

Coherent agile user-centered design

Big picture design, 2 weeks at a time



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Autodesk

What's this about?

Examples of:

- Big Picture without Big Design
- Agile multi-sprint designs



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What's this about?

- Can't see the big picture
- Unsure what to do with new backlog items
- Want to reduce unanticipated design re-factoring in later iterations
- Want to know when a design is “done”
- How to add user requirements to “done”



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What's this about?

Not today:

- Integrate basic UX activities in agile
- How to



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Highly unscientific audience survey

Agile UX: the good

- Narrows the gap between finding and fixing issues
- Less “design drift”
- Enables requirements iteration
- Most important features are done first
- Contextual inquiry & usability testing on *actual* product
- User data has effect on current release
- Less wasted UX time
- Face-to-face is better than “over the wall”



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Context

Alias (now Autodesk)

- products and users
- UX practices
- agile practices



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You?

- Commercial software
- Website design
- Web applications
- Consultants
- Non-profit
- Government
- Internal IT



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Agile looks more like a culture than a process

- Jeff Patton

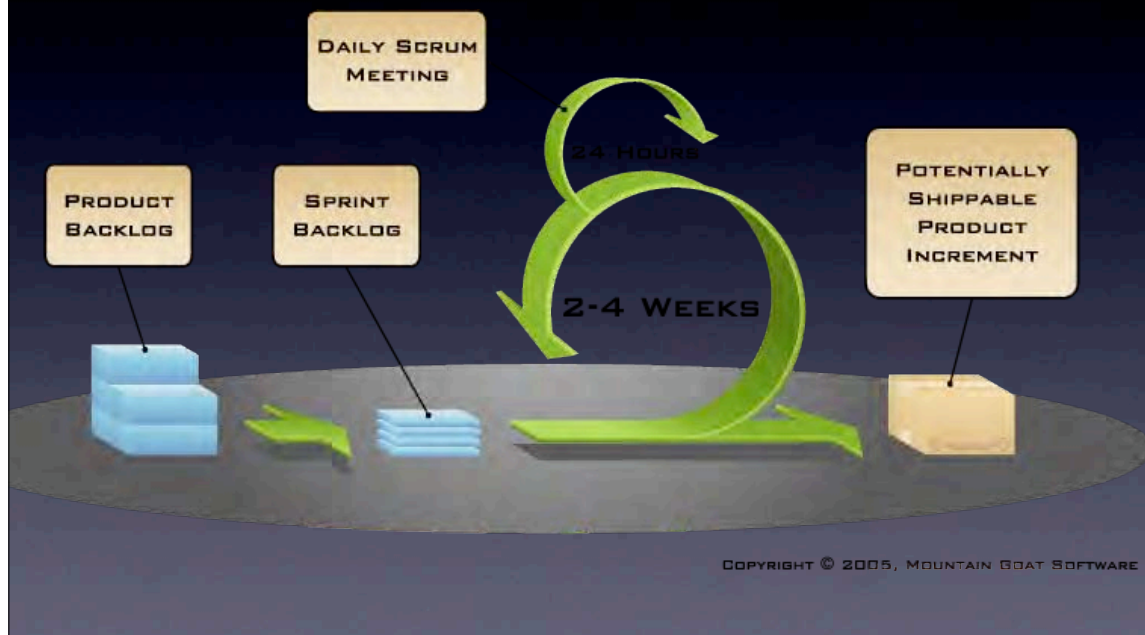
Agile is about better project control, not speed

