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Reusable robot applications for flexible robot systems based on Industrial ROS (ReApp)

Utilizing Ontological Axioms for a Flexible Specification of Template-based Robotic Applications



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Motivation- Assistance of Robotic Solutions Developers



Goal:

Helping robotic developer to build and reconfigure robotic solutions

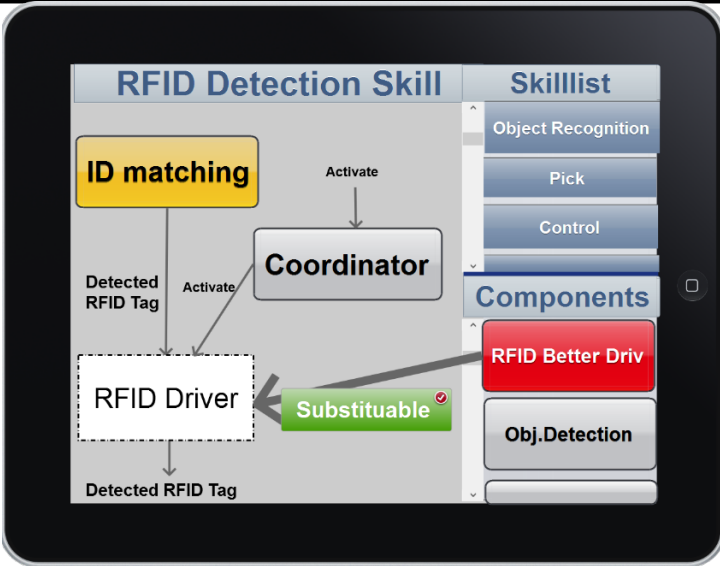
- Reducing the reconfiguration overhead
- Reducing the requirement of domain knowledge and expertise e.g. in ROS, Hardware components

Idea:

Building application templates in which 3rd party components can be dynamically integrated based on a semantic description of their functionalities using a placeholder concept.



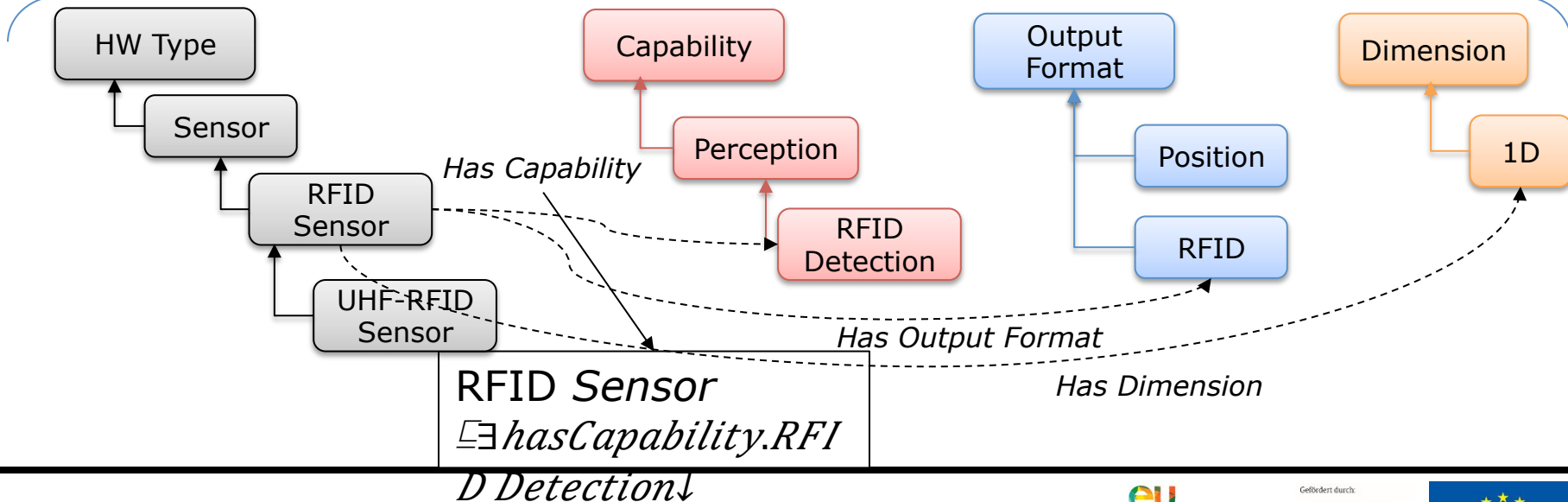
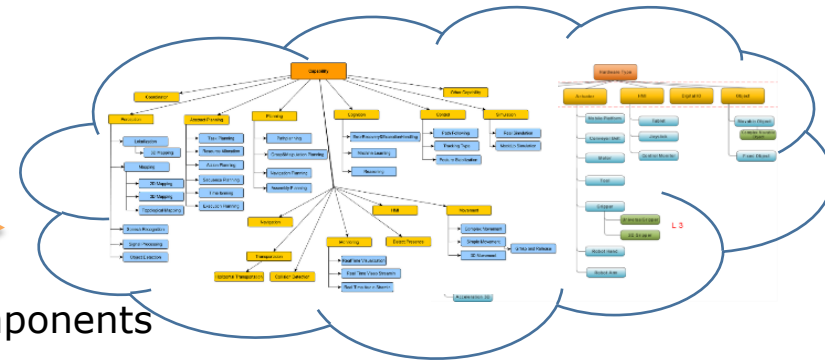
Template Based Development of Robot Solutions Using Ontological Semantics



