Toward a Web of Needs

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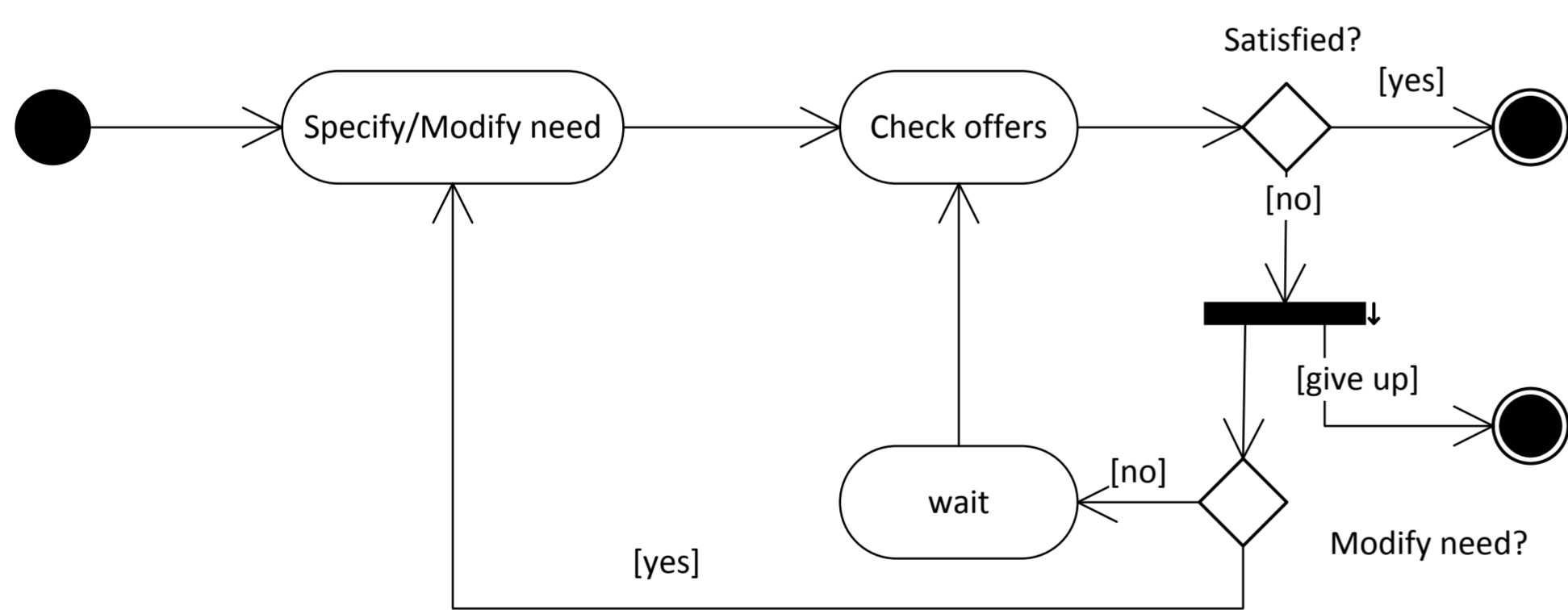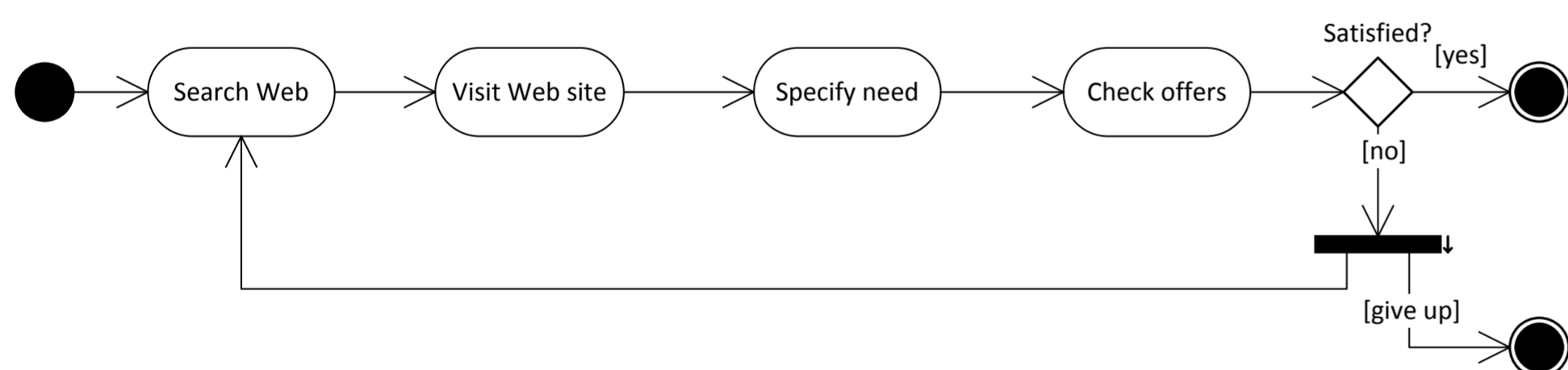
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Web of Needs

▶ The Web as related to commerce suffers from a fundamental asymmetry. While there is a great number of commercial offers available, consumer needs are rarely represented explicitly. Thus, the most widely applied process of connecting the prospective consumer of a resource with its supplier is Web search.

