Assured Autonomy

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Assured Autonomy

Well-defined system specifications / requirements

- Precise definitions
  - “Slow down gradually and give way to traffic on the major road”
- No assumptions on human nature / capabilities
  - “Check your mirrors and look over your left shoulder to make sure that there are no cars trying to pass you.”
- Rule hierarchy
  - How to handle situations where not all the rules can be satisfied

Validation methods

- Objective measure
- Sufficient coverage
Behavior Specifications

- Ensure some consistency with human behaviour
  - Ensure that the introduction of autonomous systems will not cause chaos in the existing network
- Rule violation measures and rule hierarchies that result in reasonable behaviours in all scenarios
- Amenable to objective validation