UPPAAL (Reading)

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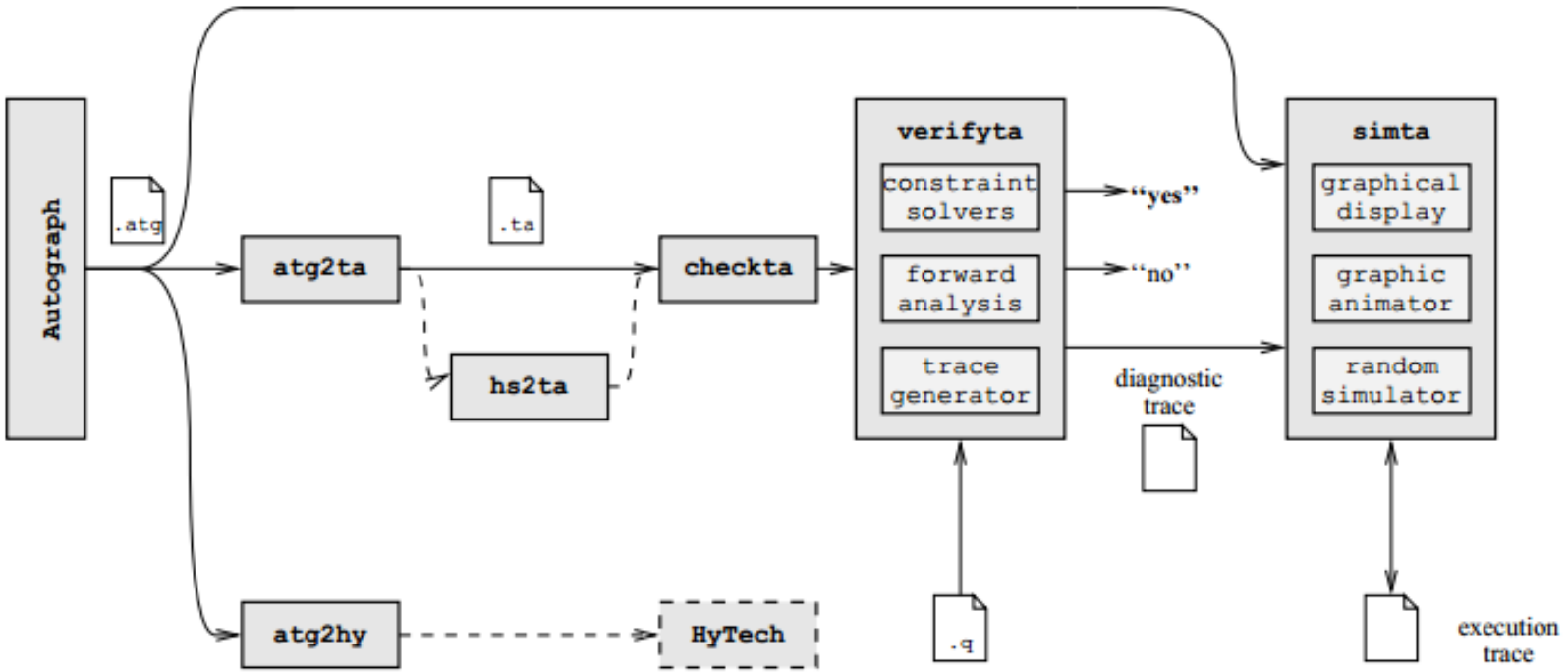
Overview

- Introduction
- Structure
- User Interface
- Properties
- Performance
- Future work

