Outline

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Motivation

Comfortable working environment, adapted to personal needs requires Collecting and evaluating personal data

Privacy-Enhancing Identity Management
Usually: inter-application partitioning

Complex applications?
Multilateral interactions?

Intra-application partitioning of personal data

Our Example Application

Anonymous user
Learner
Tutor
Technical Administrator
Moderator
Author
Content Administrator

Browsing
Learning
Guided Class
Self-Study Class
Dynamic Group
Annotation
Contact/Comm. Evaluation
Mobile Access
Manage Class
Manage Material
Authoring
Manage Content
Administrative System
Administer
Content Management
Common Working
Information
Contexts and Context Switches (1)

Context in general
any information that describes current situation of an entity –
considering information that is relevant for application

Our goals
• Enable users to control who knows what about them
• Establish various partial identities within an application by
means of contexts

Relevant aspects
• Current context within application
• Information that allow to assess linkability of his actions for
other users

Contexts and Context Switches (2)

Context
• Specific situation in which a user works to perform a task
• History of former actions if working on this task

Context switch
• User starts working on another task
• Implies not necessarily switch to another (possibly new) partial
identity
• Visible action – atomic context switch → atomic contexts
• Required: reasonable aggregation of atomic contexts
Handling Context Switches

A...prospective approach  B...collateral approach  C...retrospective approach

Necessary: combination of these three concepts

Summary and Outlook

• Preserve privacy despite the need to collect and evaluate information about users to provide them a personalized application: intra-application partitioning of personal data
• Partitioning based on contexts considering current task as well as former activities
• Application must support this partitioning
• Flexible configuration of context switches
• Deliver pre-configurations in order to support users

• Context switches in multilateral scenarios
• Visualization of linkability
• Realization and practical tests