openPASS - AC

TODOs in 2019
Agent Interface

Agent

Component A

Component B

AgentInterface

AgentAdapter

World PCM

AgentAdapter

World OSI
Present AI / AD

- **PCM world**
  - agent’s geometry contour
  - line and point based perception
  - agents and objects are line objects

- **OSI world**
  - openDRIVE-like
  - instance-based perception
  - agent’s size data
  - affiliation-based perception

- **AgentInterface**
  - constantly extending
  - hardly overlapping
  - dummies dominated
  - anti-/non-intuitive
Future AI / AD

- **PCM world**
  - full implementation of AgentInterface

- **OSI world**
  - full implementation of AgentInterface

- **AgentInterface**
  - slimmed-down
  - generic
  - extensively documented
  - consistent coordinate systems
  - remove WI* from components
Logging

Core

Global logger

Internal logger

AgentInterface

AgentAdapter

World PCM

Reference

Component
Present Logging

- Internal logger
  - core component of type “ObservationInterface” (e.g. “Observation_State”)
  - assigned via runConfiguration.xml
  - used within corresponding components
  - overhead within the component code besides the actual content

- Global logger
  - core component of type “ObservationInterface” (e.g. “Observation_ScopeLogger”)
  - global instance
  - accesses only AgentInterface
  - excessive extension of AgentInterface
Future logging

? Global logger
  ? ground truth

? Scope logger
  ? true perception

? Signal logger
  ? component I/O

? Master logger
  ? multiple runs / simulations
General

Cosmetics
...

Scheduler
...

Other
...
General TODOs

- Refactoring file system
  - remove “OpenPass” prefix
  - organize sub-projects hierarchically

- Refactoring code
  - remove “OpenPass” prefix
  - introduce InputPort and OutputPort for components’ I/O, where not done yet

- Errors
  - more detailed error messages
  - error display and interaction via UI

- Scheduler
  - re-think the priority usage (maybe obsolete)
  - reduce number of component types (e.g. kick out “Init” type)

- Other
  - replace X- and Y-values via vector signals
  - rework vector2d and vector3d libraries
  - sub-dir for GUI libraries
  - sub-dir for third-party libraries