Introduction

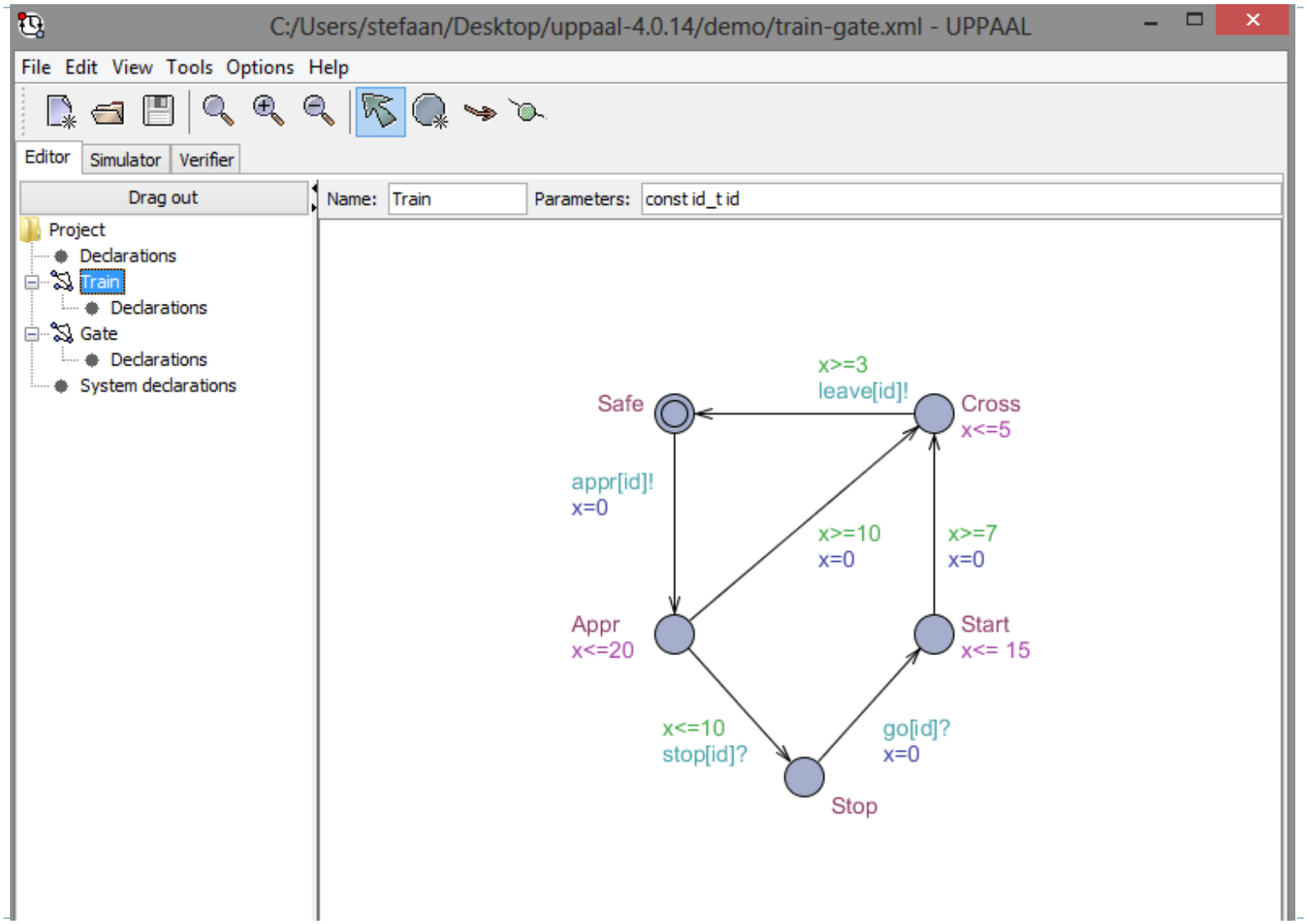
- Universities of UPPsala (Sweden) and AALborg (Denmark)
- Modeling, simulation and verification
- Real-time systems
- (Timed) automata

Structure

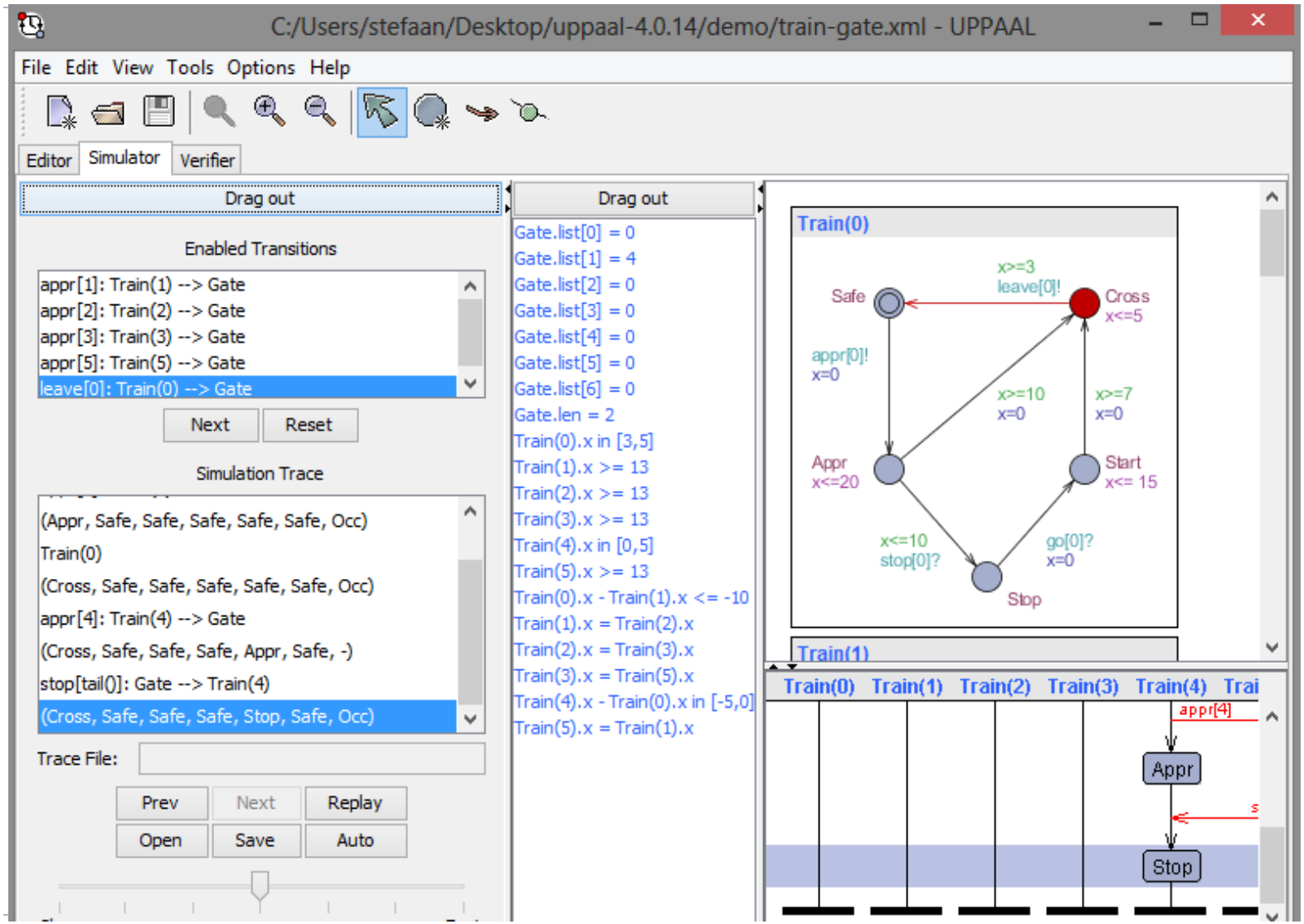


UPPAAL in 1995, Bengtsson et al.

