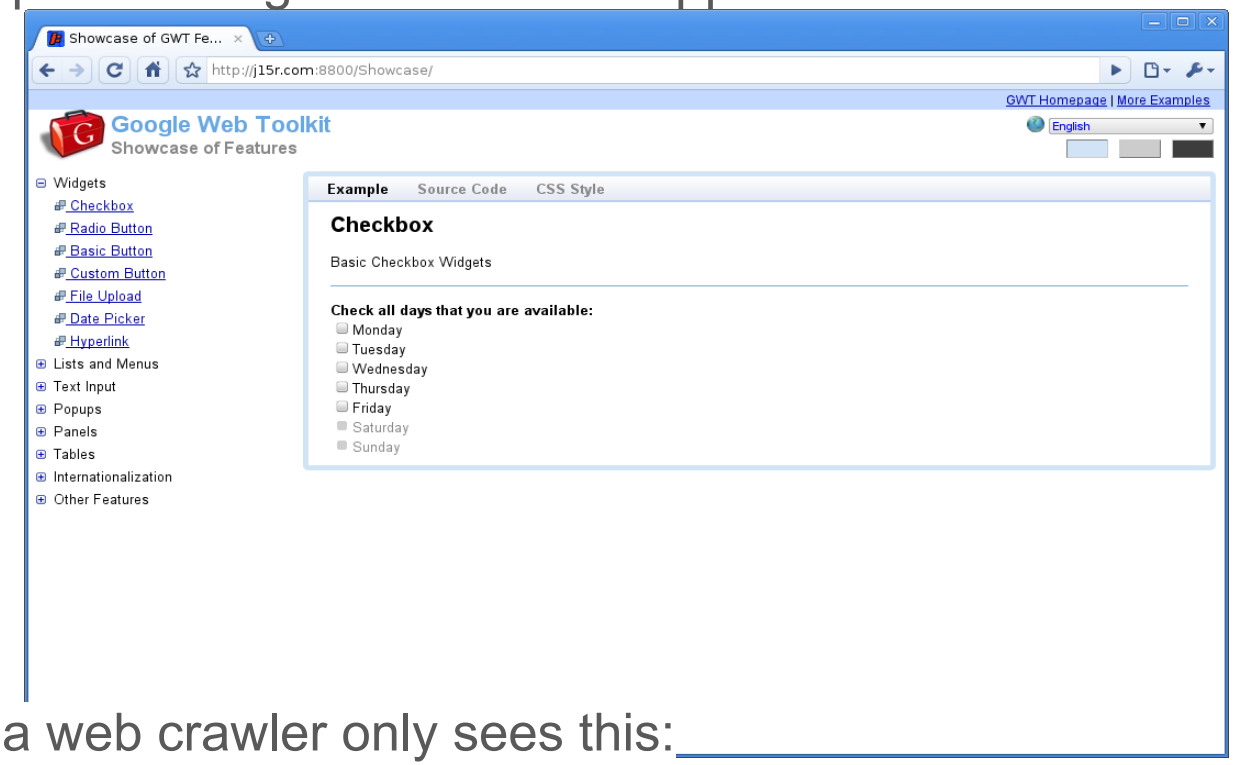
The problem of AJAX for web crawlers

Google

Web crawlers don't always see what the user sees

- JavaScript produces dynamic content that is not seen by crawlers
- Example: A Google Web Toolkit application that looks like this to a user...



...but a web crawler only sees this:

```
<script src='showcase.js'></script>
```

