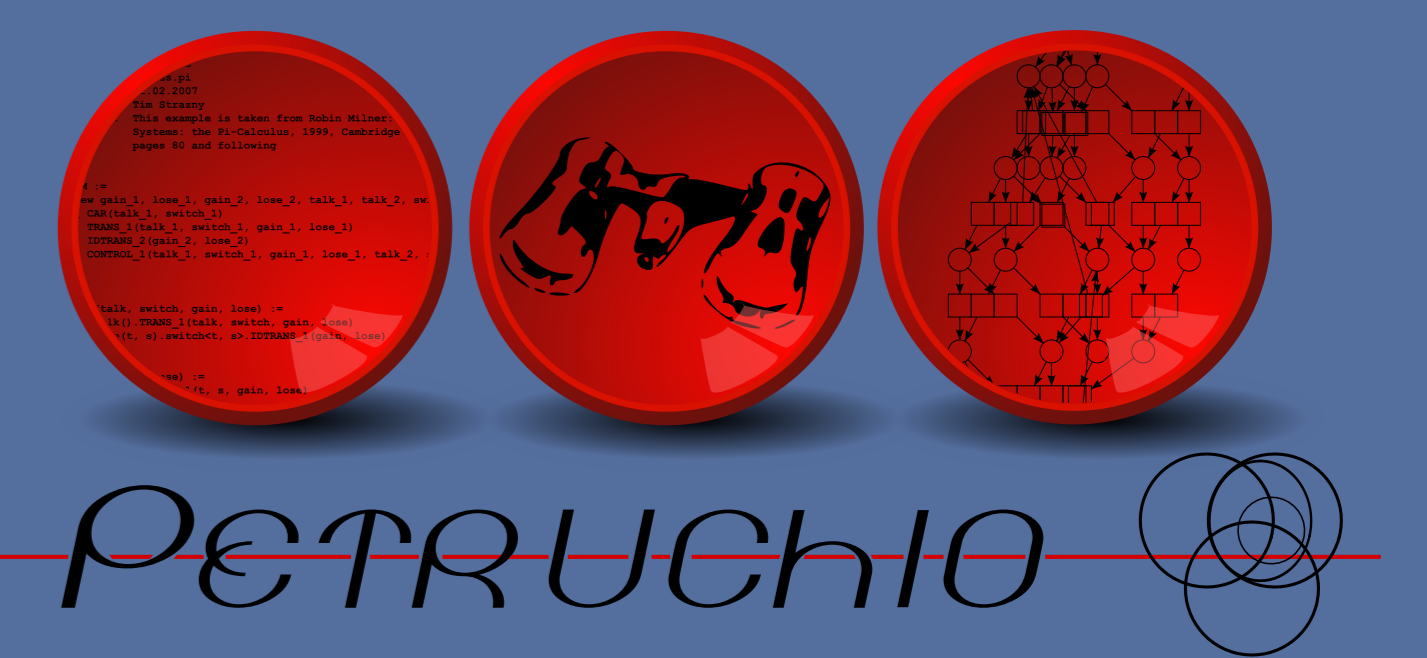
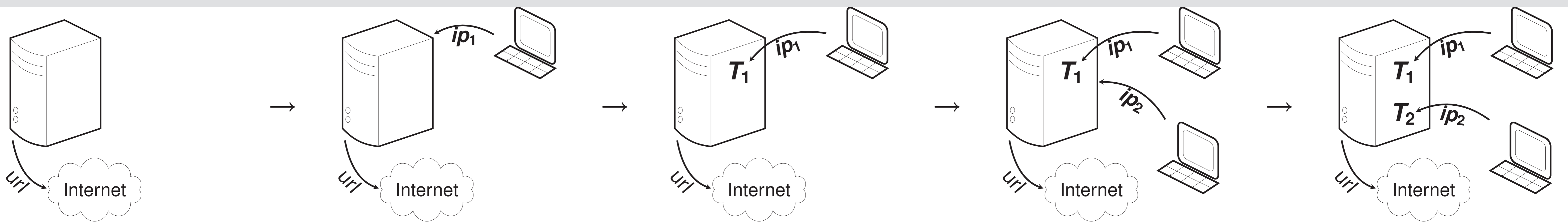


