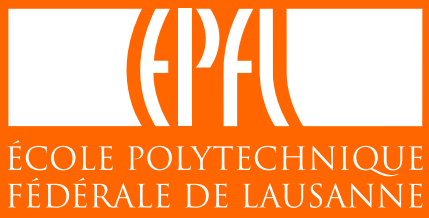

School of Computer and Communication Sciences IC

Computer Science Section

Master Thesis Project

Flok: Collaboratively solve problems through participatory design thinking

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Acknowledgments

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Abstract

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1 Introduction

Humans have ideas. Not a lot of those ideas end up being applied, no matter if they are good or bad. Sometimes they just stay in the head of the person who had one and are not developed further because the person thinks it is not a good idea. She might be right but she can't really know as long as she hasn't shared her idea. And of course it happens that people share their ideas. That's something good to do because it can bring a lot of valuable input that we don't necessarily think about by ourselves. This makes the idea evolve; it might go in one direction or another, change shape, or even generate new different ideas. This can also be seen as what is called *brainstorming*. This process is in general quite messy. A lot of information is generated and not structured, which makes it difficult to highlight the most important items. For brainstorming, teams sometimes use a ticketing system that they already use for other projects related tasks. Tickets are great for development, but not good for creative brainstorming.

Therefore, what we want to achieve is to design and develop a platform that significantly improves collaboration around ideas within a team or a small to medium-sized company by getting considerably close to the cognitive working reality of a team. We want to have a more human experience. This will enable the users to have an effective way to bubble up the good ideas among all the information, and also to drive the sharing of new ideas. All this should be highly intuitive and straightforward to use, by being particularly careful about the overall user experience of the platform.

1.1 Flok

Nothing Interactive developed an internal web platform called *Flok*. It was also about improving collaboration within a team or a medium-sized company, but rather by providing various components such as a "to do" app, a time tracker or a global activity stream to which events can be aggregated from external services. However, Flok has been rescoped to match this Master thesis goals. What stays, in addition of the name, is mostly the general idea of collaboration and respect of the human behavior. The original Flok is still accessible on GitHub[1].

1.2 Hypothesis

It can be proven that a truly real-time approach to create, read and update information within on-site or remote, (inter-)disciplinary teams significantly improves their shared know-how and overall collaborative spirit thus leading to a verifiable increase of their creative potential.

1.3 User-centered design

The approach taken to create the platform is based on the *user-centered design* concept. The goal is to focus first on the user need and to start by designing the user interaction with the product to then define what the content is going to be and which technologies are going to be used. The reason why we took this approach is because we really want the product to be intuitive for the end-users, that it matches their expectations regarding what they need, what

[1] `https://github.com/nothinginteractive/flok`

they can do with the platform, rather than making them adapt their behavior. To this end, different processes were used, such as *User Story Mapping* to define the user needs, *Wireframing* and *Prototyping* to quickly test if the design of a functionality matches those user needs, and *User testing* to have feedback from real users in order to adapt the platform to their expectations. Moreover, we are not going through these different processes sequentially, but rather iteratively. Each of these steps enable us to discover new issues, new opportunities and we have then to reflect those in every step.

2 Personas

In order to embrace the user-centered design concept, we have to put ourselves in the shoes of the users we expect to use the platform. To do this, *personas* were created. They are fictional characters build up from the ground who represent the different type of users that we might have. We made three of them for the project. All three work in the same startup. *Andrew McAllister* is the CEO, *Melanie Carter* a developer, and *Sergei Fleming* an interaction designer. These personas were not defined in much more details, as part of the research was to determine more clearly for which purpose Flok is going to be used.

3 User Story Mapping

User Story Mapping (USM) is a tool which help teams developing software to stay focused on users and their needs [1]. It is based on user stories and story maps. *User stories* are descriptions of how users are interacting with the whole product and not only with one of its feature. *Story maps* are a two-dimensional visual representation of stories with *cards* as atomic parts. In general, the top row of cards represents the backbone of the story, and the cards below give more details. In addition to the focus it gives on the users, USM enables the discussion within the team who builds it to create a shared understanding of the product. User story maps can be done with software tools which make it easier to edit and share. However, team collaboration is enhanced when people are facing a physical user story map made of sticky notes, which is what has been done for this project.

The user story map constantly evolves throughout the development of the project. In figure 1 you have an overview of how it evolved for Flok. Figure 2 shows you its state at the time of handing in the report.

4 Wireframing

Once we had a first version of the user story map, the next step was to build wireframes of the user interface. Wireframes allow to quickly have a very rough view of the components layout and how they fit in the available space. They enable us to see changes that need to be brought even before we start designing or implementing, and hence save us some precious time.

