Design Prototype

The key output of your work this semester is a design prototype. This should include:

1. **Interactive prototype** that allows you to test your idea
2. **Stand-ups and documentation of the design process** (readme.md) to explain your methods & decisions made
3. **Conference poster** and supporting promotional material to explain your idea for presentation at the final showcase.

Your project should aim to exploit digital, social and/or mobile computing within your chosen domain and might take various forms, eg: website; mobile application; social network; interactive story; flying robot. As you will have observed from the oral presentations, the shape and nature of these is diverse: we have teams who are working on creating social platforms, non-linear stories, websites and mobile apps. We've also got projects that explore ubiquitous computing, augmented reality, gaming, and hypertext.

As a result your prototypes will vary. The process of making them, however, will be similar. You will all engage in a design process. This includes phases of research and data collection; establishing requirements; design and construction. We want you to document this process.

The specifics of each prototype will vary, depending on the project. This document is intended as a guide to format and content.

The aim of your prototype is not to build a product that solves the problem entirely. The aim of your prototype is to test your idea, for the purpose of learning something. What you learn, will be used to better understand the problem space, and influence how you would build a future product.

An ambitious aspiration for this project is that your teams continues this work after semester, with an aim to disrupt the problem area or industry that you are tackling.

Process

Research

All good design begins with research and it is the data you gather that will establish requirements for your design, will inform your sketches and wireframes, and determine how well your prototype addresses user needs.

Design research often involves both desk and field work[1]. We want you to do some original research and use your findings as the basis for your design decisions. Your research should include:

- **Academic studies:** what does the literature say about the problem you are exploring;
- **Other published documents:** statistics or reports that help map the domain;
- **Primary data:** interviews, focus groups or surveys of target users;
- **Observations**: what is the use context.

[1] See Rogers, Sharp & Preece. 2011. Interaction Design: Beyond Human-Computer Interaction

We do not need to read a complete literature review or transcripts of interviews. Rather, we want you to synthesise what your research has told you and **quote studies, sources, observations to support your claims.** Photos are a great way to show use context.

Requirements

Based on the evidence you have collected, what is the problem, and what does your design need to do to better understand that problem? Articulate what you aim to achieve and how.

For example, based on your research you might decide that older people are reluctant to get news on mobile devices because the text is too small and there is too much irrelevant content. So your aim is to develop a news app for retirees to address these concerns. Some of the requirements might be larger font sizes, bigger buttons, the ability to select news by location and to make topics such as personal finance or gardening more prominent.

Designs

Prototyping is a core part of designing and we want to see how you have translated your research into design concepts. This phase is about developing the conceptual model of what your product will do and how it will work.

You should draw on your research and requirements to inform wireframes[2], mood boards[3] or low-fidelity prototypes[4]. You might mock up or sketch story layouts, or create user scenarios, maybe you need to come up with a workflow. Include these, or images of them, in your design documentation and provide explanation and context where necessary.

You do not need to produce all the items above, nor is it a definitive list of options. Rather, document your design work and the process and decisions that shaped it.

Interactive prototype

All this design work should give you a solid base on which to build an interactive version of your design. Given the time and resource constraints, it is unlikely you will be able to fully develop your project, so we are not looking for a fully-functioning product.

What we are looking for is a prototype that exhibits enough functionality to demonstrate the core concept/s you are exploring. This might be showing how a verification system works, or how a story is constructed on the platform. **The purpose of this prototype is to learn, test and demonstrate your idea (or key parts of your idea) - not to solve the problem entirely.**

The degree of interaction supported will vary between projects and you might simulate some aspects. For example, it might be appropriate to use video, animation or graphics to indicate non-core functions. Similarly, dummy content, using pre-existing APIs or an RSS feed, may suffice for original content (as long as narrative is not central to your project).

---

[2] Check out FluidUI or Balsamiq, among others.

[3] Photoshop or even cardboard and glue are options

[4] Think paper prototypes, wood blocks or digital mockups

Spend time on the unique aspects of your project. You need to clearly identify the core concept of your proposal and work toward being able to demonstrate that. This will involve both mobile/social and news aspects. For example, do not waste resources on developing a user login/profile system if that is not core to your idea - everyone can be Joe for a day.

In any case, it should be possible for someone outside your team to use the prototype and access content and features without the need for a member of the team to intervene or explain.

We want to see how the project exploits social and/or mobile technology. Make sure you consider theoretical concepts covered in lectures such as awareness, CSCW, Social Software, Groupware, and Ubiquitous Computing. Expect to be asked about the theories you have applied and methods/techniques you have employed in your design process.

Stand-ups and documentation of the design process

Throughout the prototype process, you will conduct "stand-ups" to discuss your current work and re-plan future milestones. These meetings aim to be intentionally short, to the point, and focus on getting things done. Stand-ups are now common-place within industry, and graduates are expected be proficient at the process. While they may seem like a distraction from the assignment process, their aim is to make sure that work is spread across semester. Additionally, this allows team members to work independently, and report back in a timely fashion.

A few hints:

- Stand-ups should be short
- Each team member must speak equally, discussing what they did since the last stand-up, and what they will do before the next one
- Use Zenhub and Github to help discuss what has been done
- Discuss any issues or changes to plans
- Document what has happened after the sprint
- A tutor should be present at your stand-up to assist with grading

With the prototype submission, there should be a written document that will synthesise and explain your design process (in or linked to in your readme.md). Consider this a top-level narrative of the design work you have carried out. We suggest that the documentation is written throughout the semester, and used as a method to summarise the stand-ups. This will mean that by the conclusion of the prototypes, process documentation is for the most part already written.