- Chris Nodder



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Agile definitions

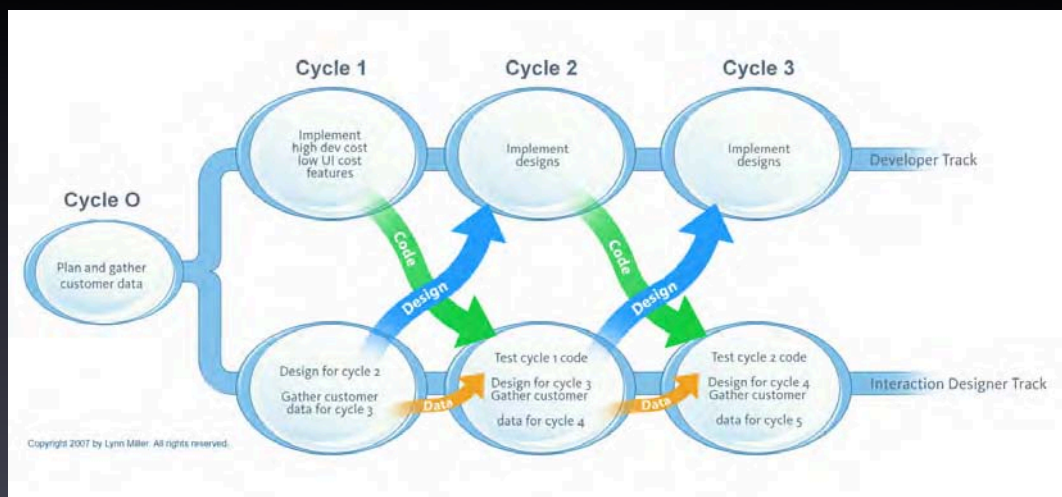


Agile definitions

- Scrum coach/Scrum master
- Product Owner/Customer
- Retrospectives

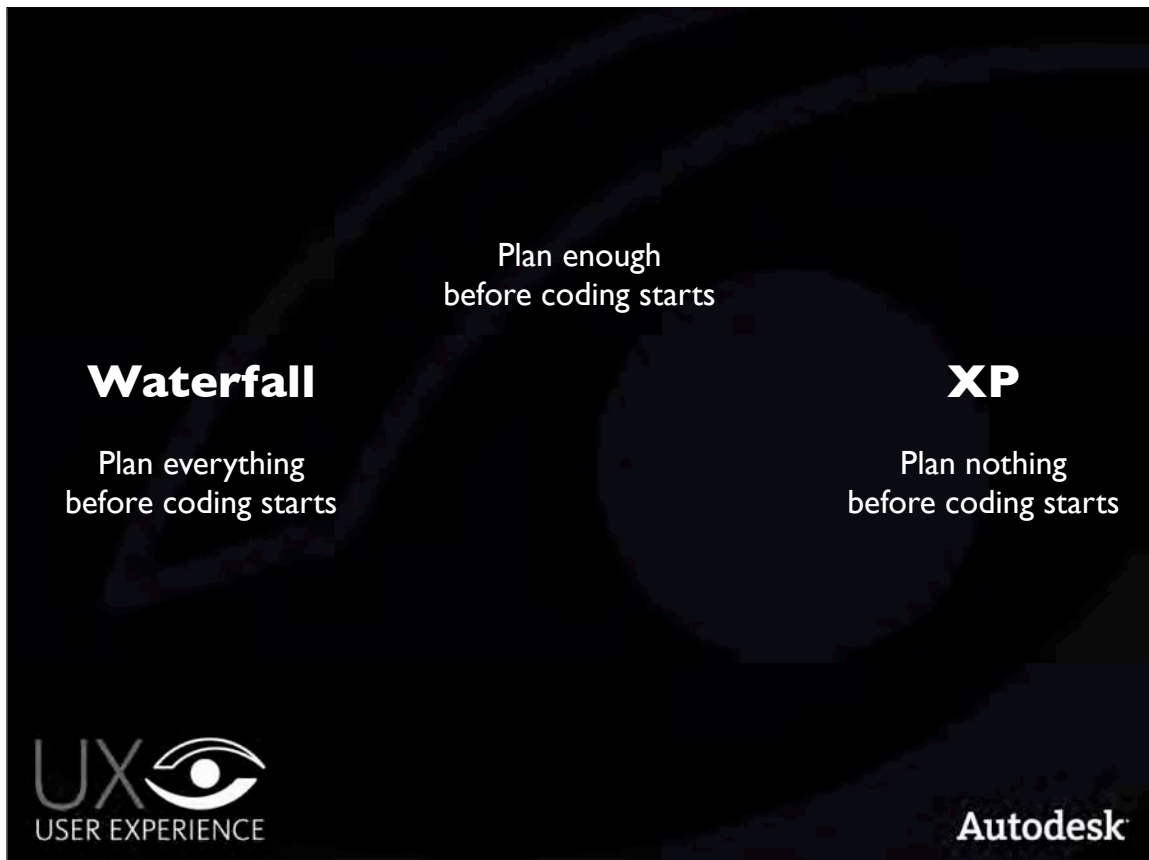


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- “Adapting Usability Investigations for Agile User-Centered Design” JUS, May 2007
- http://upassoc.org/upa_publications/jus/2007may/agile-ucd.html

