CLEARSY
Safety Solutions Designer

TUTORIAL

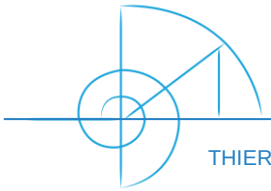
ABZ 2021

JUNE 2021

AIX
LYON
PARIS
STRASBOURG

WWW.CLEARSY.COM

Using B to program the CLEARSY Safety Platform



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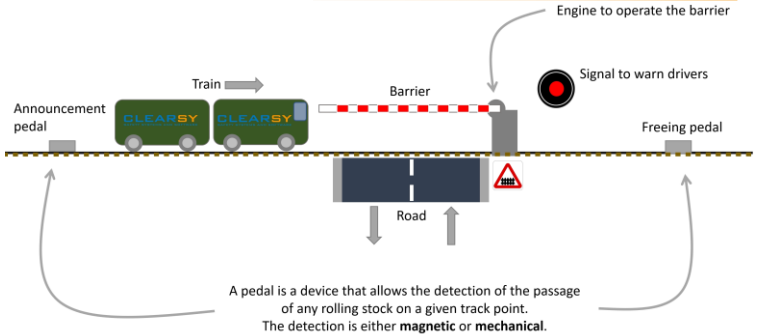
Contributers

- Thierry Lecomte — Slides, edition, live presentation
- Bruno Lavaud — CS_0, C code, slides, live presentation
- Patrick Péronne — SK_0, Software simulator, example
- Lilian Burdy — B models

Resources available at https://github.com/CLEARSY/tutorial-ABZ-2021

OBJECTIVES

- Learn how to use formal method for « serious thing »
  - More than just model, predicate and proof
- Audience
  - students, teachers, researchers, engineers
- Low requirements
  - Some knowledge of formal logic
  - Notation introduced when required
- A single example (railway Xing)



RESOURCES

- Slides and pre-recorded videos
  - Slides on github (already)
  - Tutorial video on Youtube* (this week)
- Other resources on github
  - Source code and formal models
  - CLEARSY Safety Platform for education ( -only software simulator)
  - Several informative pdf

(*): https://www.youtube.com/channel/UCWoU4LVYy7Q7OYRp4D9FnOQ

AGENDA (2 hours)

- Introduction
  - Safety, standards & embedded systems
  - The level crossing example
  - The CLEARSY Safety Platform in a nutshell
- The CLEARSY Safety Platform for Education
  - The starter kit SK0
  - The software simulator (VM)
- The CLEARSY Safety Platform for Industry
  - Industrial platform
  - Scope of the example
  - Implementation
  - Use case
- Conclusion

IN PRACTICE

- Listen and learn
- Browse the resources (slides, docs, source code, models)
- Play with the CLEARSY Safety Platform for Education
- Ask questions on the chat at any time
  - Quick answer on the fly
  - By batch during topic transition
- For further questions/remarks:
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