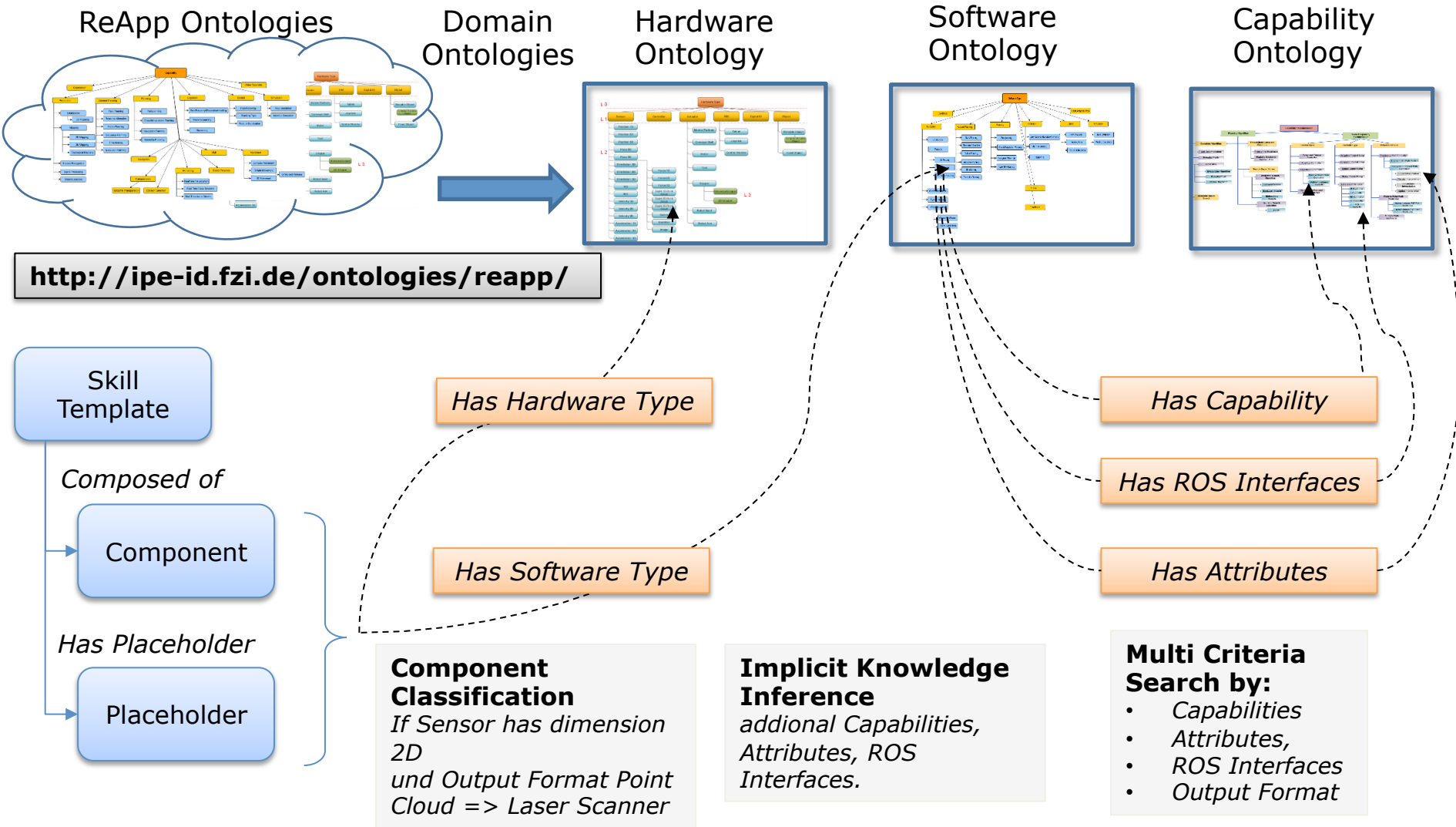
Get suitable
Components

based on a multi
dimensional components
classification

ReApp Ontologies



ReApp Ontologies-Overview



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Thank you for your Attention!

Questions?



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For more information visit us at www.reapp-projekt.de