We are looking for a document that compliments the other parts of the prototype: the prototype itself, design artefacts and the promotional material. It should explain how the prototype came to be and why it is the way it is. We expect this will contain both written and pictorial content, and should be referenced or hyperlinked where appropriate. Please note that this is not an essay or research paper.

You may choose to present your documentation in the form of an annotated portfolio. Annotated portfolios are a way of communicating design research[5], and typically contain design work alongside annotations that explain its significance and relationship to theory.

[5] Gaver, Bill and John Bowers. 2012. "Annotated Portfolios". Interactions 19 (4): 40-49

In your documentation we would expect to see examples of the evidence you have gathered, such as graphs, quotes or observations from surveys, interviews or academic studies. We would also expect to see images of physical evidence, such as photographs of users, sketches, wireframes or functioning websites.

Format

Documentation should be presented either on your main Github repository readme.md or linked from there. There is no set format for this, however, we are keen to see a strong visual component as well as some contextual detail. Here is a suggested outline:

1. Promotional Material: put this up front so we see it first;
2. Link to the prototype, and how to use it;
3. Summary: what is the problem space and how did you address it?
4. Process: how did you tackle this problem? Use images and extended captions to explain the design process and how your ideas evolved. Mention any limitations and relevant theory.
5. Include a list of who did what in the project.

Aim for no more than 1,000 words plus images. References not included in count. Reference in any style, but be consistent.

Promotional Material

As part of the prototype you need to produce promotional material to explain your problem space and prototype for display at the final showcase. All teams will be required to produce a conference poster to explain your problem space, idea and abridged process. Posters should be A1 in size and are meant to be read up close. These should be printed for display at the showcase.

Additional promotional material might include:

- a kickstarter style video (2 - 3 minutes)
- a website to house your prototype and promotional material
- brochures/information sheets about your idea

The idea of the promotional material is to pitch your idea without you being there. Focus on the problem it solves and what makes it unique. Demonstrate or explain how your prototype works and why it is innovative. Avoid overly detailed, low-level, descriptions of technical aspects of the project.

While the primary use of the promotional material will be for display at the showcase, consider how the material might live on beyond the course. You may not have an opportunity to talk to everyone that visits your display, so your materials should standalone to explain your ideas.

Your promotional material should either be visible on your Github main repository page or linked from there.

Submissions

Week 8 Stand-up: Present current group progress, discuss any issues, re-evaluate your plan and assign work for the next phase of the prototype. At this point, we would expect to see low-fidelity prototypes of your designs.

Week 10 Stand-up: Present current group progress, discuss any issues, re-evaluate your plan and assign work for the next phase of the prototype. At this point, we would expect to results of (or clear plans to conduct) user testing.

Week 12 Stand-up: Present current group progress, discuss any issues, re-evaluate your plan and assign work for the next phase of the prototype. At this point, we would expect to see your interactive prototype.

Week 13: Demonstrate your final prototype in the Social & Mobile Showcase (Wednesday 25th October at 4pm). We will be inviting our domain experts, industry guests and other interested parties to view your demonstrations.

Week 13: Upload URL of your Github repository to Blackboard by 5:00pm Friday 27 October.

REMINDER: Your Github main readme.md page must include a link to your working prototype, any additional promotional material you have developed, and process documentation. Promotional material and documentation may be embedded within your readme file.

Design prototype: 40 percent

Standups will be marked according to the following rubric:

Stand-up & process documentation (Weeks 8, 10, 12) 5% per Stand-up				
	EXCELLENT (5)	SUBSTANTIAL (4)	SATISFACTORY (3)	WEAK (2 - 0)
	Excellent process Project has progressed with a clear understanding of what has been and what needs to be accomplished Team planning is documented, collaborative and consistent Team is working together well with any conflicts identified and resolved	**Substantial process** Project has progressed with a somewhat clear understanding of what has been and what has to be accomplished Team planning is documented and collaborative Team is working together well with any conflicts resolved	**Satisfactory process** Project has progressed with an understanding of what has been and what has to be accomplished Team planning is documented Team is working together well with some issues	**Weak process** Project has not progressed much and without a clear understanding of what has been and what has to be accomplished Team planning is disorderly Team has major collaboration issues

For teamwork, the grade will be based on both observation by tutors of individual contribution during workshops and peer assessment.

High Distinction	Distinction	Credit	Pass	Fail (3-1)
Prototype: 15 percent				
Innovative prototype Innovative project that provides strong insight and a realistic idea of how social and/or mobile technologies can be used in an aspect of the problem domain Highly effective use of interactive technologies to prototype design ideas	**Creative prototype** Creative project that provides insight into how social and/or mobile technologies can be used in an aspect of the problem domain Effective use of interactive technologies	**Substantial prototype** Project attempts to use social and/or mobile technologies to address an aspect of the problem domain Appropriate use of interactive technologies	**Satisfactory prototype** Project does not effectively address an aspect of the problem domain Limited use of interactive technologies	**Weak prototype** Weak project that does not address aspects of the problem domain Weak use of interactive technologies
Promotional material: 10 percent				
Creative pitch Highly creative and engaging promotional material that effectively explains your project Promotional material exhibits high production values	**Engaging pitch** Engaging promotional material that effectively explains your project Promotional material exhibits high production values	**Substantial pitch** Promotional material explains your project Promotional material exhibits satisfactory production values	**Satisfactory pitch** Promotional material mostly explains your project Promotional material exhibits adequate production values	**Weak pitch** Promotional material does not explain your project effectively Promotional material exhibits poor production values

Work may exhibit qualities in more than one grade band but will be marked on overall quality and teamwork.