

Meeting of the IEEE Task Force on Process Mining

Thursday September 1st 2011, 18.00-19.00
Clermont-Ferrand, Campus des Cezeaux
Building : IFMA, Room : TCM 008

<http://www.win.tue.nl/ieeetfpm/>

Agenda

1. Introduction of participants and Task Force (short)
2. Goals of the Task Force and New Initiatives (short)
3. Standardization efforts, a.o., XES format (see also <http://www.xes-standard.org/>)
4. Process Mining Manifesto
5. Closing

TF on Process Mining

Chair: Wil van der Aalst (The Netherlands)

Members:

Aalst, Wil van der

Baier, Thomas

Blickle, Tobias

Brand, Peter van den

Brandtjen, Ronald

Burattin, Andrea

Carmona, Josep

Castellanos, Malu

Cook, Jonathan

Costantini, Nicola

Curbera, Francisco

Dongen, Boudewijn van

Ferreira, Diogo

Geffen, Frank van

Goel, Sukriti

Günther, Christian

Guzzo, Antonella

Harmon, Paul

Hofstede, Arthur ter

Hoogland, John

Ingvaldsen, Jon Espen

Kuhn, Rudolf

Kumar, Akhil

Malerba, Donato

McCreech, Martin

Mendling, Jan

Motahari Nezhad, Hamid

Reza

Muehlen, Michael zur

Rozinat, Anne

Seguel Pérez, Hugo

Seguel Pérez, Ricardo

Sepúlveda, Marcos

Sinur, Jim

Soffer, Pnina

Song, Minseok

Sperduti, Alessandro

Stoel, Casper

Swenson, Keith

Turner, Chris

Vanthienen, Jan

Varvaressos, George

Verbeek, Eric

Verdonk, Marc

Vigo, Roberto

Wang, Jianmin

Weber, Barbara

Weijters, Ton

See <http://www.win.tue.nl/ieeetfpm/> for full list and affiliations.

Composition of TF

- **Software vendors** (Pallas Athena, IDS Scheer/Software AG, Futura Process Intelligence, HP, IBM, Infosys, Fluxicon, Businesscape, Iontas, Fujitsu, Business Process Mining)
- **Consultancy** (Some of the above and ProcessGold, Business Process Trends, Gartner, Deloitte, Rabobank)
- **Universities** (TU/e, University of Padua, University of Catalunya, New Mexico State University, Technical University of Lisbon, University of Calabria, Penn State University, University of Bari, Humboldt-Universität, Queensland University of Technology, Vienna University of Economics and Business, Stevens Institute of Technology, University of Haifa, Seoul National University of Technology, Cranfield University, K.U.Leuven, Tsinghua University, Innsbruck University)

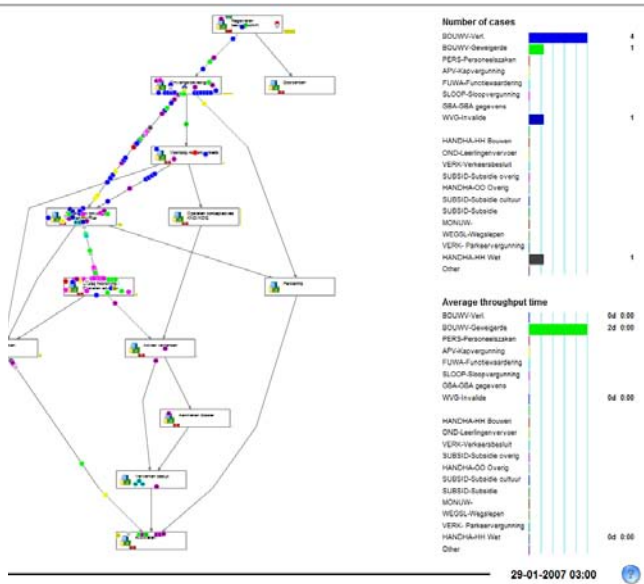
Goals

- The goal of this Task Force is to promote the research, development, education and understanding of process mining.
- More concretely, the goal is to:
 - make end-users, developers, consultants, and researchers aware of the state-of-the-art in process mining,
 - promote the use of process mining techniques and tools and stimulating new applications,
 - play a role in standardization efforts for logging event data,
 - the organization of tutorials, special sessions, workshops, panels,
 - the organization of Conferences/Workshop with IEEE CIS Technical Co-Sponsorship, and
 - publications in the form of special issues in journals, books, articles (e.g., in the IEEE Computational Intelligence Magazine).
- Note that process mining includes (automated) process discovery (extracting process models from an event log), conformance checking (monitoring deviations by comparing model and log), social network/organizational mining, automated construction of simulation models, case prediction, and history-based recommendations.