▶ We are developing an infrastructure that will allow consumers to describe and publish their needs and have them interact with offers in a semi-automatic process, reducing the need for manual search and enabling a wide range of unprecedented applications. Stressing the fundamentally different status of needs in such a system we refer to it as a **web of needs** or **WON**.
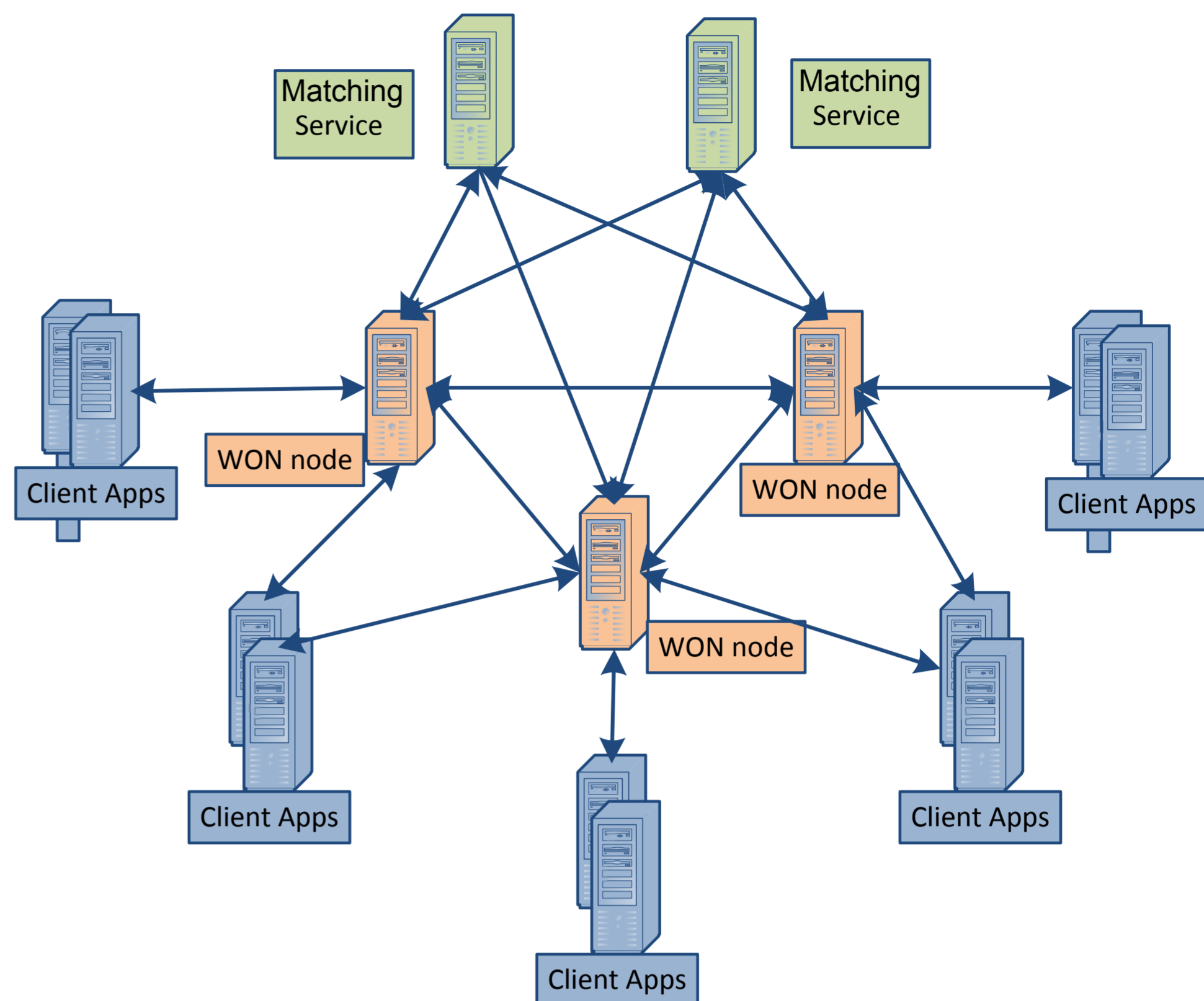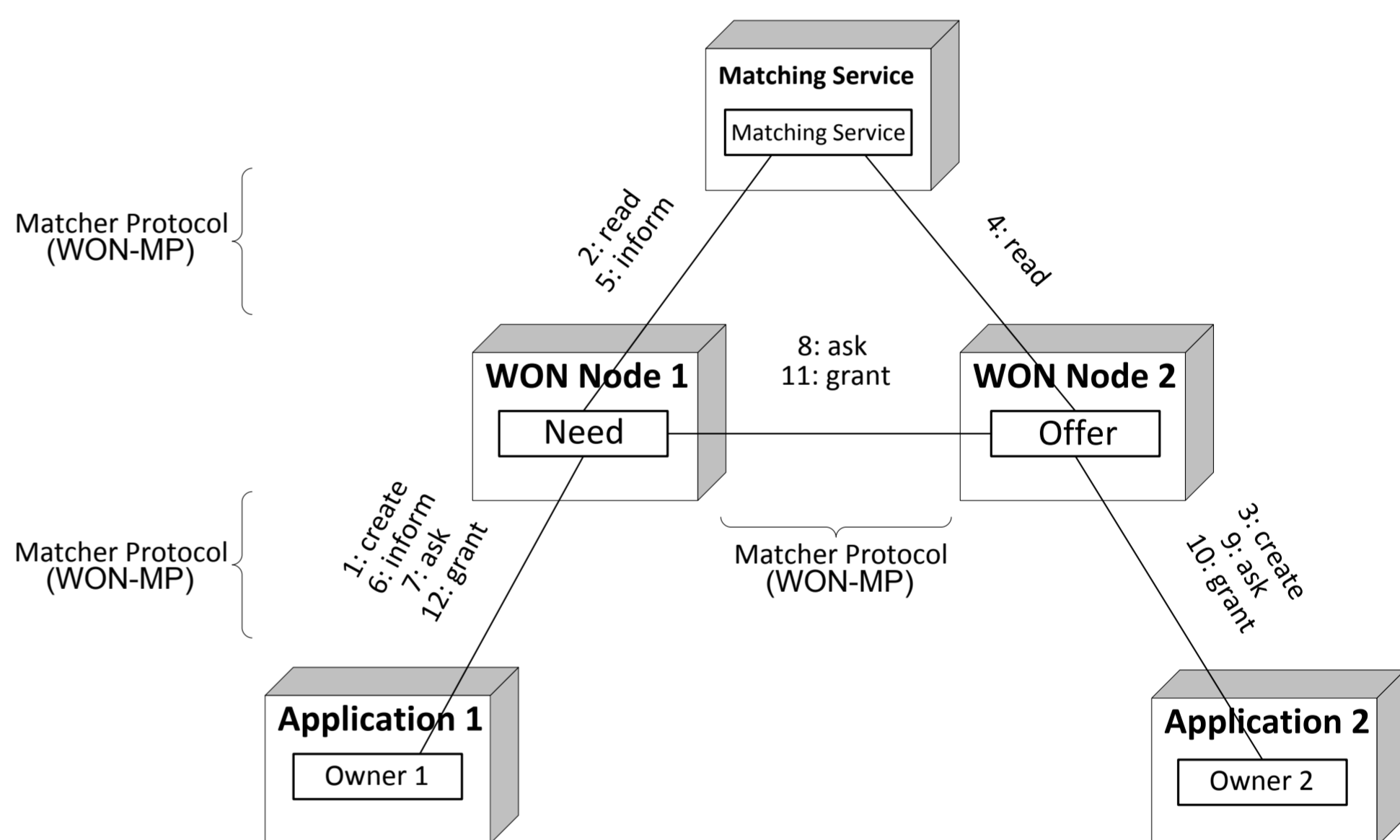
Today vs. Future

Studio Smart Agent Technologies

▶ Studio Smart Agent Technologies of Research Studios Austria develops methods for channeling the vast amount of diverse information present on the Internet. Using modern Web techniques and intelligent services, we try to reduce its complexity and alleviate the accessibility of information catering to the user's personal interests.

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Infrastructure

Collaboration in a WON

Challenges: WON Ontology

▶ Development of **a new ontology** or extension of **an existing ontology**
▶ Development of a formalism for the specification of **object properties**
▶ Development of a formalism for the specification of **constraints** of object properties
▶ Extension of the ontology so that **combinations** and **dependencies** can be formulated

Challenges: Need Matching

▶ Development of a matching service based on **textual descriptions** of objects
▶ Development of a matching service based on **textual descriptions** of objects and **WON ontology**
▶ Development of a matching service based on **textual descriptions** of objects and **WON ontology**, in which **constraints** are taken into account
▶ Development of a matching service based on **textual descriptions** of objects and **WON ontology**, in which **constraints**, **combinations** and **dependencies** of needs are taken into account

Reference

▶ Florian Kleedorfer, Building a Web of Needs, In 10th International Semantic Web Conference (ISWC 2011 - Outrageous Ideas), 2011.