Petruchio: From dynamic networks to nets

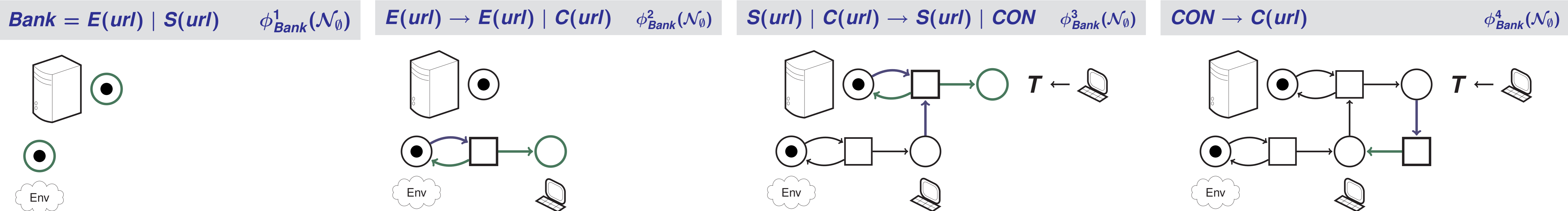
Roland Meyer & Tim Strazny
LIAFA and CNRS & University of Oldenburg



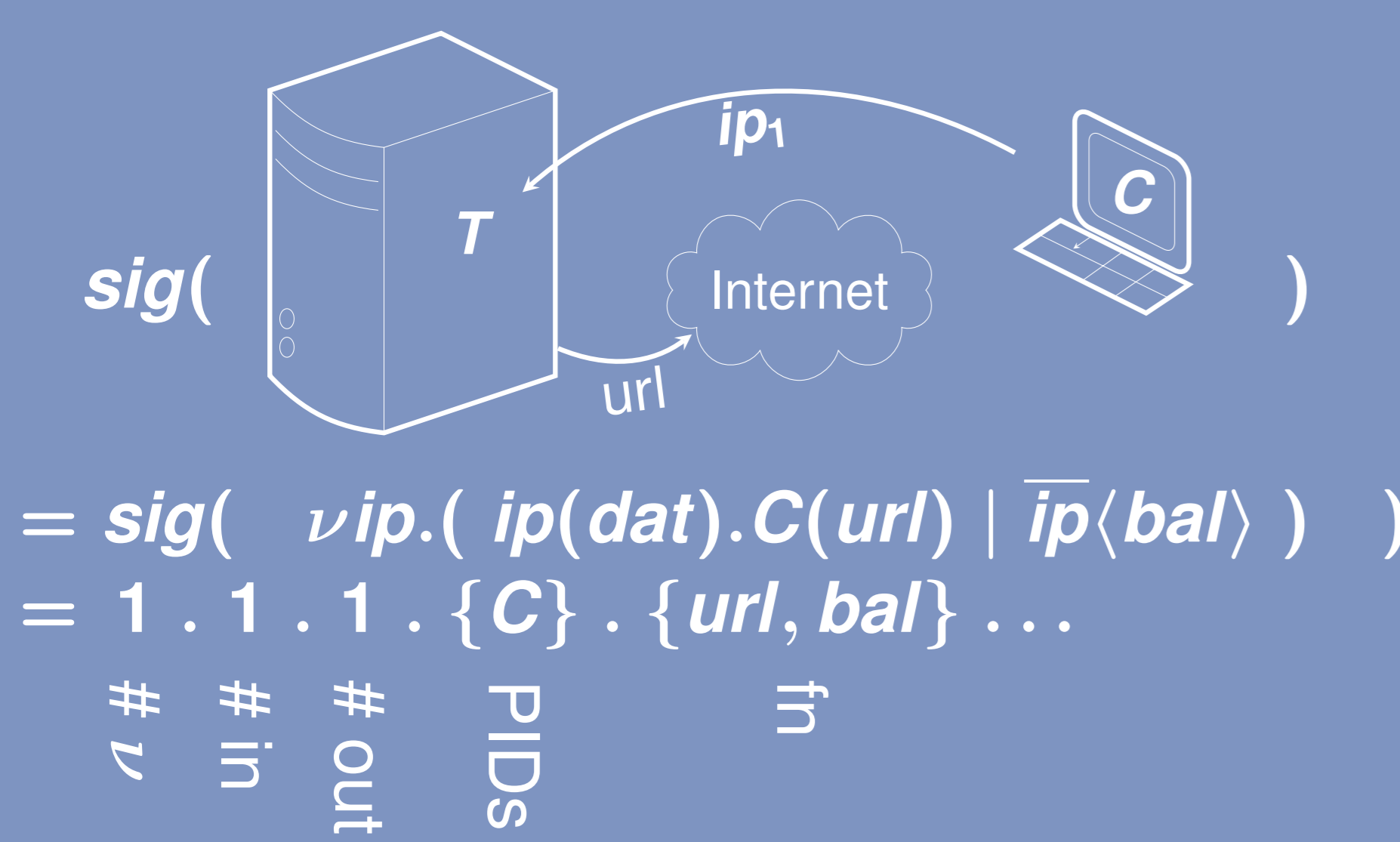
Dynamic network: Online banking service



Structural semantics as fixed-point of ϕ_{Bank}

