



**JSFIDDLE**

# **Perceiving AJAX Performance**

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London 9/11/10



Speed is the most important feature.  
If your application is slow, people  
won't use it.

*Fred Wilson's 10 Golden Principles of Successful Web Apps*

<http://thinkvitamin.com/web-apps/fred-wilsons-10-golden-principles-of-successful-web-apps/>





# slowdowns hurt business metrics

- Bing - 2s slower - 4.3% drop in revenue/user
- Google - 0.4s delay - 0.59% drop in searches/user
- Yahoo - 0.4s delay - 5-9% drop in full-page traffic
- Mozilla - 2.2s off landing page - 15.4% more downloads
- Shopzilla - 5s speed up - conversion rate up by 7-12%





**Please wait...**







<http://www.flickr.com/photos/theivorytower/4126601940/>





<http://www.flickr.com/photos/scragz/91147636/>





# Requests take time

Uploading data

Processing request on the server

Downloading data

Computing the response





# **Quantitative**

Uploading

Downloading

# **Undeterminable**

Processing request on the server

Computing the response





# Inform users







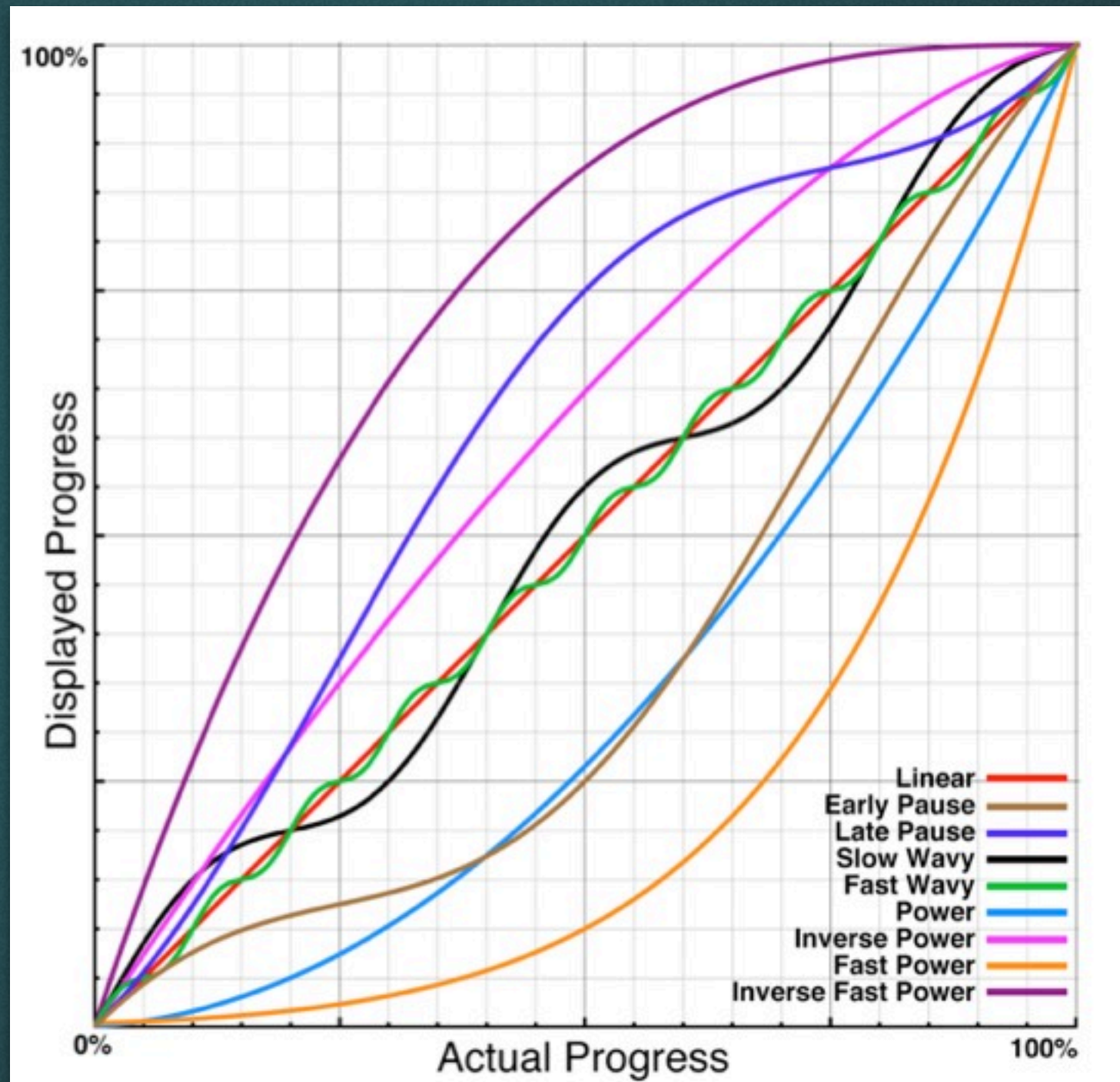
# Progress Bar

<http://www.flickr.com/photos/sainz/485663542/>



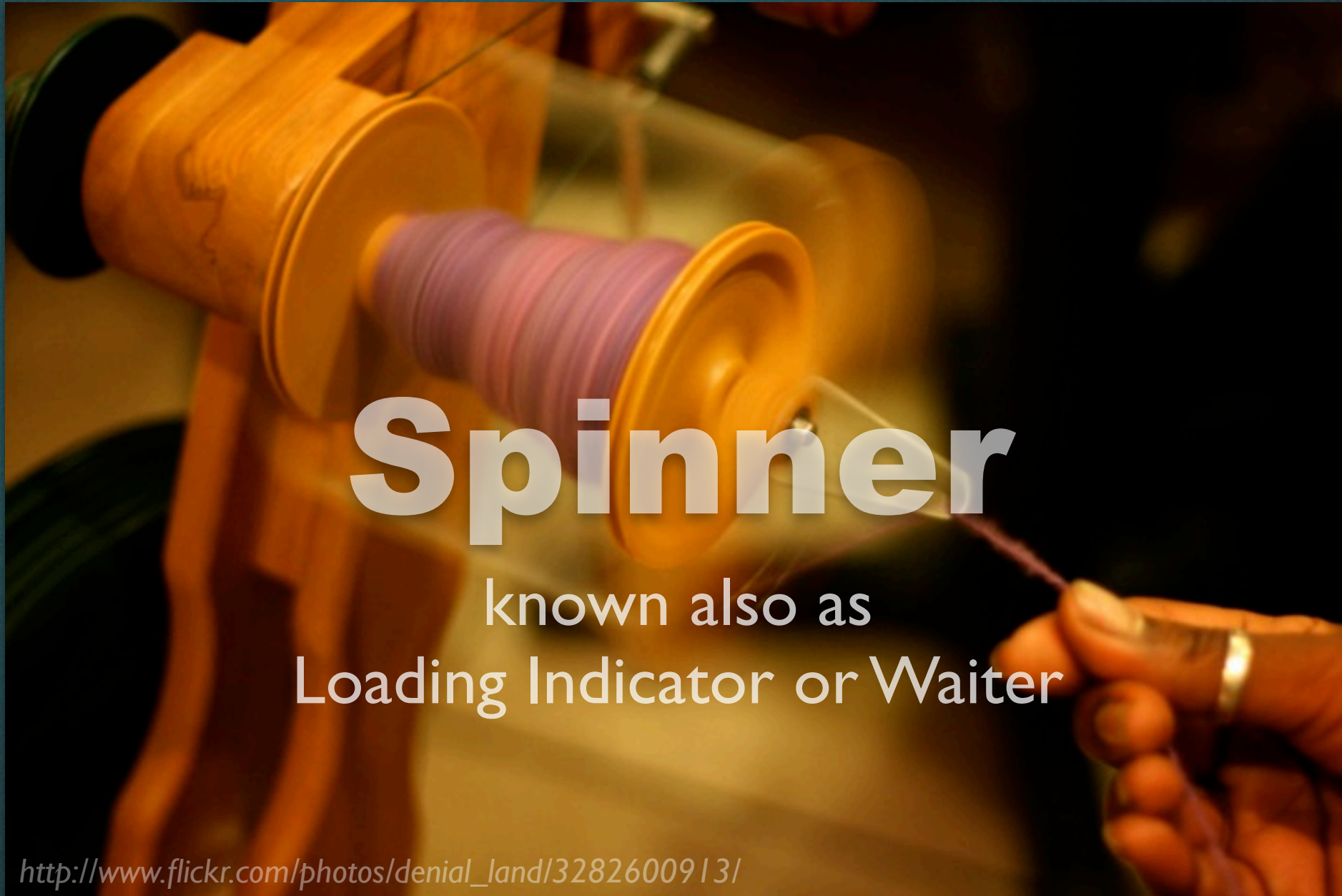
Humans do not perceive the  
passage of time in a linear way.  
This [...] causes human perception  
of process duration to vary.





