

Personas for Intelligent Email

Project Installment #3 – Birth – February 19, 2015

Introduction

In the “conception and gestation” phase of the persona project, we received prioritization from the project’s executive sponsor that ended up pushing our persona towards something along the lines of a “my mother” persona, but in our case, “my professor”. The analogy is not quite perfect, but some aspects of versions v3 and v4 of the persona were very specific and didn’t provide as much of the generalization to a broader class of users that the core persona team was seeking for the persona.

Things changed in the “birth” phase. The feedback we received from development was thoughtful and utility-focused, i.e. “how are we going to use this aspect of the persona?” and pushed us to change a variety of aspects of the persona, including making it more generalized to a broader class of users.

Interestingly enough, we found development had moved to more of a bigger picture view about using the persona. The bulk of the feedback from development was now about product and process issues, i.e. how to use Mitch to make the product better for the primary class of users.

The persona core team’s general view was that the “birth” phase of the persona project went well. We credited this “going well” to the fact that we had involved development since the beginning. While we don’t know to what extent development will really use Mitch in the future, we do feel confident that we have achieved a high level of both “buy-in” and “acceptance”.

Through the various steps of “birth”, we ended up making a variety of changes to Mitch that we all agreed were helpful in making Mitch more useful. Overall, we feel good about the birth of Mitch. He’s better than he was before and we have strong hopes for a successful adulthood.

Product and Process Problems Revisited

As we did with “conception and gestation”, it is important to revisit the product and process problems we are trying to address with the persona. The more we can continue to focus the persona on fixing real problems, the more we will achieve a greater perceived utility, i.e. “Mitch really helps us solve problems.” And ultimately this should mean more use of Mitch by the development team over time.

We will discuss how each product/process problem has evolved as we went into “birth”.

Product Problems / Conception+Gestation	Product Problems / Birth
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.	Improve user-centricity: The user-centricity problem still represents the workflows of a non-teaching Professor that our executive sponsor would like us to support better. We believe there is enough information in the persona to improve user-centricity. We may need to supplement the persona with additional information.

Product Problems / Conception+Gestation	Product Problems / Birth
<p>Better separate research from end-user concerns:</p> <p>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.</p>	<p>Better separate research from end-user concerns:</p> <p>This challenge will always be there, i.e. making research software that works well for an “end user” who wants the experience to be simple and predictable vs. adding functions that enable us to investigate research topics and write our research papers.</p> <p>This area is not going to be a focus in the birth or adulthood phase.</p>

We can get a sense that the priorities given to us by the executive sponsor do match up fairly well with these original problems. That said, we are narrowing the focus of the product problems so we do not have too many problems to tackle using the persona in the near term future.

Process Problems / Conception+Gestation	Process Problems / Birth
<p>Improve feature triage:</p> <p>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.</p>	<p>Improve feature triage:</p> <p>Improved triage remains a key value proposition of the persona.</p> <p>For example, Shahed mentioned that had the persona had been made in the past, he would understand better how to select machine learning features for the primary persona, perhaps using a hierarchical learning model instead of a flat model.</p>
<p>Better feature and specification documentation:</p> <p>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.</p>	<p>Better feature and specification documentation:</p> <p>While perhaps not the main focus of the persona effort going forward, there is some value here. Shahed asked about a “cloud” version of the intelligent email and there was a factoid in the persona that talked about how the user was frequently disconnected from the Internet. Hence we know that our feature specification needs to support offline usage.</p>

Process Problems / Conception+Gestation	Process Problems / Birth
<p>Improved shared understanding:</p> <p>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.</p>	<p>Improved shared understanding:</p> <p>Improving shared understanding is key to making intelligent email better over time.</p> <p>Before having the persona, knowledge of the primary user class was to some degree “buried” in a case study report and some slides. While helpful, we believe capturing a picture of the user in the form of a persona will be more accessible.</p> <p>To what extent we will write new design documents is hard to say at this time, but we do know they would be more valuable if they addressed our main persona.</p>

Communication Strategy

As Shahed and Tom have been part of the persona process from the beginning, we decided to adopt a relatively basic, functional, communication strategy.

It is worth noting that much of “birth”, including our communication strategy, is based on the understanding that if development uses the Mitch persona to help make the intelligent email product better, our executive sponsor is likely to be pleased.

So making Mitch work well for development is key to our persona project success over time.