Big picture vs. big design

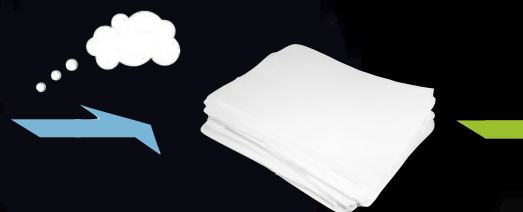


Big picture before agile



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Big picture before agile



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Big picture before agile



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Missing requirements

Time between the Big Picture thinking and coding meant we missed requirements:

- Change in the market
- Change in experience through use of product



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Design issues

Trying to capture all requirements at detailed level for the whole product meant:

- A lot of missing detailed requirements
- A lot of unused design
- A lot of “overdesign”
- Long lapse between time of design and coding

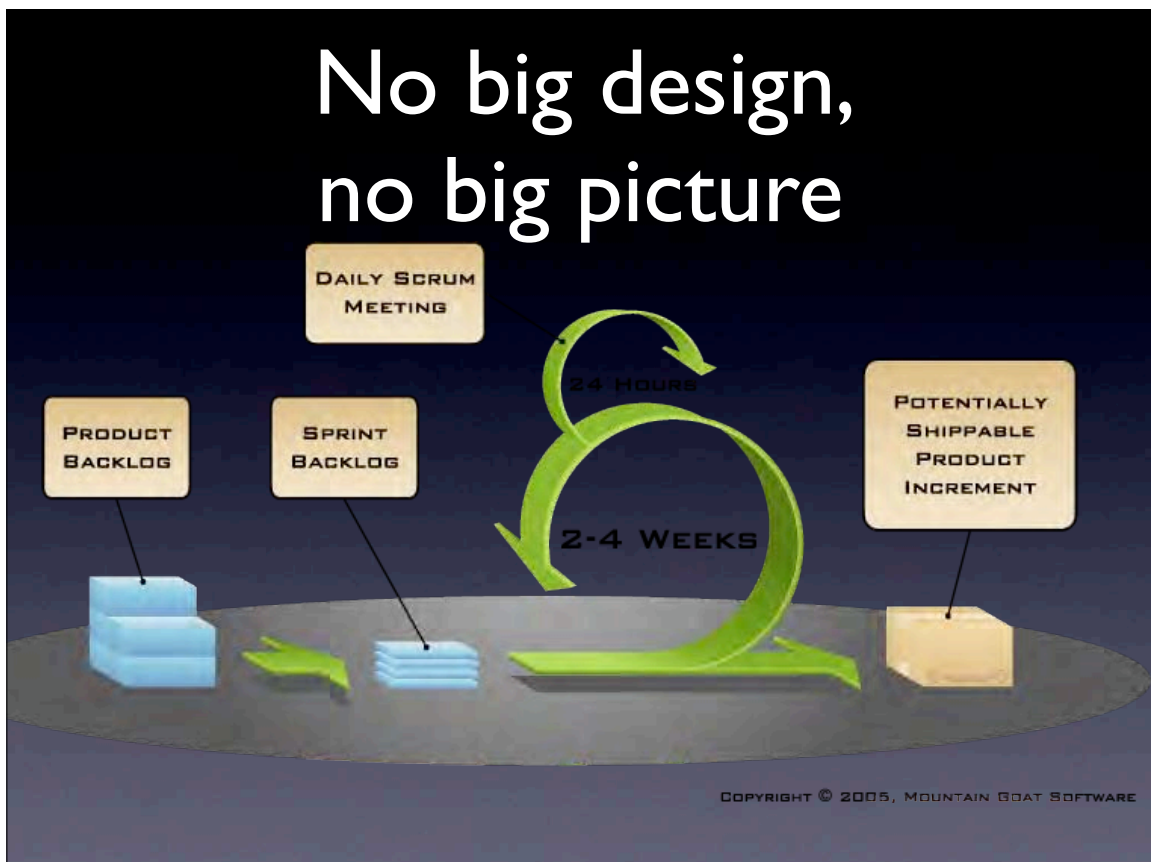
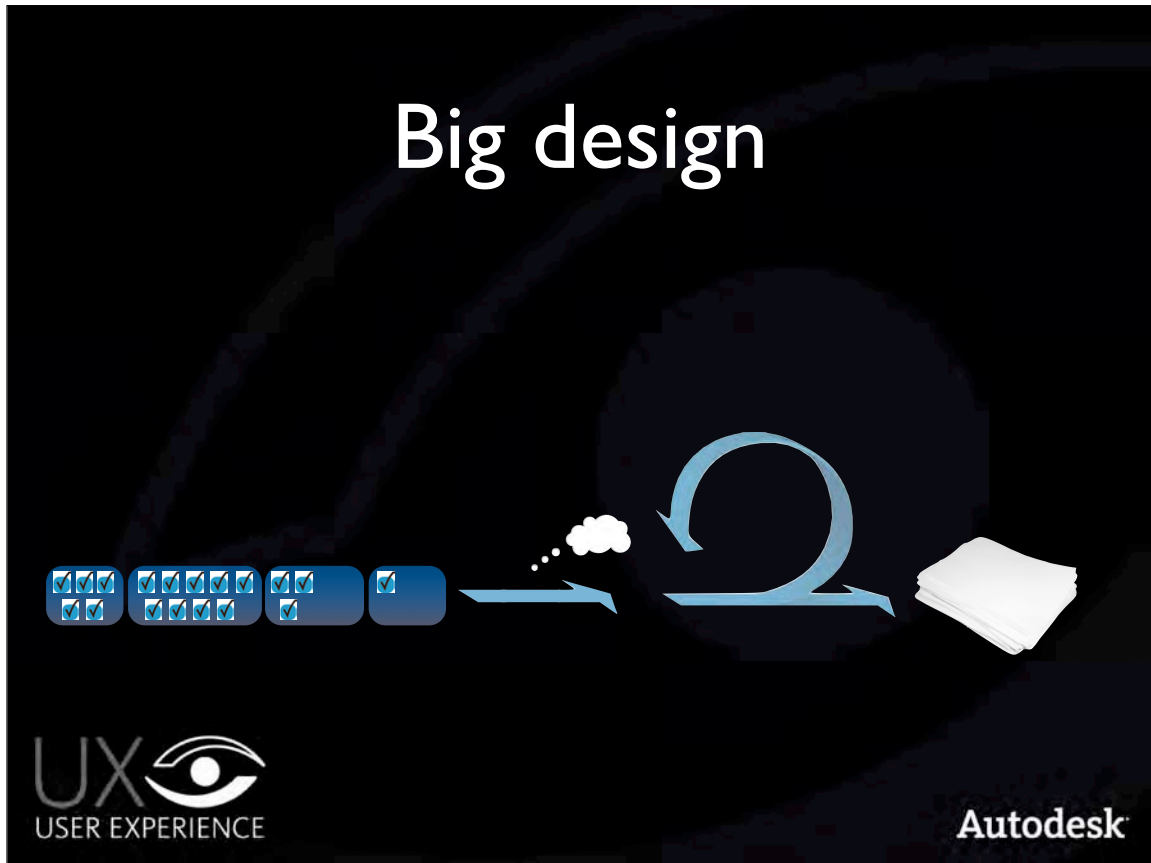


