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The Challenges of ATO for Scientific Research

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IRS - ATO

Vienna, 28th of November 2017

ATO related Topics & Team at VUT

§ Train run optimisation	}	Blieberger / Schöbel
§ Disposition		
§ Shunting		
§ Topology design		Raidl / Schöbel
§ MMI design	}	Purgathofer / Schöbel
§ Fall back mode		

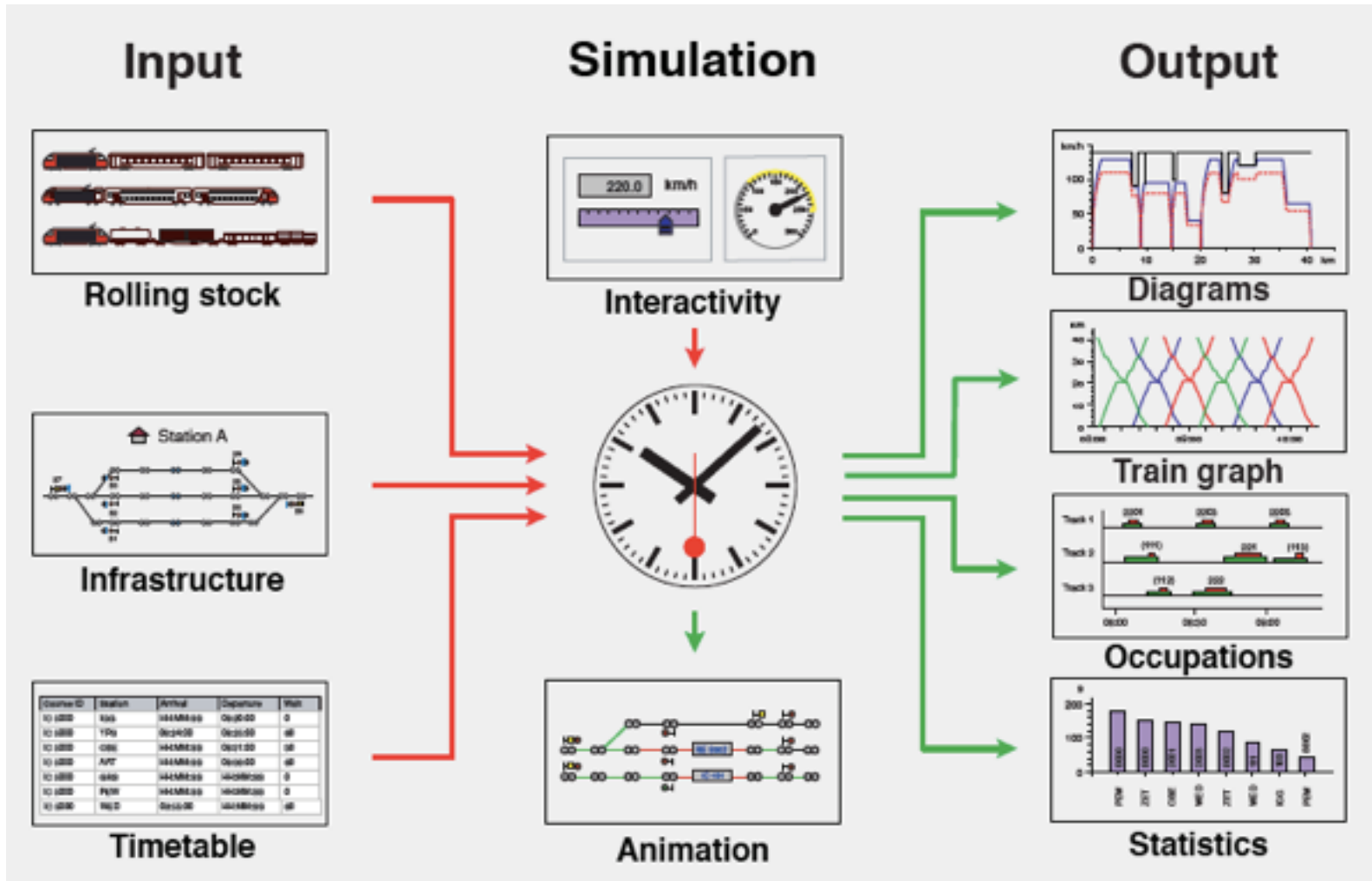
Venia docendi:

- § Johann BLIEBERGER – Computer Engineering
- § Günther RAIDL – Computer Science
- § Peter PURGATHOFER – Interactive Systems
- § Andreas SCHÖBEL – Railway Operation

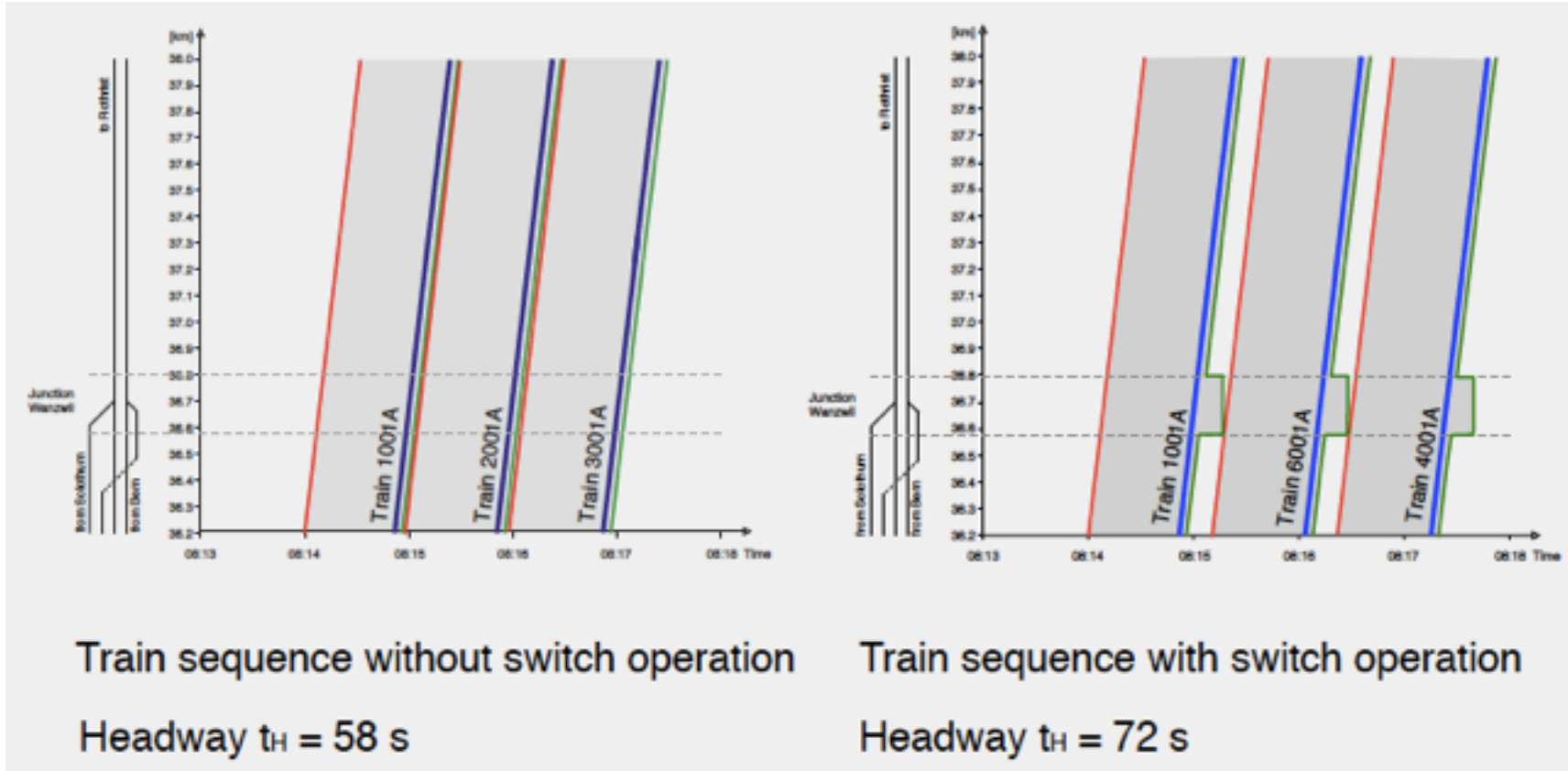
Challenges of ATO

- § Train run optimisation
 - for punctuality and
 - energy consumption
- § Automatic Disposition
 - in case of delay or larger disturbances
- § Topology design
 - restrictive braking curves may influence performance in junctions
- § MMI design
 - till GoA2 interaction still necessary
- § Fall back mode - is there any? Do we still need any?