The communication approach we used:

- Make it easy for development to keep Mitch in their minds.
- Make it easy for development to reach out to Mitch to ask questions.
- Promote an image of Mitch to development that is engaging and helpful. We found in some of our persona role-playing exercises that conversing with Mitch could be intimidating. On the plus side, this sort of emotional response supports our belief that our Mitch model is realistic. Many students are indeed intimidated talking to senior professors.

Push and Pull

As mentioned above, our communication strategy is basic and designed to be easy and informative for developers. In addition to the push and pull communication methods that we implemented, we also had a few communication ideas that fell into the “if time permits” category.

Pictures of various communication devices are included as a supplementary document.

Push

- Mitch flyer. Very simple, basically a friendly picture of Mitch working at a table that has his name and contact email for questions (see below). The Mitch flyer is placed in an easily visible spot in Shahed's office in KEC2048, so Mitch is always there.
- Portable Mitch to support Mitch being in the meeting for development meetings. Basically this is the flyer taped to a cardboard box, so we have some additional physical presence in meetings vs. something flat or small.
- Mitch business cards. Very simple, basically some realistic information about Mitch and his contact email for questions (see below). This is basically "portable Mitch" that the developer might use when they are away from their desk/office. It's also "small Mitch" in case the developer doesn't want a flyer of Mitch prominently displayed.
- Send out weekly updates via email on how Mitch is being used and what problems he is helping with, i.e. a Mitch status report. This sort of status report helps Mitch appear more "live" and reminds our executive sponsor that Mitch is being used and providing value.

Pull

- Mitch website. This is a basic, easy to understand page for information about Mitch. This includes his foundation document and how to contact him via email. All of the footnotes in the main Mitch foundation document are hyperlinked to the appropriate supporting evidence, so developers are "one click" away from supportive evidence/research for the various aspects of the Mitch persona.
- Mitch "ask Mitch" email address. Having a real EECS email address for Mitch helps people think Mitch is real and present. It is also easy from within the Microsoft Outlook / intelligent email environment to write a message to Mitch, asking him for advice or asking him a question.
- Mitch URLs for web and email:
 - <https://wiki.library.oregonstate.edu/confluence/x/YwQ3Ag>
 - askmitch@eecs.oregonstate.edu

If Time and Budget Permit

- Connect "askmitch@eecs" to a customer support portal such as ZenDesk or FreshDesk. Or perhaps directly offer an embedded customer support frame on the Mitch wiki page (if technically possible using Confluence).
- Print business cards and hand them out to people Shahed works with on other projects. If others know about Mitch, there will likely be more communication about Mitch, more "presence". Test which business cards are most "friendly and engaging" for some relevant population and use the most "friendly and engaging" design.
- Write blog entries for Mitch from time to time, so Mitch appears more "live", i.e. is not just static content.

- Add a hook in the intelligent email product itself to email a question to Mitch or bring up the customer care portal in a web browser. This way, during development if a question comes to mind, it is very quick to ask about it and minimal mental context is lost.
- Similar to the above, add a plug-in into Visual Studio or IntelliJ to support questions to Mitch or to bring up the customer care portal in a web browser. So either during development or product test/use, it is easy to ask questions and get information about Mitch.

Framing Personas for Management and Development

As we've discussed above, we haven't had to "market" or "sell" personas to our executive sponsor or development, largely because they have been part of the persona project process since its beginning.

However, we did want to use the "elevator pitch" idea to help frame Mitch for management and development, so that it is ultimately easier to show that Mitch is providing value.

Elevator Pitch

- During the course of the persona project, development has identified specific product and process problems that Mitch can help with. These problems align well with our executive sponsor's inputs on future software directions.
- Development really believes the Mitch persona will help us design a better learning system for tags. We didn't realize in the past that the primary persona uses mostly hierarchical tags.
- When we have new students working on intelligent email, they can start with some knowledge about who we primarily design each interface for vs. just reading about various previous product versions, looking through the bug/issue database, etc.

Mainly we focused on the first bullet point, i.e. the product and process problems. We want to talk about real problems and demonstrate that Mitch has real utility in helping address these problems.

Persona Validation

During "conception and gestation", we ended up having a footnote merge issue. This resulted in footnotes being present that weren't actually referenced and places where we needed footnotes that didn't have footnotes.

Hence, fixing the "merge issue", was paramount for the "birth" phase of the persona. To be confident that we really fixed the "merge issue", both Ying and Rasha of the core persona team reviewed all the footnotes. They each identified a number of problems which were ultimately fixed. Rasha rebuilt the Mitch foundation document using all the fixes, including input we got from development during the birth meeting. Sruti and Ying were tasked with reviewing Rasha's new foundation document using the following basic process plus whatever else they felt would help increase audit quality:

- Review the "check table" (a list of all the changes we needed to make) for footnote-factoid correctness and make sure what is in the table (in Excel) made it to the Word foundation document.
- Make sure every footnote/factoid is directed for its intended audience (mostly development, but also management).