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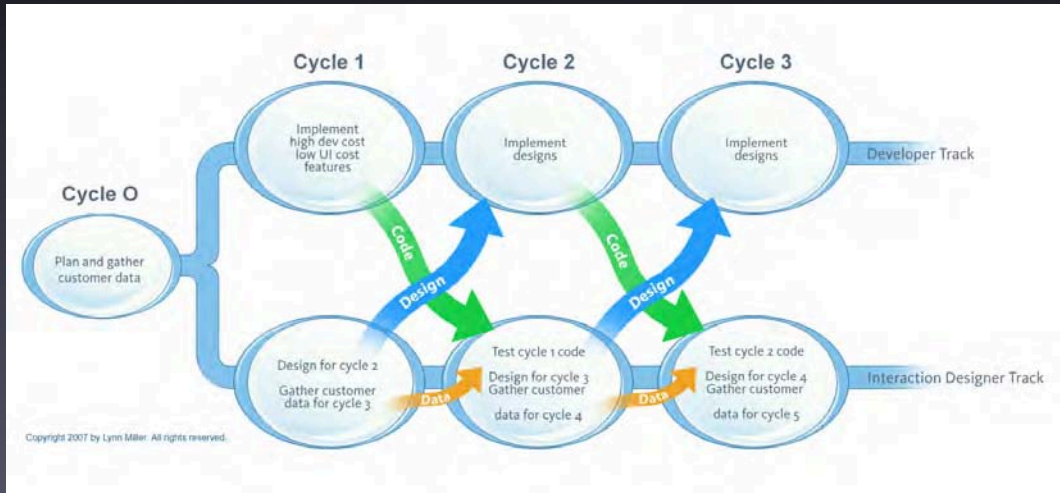
Fix design issues



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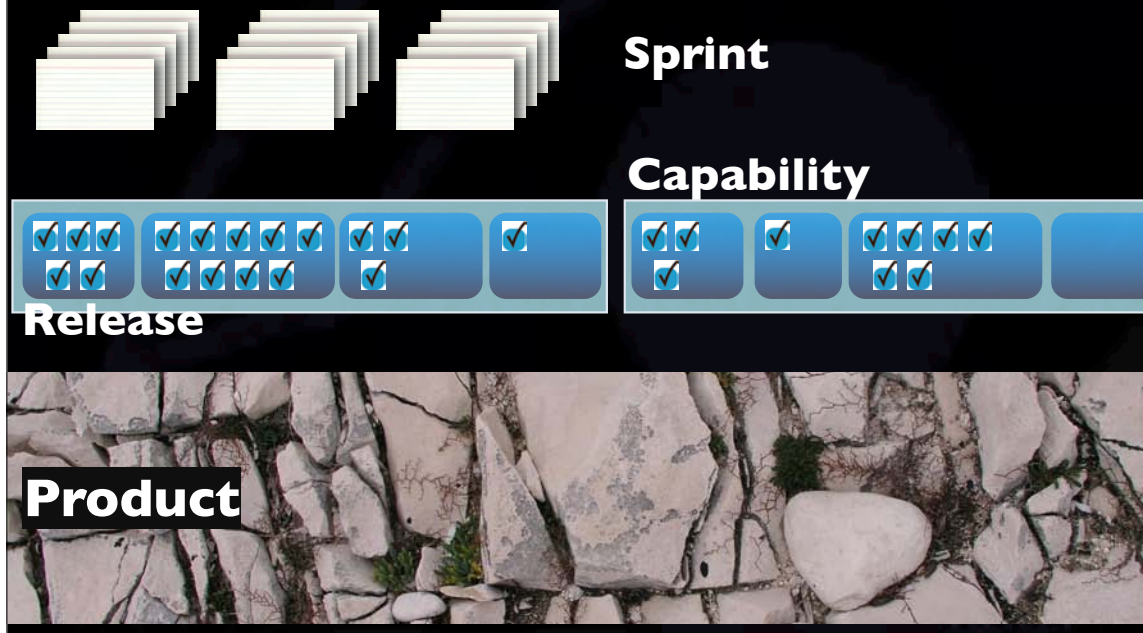


Fix design issues without Big Design



Levels of detail

Levels of detail



Example

- SketchBook Pro
- Tablet PC + Wacom tablets

Set design goals

Design goals

- Applied to backlog, let you:
 - discard
 - sort
 - rank
- Focus UX investigations
- As requirements, they can define “done”



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Product goals

- Product vision
 - Who it's for (and not)
 - What it is (and isn't)
- Design Principles
 - Define product characteristics to drive design decisions



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In action...

- Product vision
 - For creative professionals
 - Sketching: responsive, light weight
- Drop: Image processing features
- Rank: Brushes, make it faster, increase flow
- Sort: Brush quality, Interoperability

USER EXPERIENCE

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In action...

