Prototyping: Iterating Your Way to Glory
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#Agile2015

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Agenda

Welcome

Culture of Learning

Prototyping

Paper Prototyping Exercise

Wrap Up

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What makes a company successful?

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Culture of Learning

A culture that promotes the learning of its employees to transform and improve itself.
The key to the Toyota Way and what makes Toyota stand out is not any of the individual elements... [but] having all the elements together as a system. It must be practiced every day in a very consistent manner, not in spurts.”

-Taiichi Ohno
Benefits of a Learning Culture

• Maintaining levels of innovation and remaining competitive
• Being better placed to respond to external pressures
• Having the knowledge to better link resources to customer needs
• Improving quality of outputs at all levels
• Improving Corporate image by becoming more people oriented
• Increasing the pace of change within the organization
Iteration is the key to learning successfully.
So where do we trip up?

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CopyCat Mentality

Thinking since others have done it, it will work for you too.

“Well, our competitor has that feature so it must be good.”
Fear of Killing Your Baby

You’ve put so much energy into this idea, what if doesn’t work?

“This is going to work, we don’t have to test it. I’ve done tests myself. I’ve worked hard on this.”
The Expert Trap

You’ve always been told you were the smart one, the expert. Iteration means I might be wrong, so screw that.

“Trust me, I know what I’m doing. We don’t have to test this. That will take too long.”
Testing is Expensive Fallacy

You think that testing with users will increase your budget and cost you a lot of money.

“We don’t have the budget for testing. We’ll fix it after the release.”
The Pressure Dilemma

You think that everything is riding on this so you have to get it right on the first try.

“We don’t have time to fail. We have to do this right the first time. Testing will take too long.”
Biases block your ability to iterate and to learn.
Prototyping
We prototype to communicate and learn
Why prototype

We prototype to validate ideas, refine features, reduce risk, and drive the development of market-ready products.
What is prototyping?

“Something which at its current stage has been screwed up by developers and cannot yet be used by the general public”

Example: “This car isn't safe.. I'm calling it a prototype.”

- Santa(Ace) at Urban Dictionary

“A prototype is an early sample, model, or release of a product built to test a concept or process or to act as a thing to be replicated or learned from”

- Wikipedia
Prototype vs. MVP

“An MVP is not a minimal product, it is a strategy and process directed toward making and selling a product to customers. It is an iterative process of idea generation, prototyping, presentation, data collection, analysis and learning. One seeks to minimize the total time spent on an iteration. The process is iterated until a desirable product/market fit is obtained, or until the product is deemed to be non-viable.”

-Wikipedia

A prototype can actually be an MVP

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Types of prototypes

We use 3 primary categories of prototypes depending on the audience, objectives, and any existing parameters.

- Conceptual
- Experiential
- Technical
Levels of Fidelity in Prototyping

SKETCHED — VISUAL — STYLED

STATIC — FUNCTIONAL — INTERACTIVE

SAMPLE — CONTENT — ACTUAL

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Kinds of Prototypes: Conceptual

Objectives

• Convey the overarching story of an idea
• Gauge interest from potential users and help stakeholders determine if an idea is worth exploring further
• Typically used to learn about feasibility and desirability

Typical audience

• Potential users/customers
• Industry visionaries
• Internal stakeholders (Executives, Sales, etc.)

Format

• Sketches
• Storyboards
• User Flows
• Narrative Maps

Common Tools

• Pen and Paper
• Keynote
• Mural.ly
• Omnigraffle

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Kinds of Prototypes: Experience

Objectives

- Create and test product ideas and concepts
- Apply real-world feedback and metrics (qualitative and quantitative) to rapidly refine the product and user experience
- Typically used to learn about usability and desirability

Typical audience

- Potential users/customers
- Business executives/stakeholders
- Experts in the field

Format

- Sketches
- Mockups
- Clickable Wireframes
- Design Comps

Common Tools

- Paper
- Axure
- InVision
- WebFlow
# Kinds of Prototypes: Technical

## Objectives
- Explore technology and architecture choices
- Understand the level of effort to build a solution
- Typically used to learn about feasibility

## Typical audience
- Developers
- Product managers
- Business executives/stakeholders

## Format
<table>
<thead>
<tr>
<th>Common Tools</th>
</tr>
</thead>
</table>
| Coded prototypes
| Code
| Working feature

| Heroku
| JS fiddle
| Parse

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How to Think About Fidelity

Communication Value

Amount of time/effort to change/fidelity

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We prototype to communicate and learn

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Paper Prototyping Exercise
Background
Alzheimer's disease

Alzheimer's disease (AD) is a chronic neurodegenerative disease that usually starts slowly and gets worse over time.

