

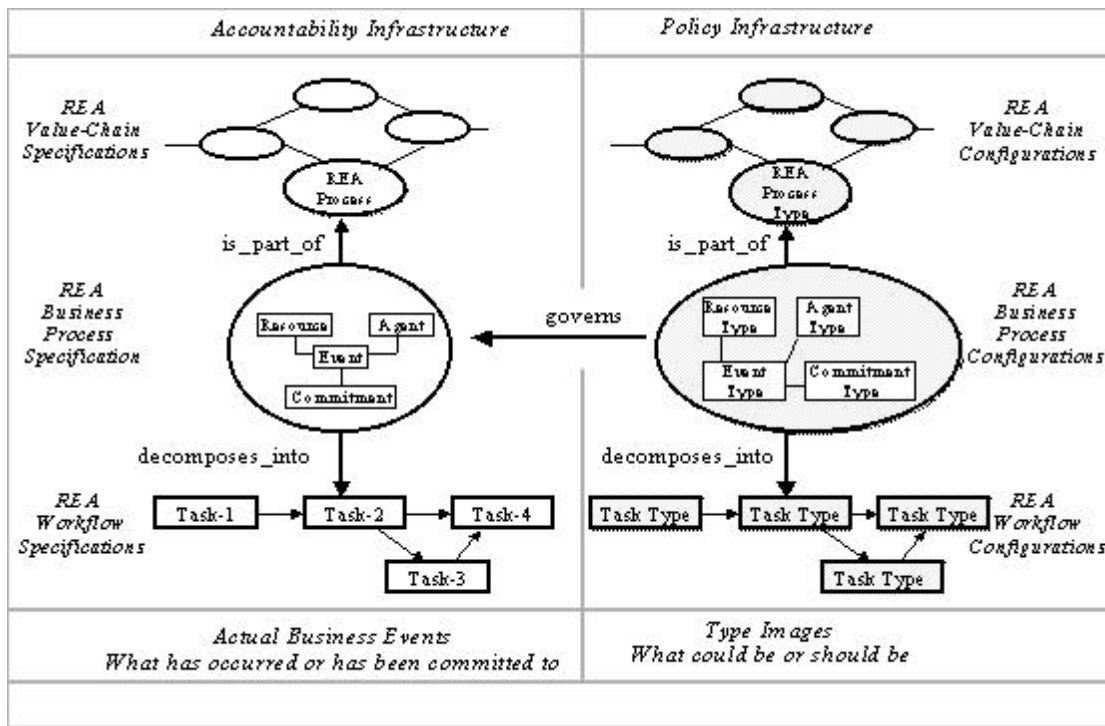
# *REA Ontology Use in ebXML and the UN/CEFACT Modeling Methodology (N90)*

## Semantic Web Workshop ñ Position Paper

**Guido Geerts, University of Delaware, geertsg@be.udel.edu**  
**William McCarthy, Michigan State University, mccarth4@msu.edu**

Two ongoing standardization efforts in the area of e-commerce that rely on the notions of semantic content and domain ontologies are (1) the [UN/CEFACT TMWG Unified Modeling Methodology](#) (known as UMM or the [N090](#) document) and (2) [ebXML](#) (electronic business XML). The UMM is a proposed methodology for object-oriented development of e-commerce solutions that uses multiple layers of abstraction. However, its primary repository of microeconomic semantics is the BRV (Business Requirements View) level that utilizes elements of the [REA \(Resource-Event-Agent\) ontology](#) for its primitive concepts. ebXML is a set of e-commerce standard specifications that is closely intertwined with the UMM and that concomitantly uses REA elements as part of its analysis and design methodology.

An overview of the REA ontology is given in the figure below.



The REA ontology [originated in the field of accounting](#), but its primitives have been extended out to [other business enterprise phenomena](#), and we now estimate that over 60 % of the strongly-typed data in a typical company (its internal ERP systems, its external EDI segments, etc.) can be interpreted (somewhat passively) within REA.

At the Semantic Web Workshop, we want to explore with other theorists and practitioners the possibilities for extending this parsimonious enterprise ontology into a more active environment wherein its components can be used for automated comprehension and intensional reasoning. This seems to be where the semantic web in general is headed, and we want to avail ourselves of the workshop's assembled expertise to chart our course. Because of ebXML infrastructure time constraints, REA is embedded somewhat passively as an [analysis guideline](#) and [worksheet template](#) at present, and we need to see how semantic web ideas can aid us in getting it embedded as a run time component for reasoning about the economic, accounting, and legal contracting aspects of business exchanges and transformations,

both within and between business enterprise partners.