

Planning Protocure WP5

Evaluation of the verification
results

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Main Objective

- Evaluation of the feasibility of the use of formal methods for quality improvement of guidelines and protocols.
- In WP5 the results of WP4 (verification of properties on the Asbru-in-KIV reference protocols) will be analysed and evaluated.



Evaluation Criteria

Quantitative results of the verification process:

Assessment of the formalisation and verification process by determination of how many errors (expected and unexpected) can be uncovered

Quantitive results (cont.)

Expected errors

- Tabulate which of the informally discovered errors are indeed also uncovered using the formal process and tools
- Analyse the errors that are not uncovered by the formal means

Quantitative results (cont.)

Unexpected errors

- Errors that cannot be found without the support of formal tools
- Low rates of unexpected errors
 - weaknesses in the formal method
 - high quality of the protocols
- Two approaches
 - Advice from domain experts on quality of the protocols
 - Injecting artificial errors into the protocol

Relevance (type) of uncovered errors

Evaluation with the help of a panel of domain experts

- criticality (from serious to trivial ones)
- feasibility of their detection by alternative means (errors requiring formal analyses or not)

Relevance of uncovered errors (cont.)

Succes:

- The detection of either some serious error or several trivial ones requiring formal analyses
- High percentages injected artificial errors are recovered in the formal verification

Quantitive results of the verification process

- Discussion points!

Overall applicability of the approach

- Perspectives of application of the approach.
- Perspectives of the potentials of this approach
- Discussion!!(Peter)