How do we design usable rich interfaces?

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Why is it so difficult to design usable interfaces?

* Our experiences, expectations, and knowledge are different than those of our users.

* We know too much about the application we are designing/developing.

* We are designers or developers.

* As hard as we try, we cannot ignore what we know.

* And...

Why is so difficult to design usable interfaces?

* ...because we design with the assumption that people see everything we put in front of their eyes.

* Unfortunately we only see very little of what is in front of us. And we remember even less.

* You don't believe me, do you?

Lessons from Change Blindness

* Let's take an experiential approach...

* http://www.usd.edu/psyc301/Rensink.htm

So, what have we learned?

* We see a lot less than we think we see.

* We only see changes if we are paying attention to that area of the image.

* If it's in the periphery or in the background, we will likely miss a change in the image. Even a big change (hint: usually making it bigger doesn't work)

So, what have we learned?

* Only if the change creates a "visual transient*" it will attract our attention and become visible.

* In certain conditions (e.g., when we use a blank frame between to images), change IS NOT perceived as a visual transient and our attention is not drawn to that area.

* Once we know how the interface works, we cannot pretend we don't know. It just doesn't work.

*Abrupt changes in luminance, color, or position.

A bonus demonstration

* http://viscog.beckman.uiuc.edu/grafs/demos/12.html

* http://viscog.beckman.uiuc.edu/grafs/demos/10.html

What can go wrong
when designing rich interactions

* Breaking familiar web interface conventions (links, navigation, controls).

* Making options and affordances non immediately visible (e.g., drag-and-drop).

* Creating subtle changes on the page that users don't notice because the page doesn't refresh.

* Not providing a clear task flow ("what do I do next?").

What can go wrong
when designing rich interactions

* Requiring fine motor skills to manipulate interface elements (sliders, fly-out menus).

* Increasing the potential for disruptive user errors.

* Overloading users with too much information and unnecessary visual complexity.

* Decreasing accessibility (connection speed, ADA Compliance, and finer motor skills).

Want to learn more about Change Blindness?

* http://www.usd.edu/psyc301/ChangeBlindness.htm

* http://nivea.psycho.univ-paris5.fr/ECS/ECS-CB.html

* http://en.wikipedia.org/wiki/Change_blindness

* http://viscog.beckman.uiuc.edu/change/demolinks.shtml

* http://www.syntagm.co.uk/design/articles/grandillusion.htm