- Design Principles
 - Elegant simplicity, Stylus-friendly, Self revealing, Maximum work area
 - Drop/Rank: Don't add because we can
 - Design “Done”: All features must have access without a keyboard
 - Investigate: Discoverability, Clutter

USER EXPERIENCE

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In action...

- Design and Engineering Principles
 - Self revealing/Optimize (fast + small code)
 - Design had large set of icons, but that added to code weight. We redesigned.
- Business Principles
 - Enter broader market
 - We needed to add design and code for trial version

USER EXPERIENCE

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In action...

- TiVo Design Principle
 - It's entertainment, stupid
 - “Lean back, not forward”
- Drop/rank: No keyboard entry
 - “How (Not) to Destroy a Great User Experience” UPA 2006

Rich Fulcher, Rachel Garb, Alex Liston, Donna Slotte

USER EXPERIENCE

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Release goals

- Aligns the team trajectory
- Guidance for course corrections
- Needs to be consensus between development, business, and design
- What the Product Owner uses
- Not the backlog (or a subset of it)

USER EXPERIENCE

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In action

- SketchBook Pro v2
 - “Remove barriers to purchase from trial”
- Investigate: Survey. Focused the ‘who’
- Drop/Rank: 200 > 25 > 10 (top 5)
- Drop: Saving colours
- Consensus: Dropped Rotate Canvas

USER EXPERIENCE

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In action

- Rare but powerful: Redefine the release
- SketchBook Pro v1.1
 - “Mac OS X port”
- Reset the alignment
- Promote: Add keyboard shortcuts

USER EXPERIENCE

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Capability/Sprint goals

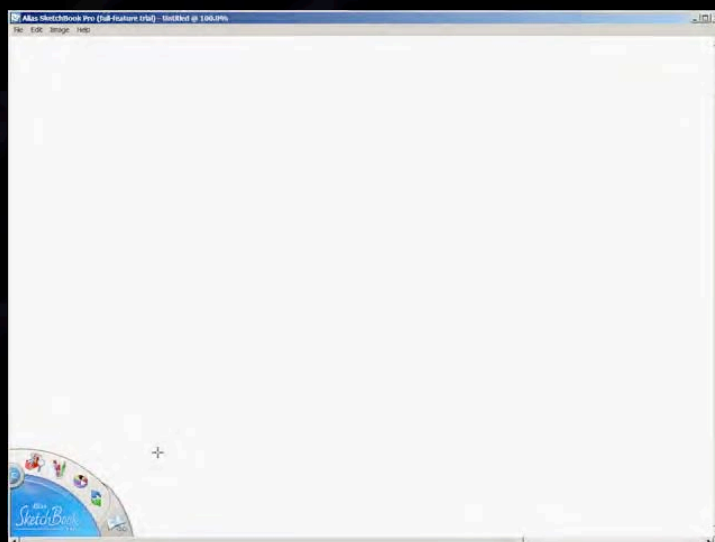
- Articulate problems to solve for a workflow/user story
- Carry forward as sprint goals
- Defined through chunked research
- Used to chunk designs
- Used to chunk mini-releases
- Used to define “done”

USER EXPERIENCE

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In action

Brush Resize



USER EXPERIENCE

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In action

Brush Resize

- First 5 minutes: learn without documents
- Resizing without Brush Editor
- One control for size, not 2-5
- Keep focus in-canvas
- Fewer dialogues (covering the work)
- Stylus only (no keyboard)

USER EXPERIENCE

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Multi-sprint designs

Tear and build

- Design a capability over >1 cycle.
- Break a design into chunks.
- Mix and match chunks in investigations: mini-research, usability test and iterate on mini-prototype.
- Look at the design at the Capability level. Now break it into mini-specifications, to be coded over >1 sprint.

USER EXPERIENCE

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Caveats

- You'll need to establish a buffer first
- Even with the buffer, you'll still need to write designs for the next cycle
- Team will see it as Big Design if $>1 =$ too many sprints
- Think about constantly revealing new capabilities

USER EXPERIENCE

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Design chunking

- What can you investigate over next few sprints?
- Look at the list of capability goals.
- How can you layer sprint-sized investigations and prototypes to meet goals?