The most common early symptom is difficulty in remembering recent events (short term memory loss). As the disease advances, symptoms can include: problems with language, disorientation (including easily getting lost), mood swings, loss of motivation, not managing self care, and behavioral issues.

As a person's condition declines they often withdraw from family and society. Gradually, bodily functions are lost, ultimately leading to death. Although the speed of progression can vary, the average life expectancy following diagnosis is three to nine years.

No treatments stop or reverse its progression, though some may temporarily improve symptoms. Affected people increasingly rely on others for assistance often placing a burden on the caregiver; the pressures can include social, psychological, physical, and economic elements.

In 2010, there were between 21 and 35 million people worldwide with AD. It most often begins in people over 65 years of age, although 4% to 5% of cases are early-onset Alzheimer's which begin before this. It affects about 6% of people 65 years and older.

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What problem are we trying to solve?

Families can feel helpless when a family member has just been diagnosed with AD

With AD you lose history and culture held in the memories of your loved one and if you don’t capture it now it can be lost forever
Solution: Forget Me Not

An app that lets your family capture and share media (e.g. video, photos, text, audio) about your loved one with AD.
Target Audience Hypothesis

Adult children of people with AD
1. Tech savvy
2. Family member is in early diagnosis (30 - 60 Days)
3. Age 35-55
Persona: John Benson

Background

• 35 year old male
• Dad (George Benson) was just diagnosed with early stage AD
• Likes using his phone
• Has a large family who all care for his dad
• Dad is 75 years old and an immigrant from Ukraine
• Lives in Cleveland Ohio
• Lives near his father

Goals

1. Capture as many meaningful memories of his dad as possible
2. Allow his family to experience his dad in ways they hadn’t previously been able to
3. Learn about his dad's past
4. Create something that will help his father with his memory

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Narrative

Background

John Benson is at the doctors office with his dad George, the doctor has just given the diagnosis of early stage AD. John is devastated, but the doctor suggests Forget Me Not as part of the tool kit.

The app is described as a way to engage in conversation and strengthen and engage George's memory to keep his brain sharper for a longer time. This can become a repository for John and his family to be able to tell the stories of George after he is gone.

John and his dad go home where John downloads the app.

Sign Up

1. John sees a nice image that take him to a sign up page

2. He fills in relevant information about himself to create an account, including putting in a picture for his profile

3. He fills out information on his dad, George like his birthdate and birth place

4. He adds a picture of his dad
Narrative (continued)

**Adds first video**

1. John is taken to an empty timeline page
2. He taps a button to add a video
3. He records a video and gets a prompt from the app
4. The prompts are written by psychologists, medical practitioners, medical experts, story-tellers, poets, and Walmart greeters
5. The prompt appears at the top of the screen and when he taps record, the video is limited to two minutes, but he can add more time if he wants
6. George tells the story of going to FAO Schwartz as a kid and how much he loved it
7. He records his dad’s story then gives it some context like a title, a year if it relevant, and tags for searching later on
8. Then he can see the clip in the timeline
Narrative: Sign up
Narrative (continued)

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Identify Key Needs

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Sketching!
EVERYONE CAN DRAW!
Forget Me Not conceptual (paper) prototype

Paper Prototype Title: Forget Me Not

Splash

Sign Up

Add Subject

Timeline Screen

Image

Welcome to Forget Me Not

Name

Email

Password

Repeat password

Add profile pic +

Individual family

Done

Add a Subject

Name

Place of birth

Date of birth

Male / Female

Date of diagnosis

See

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Each person draw the narrative in your product brief using the stencil
Interviewing Techniques

Ask the user to complete a task.

Ask open ended questions.

Don’t lead the person to your answer.

Ask “Why?”

Lastly, shut up and let the user talk!
Conduct an interview
Interview directions

1. Think about the key questions you are interested in exploring with your paper prototype
   1. Ask the user to complete a task
   2. Do they understand the concepts you used?
   3. Do they want to use it
2. Write down your questions in your product brief
3. Find another person (sitting next to you)
4. Choose one person to start as the interviewers
5. Conduct an interview for 4 minutes
   1. Interviewers, show your prototype and ask your questions
6. Switch roles
What did you learn?
Iterate! Draw a new paper prototype incorporating the feedback you received
Retrospective

In groups, everyone say:

1. What is one thing you learned?
2. What is one thing you want to learn more about?

Present top 3 findings to everyone.
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Forget Me Not conceptual (paper) prototype

Screen Title: Timeline View (with data)

Order: 2

add butto works like "path" follow Button allows user to add any kind of supported media

play Button would play all milestones in succession

Milestones could be dragged and dropped to reorder

Origin
Forget Me Not conceptual (paper) prototype
Forget Me Not conceptual (paper) prototype
Forget Me Not Functional Prototype