Community Interaction platform

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Overview

• The Swedish pilot
  • The pilot in brief
  • The use cases
  • The two rounds of the pilot

• Demonstration

• Q&A
Söderhamn Pilot

- School internal social network for communication among students, teachers, and personnel
- Provide trusted authentication while protecting anonymity
- Usability: make privacy technology understandable for non-technical users (e.g. students)

Norrtullskolan School
Söderhamn, Sweden
Objectives of the Pilot

• To demonstrate how ABC technology can successfully provide trusted identification while protecting anonymity and privacy of children in real life applications where this is desirable

• To meet the requirements of the school and local (in this case Swedish) authorities.
  - The Swedish National Agency for Education
  - The Swedish Data Inspection Board
The Swedish pilot scenarios

• School internal community interaction among students, guardians and school personnel

• Main scenarios:
  ▪ Chat communication
  ▪ Political discussions
  ▪ Counseling with health personnel
  ▪ Document sharing and access
Chat Communication

- User(s) wants to chat with another user(s) (individual or group chats authenticated with specific attributes or identified by name)
• For some people the ability to express a political opinion anonymously is essential to discuss sensitive subjects.
  • Students prove that they belong to the school but can still remain anonymous

20 different nationalities
Counseling

- Get help and advice from school personnel
  - Students will discuss, get help or get advice from authorized professionals regarding psychological, physical and other problems
  - The students prove to belong to the school but can still remain anonymous
Sharing Documents

• The school is producing many important documents (exam results, grades, individual development plans etc.) that need to be shared with and distributed to the students and their parents.
Necessary features

• The school needed a way to stop usage of already issued credentials in case a student
  ▪ changes class or subject;
  ▪ no longer belongs to the school,
  ▪ ...

• The school is responsible for the well being of the students while at the school and using tools provided by the school
  ▪ What if anonymous users misbehave?
Pilot Users and Roles

- Students
- Parents/Guardians
- School personnel
  - Teachers
  - Counselors, welfare officers
  - Administrators
- School Inspection Board
- Inspector (The schoolmaster)
Approach

• Users were identified by smart cards they received from the school administration. The smart cards contained ABC software, credentials and attributes (e.g. name, class, date of birth, gender etc.)

• Students, guardians and school personnel used their smart cards to sign in to the school application (the Restricted Area Application)
Credentials (attributes)

- CredSchool (first name, last name, gender, school name, PUN=Pilot User Number, revocation handler)
- credSubject (subject)
- credClass (class)
- credChild (child)
- credGuardian (guardian)
- credRole (role)
Benefits!

• Students are in charge and can choose to …
  ▪ Remain anonymous/pseudonymous
  ▪ Be uniquely Identified
    “Claudia Hugosson”
  ▪ Be partially identified
    “Girl”, “Age 9-12” or “A girl, age 10-11”

• This can be done at any time and can be different from time to time.
• Students can choose what attributes they want to prove and to whom.
High Level Architecture

School Registration System
- ABC System
- IdM Database
- IdM Admin GUI
- IdM Mass Provisioning Tool
- IdM Smart Card Registrar
- LDAP Admin
- IdM Portal

Restricted Area System
- ABC System
- Restricted Area Database
- Revocation Authority
- Restricted Area Application
- Restricted Area Admin
- School Portal
- Restricted Area Client (JS)

User
- Smart Card
- ABC System
- User Client

Inspector
- Smart Card
- ABC System
- Inspector Application
Restricted Area (RA)

School Community

Restricted Area functionality

- Messaging
- Documents
- Chat
- Forum

School Personnel
- Teachers
- Nurses
- Coaches

Pupil

Parent
Two Pilot Rounds

• 1st round of the pilot successfully performed May-Jun 2013.
  ▪ 24 participating students were educated in the Privacy ABCs concept
  ▪ 22 performed tasks and 15 completed a questionnaire

• 2nd round successfully performed Oct 2013-Feb 2014
  ▪ 381 participants: students, guardians and teachers
  ▪ Improvements based on the results from Round 1
  ▪ Adaptation of the Revocation and Inspection functionality
  ▪ Altogether 91 persons participated in the questionnaire
Round 2

- 381 participants
  - 53 School personnel
  - 123 Students
  - 203 Parents
  - 2 Admins
D6.3 Evaluation of the School Pilot

- Contains an evaluation of the legal aspects and impact of using Privacy-ABC
- Provides a comprehensive list of recommendations for further development in using Privacy-ABC
- Summarizes the results of the questionnaire
  - Users were able to utilize the Restricted Area Application
  - Users had a good level of understanding and appreciated the overall concept of the Privacy-ABC technology
  - Users trusted that the systems improved their privacy and would use the system if it were to continue
Demo features

• Help and downloads
  ▪ User Client, User manual and credentials

• The RA system
  ▪ The menu (My dashboard, official RAs)
  ▪ Alias selector
  ▪ Enter an RA, post a message into the chat
  ▪ Open private chat
  ▪ Show “Report content” controls
  ▪ Counselling

• The User Client
  ▪ Manage credentials, revocation check, change PIN etc.
Demo

• RA system (select alias, chat, report content, counseling etc.)
• User Client - browser plugin menu
Questions?

Thank You
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