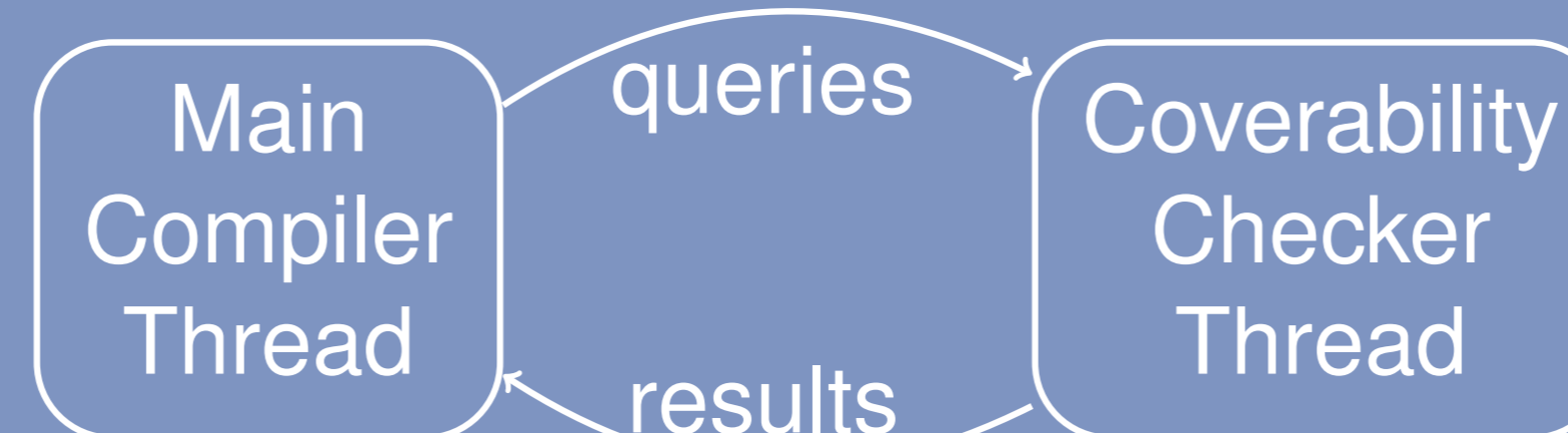


Inserting places

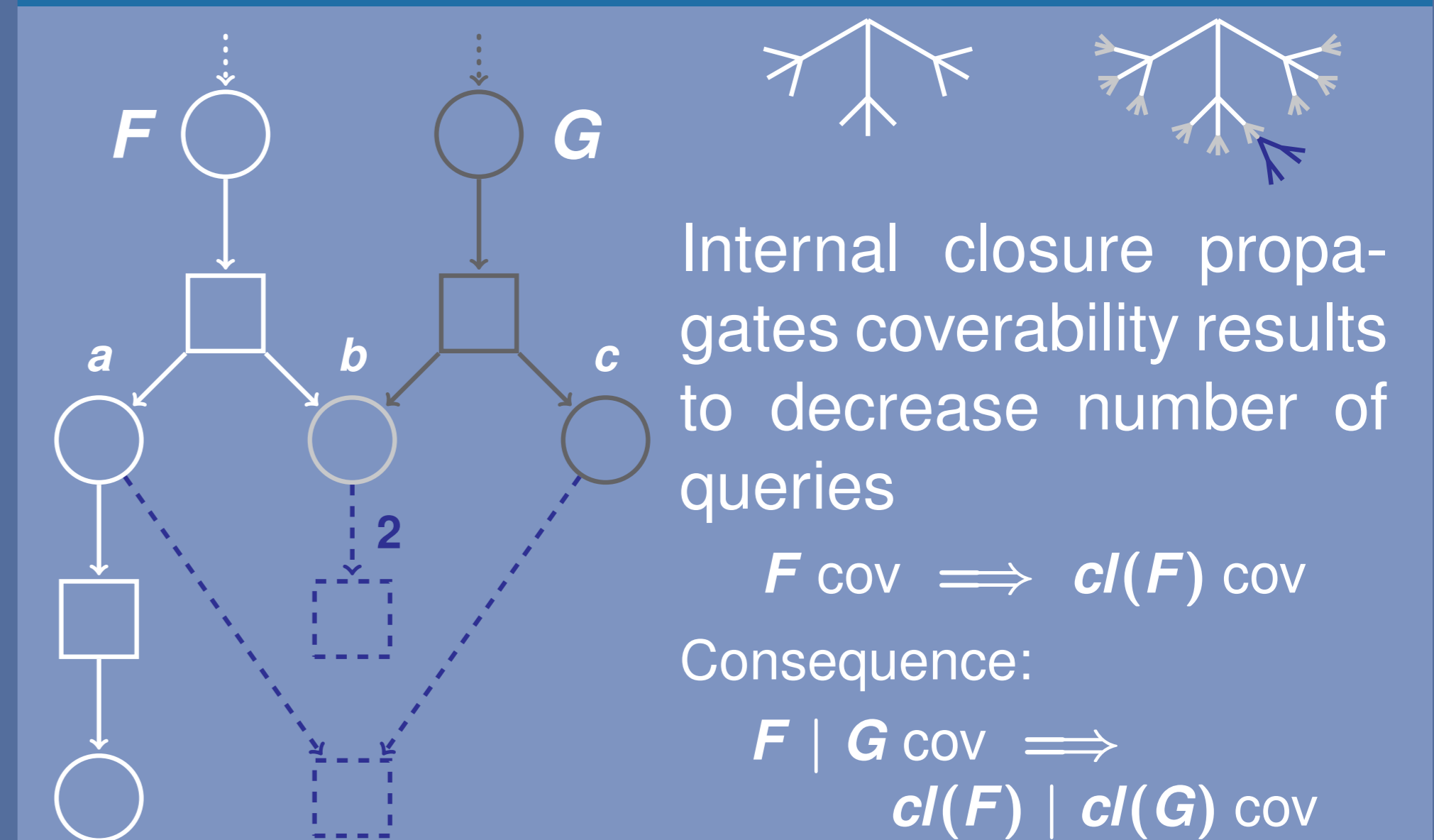


Communication partners

Dir	Name	Processes	reachable?
in	url	$\{S(url)\}$	$S(url) \mid C(url)$
out	url	$\{C(url)\}$	\bullet \bullet
find	potential partners		coverable?

