Chapter 15

Supporting Collaborative Tailoring

Issues and Approaches

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Abstract. In this chapter we depict collaborative aspects of tailoring software. We provide a categorization distinguishing between (at first) three levels of intensity of user ties regarding tools usage (“shared use,” “shared context,” and “shared tool”) and discuss approaches to support collaborative tailoring in these scenarios. For the two levels with the most intense ties (“Shared Context” and “Shared Tool”) we provide the relevant theoretical background as well as empirical evidence from our own fieldwork. Our taxonomy helps us to describe and address two important shortcomings of current tailoring environments. First, current considerations regarding tailorability usually address tailoring within one tool, while current work infrastructures (which we introduce as a forth scenario—“Shared Infrastructure”—in our taxonomy) require a thinking beyond one tool. Second, although studies on tailoring-in-practice and evolving use of organizational software show the importance of user-user-interaction in processes of technology configuration, this interaction was only treated as a side issue in the design of tailoring environments. Respecting the importance of that interaction, we suggest to stronger focus on opportunities to support those appropriation activities of users.

1. Introduction

More often than ever software is involved in the collaboration of computer users in offices. Thus, the way a software product is implemented, configured, and used influences the collaborative work of these users. In this chapter we describe approaches to support end-users in collaboratively finding and implementing tool configurations that are adequate for their form and intensity of collaboration. “Tailoring” has been defined by Henderson and Kyng (1991) as “changing stable aspects of an artefact” and distinguished from use as persistent manipulations that are not “being made to the subject matter of a tool” (e.g. a text), but “to the tool itself.”¹ Traditionally, approaches to improve the “Tailorability” (Trigg et al., 1987; Henderson and Kyng, 1991) of software artefacts address the improvement of the necessary artefact flexibility (e.g. Malone et al., 1992; Stiemerling and Cremers, 2000; Wulf, 1999). But offering the necessary flexibility to make tools fit diverse and changing work contexts is only the first step of offering support. A deeper understanding of the role tailoring plays in the appropriation processes of individuals, groups and organizations has lead to new ideas to also support

¹ We use the terms “configuration” and “tailoring” synonymously, but with the former having a more technology-related notion, in contrast to the latter having a more socio-technical notion.

tailoring as an activity within the tailored artefacts. Being aware of the organizational aspects of tailoring activities we explore opportunities to support these activities with additional functions.

Especially long-term studies of groupware systems (Karsten and Jones, 1998; Pipek and Wulf, 1999; Töpel et al., 2003) show that tailoring an application is only the technological condensation of an individual or social activity of designing a work setting for performing a certain task. In line with earlier experiences (Stallmann, 1981; Malone et al., 1988; Mackay, 1990) they show that tailoring activities often involve user-user interaction and collaboration. So, the “individual” decision how to tailor an artefact is to a certain extent always also social, since large parts of the knowledge used in the decision processes usually have been acquired through social interaction (e.g. knowledge on the capabilities of computers and tools, knowledge on the task the tool should serve in, etc.). So there is always a notion of cooperation in a tailoring activity, as it is in every activity of technology appropriation processes.

This general consideration of the sociality of tailoring processes has to be concretized to discuss possible opportunities for offering technical support for collaborative tailoring. To discuss existing approaches as well as new challenges, it is necessary to give some structure to support scenarios. In the next section, we develop four scenarios of collaborative tailoring that guide us through our discussions in this chapter. Focusing on technical support for particularly collaborative tailoring we will concentrate our discussion on those scenarios that show the biggest need for collaboration support. We close this chapter by describing new challenges for collaborative tailoring at modern workplaces and discuss extensions of tailoring interfaces to support the appropriation of groupware technologies in a broader sense.

2. The Collaborative Dimension of Tailoring Activities

What are the important aspects that motivate or even enforce cooperation in tailoring activities? Abstract perspectives on tailoring functionality have usually been dominated by distinguishing different tasks and complexity levels of tailoring interfaces (Henderson and Kyzg, 1991; Mørch, 1997).

In the literature on tailorable collaborative aspects have been mentioned at several occasions since the early 1980ies. Already Stallman (1981) reports that users not only think of small changes and try them, but also pass them over to other users. Mackay (1990) researched how people actively shared their tailoring files with each other. Oberquelle (1994) proposes a classification of groupware tailoring distinguishing tailoring actors, who can be individuals or a group, from persons affected by a tailoring activity, who can again be individuals or a group (see Figure 15.1). This can also be used to classify collaborative tailoring. Different aspects and intensities of collaborative tailoring of a single-user software product and of groupware fit in the resulting four categories: