TENCompetence Action Logging

towards a standardised activity log

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Context

- WP4 runs pilots
- WP4 has to analyse the impact of the infrastructure
- TENCompetence system has become more complex
- TENCompetence scenarios have become more complex, too

⇒ Technical evaluation becomes difficult and inefficient
TENCompetence Domain Model
Problem

• Multiple Services
• Multiple Servers (that host different services)
• Different Interaction Schemes
• Different Types of User Activities

How to determine the actions of a user?
Simple Solution

• Take the log files
• Normalize the user logs to identify individual activities
• Match users across the log files
• Analyse the log files

=> This was the procedure for Cycle 1 Pilots
Lessons learned

• Complex because in-depth knowledge about all systems is needed

• Difficult
  All partners in the process have to commit to the same procedure (logging format, log file backups, logging)

• Does not scale
  Appropriate for system comparison up to three systems
Let the Sub-systems Report!

• Create sensors for different user activities
• Unify the information structure
• Provide a central hook for logging (not necessarily a central log)
• Analyse the data depending on activities
• No unrelated information spoils the log
  – No keep alive requests
  – No RPC related information
Side Effects

• Development of user models

• Other services may hook into the log
  – Higher level personalisation
  – Activity based assessment becomes feasible
Proposed Solution

• Each service defines a set of relevant user information that has to be logged (sensors)
• Each service reports the user actions (as complete steps)
• Services may access the log data
  – Personalisation
  – Assessment
  – Recommendation
What is an event?

- Time stamp
- Unique user id (not an URI, in this case)
- Sensor URI
- Source URI
- Referrer URI (optional)
- Optional named event attributes
  - E.g. Tags, other meta-data
Interaction Pattern

Logging service

- Logging
  - Single events
  - Batch event logging

- Sensor registration
- Sensor Information
- Basic state information
Interaction Pattern
Interaction Pattern
What has been already done?

• HTTP REST Service implementation
  – http://lnx-otecexp-005v.ou.nl/service/sensor
  – JSON input
  – XML input
• Javascript Frontend
  – framework independent implementation
  – Mootools implementation
• Perl Frontend

• **Who needs a Java Class?**
To Do

• Java Frontend – (Stef, maybe Harry, Hubert)
• PHP Frontend – Atanas

• Proxy Authentication Tests Needed