

Personas for Intelligent Email

Project Installment #2 – Conception and Gestation – February 5, 2015

Introduction

Before going into the “conception and gestation” details of the intelligent email personas project, it is important to note that during this phase of our personas project, we received important prioritization feedback from our executive sponsor. This feedback resulted in our focusing on one primary persona for much of the work of this phase of the project. The other two personas that we had made rough sketches of from interview data and assumptions were effectively moved to a “if time permits” status.

In general, it was the core persona team’s collective impression that compared to the beginning of the project, as our personas had gotten more real for us, they also had gotten more real for the stakeholders, and we started getting more detailed questions and more specific feedback.

Conception

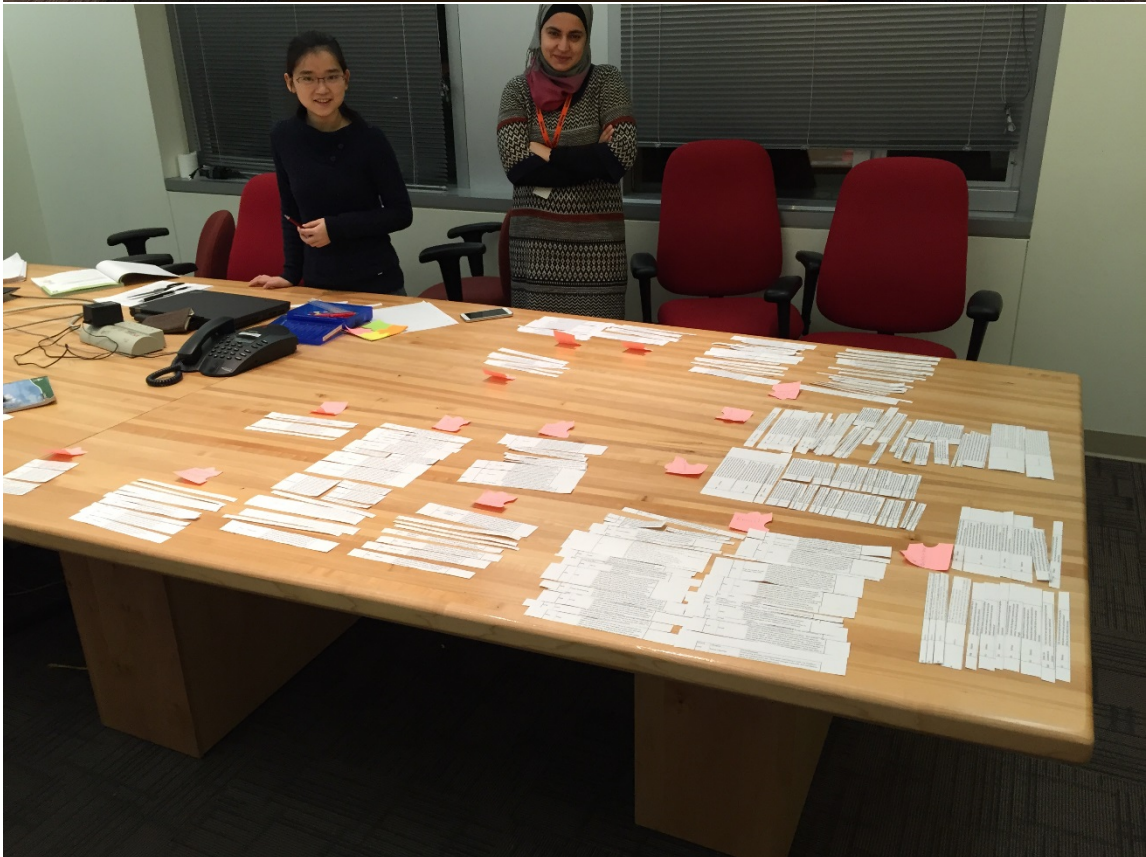
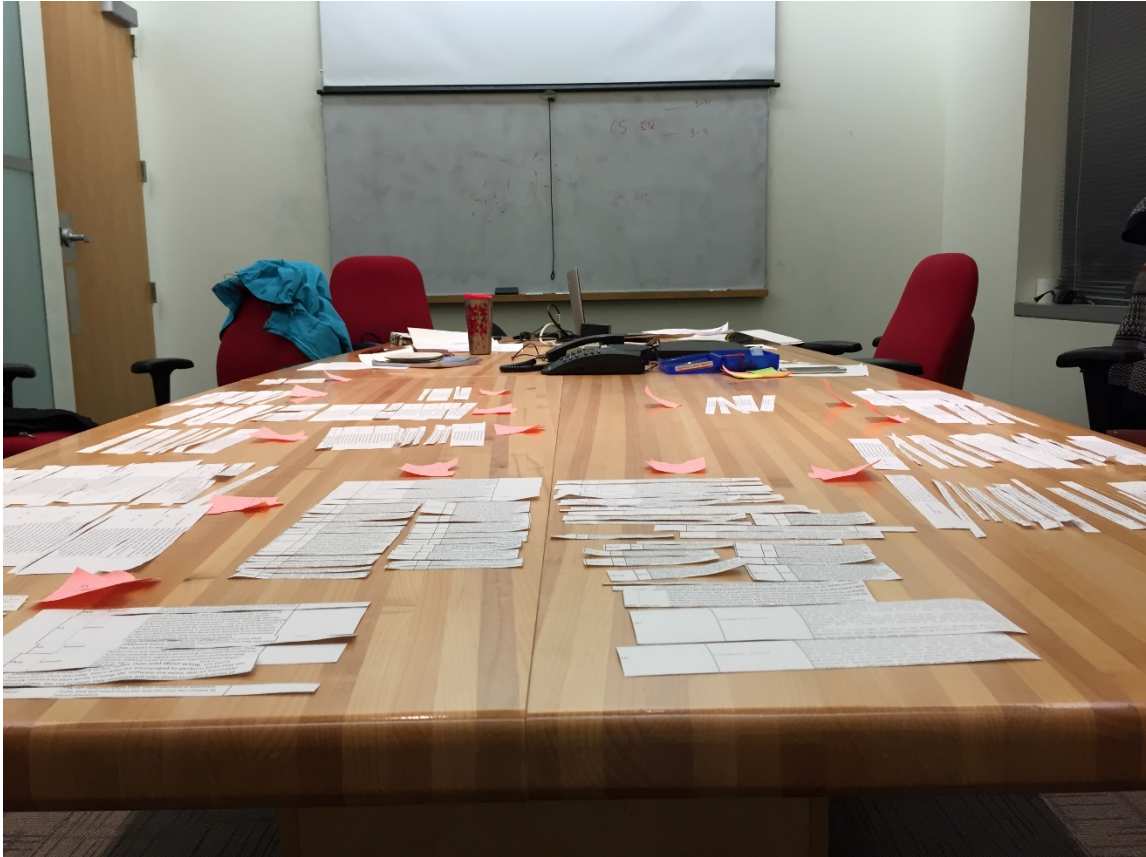
Affinity Diagrams