Harrison, C., Amento, B., Kuznetsov, S., and Bell, R. 2007. Rethinking the progress bar.  
<http://chrisharrison.net/projects/progressbar/ProgBarHarrison.pdf>



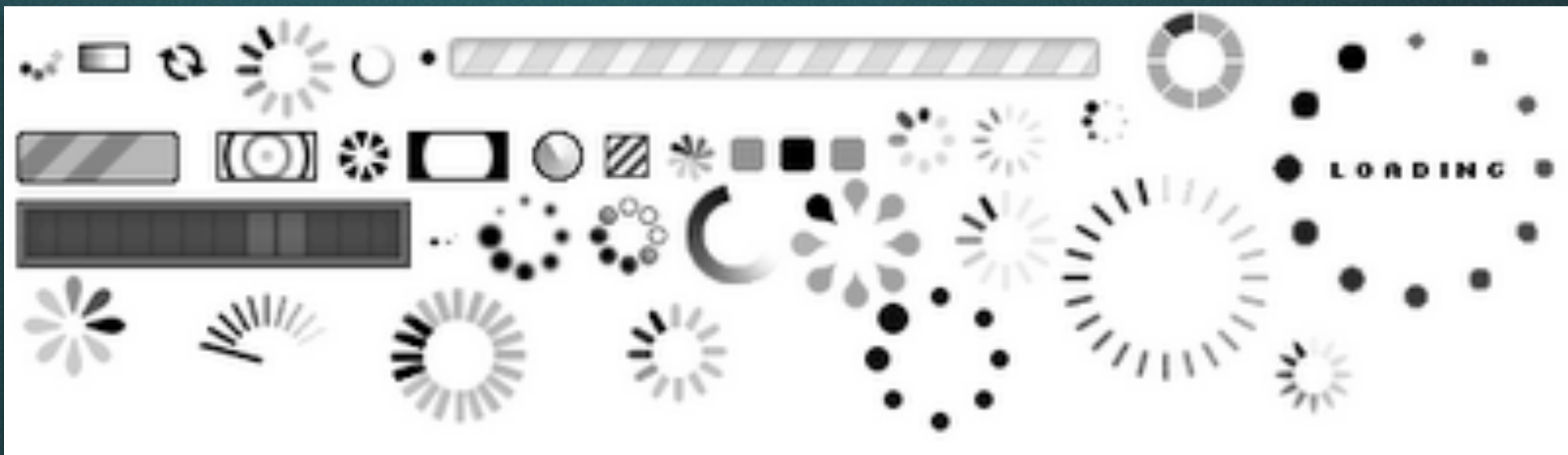


# Spinner

known also as  
Loading Indicator or Waiter

[http://www.flickr.com/photos/denial\\_land/3282600913/](http://www.flickr.com/photos/denial_land/3282600913/)







# Mastering Spinner





Draw the [...] spinner icon as little as possible, but one solid break isn't bad and might be better than one really long spinner.

*John Wayne "Perceived Speed Performace"*

<http://www.johnwaynehill.com/blog/2010/06/16/perceived-speed-performace/>





# jsFiddle and Ajax

- Echo XHR Request
- HTML, JSON, JSONP, XML
- Defined in the fiddle
- Stored on Github
- Delay

