Agents and Roles

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Abstract
Are the salesperson and customer REA economic agents? Well, it depends. They might either be economic agents or *roles* of economic agents. This position paper aims to bring attention to this distinction, which is often misinterpreted in many REA papers.

Static structure of the role pattern is illustrated in Fig 1. The same Real Party (person) can play different Party Roles, such as customer, vendor and employee.
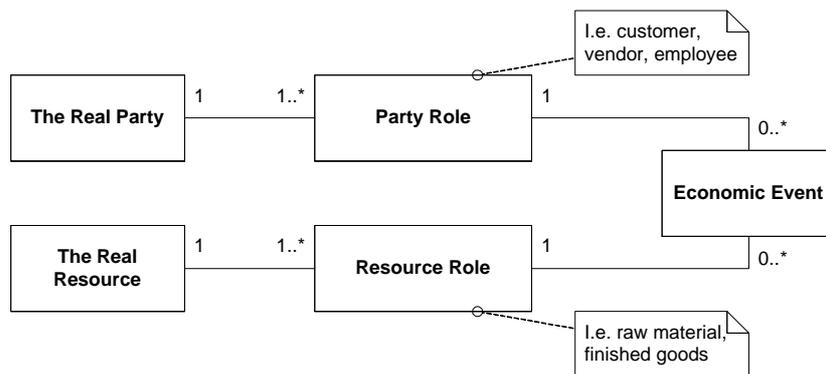

Fig. 1. Role pattern

The REA model is illustrated in Fig. 2. REA model does not explicitly determine mapping to the role pattern.
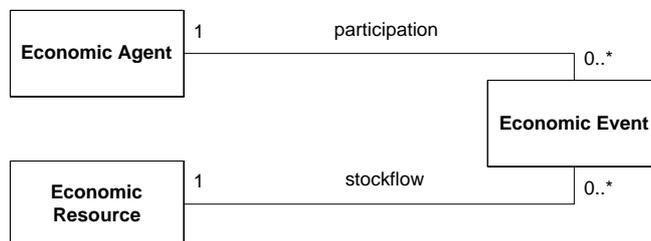

Fig. 2. REA model (incomplete)

Party Roles, such as customer and vendor, can be represented in REA either by participation relationships, or by economic agents. Brief search in the literature showed that almost all authors use both approaches. For example

Geerts and McCarthy sometimes interpret roles as participation relationships: "The participation relationship describes the agents involved in an Economic Event. Inside and outside are two different subtypes of this relationship representing the two roles of Agents in the participation relationship. The same agent (person) can be an inside agent (employee) for one event and an outside agent (customer) for another event." [2], page 9.

However, many authors interpret roles as agents: "Agents, such as salesperson and customer" [1], page 8.

This mapping influences the model structure and behavior. For example, in the first case, customer account must be contained in the relation, which would require some data structure behind the relation. In the second case accounts are contained in the agent objects, which is somehow more intuitive. On the other hand, the first case might be more proper from philosophical and ontological perspective.

I would like to discuss consequences of these two mappings between the role pattern and the REA pattern.

References

[1] Guido Geerts and W. E. McCarthy"An Ontological Analysis of the Primitives of the Extended_REA Enterprise Information Architecture".
[2] Guido Geerts and W. E. McCarthy "The Ontological Foundations of REA Enterprise Information Systems"