

TENCompetence Action Logging, towards a standardised activity log

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TENCompetence

Action Logging

towards a standardised activity log

Christian Glahn, OpenUniversityNederland

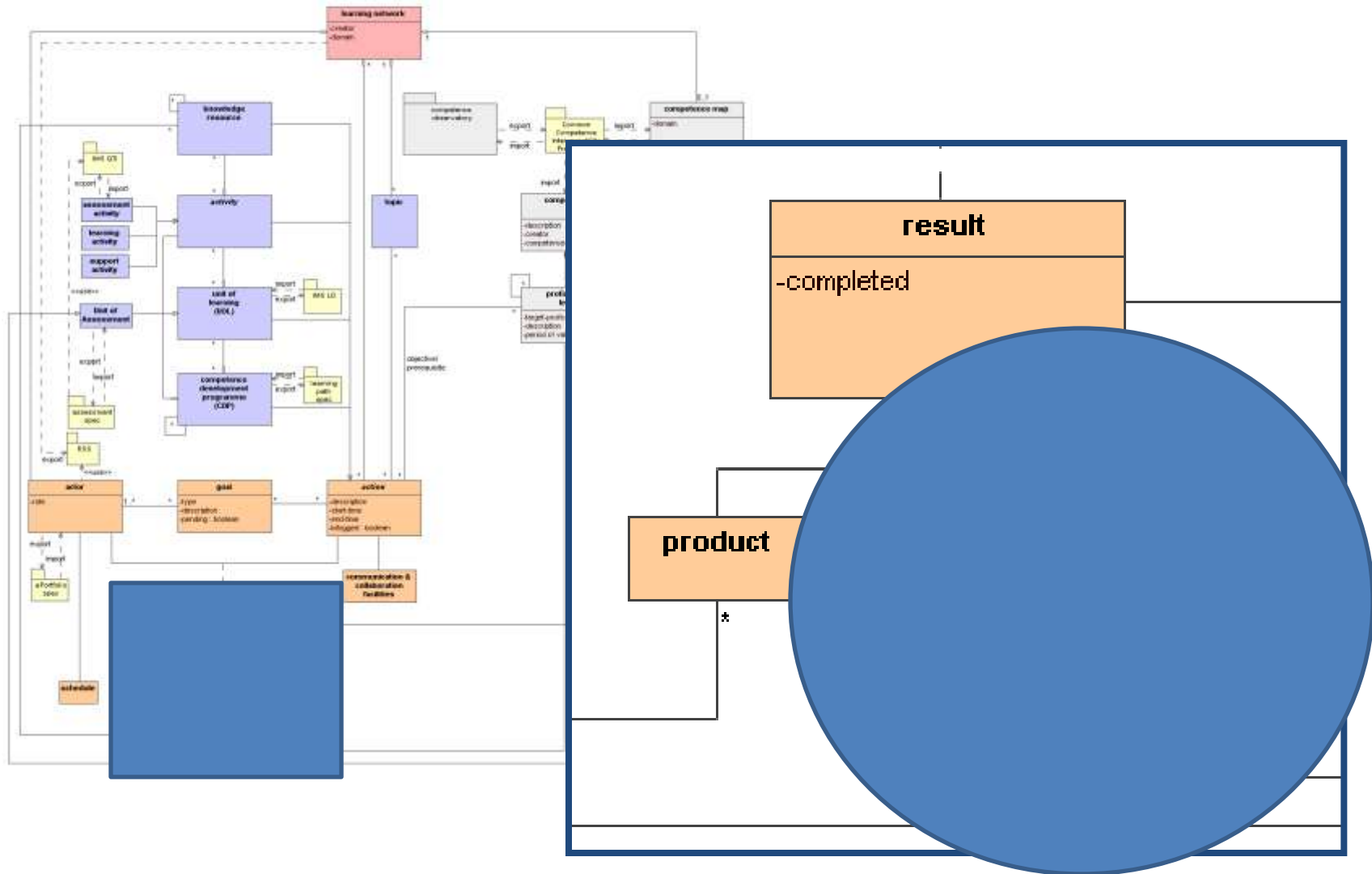
TENCompetence Technical Meeting,
Maastricht, 02.09.2008