Affinity diagrams are shown below. Both of these affinity diagrams reflect the state of the affinity diagram before we adapted it to our primary persona.

Since we last published the “family planning” report for the personas project, we added more data sources to adequately research our personas. These sources included short interviews with Professors Burnett, Groce, and Jensen.

The adaption to the primary persona was performed as per the direction given to the core persona team by our executive sponsor and the guidance we received from our on-call persona team research advisor.

Also while we were building our affinity diagram, we were fortunate that one of the developers on the on-call persona team was able to be present for a portion of the process. He had a number of questions about personas and also gave us his prioritization input, which is detailed in the “gestation” section of this report.



Assumptions

From the interviews with the professor subjects, a number of assumptions surfaced. These are shown below. These assumptions were used to form rough sketch “assumptive personas”, as per the Persona Lifecycle book. As our executive sponsor gave us direction to focus on the persona most like him, we didn’t end up using these assumptions in the formation of the affinity diagram of our primary persona. They would be useful in a “if time permits” expansion of our set of personas.

Subject 287

- “Our software needs to be reliable, so she doesn’t miss any deadlines.”
- “She won’t use any new features.”
- “She has too many folders.”
- “She thinks she doesn’t need an intelligent assistant, but she really does.”

Subject 444

- “It seems like he would benefit from tags because there are times when keyword search fails.”
- “He says he has a good memory, but also says he can’t remember the right keywords to find the email he is looking for. This appears to be some kind of over-confidence in his memory.”

Subject 143

- “He seems overloaded with student demands on his time.”
- “He minimizes emails by decentralizing some activities, like maintain a public calendar where students can book meeting slots”
- “Maybe an intelligent assistant to manage the students would help.”

Subject 000

- “He has to spend a lot of time communicating via email with his students because of all his traveling.”
- “He is entirely dependent on an intelligent agent to help him organize emails”
- “His work is so demanding and he is so precise, that he cannot tolerate it if the system makes too many mistakes”.

Professors in General

- “They all do a variety of things and suffer an email overload – conferences, teaching, grants, serve on committees, professional services, research projects, etc.”
- “They are afraid to open email, because it will be filled with hundreds of student demands.”
- “They are not in their office all the time. But when they go out of their office, they always have a laptop or some other device with them. This makes me think they need to monitor important things all the time.”
- “They pay a lot of attention to every funding opportunity.”
- “They seem to disappear whenever there is a big paper or funding deadline.”

Data Sources

The list of data sources used for the affinity diagram is attached as an appendix to this document.

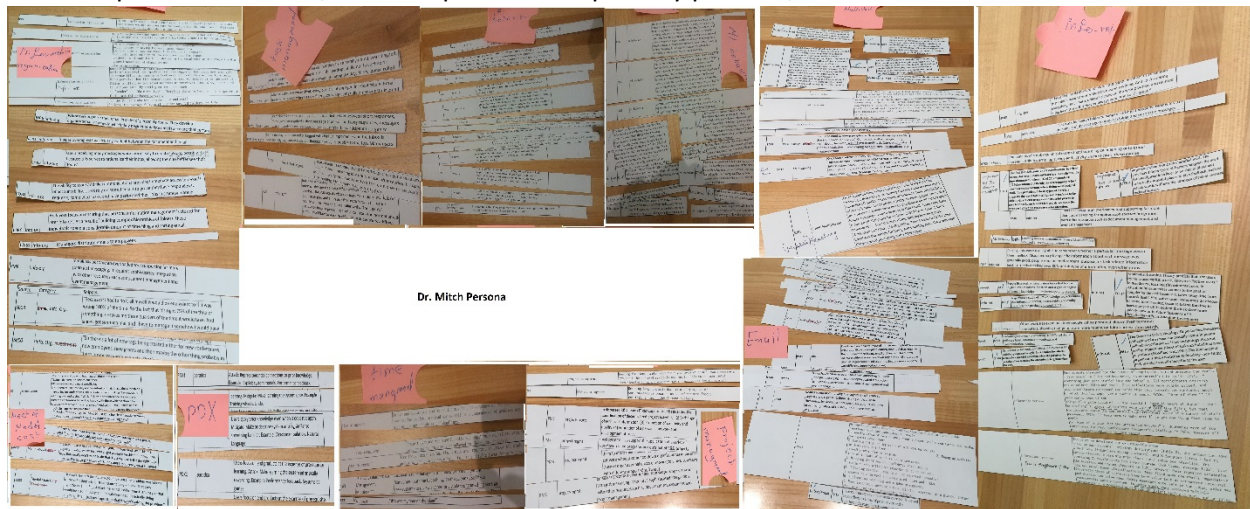
This list is also available in the foundation document, but only items 1-94 as additional personal background data was used for the foundation document beyond what was used in the affinity diagram.

Compared to the list of data sources in the “family planning” document, the additional data sources shown below were used for the affinity diagram:

Data Source Number	Data Source	Use in Persona?
	Persona Background and Activities	
S000	Slater, Michael. "Portrait of a Professor", case study slides, 2014. Quotes part of case study interview of subject 000 conducted prior to personas project.	Yes
S143	Interview, subject 143.	Yes
S287	Interview, subject 287.	Yes
S444	Interview, subject 444.	Yes

Persona Skeletons

The final persona skeleton, after adaption to our primary persona, is shown below.



Additional Detail

A text-based category-centric breakdown of these segments is also included as an appendix to this report.

