University of Groningen

Dynamic Rule-Based Reasoning in Smart Environments

Degeler, Viktoriya

Dynamic Rule-Based Reasoning in Smart Environments

1. People make decisions using a vast amount of background information. One cannot expect an automated system to make equally good decisions without it. Populating the smart reasoning system with all relevant information is an important yet one of the hardest challenges a system's engineer meets.

2. When designing a rule language for the smart system, it is better to use declarative rules, not imperative ones. Final users should be able to specify what they want to achieve, not how to achieve it. The "how" should be left to the system itself to figure out.

3. While people understand why the smart system makes its decisions and how to change its behavior, they ultimately remain in control.

4. A smart system must expect the possibility of sensor data being corrupted or missing, and be able to reason so to mitigate the consequences of it.

5. Sometimes machine learning methods are better at creating rules for smart environments than final users, as they can capture data relations that users do not think about.

6. Complicated and expensive initial deployment of smart systems hampers their wide expansion. A system that keeps initial commitments low, can aim high.

7. The easiest way to save energy in any environment is to immediately turn off all devices and never turn them on again. People's needs and comfort is what prevents this approach.

8. Whenever people learn something sufficiently well, they cease to be aware of it. (Mark Weiser)

9. What makes the desert beautiful is that somewhere it hides a well... (Antoine de Saint-Exup)