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

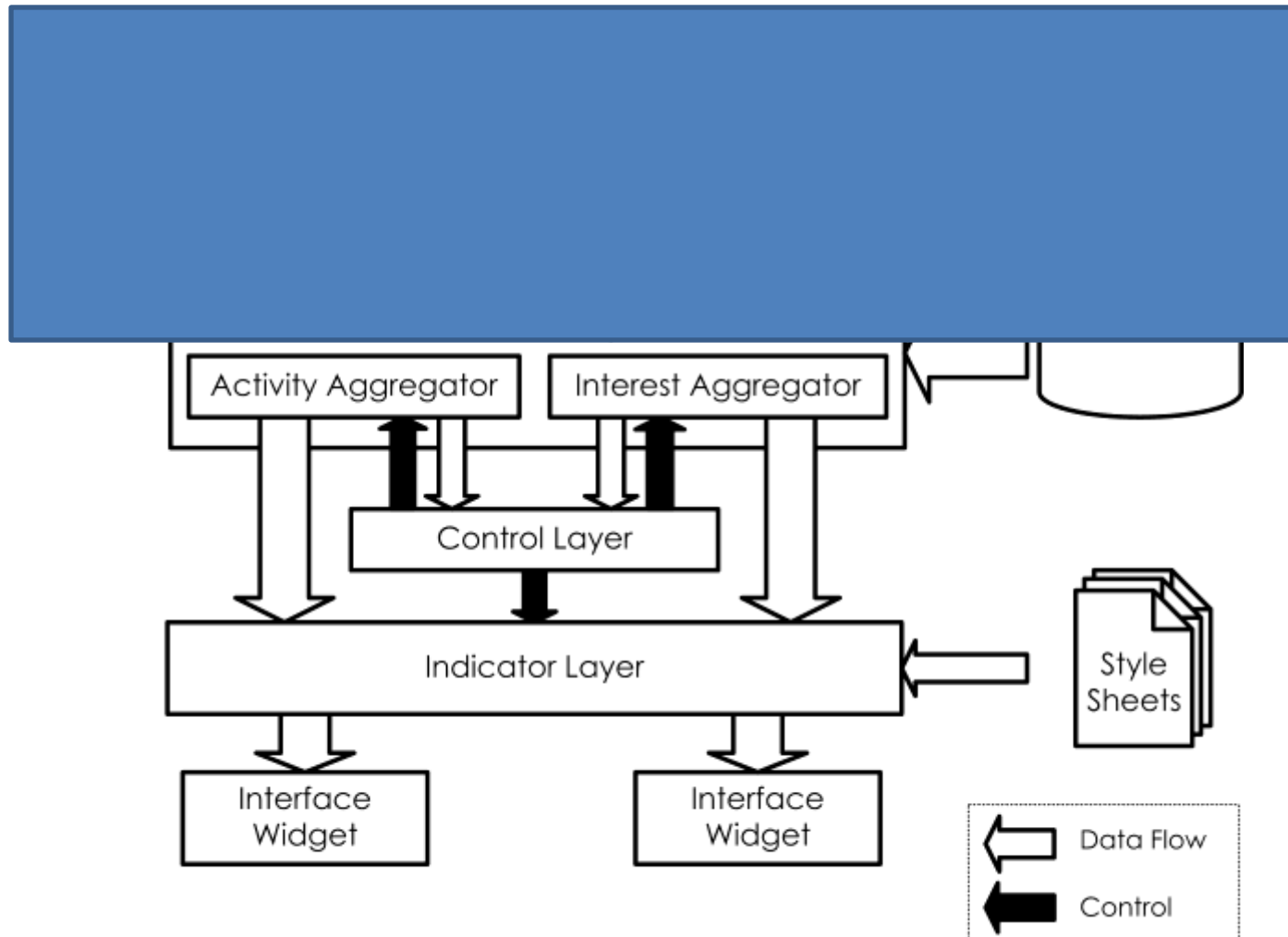
Side Effects