Full size picture images of the detailed segments are also included as an appendix to this report.

Gestation

Prioritized Persona Skeletons

It is important to revisit certain elements of our “family planning” report as they help put the prioritization input we received from our executive sponsor in context:

“It is safe to say that some aspects of the design of the OSU “Email Predictor” system do not adequately take into account the potential dominance of the end user persona of the user, are not aware of the larger context of the user’s work and environment, or do not adequately factor in the value of the user’s time. The end user may be averse to spending their time learning anything about the assistant beyond the core tasks they use the assistant for. An intelligent assistant may be more effective if designed using personas.”

When discussing how to prioritize our rough sketch skeletons of different professors, our executive sponsor reminded us how important it was to realize that his current role is dissimilar to that of many other professors. It was important to our sponsor for our persona to capture “the *larger context of the user’s work and environment*” as described below.

Additional specifics that the sponsor (and model of the primary persona) mentioned as important:

- Lots of different workflows compared to professors who have to teach.
- A lot more travel details, a lot of reimbursements, and a high degree of travel complexity.
- Weekly reports from his large team. Some require significant time to process.
- External things such as his AAAI responsibilities which take time and have their own workflows.
- Workflows for book writers, journal editors, and conference chairs.
- Additional roles as a spokesperson for machine learning to the broader science community.
- Tags aren’t perfect, but they work better than anything else he knows of.
- In his ideal world, he could get to all of his information using tags and use tags for context recovery. This is similar to what he expressed during an earlier case study interview.

The foundation document attempts to represent these important aspects of the primary persona.

“Currently, design and development processes do not adequately represent these different users and their various roles.”

While it still is important to expand the appeal of the intelligent email assistant to a broader group of professors, we are focusing first the only professor who is currently using the assistant.

This focus fits well with Alan Cooper’s dictum regarding personas, “Design each interface for a single primary user” as mentioned in *About Face 2.0* and discussed on page 170 of the “Persona Lifecycle”.

If time permits, we will explore additional personas, likely along the lines of our original “proto-personas” or “assumptive personas”.

Revisiting the product problems we are trying to address:

- *Improve user-centricity:*
The product doesn't take into account the day to day life of a professor. For many tags, there are particular workflows and contexts that the software doesn't know about it. By using a professor persona, we hope to design and implement features in a way that better supports the user.
- *Better separate research from end-user concerns:*
Parts of the product are geared towards research and other parts towards end-user features. Sometimes features for these different parts are not developed adequately, because there is no clearly defined model of the "researcher" or the "end user". Personas should help us target these often divergent features for different types of user better.

We can get a sense that the priorities given to us by the executive sponsor do match up fairly well with these original problems. The focus is more specific, but the problems are the same.

Similarly, if we revisit the process problems we are trying to address:

- *Improve feature triage:*
In team meetings and other situations, sometimes it is difficult to triage features. We don't understand how they will be used and/or why. Personas should enable us to better answer questions such as "would Mitch use this feature?" as well as enable us to construct a feature-persona weighted priority matrix that should help us prioritize features for a product development cycle.
- *Better feature and specification documentation:*
Our feature description/specification documents can become more lifelike, i.e. contain feature walkthroughs using personas. We can also list target personas for different features.
- *Improved shared understanding:*
The development team often feels like they have different pictures in mind of the users who run the intelligent assistant. Personas should give development a better connection to who we are trying to help with this app and give us a common language across development, design, product management, etc. The design documents, for example, will incorporate personas which will give development a more singular context they understand, e.g. each of the personas.

As we got into the details of how we would address our process problems, it was very helpful to have the help a software developer who is part of on-call persona team.

It was clear that the developer was still trying to wrap his head around this concept of the "persona". In general, we got the impression that the developer had a lot more "how does the user do this?" questions than "why does the user do this?" or "what is the person trying to accomplish?" or "what outcome is the user trying to achieve?".

The core persona team spent considerable time discussing personas and going through examples of how personas can be effective. We used a "in the room" live demo with Rasha as the stand-in for one of the professors we interviewed to answer the developer's questions. It was very effective and it wasn't just the developer who "got it", but also the persona core team. The "in the room" live demo really brought the character we were describing to life. We realized later, though, that creating all the documents to represent the same persona as well as the live demo would be a challenge.

