

ASAM OpenSCENARIO Implementation Demo

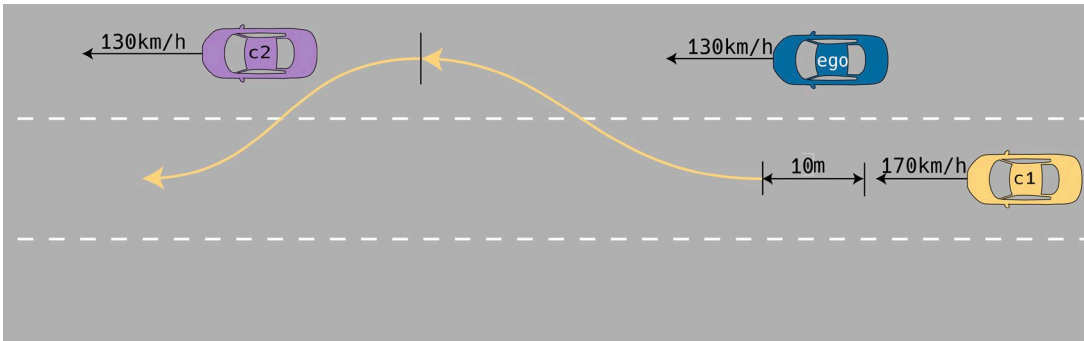
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ASAM GA



OpenSCENARIO Different Level Samples

DoubleLaneChanger



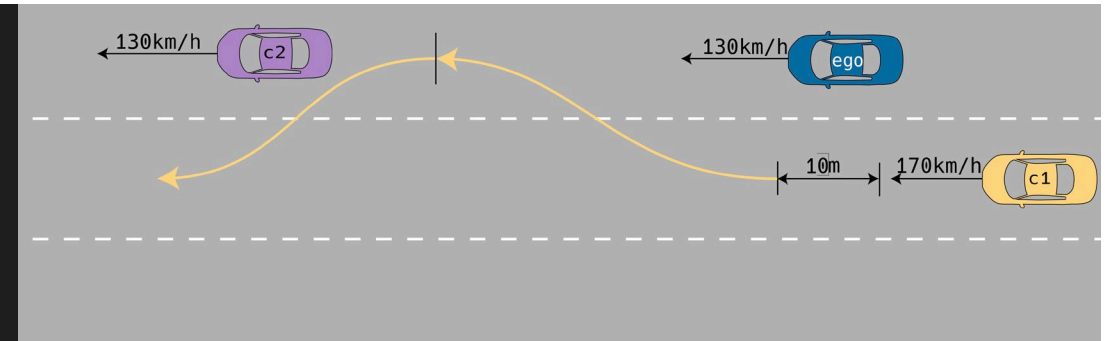
| | 1.x | | 2.x |
|----------|--|------------------------|---|
| Concrete |  concrete.xosc | = |  concrete.osc |
| Logical |  concrete.xosc | + distribution.xosc | =  logical.osc |
| Abstract | X | |  abstract.osc |