- 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

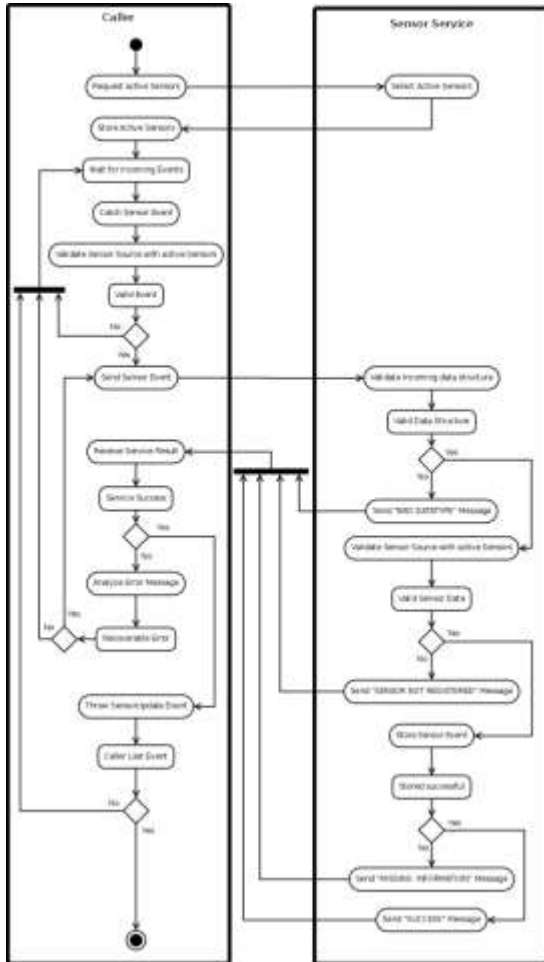
Architecture



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

