Chapter III

Privacy and Trust in Agent-Supported Distributed Learning

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Abstract

The objective of this chapter is to explore the challenges, issues, and solutions associated with satisfying requirements for privacy and trust in agent-supported distributed learning (ADL). Accordingly, the first section will present the background, context, and challenges. The second section will delve into the requirements for privacy and trust as seen in legislation.
and standards. The third section will look at available technologies for satisfying these requirements. The fourth section will discuss an often-ignored area—that of building trustworthy user interfaces for distributed-learning systems. Finally, the chapter will end with conclusions and suggestions for further research.

Introduction

Background and Context

One of the key characteristics of our information economy is the requirement for lifelong learning. Industrial and occupational changes, global competition, and the explosion of information technologies have highlighted the need for skills, knowledge, and training. Focused on attracting and retaining staff, companies have placed an emphasis on training to bolster soft and hard skills to meet new corporate challenges. In many cases, career training has been placed in the hands of employees, with the understanding that employees must be able to keep ahead of technological change and perform innovative problem solving. One way of meeting the demand for these new skills (especially in information technology) is through online distance learning, which also offers the potential for continuous learning. Moreover, distance learning provides answers for the rising costs of tuition, the shortage of qualified training staff, the high cost of campus maintenance, and the need to reach larger learner populations. Key trends for corporate distance learning, germane to privacy and trust, include the following (Hodgins, 2000):

- Learners may access courseware using many different computing devices, from different locations, via different networks (i.e., the distance-learning system is distributed).
- Distance-learning technology will overtake classroom training to meet the needs for “know what” and “know how” training.
- Distance learning will offer more user personalization, whereas courseware will dynamically change based on learner preferences or needs. In other words, distance-learning applications of the future will be intelligent and adaptive.
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