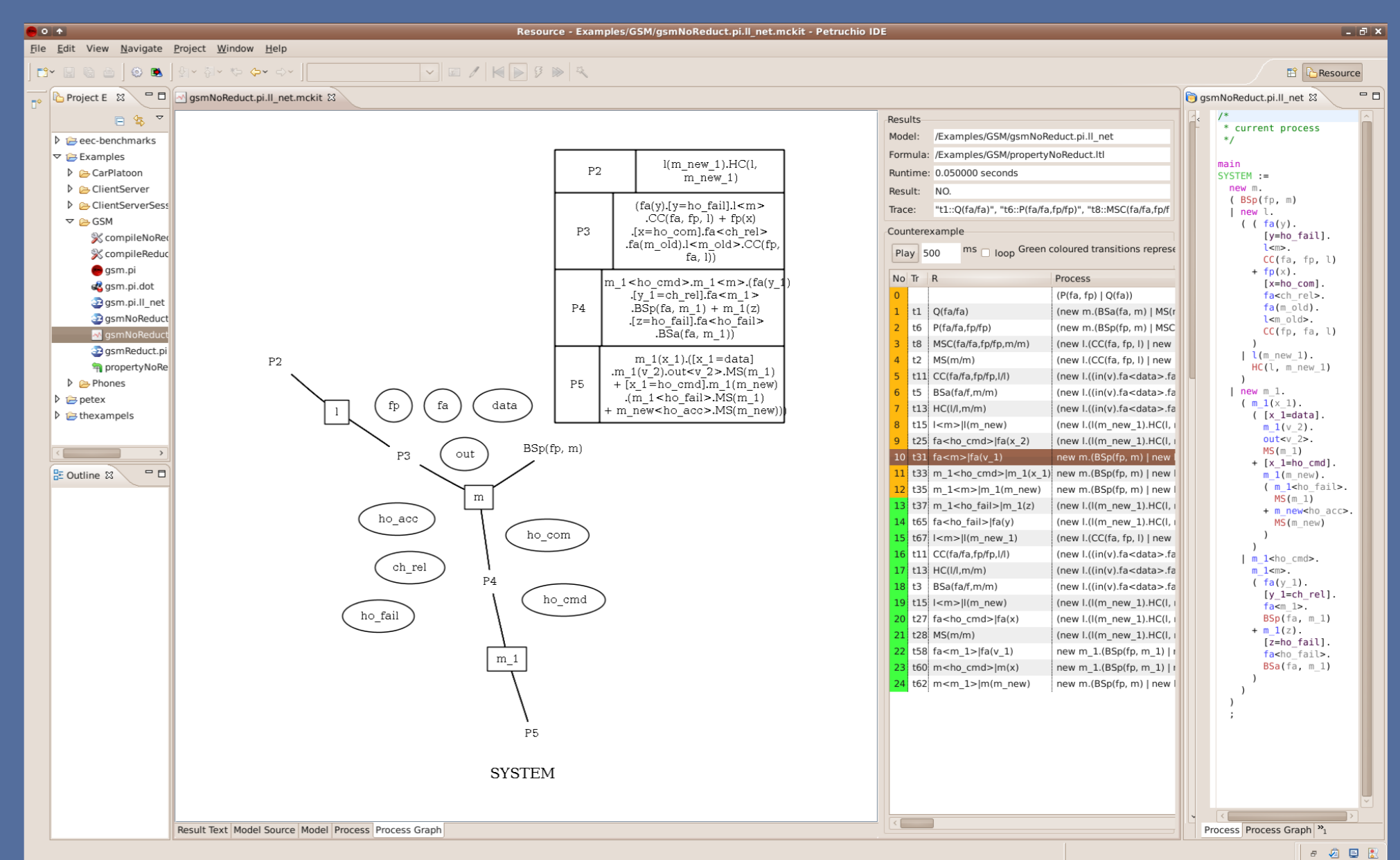