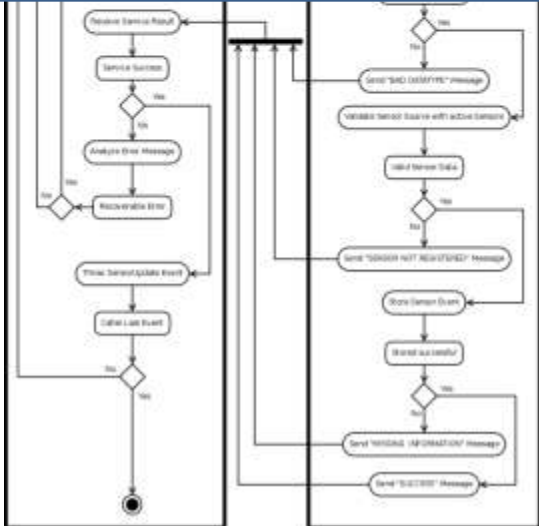
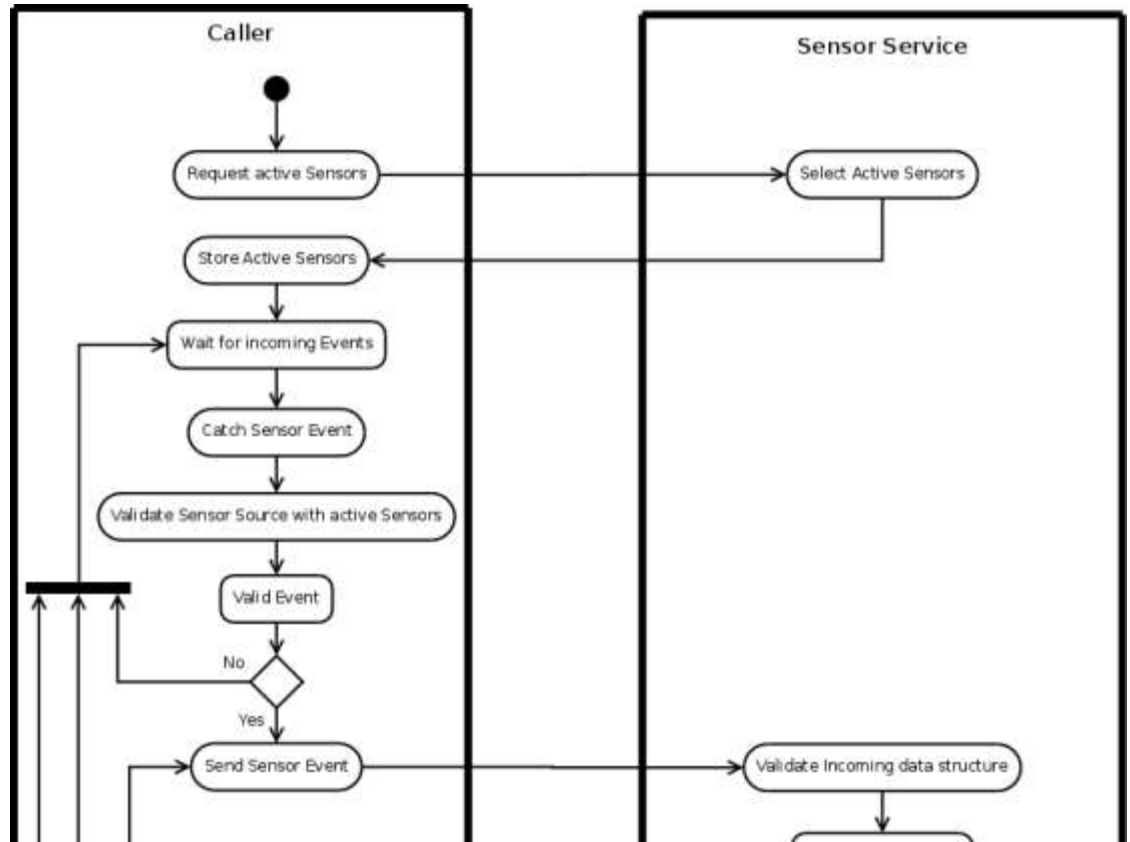
Interaction Pattern