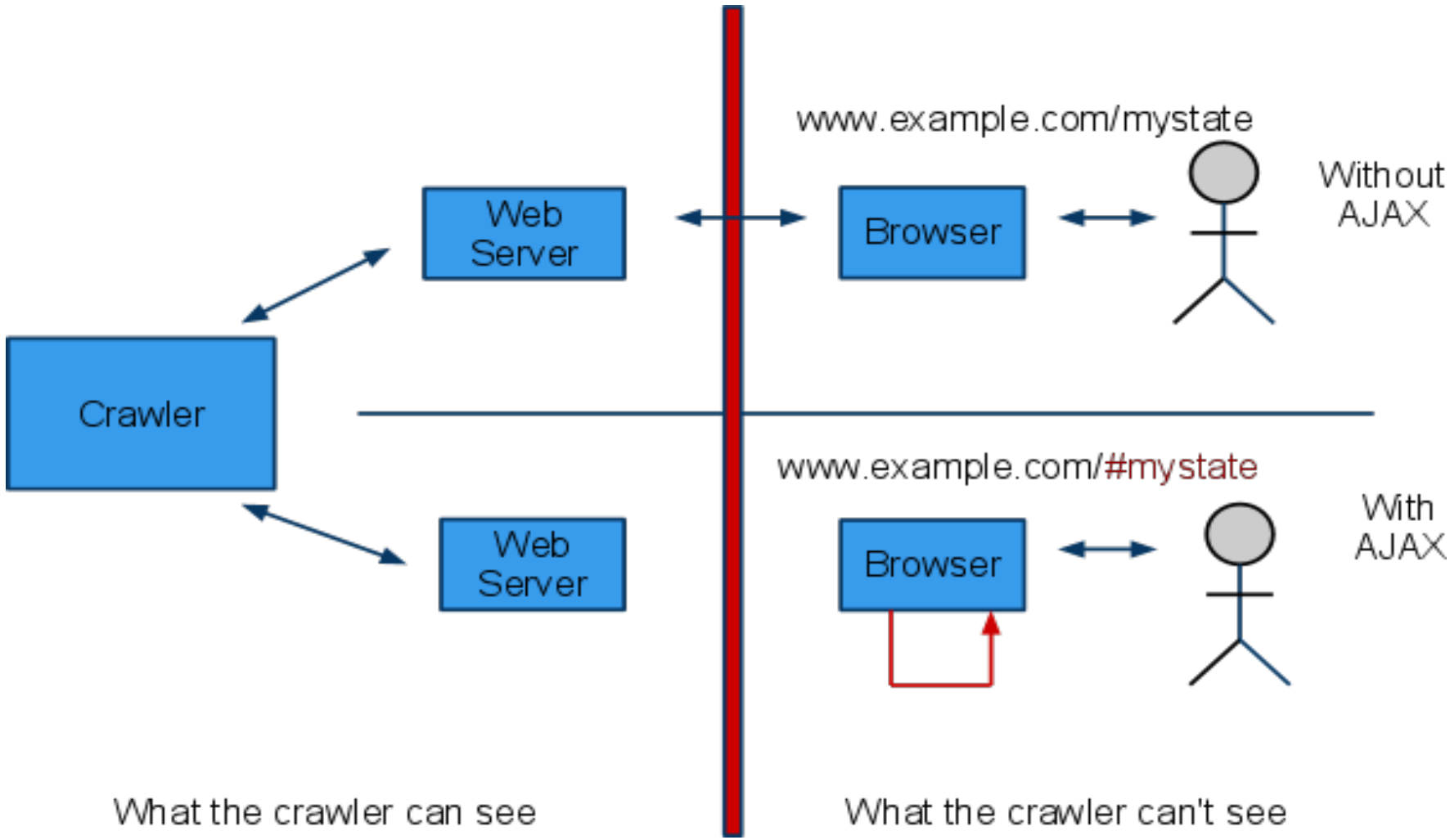
Why does this problem need to be solved?

Google

- **Web 2.0: More content on the web is created dynamically (~69%)**
- **Over time, this hurts search**
- **Developers are discouraged from building dynamic apps**

- **Not solving AJAX crawlability holds back progress on the web!**

A crawler's view of the web - with and without AJAX



Goal: crawl and index AJAX

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- **Crawling and indexing AJAX is needed for users and developers**
- **Problem: Which AJAX states can be indexed?**
  - Explicit opt-in needed by the web server
- **Problem: Don't want to cloak**
  - Users and search engine crawlers need to see the same content
- **Problem: How could the logistics work?**
  - That's the remainder of the presentation

