Beall Student Design and Butterworth Product Development Competitions

Workshop #2
Pretotyping
January 26, 2022
Welcome!
The Butterworth Product Development Competition in ICS

Butterworth Competition

UCI Donald Bren School of Information & Computer Sciences

UCI Samueli School of Engineering
The Beall Competition
Competition Summary

• Promote excellence in product design and development among Engineering, ICS and UCI Students

• Open to all UCI students (Graduate and Undergraduate)
  – Butterworth: Must have 1 ICS student
  – Beall: Must have 1 Engineering student
  – Teams must be entirely comprised of matriculated UCI students
Competition Summary

• Each competition will award a 1st, 2nd, and 3rd place prize.
• Specialty prizes will be announced in Winter 2022 that may include:
  – Best prototype
  – Best UX/UI
  – Best Customer Feedback
• $40,000+ total in Cash Awards!
• The top team will get preferred application to Wayfinder for the summer 2022 cohort.
Competition Due Dates

1. Intent to Enter (ASAP)
   – https://tinyurl.com/bbcompintent22
2. Concept Paper & Product Specifications (March 6, 2022)
   – Template will be on the website
4. Final Product & Business Case Due (May 15, 2022)
   – Template will be on the website
5. Demo Day (May 20, 2022)
6. Awards Night! (May 25, 2022)
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<thead>
<tr>
<th>Qtr. &amp; Week</th>
<th>Day</th>
<th>Date</th>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>F8</td>
<td>Monday</td>
<td>11/15/2021</td>
<td>5:30-7 pm</td>
<td>BB Comp Kick-Off</td>
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<td></td>
<td>WINTER BREAK</td>
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<tr>
<td>W2</td>
<td>Wednesday</td>
<td>01/12/2022</td>
<td>6-7:30 pm</td>
<td>BB Workshop #1</td>
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<tr>
<td>W4</td>
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<td>01/26/2022</td>
<td>6-7:30 pm</td>
<td>BB Workshop #2</td>
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<td>W6</td>
<td>Wednesday</td>
<td>02/09/2022</td>
<td>6-7:30 pm</td>
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<td>02/16/2022</td>
<td>6-7:30 pm</td>
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<td>W9</td>
<td>Wednesday</td>
<td>03/02/2022</td>
<td>6-7:30 pm</td>
<td>BB Workshop #6</td>
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<tr>
<td>W9</td>
<td>Sunday</td>
<td>03/06/2022</td>
<td>11:59 pm</td>
<td>Concept Papers &amp; Product Spec Due</td>
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<td>SPRING BREAK</td>
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## Schedule (part 2)

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<tr>
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<tr>
<td></td>
<td><strong>SPRING BREAK</strong></td>
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<tr>
<td><strong>S2</strong></td>
<td>Friday</td>
<td>04/08/2022</td>
<td>8:00 am-5:00 pm</td>
<td>BB Midpoint Review</td>
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<td><strong>S3</strong></td>
<td>Wednesday</td>
<td>04/13/2022</td>
<td>6-7:30 pm</td>
<td>BB Coaching Session #1 - Orientation</td>
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<td><strong>S5</strong></td>
<td>Wednesday</td>
<td>04/27/2022</td>
<td>6-7:30 pm</td>
<td>BB Coaching Session #2</td>
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<td>Wednesday</td>
<td>05/11/2022</td>
<td>6-7:30 pm</td>
<td>BB Coaching Session #3</td>
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<td><strong>S7</strong></td>
<td>Sunday</td>
<td>05/15/2022</td>
<td>11:59 pm</td>
<td>Final Product &amp; Business Case Due</td>
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<tr>
<td><strong>S8</strong></td>
<td>Wednesday</td>
<td>05/18/2022</td>
<td>6-7:30 pm</td>
<td>BB Coaching Session #4</td>
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<tr>
<td><strong>S8</strong></td>
<td>Friday</td>
<td>05/20/2022</td>
<td>8:00 am-5:00 pm</td>
<td>BB Demos &amp; Final Presentations</td>
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<tr>
<td><strong>S9</strong></td>
<td>Wednesday</td>
<td>05/25/2022</td>
<td>5:30-7 pm</td>
<td>BB Awards Ceremony</td>
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Cynthia Kirkeby