- Compare Rasha's new persona document with the v5a persona document, to see if any small changes in the text didn't make it over to Rasha's new document.
- Review Rasha's persona document to make sure everything that should have a footnote does have a footnote.
- Review Rasha's persona document to make sure the footnotes that are in the document reference the proper sources/factoids.
- Convert Rasha's document to a PDF using Acrobat 11 and make sure all hyperlinked footnotes work.
- In MS Word, make sure all linked footnotes go to the right bookmark in the document.

We also utilized a “utility validation” process so we could better understand which elements of the persona were perceived as “useful” by development.

While Shahed was the primary source of input for “utility validation”, we also used Jed, an experienced professional developer with prior experience with the TaskTracer project, as a control for Shahed's input.

Essentially we didn't want to lose persona details that perhaps a graduate student with little professional development experience didn't feel were important, but a professional developer (with some degree of domain expertise in intelligent email) thought were important.

The feedback from Shahed and Jed also helped guide us in deciding which parts of the Mitch persona to make “changeable”. If something was important to both of them, we made it “non-changeable”.

Having Shahed help the core persona team with the “utility validation” really helped Shahed think through the various aspects of Mitch. It was the general opinion of the core persona team that this feedback ended up being quite helpful for the success of the persona, i.e. acceptance and buy-in.

Additional Details

Full size scans of the commented persona foundation documents we received from Shahed and Jed are included as a supplemental document.

Shahed's comments on “Mitch-v4” persona that we discussed during the birth meeting are mentioned in the below section describing the birth meeting.

The Birth Meeting

The birth meeting for Mitch took place late Tuesday afternoon, Feb 17th, 2015 and lasted about an hour and 15 minutes. The basic format was briefly presenting some basic details of Mitch using about five slides and then having a very open and practical discussion with development on how to use Mitch.

In the course of the meeting, we took care to avoid “telling” development too much on how the Mitch persona would be useful. Instead, we asked development to think about the character of Mitch and come up with some real past problems where Mitch would have been useful.

Achieving Acceptance

At the conclusion of the birth meeting, the persona core team's collective view was that we had achieved a high level of acceptance. Shahed asked some very thoughtful questions and was fully engaged in the persona and figuring out how to make it useful.

Ultimately the core persona team believes the following main factors led to a high degree of acceptance of Mitch:

- Involvement of development since the start of the project.
- Having an open, honest conversation about using personas as a tool and discussing specific contexts/issues where the tool might be useful.
- Being open and willing to update Mitch to better suite development's perceived needs.
- Not presenting Mitch, or personas in general, as some sort of miracle cure for all development woes, but rather as a user-centric design tool that might help with specific problems in our intelligent email project.

Conversing with Development about the Persona During the Birth Meeting

- One of the first things we asked development about was what sort of general impression they had of Mitch. We found that development thought Mitch was "very specific" and had concerns that a very specific persona might not be as useful as a less specific, more general, persona. Beyond this concern, development also mentioned that they might want to use a requirements document instead of a very specific persona. We didn't explore how a requirements document would be a substitute for a persona, but instead focused on generalizing the persona.
- We asked development to come up with a question for Mitch that they had on their mind. Development put forth the "would Mitch want to run the intelligent email software in the cloud?" We were able to address this question using the fact that Mitch is often disconnected from the Internet. Outside of security concerns, Mitch needs everything to run on his laptop for the times when he is disconnected. We also had a good discussion about Mitch's cost-benefit analysis of "running things in the cloud", i.e. if there was sufficient benefit and low enough cost, we felt Mitch might move to more of a cloud model.
- We asked development to identify a fact about Mitch which they believed was useful. Development identified "Using tags is a notational strategy for Mitch. Tags also function as mnemonic cues to help Mitch recover context". This information helped development understand that Mitch's tags were not simply some random/arbitrary set of words, but that tags had a certain context and intention.
- We asked development to identify a fact about Mitch which they thought was not very useful. In this case, development selected "Time and time pressure have a strong effect on how and why Mitch uses his software". To help development see why the core persona team had included this fact, we had a good discussion about how "my software should minimize memorization overload" and how "automatic reminders/suggestions" might be useful for situations with a high degree of time pressure. The core persona team also described how time pressure and information overload might often be correlated. At the end of discussing the "not very useful" fact about Mitch, development could see that the fact was actually useful, but that it took some extra thinking to realize how it was useful.
- We inquired of development what some other useful features of Mitch were and we got some useful feedback. Essentially development could see how Mitch uses tags (page 4 of the

foundation document) “complements the tag mnemonics” and are examples of “intention action”. Development got a better sense of what Mitch wants out of a tag and the purpose of the tag. Development made the assertion that “AI should be able to understand its purpose”. Hopefully these insights into tags will help development build better workflow support.