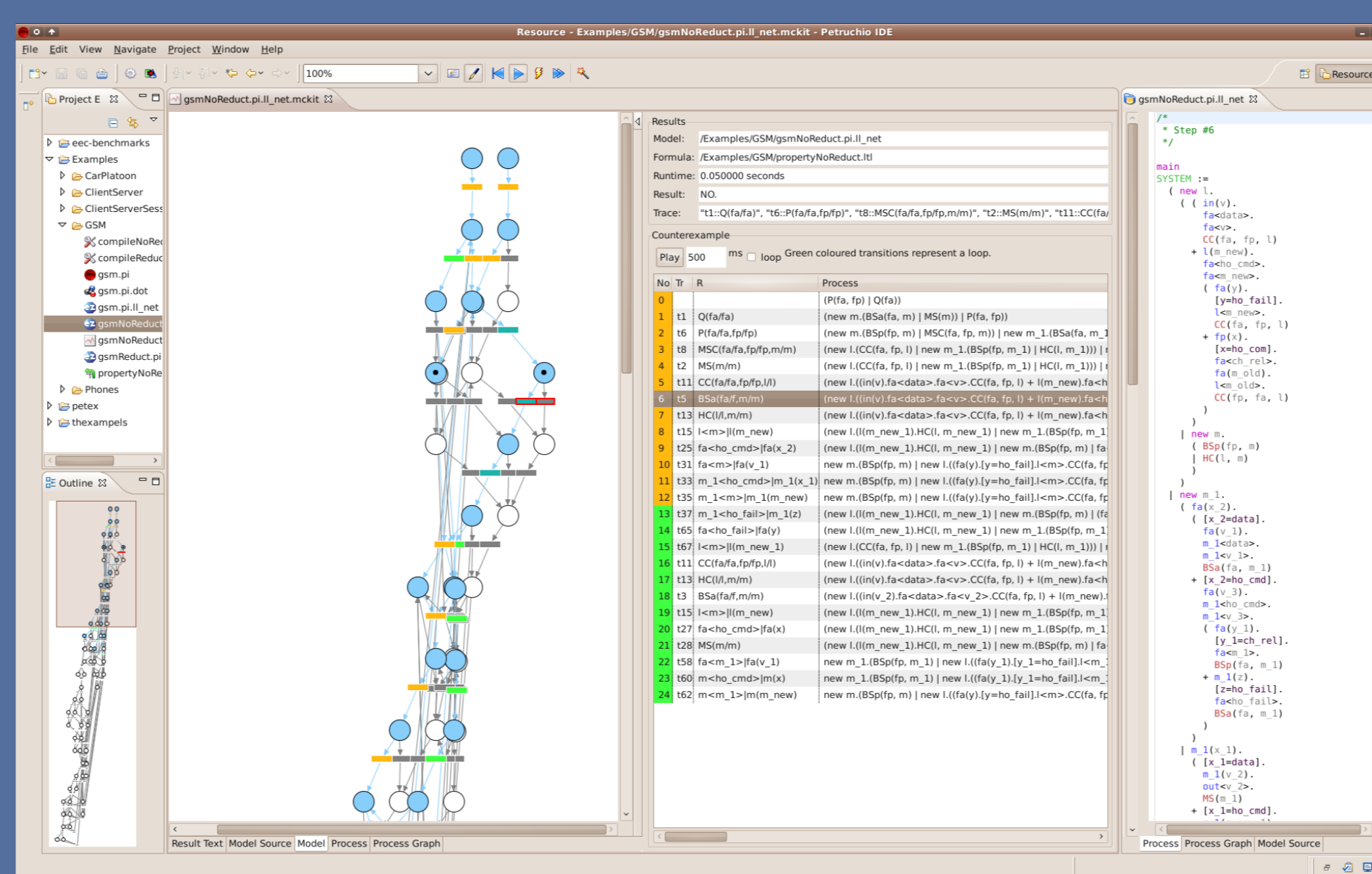


