Summary

5th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE’09)

Vancouver, British Columbia, Canada
TEFSE Goals

- Bring together researchers and practitioners working in traceability
- Promote interaction
- Focus on emerging forms on traceability
Definitions of traceability models
Traceability between artifacts and processes
The semantics of traceability links
Recovery and evolution of traceability links
Visualization of traceability links
Session I

- **Getting Back to Basics: Promoting the Use of a Traceability Information Model in Practice**
  Patrick Mäder, Olly Gotel, and Ilka Philippow

- **Towards Traceable Test-Driven Development**
  Jane Hayes, Alexander Dekhtyar, and David Janzen

- **Challenges for semi-automatic trace recovery in the automotive domain**
  Jörg Leuser

- **Establishing and Maintaining Traceability Between Large Aerospace Process Standards**
  Ove Armbrust, Alexis Ocampo, Jürgen Münch, Masafumi Katahira, Yumi Koishi and Yuko Miyamoto
Session I - Cont.

- Should granularity be homogenous on both site of a traceability link and what is the right granularity?
  - Fine grain can generate too many events
  - What if we trace across boundaries of systems or companies?
- TDD is this a step toward the Holy Grail?
  - Co-changes represent an important source of information
  - As the process is going can we leverage test to produce traceability matrices in non intrusive ways?
- Multi language tracing and scalability problem
  - How to discover links between artifacts with different languages?
  - External light system in automotive companies may generate 24000 or more links ...
- Non ASCII languages and non electronic documents
  - how do we deal with multi-media data?
Session I - Cont.

- Teaching traceability and finding the right selling pitch
  - Make student fail in a controlled way
  - Make traceability mandatory part of curricula
  - Make a student face a real project
  - Make students face maintenance activities

- Scalability problem with regulatory documents and huge requirement
  - Regulation change how about outdated traces
  - Push for standard in writing standards and regulations
Session II

- Capturing Custom Link Semantics Among Heterogeneous Artifacts and Tools
  Hazeline Asuncion and Richard N. Taylor

- Model Based Traceability
  Jane Cleland-Huang, Jane Huffman Hayes, and Jean Domel

- Towards Traceability from Project Management to System Models
  Jonas Helming, Maximilian Koegel, and Helmut Naughton

- TQL: A Query Language to Support Traceability
  Jonathan Maletic and Michael Collard
Customer specific language for trace query?
  - What language for what customer?

How can we go from any artifact to XML?
  - Code is ok but if we have other representations? Multi-media data?
Session II - Cont

- Co-change links in the network and users of the traceability documentation system
  - Trace user actions to enrich traceability?
- Rule based system to define rules to capture granularity at different level in different parts
- Push away artifacts definition but keep a clear definition of links
Session III

- Combining Textual and Structural Analysis of Software Artifacts for Traceability Link Recovery *Collin McMillan, Denys Poshivyanyk, and Meghan Revelle*

- **Trace Retrieval for evolving artifacts** *Stefan Winkler*

- **Cross-Artifact Traceability Using Lightweight Links** *Sukanya Ratanotayanon and Susan Elliott Sim*
Session III - Cont

- Does it really help getting extra info from underline implicit structure (aka caller – callee)
  - Which kind of structural information
  - If structural information evolves
  - How to integrate NLP tools and analyses
- Tuning parameters ... how to ...?
- Evolution of links how do we get multiple requirement documents?
- Decentralized, distributed non hierarchical repositories for distributed projects across countries and companies
Session III - Cont

- Cookbook of what to do, when to do and how to do
- Data sets to compare each other
  - Benchmarks are needed
- Traceability challenge can help in comparing each other
  - Proposing it as stable event at TEFSE?
The need for traceability

- Large project
- Regulation
- Legislation and standard enforcing practices