



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 form on traceability

TEFSE Topics

- 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 side 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 - Regulation change how about outdated traces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*

Session II - Cont

- 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 Poshyvanyk, 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