

Supported by : Hibah Riset Kompetensi
DRPM - Universitas Indonesia
2011

Weekly Meeting – 17 February 2011: Finalize the Team and Possible Future Work and Grant Support

Last update: 17 February 2011 by Ade Azurat



Formal Method in Software Engineering
Faculty of Computer Science – University of Indonesia

Agenda

- ✘ Review Last Week Progress
- ✘ The Team
- ✘ Future Work and Grant Support
- ✘ Discussion

The Team

- Job Desc
 - Tool TextBE: Ferdi, Vit, Erik
 - Case Study: Iis, Amin, Zaki
 - Code Generator (long term): Arwin
 - Bayu ???
 - Formalization: Niken (HOL), Zaki (DC)
 - Administration: Niken, Vit, Erik, Ferdi

Tool TextBE: Ferdi, Vit, Erik

- Work closely with Toby.
- Code contribution
- Month 1: Exploration (except Erik)
- Month 2: Experiment
- Month 3: Testing, simple case study
- Month 4: Final Report (except Erik)

Case Study: Iis, Amin, Zaki

- We decide to have another case study.
- The evaluation of “gate tol system”.
- It is an automatic car detection in the gate tol.
- Two design are given, we would like to see how Behaviour tree could help us detect errors or verify the correctness.

lis' Task

- Studying the design.
- Formulate it in Behaviour Tree
- Define formally some correctness property.
- Verify those property.

Amin's Task

- Continue the E-Passport case study
- Studying the refinement of tree.
- On completion in behaviour tree, compare it with the UML.

Zaki's Task

- Studying duration calculus.
- Studying the car detection system from lis.
- Formulate lis's specification in duration calculus.
- Prove it in duration calculus.

Arwin's Task

- We would like to investigate the possibility to contribute in code generator.
- We need to study the semantic which is in process algebra.
- Arwin will learn the process algebra this semester (Independent study) and code generator for next semester (Master Thesis)

Niken's Task

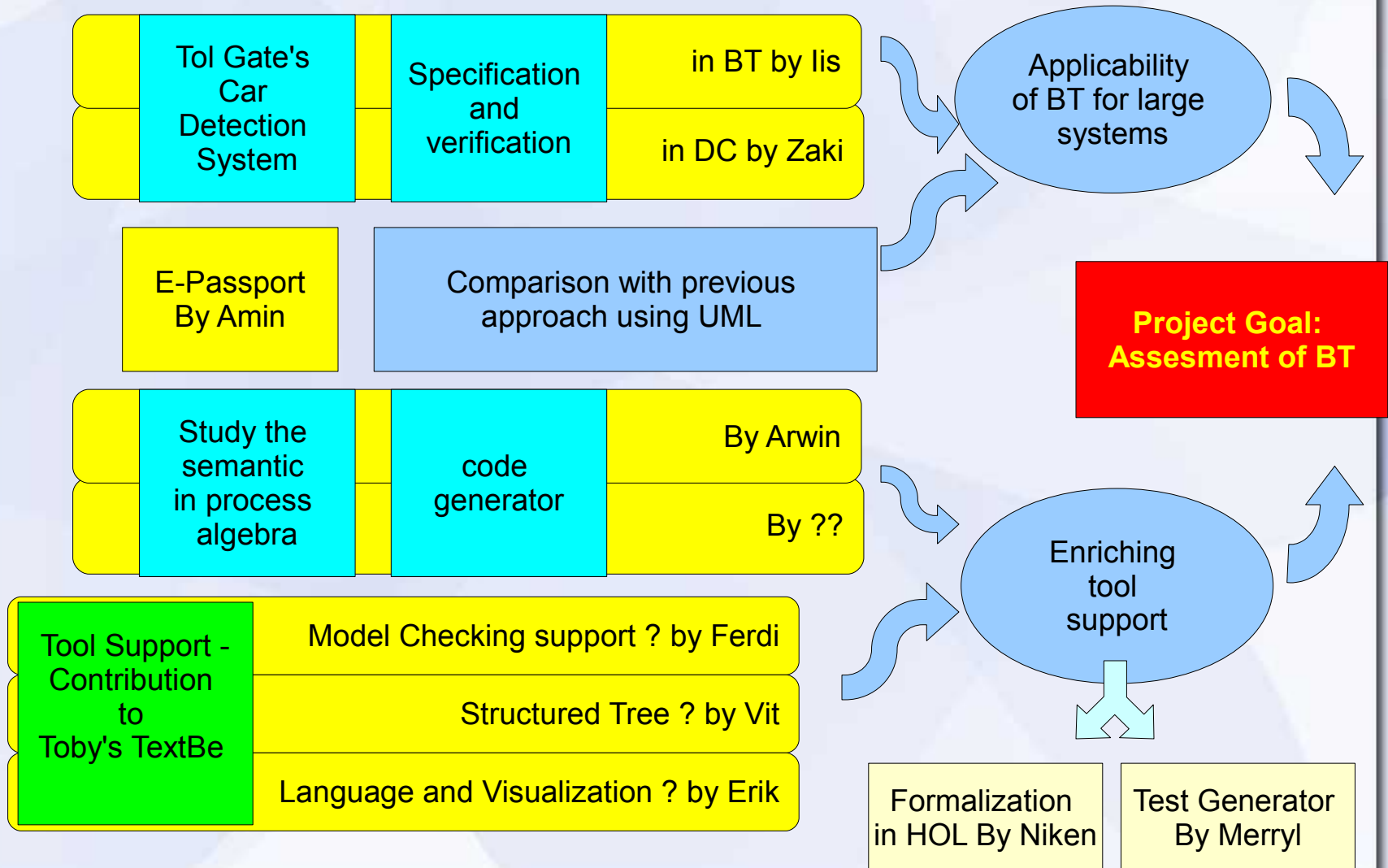
- Currently BT doesn't have theorem prover support. Niken will learn about HOL theorem prover. Starting from Iis's previous work on TLA+ in HOL.
- We would like to continue this work, and later see if BT could be formalized in HOL.
- Hafidz and Agra, have similar task for their final project under Ade's supervision

Administration's Task

- Pipit: Meeting notes, scheduling, update project homepage
- Ferdi : Source Code Repository
- Niken: Future proposal, document repository
- Erik: system, software/hardware, backup

Bayu's Task ???

