XES Standard

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Overview

Standard for XES – eXtensible Event Stream – for achieving interoperability in event logs and event streams.

XES

Extensible Event Stream
Goal

- Facilitate export of event logs and event streams from an information system to an analysis tool
  - like, for example, a process mining tool
Scope

• To define a grammar for a language capturing event logs and event streams
  – XML Schema for event logs and event streams
  – XML Schema for extensions
  – Basic extensions
Current Status

• Progress
  – XES Standard Proposal is on RevCom agenda
    • Sep 19 (that is, today)
  – Policies and Procedures submitted to sponsor
    • Pending
  – Micro extension approved

• We are on track!
XES Standard Proposal

- WG: Dec 12
- MEC: Jan 27
- Ballot: Mar 18
- 1 issue
- Recirc: Jul 7
Balloting group

- Academic - Researcher: 32%
- Consulting: 18%
- General Interest: 23%
- Producer - System / Manufacturer: 23%
- User - Other: 4%
Issue: localtime

- **xs:dateTime**
  - This element doesn't specify "which time" is represented. It could be UTC, but also it could be "localtime" or "unspecified time".
  - I think standard should require all timestamps to be exact UTC, no timezone. And using "local time" should be banned - as "local time" is affected by change from/to DST; and order of events in such night would be e.g.: 1:00, 1:15, 1:30, 1:45, 1:00, 1:15; also these two events could be only 15 minutes apart: 1:00 and 2:15.
Micro extension

- Nested activities
  - Subactivities, micro activities, subprocess, …

Macro Step

2015-04-13
T14:02:51.453Z

Micro Step 1

2015-04-13
T14:02:31.199Z

Micro Step 2

2015-04-13
T14:02:41.032Z

Micro Step 3

2015-04-13
T14:02:49.729Z
Micro extension proposal

Start
• Sep 17

Comment
• Nov 9

Discuss
• Dec 9

Comment
• Jan 4

Approve
• Jan 21
Action points

• Add XES support if not yet provided
  – QPR

• Add extensions and analysis techniques exploiting these
  – Micro

• Provide data sets via 3TU data center
  – Now called 4TU data center
  – …
## New data sets

<table>
<thead>
<tr>
<th>Date</th>
<th>Authors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 3</td>
<td>Josep Carmona</td>
<td>Activities of daily living of several individuals</td>
</tr>
<tr>
<td>April 22</td>
<td>Marcus Dees and Boudewijn van Dongen</td>
<td>BPI Challenge 2016</td>
</tr>
<tr>
<td>July 5</td>
<td>Xixi Lu</td>
<td>Handling Duplicated Tasks in Process Discovery by Refining Event Labels (BPM2016)</td>
</tr>
<tr>
<td>August 15</td>
<td>Maikel Leemans</td>
<td>JUnit 4.12 Software Event Log</td>
</tr>
</tbody>
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Looking ahead

• RevCom decides today
  – Recommendation to Standards Board

“Upon approval by the IEEE-SA Standards Board, the standard shall be published as an IEEE standard. The Sponsor shall be notified of the approval in writing.”

• Update of OpenXES
• New extensions?
• New data sets?