Docs: <http://doc.jsfiddle.net/use/echo.html>

Example: <http://jsfiddle.net/zalun/6yLuQ/embedded/result/>



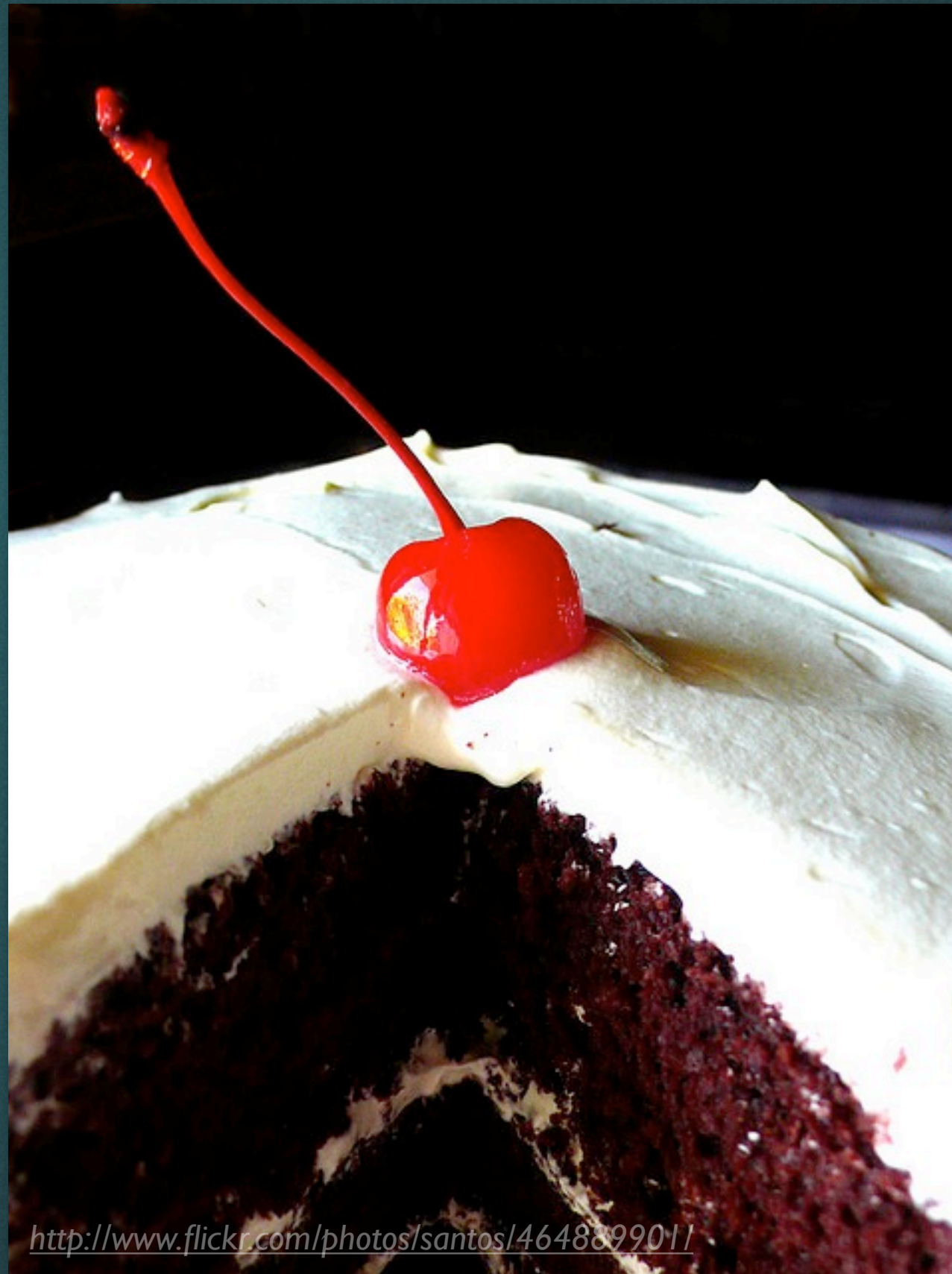


# Spinner delay survey

- <http://survey.jsfiddle.net/spinner/>
- 2 Requests with the same (randomized) XHR Duration and randomized Spinner delays
- XHR Durations: 0.2, 0.4, 0.6, 1.0, 1.5 seconds
- Spinner delays: 0.0, 0.2, 0.4, 0.6 seconds
- Participant is choosing which request was faster and if both requests felt responsive







<http://www.flickr.com/photos/santos/464889901/>