Cynthia Kirkeby is an entrepreneur with a design and manufacturing background that includes physical and virtual products in a variety of industries such as furniture, pet products, education, technology, and home decor. Cynthia holds six issued patents and has additional patents pending.
Pretotyping
Low Fidelity Prototyping
Where it started

Manifesto by Alberto Savoia

Unleash the Innovators Manifesto

Innovators over Ideas
Do over Talk
Take over Ask
Commitment over Committees
200% over 20%
Why not? over Why?
Prototype before you Productype

Don't finish what you've started.
Failure is an option.
Reinvent the wheel.
The more the messier.
The Pretotyping Manifesto

Innovators beat ideas
Pretotypes beat productypes
Building beats talking
Simplicity beats features
Now beats later
Commitment beats committees
Data beats opinions

Don't finish what you start
Failure is an option
Scarcity brings clarity
The more the messier
Reinvent the wheel
Play with fire
Types of Pretotypes

PART 1

PRETYPING - Cynthia Kirkeby
Fake Door

An offer for a product, feature or service that doesn't exist
FAKE DOOR

What A marketing entry point for an as-yet undeveloped idea.

Why The solution doesn’t exist yet and you want to capture an initial indication of interest at next to 0 cost.

When Your idea can be concisely described and presented to potential customers where you would expect to find them, and you are confident you can manage the expectations of enthusiastic customers by following up within an appropriate time-frame.

How Advertising a new product or feature, then tracking click-through and customer response rate to see who would be interested in an offering.

Where Web tech enables a very robust method that includes: online ads + landing pages + simple response forms. Same approach also works with emails, offline posters and other media.
Cardboard Pretotype to High Fidelity Prototype

Pinocchio
Pinocchio

Cardboard Prototype to High Fidelity Prototype
PINOCCHIO

What
An inanimate (or “dumb”) artifact acts as a proxy for the real thing.

Why
The solution doesn’t exist yet and you want to validate a key design parameter early on.

When
Your solution requires a significant switching or behavioral adaptation by customers to develop a new habit OR You expect demand to be sensitive to the appearance or form factor of your solution.

How
Use a proxy to validate certain parameters of the product like form factor, features and usability.

Where
In the same real-life situation where the innovation will be used.
Adding a new skin to an existing product to gauge interest
IMPERSIONATOR

What  Use an existing product or service to pose as the new offer under test.

Why   Save on development costs while the market interest is not yet validated.

When  A test of the value of the solution depends on the customers’ ability to interact with a full-scale design, and you need to create a plausible stand-in for the size, shape, color, features, etc. of the solution.

How   Apply a new skin to an existing product that can act as a good substitute to validate market interest.

Where In the same real-life situation where the innovation will be used or accessed.
MECHANICAL TURK

ONE-NIGHT STAND POP-SHOPS

FACADE

Types of Pretotypes

PART 2

PRETYPING - Cynthia Kirkeby
Mechanical Turk

Using simple people-powered techniques to simulate more advanced processes
MECHANICAL TURK

What  Use human power to simulate a technology that would take too much money or time to build.

Why  To postpone costly development until market interest is validated.

When  When the final product requires the development of expensive and complex technology, and those actions and outputs could be simulated by humans.

How  Use a realistic interface to deliver target customers the essential experience of a proposed technology, simulating functionality of a complex back-end using human input.

Where  In the same real-life situation where the innovation will be used.
One Night Stand

A complete service experience without the required infrastructure
ONE NIGHT STAND

What: A complete service experience without the infrastructure required by a permanent solution.

Why: Avoid investment in complex infrastructure and validate market interest and actual use.

When: The solution is — or depends critically upon — an interactive service experience.
- You expect demand for the offer will be sensitive to the choice of channel, and you need to test a number of possible customer interception points.
- You want to validate a large homogeneous market before scaling up.