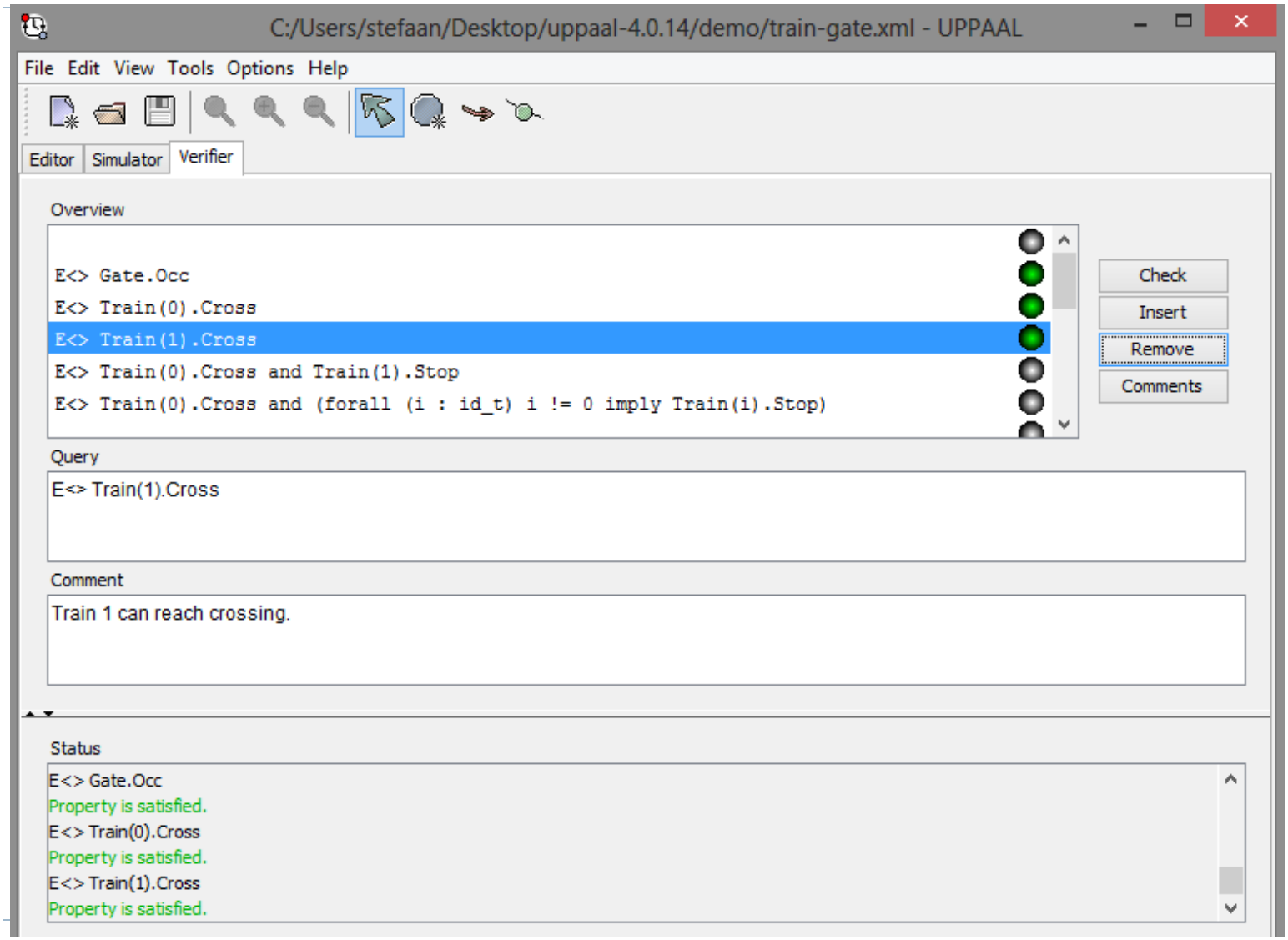
User Interface (Editor)



User Interface (Simulator)



User Interface (Verifier)