Depth-first acceleration



Core features of Petruchio

- Rich frontend, Eclipse based
- π -calculus editor with syntax highlighting
- Configurable compiler
- Petri net editor with simulation capabilities
- Connection graph view
- Process interpretation of markings
- Backend checkers MCKIT, INA, and ARMC
- Counter-trace interpretation as processes, Petri net markings, and connection graphs



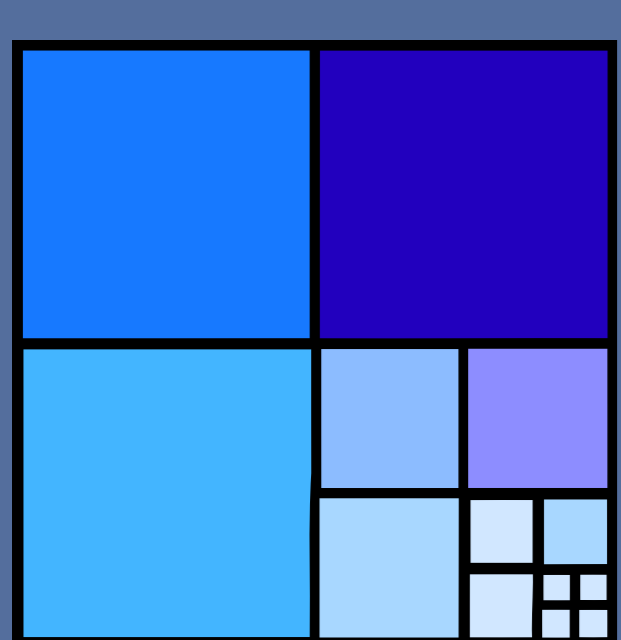
Experiments

Model	LOC	P	T	E	t[s]
GSM	84	131	263	526	1.55
HTS _P	194	903	1103	3482	3.24
HTS _C	195	1912	3515	11881	15.7

GSM handover protocol. Holonic transportation system (HTS) parametric in # vehicles. HTS with six vehicles.

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Correct System Design
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