Possible solutions

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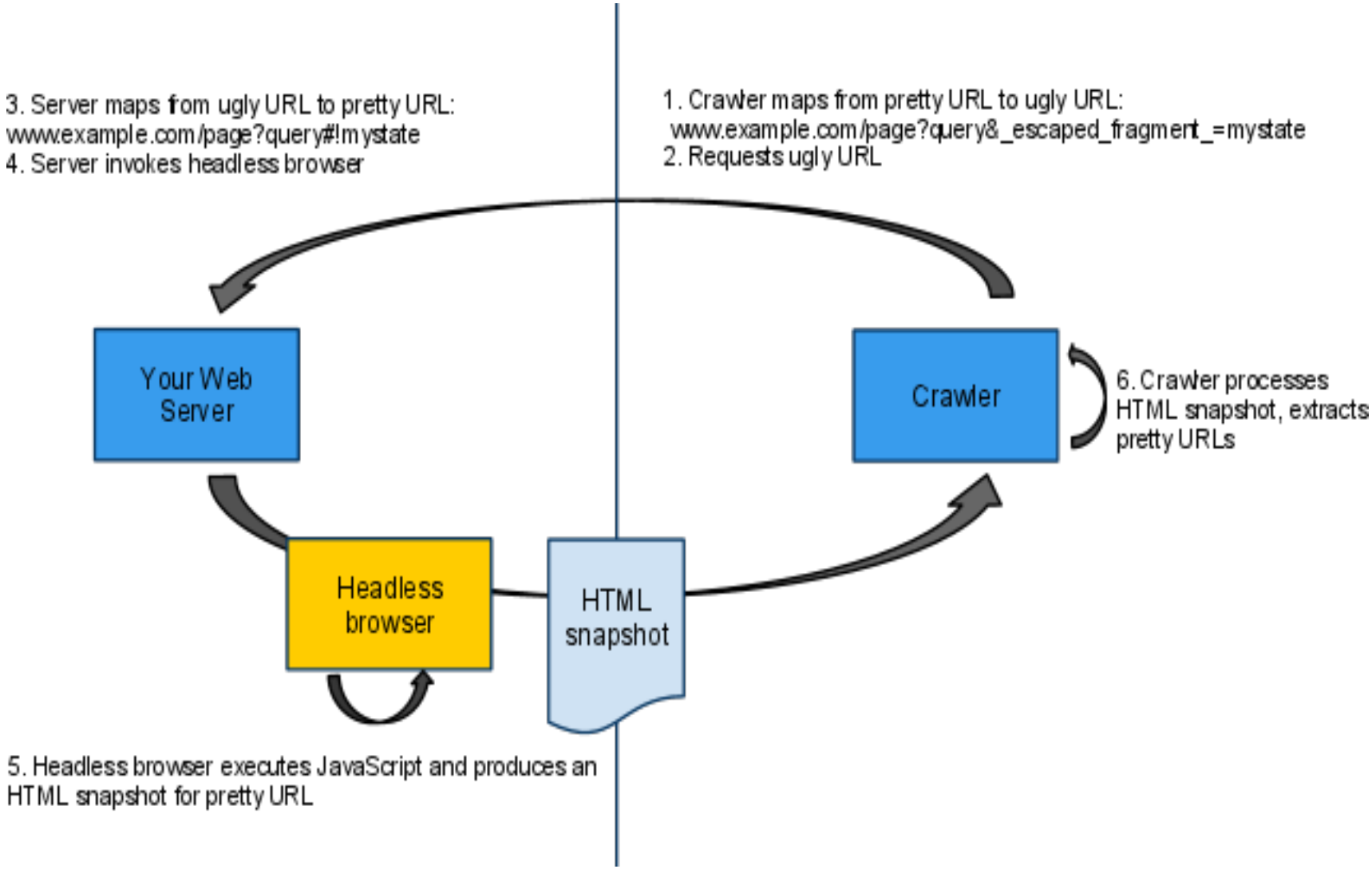
- **Crawlers execute all the web's JavaScript**
  - This is expensive and time-consuming
  - Only major search engines would even be able to do this, and probably only partially
  - Indexes would be more stale, resulting in worse search results

- **Web servers execute their own JavaScript at crawl time**
  - Avoids above problems
  - Gives more control to webmasters
  - Can be done automatically
  - Does not require ongoing maintenance

Overview of proposed approach - crawl time

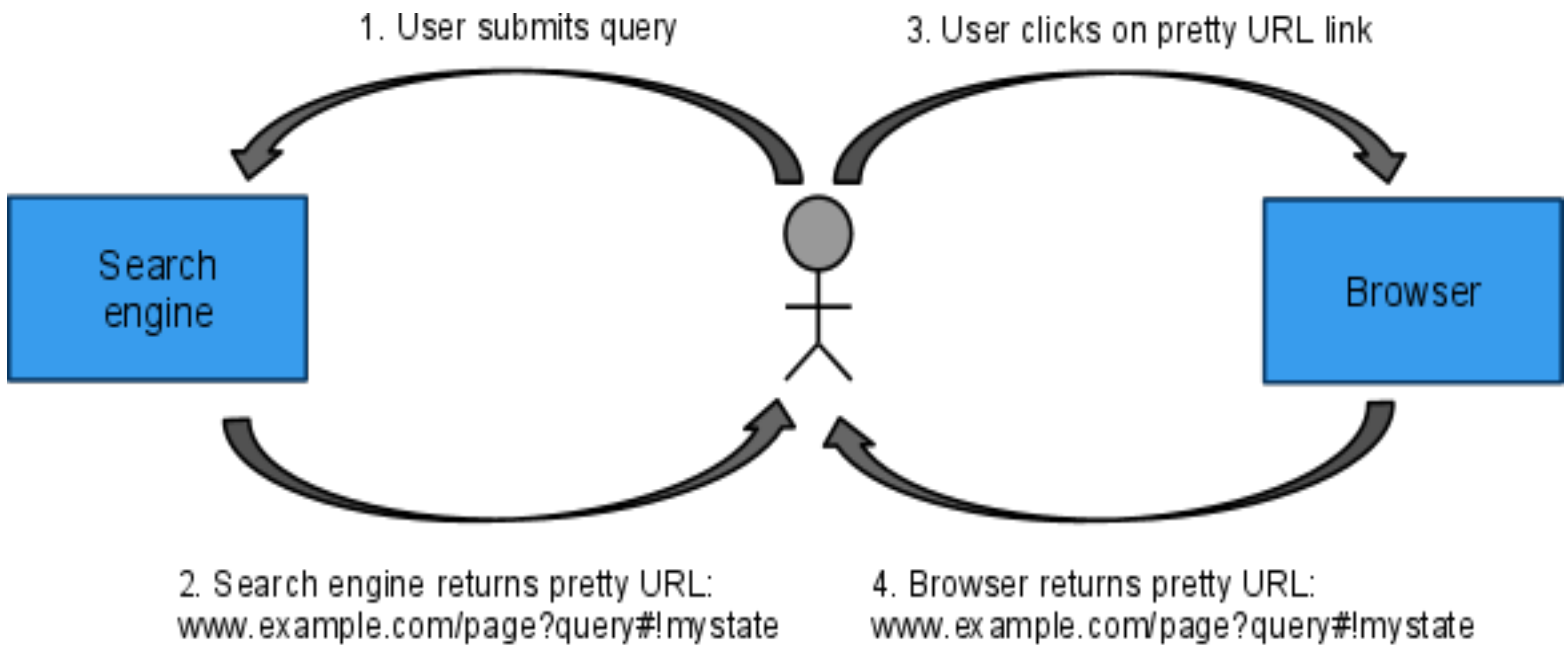
Google



Crawling is enabled by mapping between

- *"pretty" URLs: www.example.com/page?query#!mystate*
- *"ugly" URLs: www.example.com/page?query&_escaped_fragment_=mystate*

Overview of proposed approach - search time



Nothing changes!

Agreement between participants

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- **Web servers agree to**
  - opt in by indicating indexable states
  - execute JavaScript for ugly URLs (no user agent sniffing!)
  - not cloak by always giving same content to browser and crawler regardless of request (or risk elimination, as before)
- **Search engines agree to**
  - discover URLs as before (Sitemaps, hyperlinks)
  - modify pretty URLs to ugly URLs
  - index content
  - display pretty URLs

Summary: Life of a URL

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`http://example.com/stocks.html#GOOG`

could easily be changed to

`http://example.com/stocks.html#!GOOG`

which can be crawled as

`http://example.com/stocks.html?_escaped_fragment_=GOOG`

but will be displayed in the search results as

`http://example.com/stocks.html#!GOOG`

Feedback is welcome

Google

- We are currently working on a proposal and prototype implementation
- Check out the blog post on the Google Webmaster Central Blog: http://googlewebmastercentral.blogspot.com
- We welcome feedback from the community at the Google Webmaster Help Forum (link is posted in the blog entry)