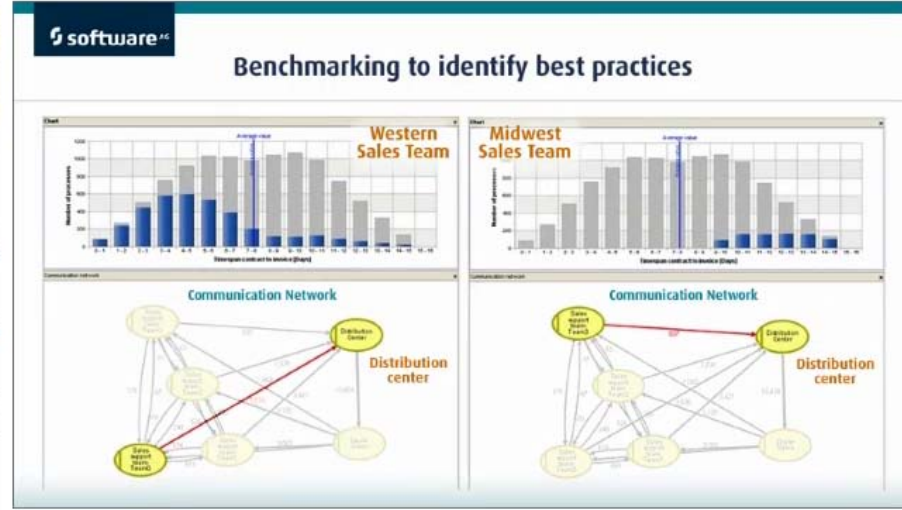
Activities thus far

- Several process mining tutorials have been given under the IEEE Task Force umbrella, e.g., the “Process Mining: Beyond Business Intelligence” tutorial at the 2010 IEEE WCCI, the “Process Mining meets Data Mining” (PMPM’09) conference in October, various Process Mining courses (ACPN summerschool, ESSCaSS 2009 summerschool, SIKS course, BPM Forum Process Mining Hands-On).
- Special session on process mining at IEEE Symposium on Computational Intelligence and Data Mining, Paris, April 2011.
- Standardization efforts related to XES.
- Workshops on Business Process Intelligence at BPM 2010 (New York) and BPM 2011 (Clermont-Ferrand) co-organized by the IEEE Task Force on Process Mining.
- First International Business Process Intelligence Challenge (BPIC’11)
<http://www.win.tue.nl/bpi2011/doku.php?id=challenge>
- Various other promotional activities (process mining book <http://springer.com/978-3-642-19344-6>, process mining manifesto, etc.)

Examples of promotion



Process Intelligence Two-Minute Explainer



LinkedIn Account Type: Basic

Home Profile Contacts Groups Jobs Inbox Companies News More

Process Mining

Discussions Members Promotions Jobs Search More...

NEW Restart your old discussions with one click. [Browse your archived discussions](#)

Process Mining Manifesto by the IEEE Task Force on Process Mining Meeting: Request for Input
The IEEE Task Force on Process Mining is currently writing a manifesto to promote the application, research, development, education and understanding of process mining.

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Process Mining or Automated Process Discovery? Anne 12 Aug 3

It's useful to have a shared terminology to avoid misunderstandings. During a recent discussion in the BPTrends Discussion Group at LinkedIn the terminology discussion about process mining has resurfaced.