Road map



Bsc. Final Project's Supervisor

- Ferdi, Vit: Ade, Mursanto
- Erik: Heru
- Niken: Ade, Bela

Graduate Project's Supervisor

- Bayu: Mursanto
- Arwin: Mursanto
- Zaki: Bela
- Iis: Mursanto

Future

- Grant support constraint
- Topic and target
- Roadmap
- Partner
- Todo

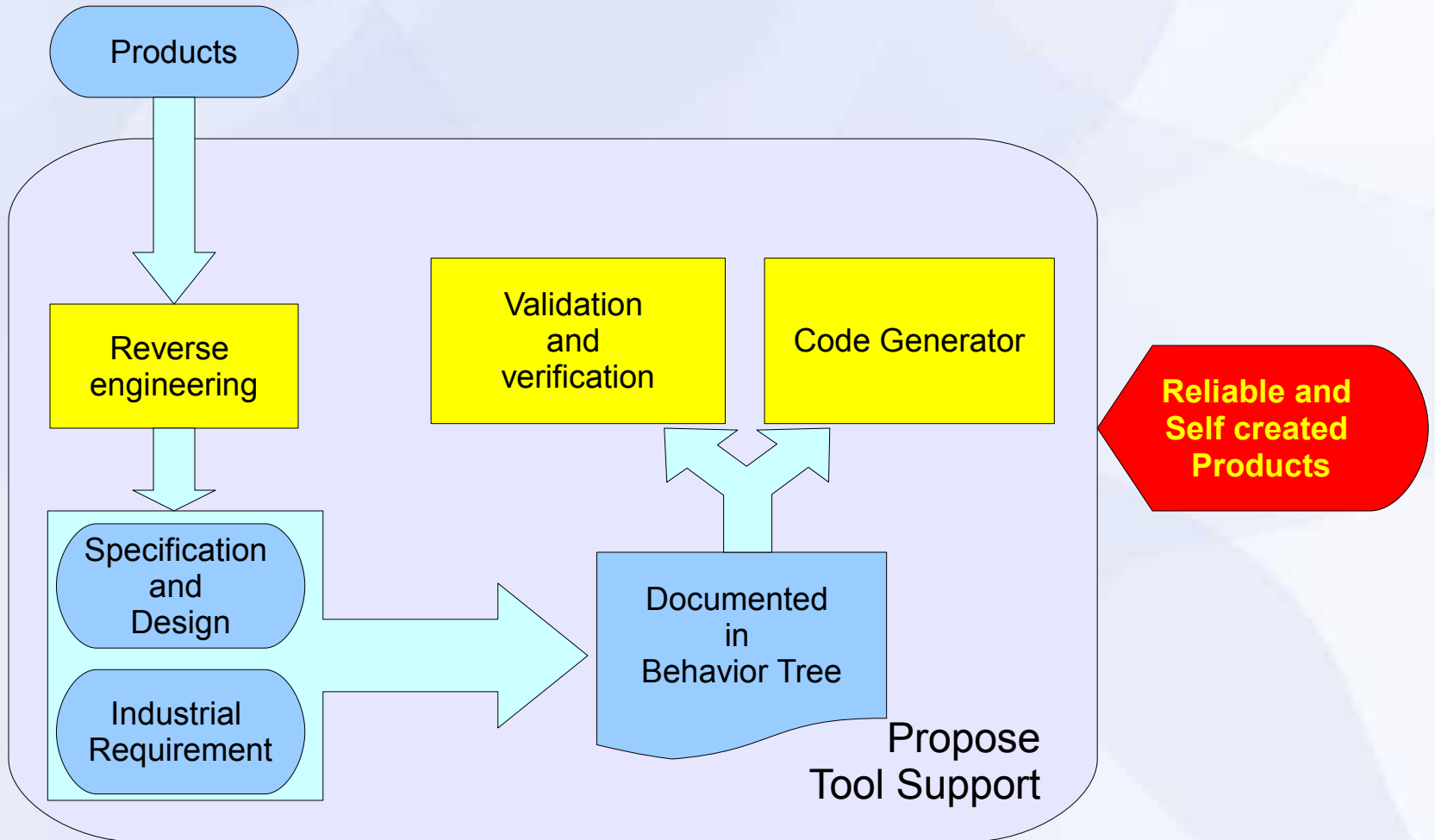
Constraints

- Administration: 25 Feb 2011
- Proposal : 11 Maret 2011
- Require support from industrial partner
- Big team with related expertise, min. 6

Topic and target

- Quality Assurance support for Reverse Engineering using Behaviour Tree.
PIC → Bela
 - Language & Tool Support → Heru
 - Requirement Engineering → Eko
 - Reverse Engineering → Mursanto
 - QA using Formal Method → Ade

Road map – Future Work



Partner

- We need letter of intent from:
 - UQ → Peter Lindsay via Sentot
 - Industrial Partner → ?? via Mursanto

Todo for future grant

- Revise the previous proposal
- Assemble Team (Faculty Staf)
- Urgent: Letter of intent from partner
- Urgent: Fill in the registration form for grant competition.
- Urgent: Consult the guidelines

Closing