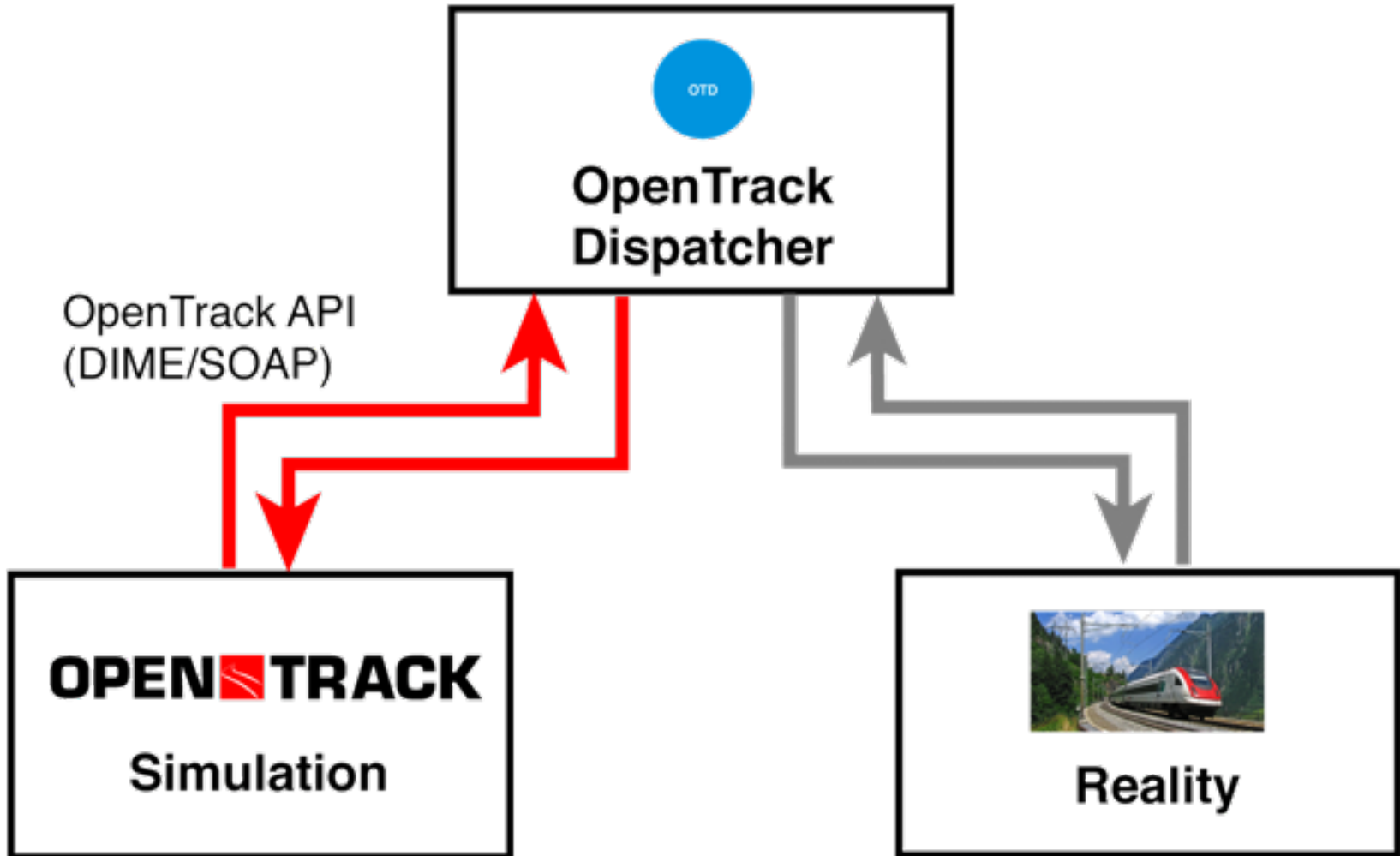
Simulating ATO by OpenTrack



Possible Headways of Moving Block



Open Track vs. Reality for Demo of ATO



- § algo4rail.auto.tuwien.ac.at
- § Ph.D. thesis of Mark Volcic (Stefan)
 - § https://publik.tuwien.ac.at/files/PubDat_237223.pdf
- § FFG-Project EcoRailNet
- § H2020-Project Destination Rail
 - § www.destinationrail.eu
- § Shift2Rail-Project GoSafeRail
 - § www.gosaferail.eu
- § Software OpenTrack
 - § www.opentrack.at