OpenSCENARIO2 Concrete Scenario

DoubleLaneChanger

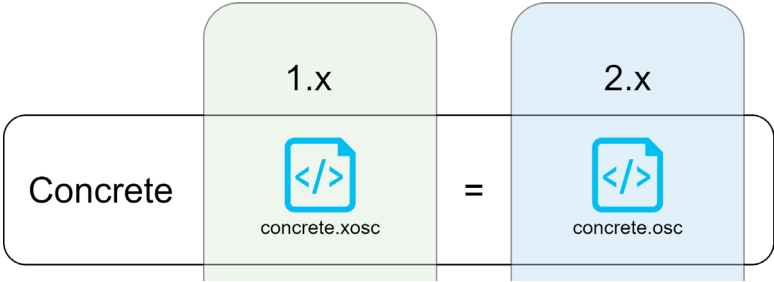
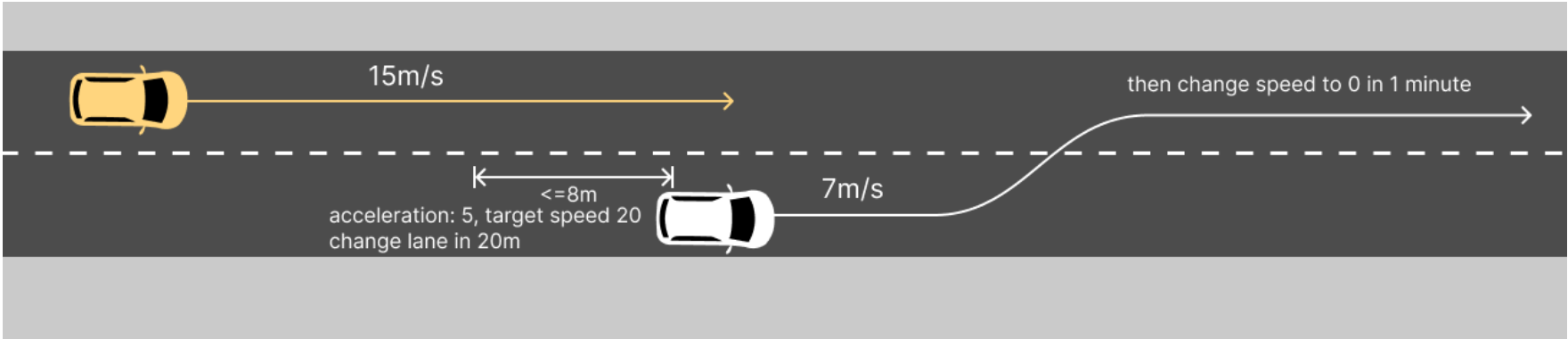


```
40 do serial:
41   init_: parallel:
42     ego_init: ego.drive() with:
43       along(path_ego)
44       speed(speed: 130.0kph)
45     a1_init: car_a1.drive() with:
46       along(path_a1)
47       speed(speed: 170.0kph)
48     a2_init: car_a2.drive() with:
49       along(path_a2)
50       speed(speed: 130.0kph)
51   with:
52     until (ego.object_distance(reference:car_a1) > 10m)
53
54   action_: serial:
55     car_a1.change_lane(side: right, num_of_lanes: 1, reference: car_a1, rate_profile: dynamic_profile.smooth, duration:2s)
56     car_a1.change_lane(side: left, num_of_lanes: 1, reference: car_a1, rate_profile: dynamic_profile.smooth, duration:2s)
57
58   wait elapsed(10s)
```



OpenSCENARIO Concrete Scenario

CutinAndSlow



1, Problems not detected with parser based on EBNF

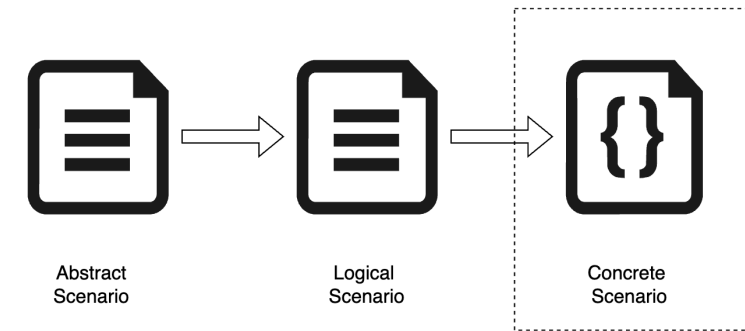
- Semantic error
- Forward usage before declare
- enum ambiguous with two same name such as at!start and route_overlap_kind!scenario
- environment.datetime is parameter but not variable

2, Need complete migration from 1.x to 2.x

- missing simulation time, what' s the exactly replacement

3, Exchangeable and basic reproducibility cross different tool

- OSC2.0 reproducibility need concrete enough



| | Abstract Scenario | Logical Scenario | Concrete Scenario |
|-----------------|-------------------|------------------|-------------------|
| Exchangeable | ★★★★★ | ★★★★★ | ★★★★★ |
| Reproducibility | ★ | ★★ | ★★★ |

Thanks!

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