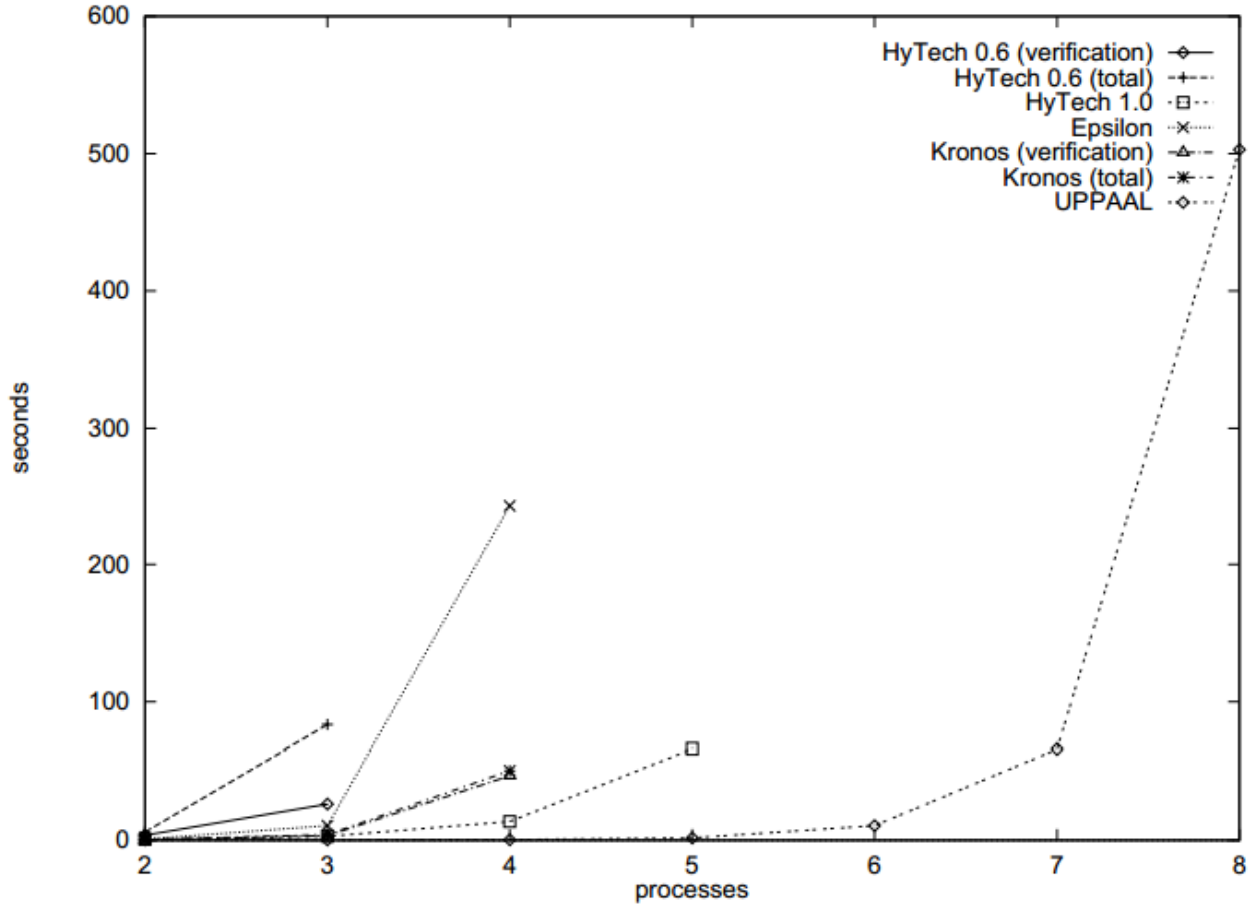


Properties

- Invariants and Reachability analysis
- Safety
  - "Something 'bad' can never happen."
- Bounded liveness
  - "Eventually something 'good' happens."