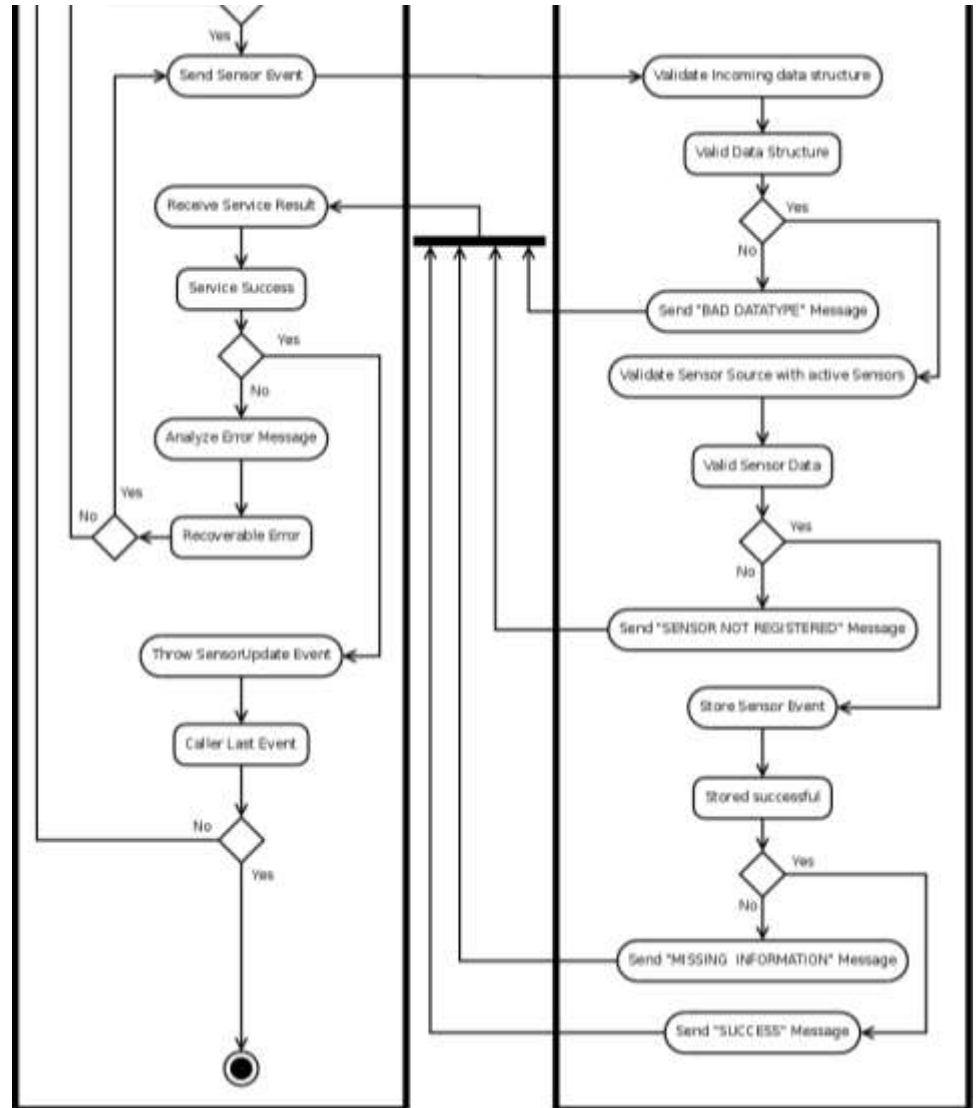
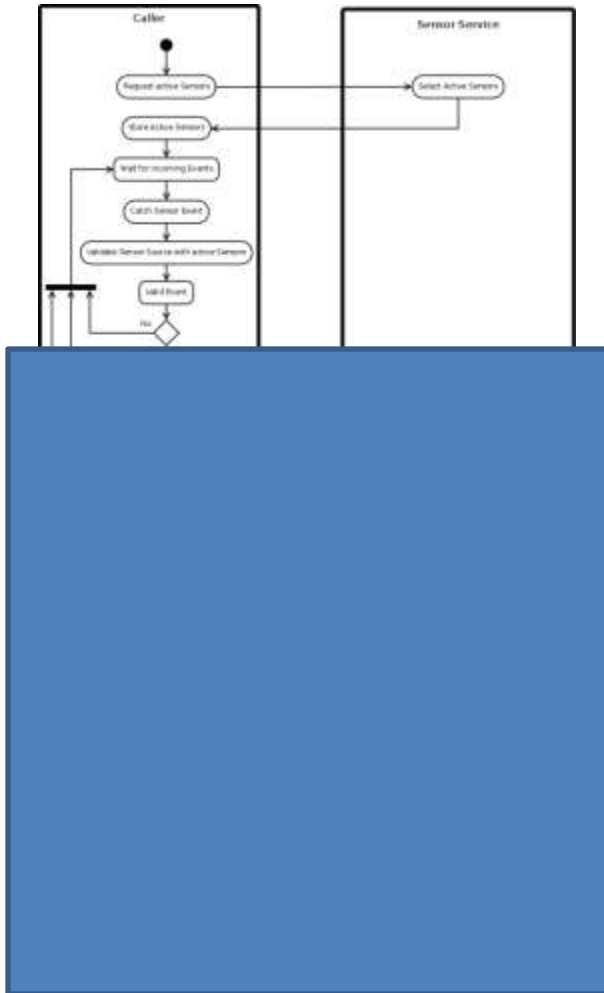
Logging service

- 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