

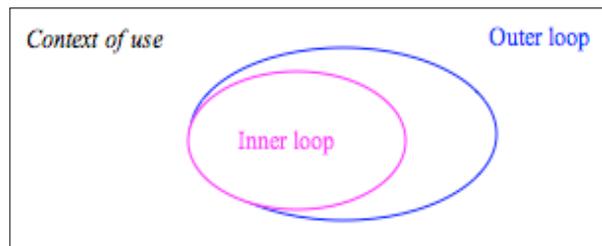
Customer-initiated Product Development a case study of Adaptation and Co-configuration

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Introduction

We have investigated how customers and developers interact through different forms of constellations in product development processes. The study took place in a Company consisting of 26 employees in two offices in Norway. Characteristic for The Company is their close and personalized customer relationship, but this is challenged as they expand and move into new business areas.

The general topic addressed is Adaptive Product Development in a software house, involving developers and end users (customers). Adaptive Product Development contains two components: Firstly, the professional developers can perform regular, purely in-house development, which can be defined as "inner loop product development". Secondly, the customers and developers can interact and collaborate in product development processes, and this can be referred to as "Outer loop product development processes".



Study approach

This particular study focused on the adaptation and co-evolution as a mutual development process between customers, developers and products. A conceptual framework drawing on product development, end-user development and activity theory, to highlight inclusion of customers in the development process makes up the theoretical foundation in this study. In particular we drew on insights from Knowledge intensive firms, Meta-design, Modding and Co-configuration, understood as

- *Knowledge intensive firms*: People working with complex tasks, characterized by autonomy and dilemma handling, where traditional forms of control are no longer adequate
- *Meta-design* seek to provide end users with tools that allow them to tailor and further develop professional tools in their own context
- *Modding* is a process where the customers use the original products as platforms when they initiate further development
- *Co-configuration* is an approach to product development where the dialectic relationship between the customers and developers are of the utmost importance.

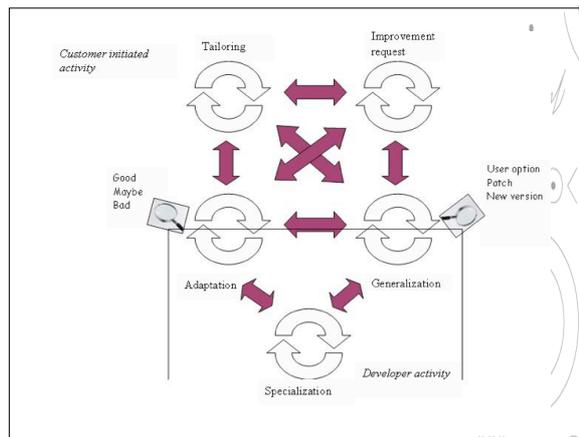
We used a qualitative approach, and collected data through open ended interviews, some participant observation and focus groups over a period of one and a half year.

Findings

Using Adaptive Product Development to focus on adaptation and co-evolution, the following forms of software product development appeared in the Company:

- *Tailoring* when active end-users made adaptations on their own.
- *Improvement Request* when customers enter requests to the company about extra functionality, bugs-fix etc., viewed important from the customers' perspectives.
- *Generalization* occurred when a new version of an existing product was released and made available to all customers.
- *Adaptation* was when a customer requests for improvement(s) to an existing product and the company fulfilled the request for just this customer.
- *Specialization* was when the professional developers at the company create in-house builds.

This is illustrated in the diagram below.



Discussion and conclusion

The different forms of product development can be seen as a new form of work or production that includes the customers. One of the important findings from this study is how customers play important roles in the Adaptive Product Development as initiators of further development of the products at the Company.

The process of Adaptive Product Development points at interesting learning opportunities taking place between the interacting organisations. To further explore the learning aspects of Adaptive Product Development looking at boundary crossing and "knotworking" as activities in hybrid shared spaces give direction for further work.

Acknowledgement

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