How: Delivering target customers the essential experience within an extremely narrow scope and time frame.

Where: In the same real-life situation where the innovation will be used but with limited time and scope.
Facade

Avoiding the investment in expensive space or equipment while validating interest
FACADE

What  Borrow or rent expensive equipment, space, and assets to simulate a more stable or complex infrastructure underlying your offering.

Why  Avoid investments in expensive equipment, space, and other assets while validating interest.

When  - The solution requires major upfront investment, in equipment, space, or assets.
      - You expect demand will vary based on customer confidence in your infrastructure.

How  Delivering target customers the essential experience, while communicating stability and complexity.

Where  In the same real-life situation where the innovation will be used, but with all assets and space borrowed or rented cheaply.
Paper Pretotypes

Paper prototype of a handheld stud finder by Patrick Dugan

Build with paper or cardboard and add electronics
Covert Ink

Pretotypes to finished products
Resources

PRETOTYPING
pretotyping.org

WIREFRAME PROGRAMS
Invision
invisionapp.com

Figma
figma.com

Google Material Design
https://material.io/

Prototyping with Cardboard (parts 1-3)

Skeptic's Guide to Low Fidelity Prototyping
https://www.smashingmagazine.com/2014/10/the-skeptics-guide-to-low-fidelity-prototyping/
PRETOTYPES

Feel free to CONNECT

Cynthia Kirkeby

LINKEDIN
/in/cynthiakirkeby
Resources

- ANTtrepreneur Center
- Beall Applied Innovation
- Beall Center at Merage Business School
- Wayfinder
- Library
  - https://guides.lib.uci.edu/entrepreneurship
Engineering Students Win Big in 2021 New Venture Competition

Engineering Students win big at the 2021 Merage New Venture Act Tank Final Competition.

June 9, 2021 — The Merage School’s Beall Center for Innovation and Entrepreneurship conducted its virtual live “Shark Tank”-style final round of this year’s 17th annual New Venture Competition on May 27, 2021. The top ten teams walked away with cash and prizes valued at more than $100,000, three of the winning teams included Samueli School of Engineering students.

The grand finale was broadcast via Zoom where the finalists competed for the grand prize in a 3-minute fast pitch, facing a panel of five distinguished judges from Orange County’s startup ecosystem. Although the judges considered specific criteria when evaluating concept papers and pitch decks, they ultimately chose the winning teams based on which pitches they would most likely invest their own money in.

Here are the winning teams that count Anteater Engineers as members.

**MoodCloud** earned a tie for first place in the Consumer Services category ($5,000). MoodCloud is an app that combines artificial intelligence with the world of lifestyle and health management. It enables its users to express themselves and view exactly how their day-to-day lifestyle has a long-term impact on their health.

**REMSYS** tied for first place with MoodCloud in the Consumer Services category ($5,000). The team’s goal was to create a resume management system designed for college students. The program would alleviate the hassle of managing multiple resumes when applying to various jobs.

**StyloSonic** took an easy first place in the Life Sciences category ($7,500). StyloSonic is a miniaturized handpiece that uses ultrasound/photothermal imaging to provide key periodontal metrics. The tool aims to assist dentists and periodontists with accurately diagnosing gingivitis in the early stage and to reduce the rate of advanced periodontitis.

The UCI New Venture Competition is open to all UCI students, staff members and researchers as well as community members. This year, 100 concepts were initially submitted in February. The competition and entrepreneurship program are dedicated to cultivating the entrepreneurial mindset and launching student startups in Orange County.

$100,000
Next Steps

• Intent to Enter:
  – https://tinyurl.com/bbcompintent22
• Workshop #3 on February 2 at 6:00 PM (IN PERSON at ISEB 1010)
  – https://bbcomp22workshop3.eventbrite.com
• Share with your friends and fellow students
• Stay up to date at https://bbcomp.tech.uci.edu
• Concept Papers & Product Specifications are due on March 6, 2022
• Schedule office hours for help (bbcomp@uci.edu)
• Get started!!!
• Also, check out https://merage.uci.edu/nvc to find out more about the NVC.
Thank you!