Performance

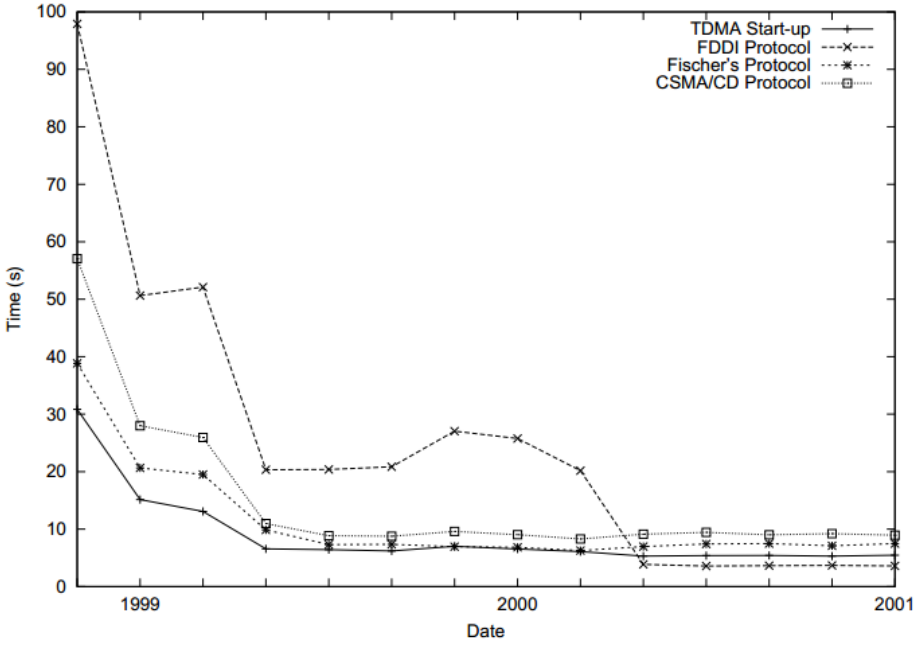
- Faster than other tools and can handle larger systems

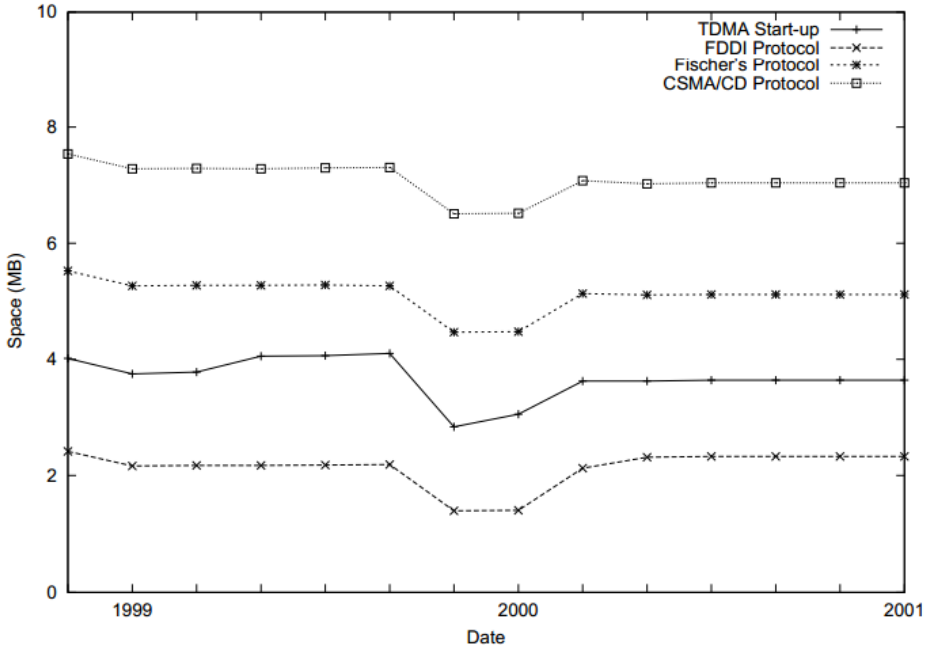


UPPAAL | a Tool Suite for Automatic Verification of Real-Time Systems, Bengtsson et al.

Performance

- Improved over the years





New generation of UPPAAL, Bengtsson et al.

Future work

- Create, simulate and verify RPG models

- Export RPG from AToMPM
- Transform to valid XML

Questions?