We also noticed the developer had questions about the current paper he is working on and was in effect expressing his desire to have these questions answered by wanting to know these details of the primary persona. These questions included:

- “Some people just quickly skim the email, if the email is not important, than they won’t go to detail. But others maybe will go to detail for every email. Maybe there is a different behavior for people in different time of a day? How does the persona read their email every day?”
- “How many project he/she can manage at the same time?”
- “How do they multitask? How much is their domain knowledge? How do they know what they want to do?”
- “How does the persona add a tag to a message?”

Some of these questions were quite humbling as they seemed to point out large variations in domain knowledge and target audience knowledge amongst members of the intelligent email product team.

After going through the affinity diagram with the developer and discussing each category/bone and what it meant, the developer indicated that the below categories were most important:

- Mental models → developer wants to know how the persona thinks.
- Paradox of the active user → developer wants to know how the persona invests time makes decisions using the software.
- Behavior → developer wants to know many details of how the persona makes decisions with email and tags.
- Multitasking → developer wants to know how the persona does multitasking.

The developer’s category/bone interests were illuminating in that they further pointed out what aspects of user-centric software design and development we could improve on as a product team. As before, the challenge is representing the persona well enough so that the persona can embody enough of this knowledge to be helpful for the developer.

It is important to note that the persona core team had some serious discussions regarding “who is the persona for?”.

To help figure out a path forward, the personas core team consulted the unabridged “Persona Lifecycle” reference guide and realized that sometimes more developer-specific personas are needed (“Oden”, pg. 229).

What a particular developer needs from a persona can be quite different than what a broader team needs. There are examples in the “Persona Lifecycle” of highly software feature specific personas like “Oden” and also more generalized personas like “Genevieve” and “Jim” on pages 684-685.

With this knowledge, we decided to largely remain focused on a broader target persona, but chose to fold in some extra detail to help address the developer’s needs.

We will address further issues with targeting and adaptation of the persona to the target needs during validation. We believe it may be possible to build one foundation document, but more than one communication document, each of which focuses on particular aspects of the persona. We will also check with our on-call research advisor to get some guidance with this somewhat complex puzzle.

Persona Foundation Documents

The foundation document for our primary persona is included with this report as a separate document.

Note that the additional data sources shown below were used in the creation of the persona foundation document, for personal background and personal habit details. This additional information was added as per the sponsor's goals and prioritization input.

Additional Data Sources and Categories

Data Source Number	Data Source	Use in Persona?
	Persona Background and Activities	
S000C1	Slater, Michael. "Portrait of a Professor", unpublished case study report and associated case study materials and records, 2014.	Yes
S000W1	Personal background, general http://eecs.oregonstate.edu/people/dietterich-profile	Yes
S000W2	Personal background, Distinguished Professor http://oregonstate.edu/leadership/provost/distinguished-award	Yes
S000W3	Personal background, Distinguished Professor and funding http://oregonstate.edu/dept/ncs/lifeatosu/2013/osu-to-honor-two-faculty-leaders-as-%E2%80%9Cdistinguished-professors%E2%80%9D/	Yes
S000W4	Personal background, AAAI http://www.aaai.org/Organization/officers.php	Yes
S000W5	Personal background, renowned machine learning expert. Future of Life Conference http://futureoflife.org/misc/AI	Yes

Validation

We performed what was essentially some *preliminary or early validation* of our persona with our sponsor and some *initial or exploratory validation* with the developer on the on-call persona team.

As above, we received different inputs. A short characterization:

The sponsor wants to be sure some things about his work and goals are documented via the persona so developers understand the big picture.

The developer wants to be sure there are a lot of nitty-gritty details so he can work on implementing features based on a thorough body of knowledge for the persona and how users think and act.

These divergent needs will need to be sorted through as part of validation which the persona core team will focus on as the initial part of the next persona building phase. It may be we need two (or more) communication/target documents for our persona. Hopefully further study and guidance from our on-call research/persona advisor will help the team navigate these issues well so the persona effort is viewed as successful by all members of the product team.