

**Master thesis** Skill based routing in telephone exchanges

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## SKILL BASED ROUTING – THE END OF CUSTOMER SUPPORT FRUSTRATION?

**Your internet connection goes down for the second time this week and you call your internet provider for help. Wouldn't it be great if you were connected to the same person you talked to previously?**

Skill based routing is a concept about connecting calling clients to the best suited agents to answer their call. In the scenario described, your provider already knows that you are an internet customer with them, and that you called before about your internet troubles. Using this information, your experience calling in again could be made much smoother.

Being passed around between agents is one of the most frustrating thing when calling for telephone support, and it is also a loss of productivity for the agents. So, it is in the best interest of everyone to reduce this inconvenience as much as possible. There are also other side benefits for businesses to use a technology like skill based routing, as agents can know what a call might be about before answering and prepare by getting the relevant information ready.

This project focused on developing an interface for the agents answering and the administrator setting up such a system. By interviewing experts and testing on users we tried to get an overview of how a skill based routing should work. There are many technical details to consider, as the system must in every case be better than basic phone routing where clients have to press several numbers. It was important that it was presented in an understandable way, as the interfaces are something that agents work with every day.

The project started with many brainstorming sessions, interviews and thorough investigations of already existing products.

Sketches were drawn to put the gathered ideas down on paper, which then were recreated into a clickable computer version. Discussing with user interface expert as well as testing on some users, we exposed a couple of issues with the product. These issues were fixed moving on to a nicely designed computer prototype, looking much like the final product would, see Figure 1. The product was then tested remotely by agents who work with telephone support every day, and the feedback was mostly positive!

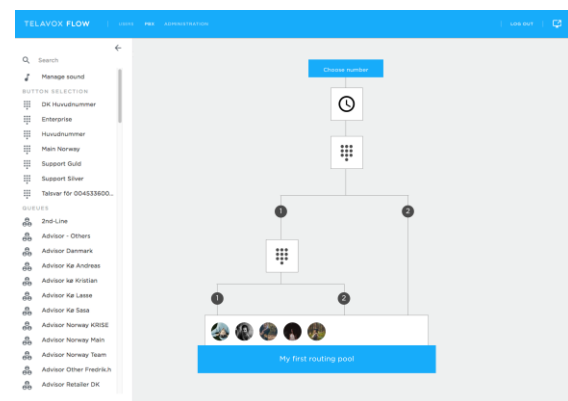


Figure 1. How a routing system looks to an administrator.

During the project, a survey was sent out asking consumers what their thoughts were about calling customer support. Surprisingly positive response was found for the feature “on hook waiting”, enabling clients to be called back instead of waiting in line on the phone. Some responders even said they would accept waiting over an extra hour for support, if they could just wait off the hook!

In the future, these prototypes are meant to be implemented into real code and used in routing solutions. Overall, the prototypes work well and there is a high chance that the future of customer service will be a more pleasant experience for everyone involved through skill based routing.