In Wil's book as well as in the process mining literature, the following picture (see below) is used to illustrate the scope of process mining technology. There is a classification that distinguishes techniques that, based on event logs,

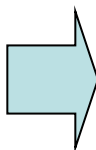


XES

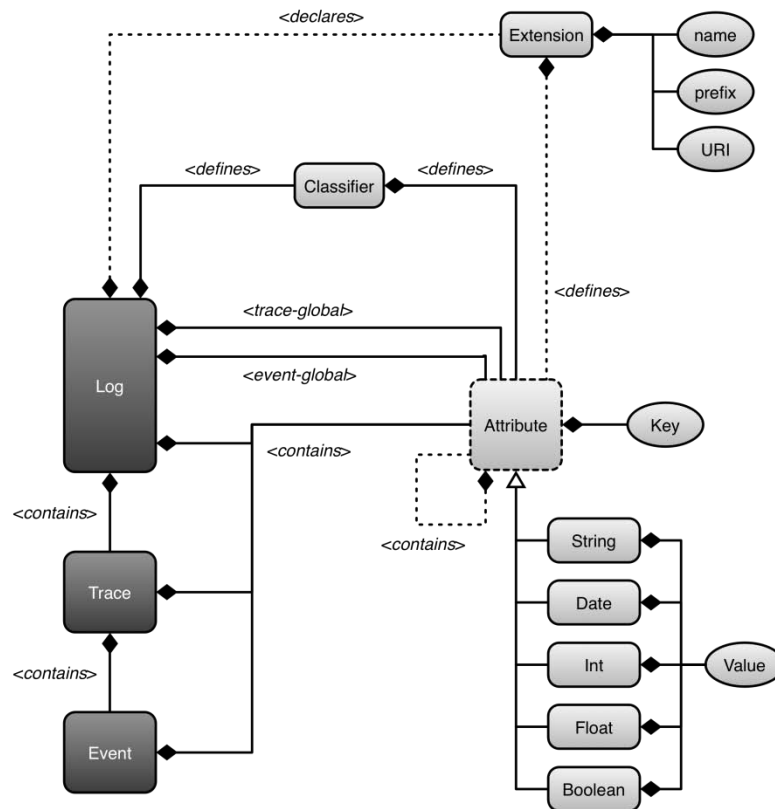
Extensible Event Stream



event logs, audit trails,
databases, message
logs, etc.



XES



www.xes-standard.org
www.openxes.org

Process Mining Manifesto



Process Mining Manifesto

- Public declaration of principles and intentions by the IEEE Task Force on Process Mining.

Process Mining Manifesto

(second draft, August 24, 2011)

Wil van der Aalst, Tobias Blickle, Peter van den Brand, Ronald Brandtjen, Andrea Burattin, Josep Carmona, Malu Castellanos, Jonathan Cook, Francisco Curbera, Boudewijn van Dongen, Diogo Ferreira, Sukriti Goel, Christian Günther, Antonella Guzzo, Paul Harmon, Arthur ter Hofstede, John Hoogland, Jon Espen Ingvaldsen, Rudolf Kuhn, Akhil Kumar, Donato Malerba, Martin McCreesh, Jan Mendling, Hamid Motahari Nezhad, Michael zur Muehlen, Anne Rozinat, Jim Sinur, Pnina Soffer, Minseok Song, Alessandro Sperduti, Casper Stoel, Keith Swenson, Chris Turner, Jan Vanthienen, George Varvaressos, Eric Verbeek, Marc Verdonk, Jianmin Wang, Barbara Weber, and Ton Weijters

IEEE Task Force on Process Mining
<http://www.win.tue.nl/ieeetfpm/>

Guiding Principles

- GP1: Event Logs Should Be Treated as First-Class Citizens
- GP2: Log Extraction Should Be Driven by Questions
- GP3: Concurrency and Choice Should be Supported
- GP4: Events Should Be Related to Model Elements
- GP5: Models Should Be Viewed as Maps
- GP6: Process Mining Is a Continuous Process

Challenges (1/2)

- C1: Finding, Merging, and Cleaning Event Data
- C2: Dealing with Event Logs of Different Sizes and at Different Levels of Granularity
- C3: Creating Representative Benchmarks
- C4: Dealing With Concept Drift
- C5: Finding a Suitable Representational Bias

Challenges (2/2)

- C6: Balancing Between Multiple Objectives
- C7: Cross-Organizational Mining
- C8: Providing Operational Support
- C9: Combining Process Mining With Other Types of Analysis
- C10: Improving Usability for Non-Experts

Discussion

- Scope and audience (multiple versions)?
- Terminology discussion?
- Input missing (missing people, missing principles, missing challenges)?
- Time schedule?
- Formatting?
- Distribution and promotion?

Closing