USER EXPERIENCE

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In action

Brush Resize design goals:

- First 5 minutes: learn without documents
- Resizing without Brush Editor
- One control for size, not 2-5
- Keep focus in-canvas
- Fewer dialogues (covering the work)
- Stylus only (no keyboard)

USER EXPERIENCE

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In action

Brush Resize design chunks:

- Brush Resize with hotkey
- Brush Resize with stylus (interaction)
- Brush Resize with stylus (look)
- “Workflow” prototype



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In action

Brush Resize with hotkey: Disposable code prototypes

- Resizing without Brush Editor
- One control for size, not 2-5
- Keep focus in-canvas
- Fewer dialogues (covering the work)



In action

- Brush Resize with stylus (interaction):
Whiteboard prototype
- Stylus only (no keyboard)



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In action

- Brush Resize with stylus
(look):
Graphic designs
- Stylus only (no
keyboard)



In action

- Workflow prototype:
Disposable coded prototype
- First 5 minutes: learn without documents
- Combined with 2 other user stories:
Brush Palette and Custom Brushes



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Specification chunking

- Which users will see the next cuts and when?
- Look at the list of the capability goals.
- How can you layer the design so that each sprint delivers on key goals?
- Think worst-case scenario: is each incremental build shippable?



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In action

Brush Resize implementation:

- Per-brush Property Editor, with Size control
- Brush Resize widget

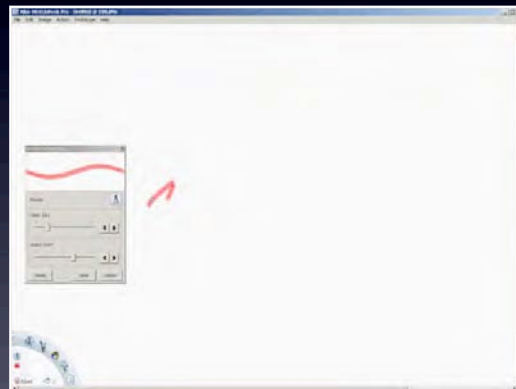


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In action

Per-brush Properties dialog with Size control:

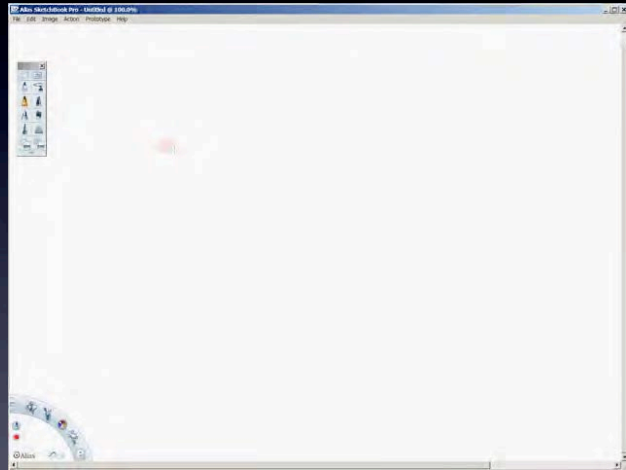
- Overlap with Custom Brushes
- First 5 minutes: learn without documents
- Resizing without Brush Editor
- One control for size, not 2-5
- Stylus only (no keyboard)



In action

Brush Resize widget:

- Keep focus in-canvas
- Fewer dialogues (covering the work)



Usability

acceptance criteria

- Sit with developers as they are turning the user stories into hard estimates.
- Make sure you understand how each of their pieces builds into the specification.
- If applicable, add code-testable usability criteria



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In action

Heads up display

- Fixed decimal point



Working with the team

Course corrections

What to do at:

- “Scrum”/stand up meetings
- Daily contact with developers
- Capability discussions with developers
- Sprint/Release retrospectives
- Sprint Zero meetings



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Putting it together

Coherent agile UCD

Requirements are still required:

- Product and release goals give you a big picture, and then inform capability goals
- Use capability goals to break multi-sprint designs into smaller pieces, both to design and implement
- Work closely with development



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Thank you

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#upa2009 #agileUX



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