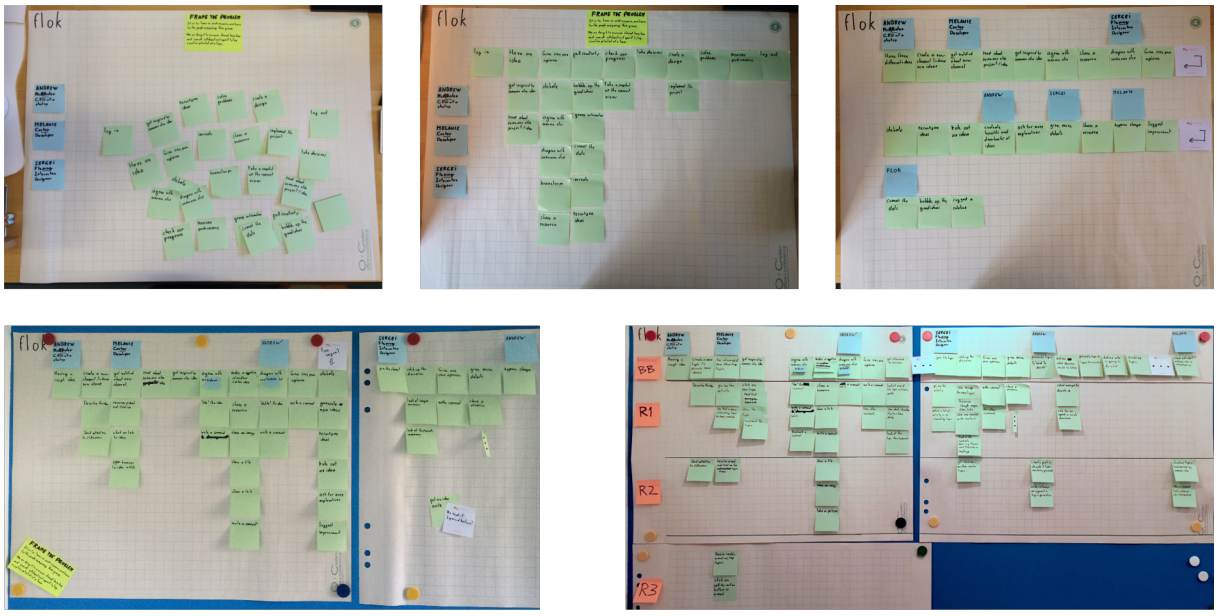

Figure 1: Evolution of the user story map for Flok

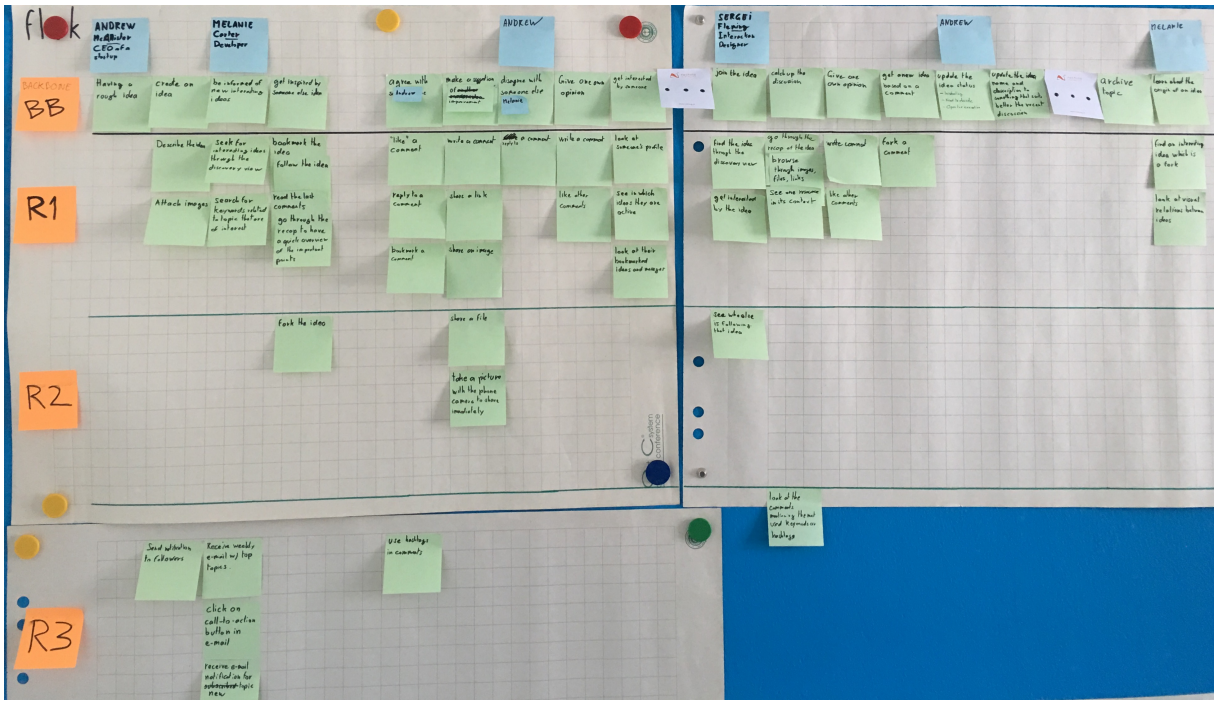

Figure 2: Current state of the user story map for Flok

5 Prototyping

6 Information architecture

7 Front-end implementation

7.1 Architecture

7.2 Design decisions

8 User testing

9 Conclusion

References

[1] J. Patton and P. Economy, *User Story Mapping: Discover the Whole Story, Build the Right Product*. O'Reilly Media, Inc., 1st ed., 2014.