What Went Well During the Birth Meeting

- Development really has a solid idea of what personas are.
- Development believes personas are useful, especially for new developers or for developing new features without much input from the executive sponsor.
- Got really good feedback on details of Mitch and overall impressions of the Mitch character.

What Didn't Go Well During the Birth Meeting

- Nothing major went wrong, per se. As Shahed had been part of the persona effort since its beginning, the meeting was mostly focused on how to take advantage of Mitch.
- We couldn't have Shahed try sending a message to “askmitch@eecs” during the birth meeting, so Shahed would have this email address already in his email. We failed to let Shahed know in advance to bring his laptop.

Surprises During the Birth Meeting

- We got some really thoughtful questions about how to make good personas, when they are most useful, and how the role of the “primary persona” plays out in design/development.
- Development was very clear and emphatic about making the persona more generalized, i.e. backing away from “my professor”.

Process Changes with the New Persona

Our communication with development regarding process changes was relatively basic. We mentioned about how we would like for Mitch to be present in the room when we hold development meetings. We also mentioned how we could start using the persona to address the process problems that we feel will add value quickly, namely:

Improve feature triage:

For example, Shahed mentioned that had the persona had been made in the past, he would understand better how to select machine learning features for the primary persona, perhaps using a hierarchical learning model instead of a flat model. Development came up with this example during the birth meeting and we talked through how the persona would help. Most of this “help” is giving development the information they need to better triage features.

Improved shared understanding:

The development team often feels like they have different pictures in mind of the users who run the intelligent assistant. Having Mitch be present and having push and pull ways of getting information about Mitch should help improved shared understanding.

With both of these process problems that we'd like to improve, there is some challenge to see how much development will embrace Mitch in adulthood. While acceptance of Mitch as a useful tool seemed very positive during the development of Mitch and during the birth meeting, development changing some of their work habits will take some effort.

Summary of Changes Made To the Persona

Building up to the birth meeting and as a result of the developer feedback we got during the birth meeting, we made a number of changes to Mitch. These changes are highlighted below.

- We made Mitch less specific, i.e. less of "my professor". This was reflected in changing Mitch to simply be a technical CS professor instead of an ML expert. We also removed specific mentions of groups (AAAI) and roles (President), so Mitch is not as singular.
- We changed "Distinguished Professor" to Computer Science Professor (although it appears that this change didn't make it to the new foundation document yet).
- We played down Mitch's role as Director of the Intelligent Systems Laboratory.
- We shorted the description of how Mitch interacts with the artificial intelligence community. There is some question as to whether or not we could get rid of this entirely.
- We removed some aspects of Mitch that are hard to interpret, i.e. being a "renaissance man" of science.
- We made Mitch's use of additional tools more generic, i.e. didn't focus just on "OneNote".
- We deleted information about how Mitch programs in Lisp/R. Neither language is relevant to what Mitch does in the intelligent email client and adding this information introduces some possibility of confusion, i.e. "would Mitch want to program the intelligent email client using R?". Mitch has made it clear that the answer is "no".
- We removed other possibly difficult to interpret characteristics of Mitch, i.e. the fact that his assistant has access to his calendar.
- We removed low utility information such as Mitch being a UNIX user in the past.

Thoughts on Persona Adulthood

Looking forward to persona maturation and adulthood, the key area we want to use the persona for is "product planning". There is also some need for the persona for triaging features / making better features, but this usage will depend on what exactly development is working on in the near future.

The persona should help development with a variety of development tasks associated with "better supporting the workflows of the primary user" which is what the intelligent email executive sponsor would like to see.

We will see during the next 2-3 development meetings how Mitch gets used and how the higher priority process and product problems we discussed earlier benefit from using Mitch. We may need to further evolve Mitch as development surfaces missing/not quite right aspects of Mitch. As the core persona team did not position Mitch as some sort of universal panacea, we don't believe this will be an issue. Rather, getting Mitch to be always present in meetings, frequently asked questions, and providing useful help to development will be our main challenge.