

# Position Paper for Rules Concerning Project Management Ontologies

## Author

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## Author Background

Mr. Clark is co-founder and Chief Executive Officer of Métier ([www.metier.com](http://www.metier.com)). He is currently the project manager for the Project Management Institute's (PMI, [www.pmi.org](http://www.pmi.org)) Practice Standard for Scheduling, as well as a member of the Standards Consensus Body for PMI. He was founding board member of PMI's College of Scheduling. Mr. Clark was trained as a cryptanalyst at the National Security Agency, and has extensive experience in systems development. Mr. Clark received a Bachelors of Science degree in Information Systems from The University of San Francisco.

## Overview of a Use Case

Many management consulting words espouse the importance of the **project** to today's economy. It is not a stretch to state that the project has become the finished good for many service based businesses. As the de facto finished good, the project, or more specifically, the project portfolio, becomes the real source of the balance sheet of an organization, not the traditional items within a chart of accounts. Métier believes that project management is a critical use case to consider during the Workshop on Rule Languages for Interoperability.

With the advent of project portfolio management software in the late 90's, project management became a core competency in the enterprise. The rapid growth of project management's professional association, PMI, coupled with PMI's personal certification program and standards program has raised the competence bar for managing the project. In fact, several of PMI's standards have attained ANSI accreditation status.

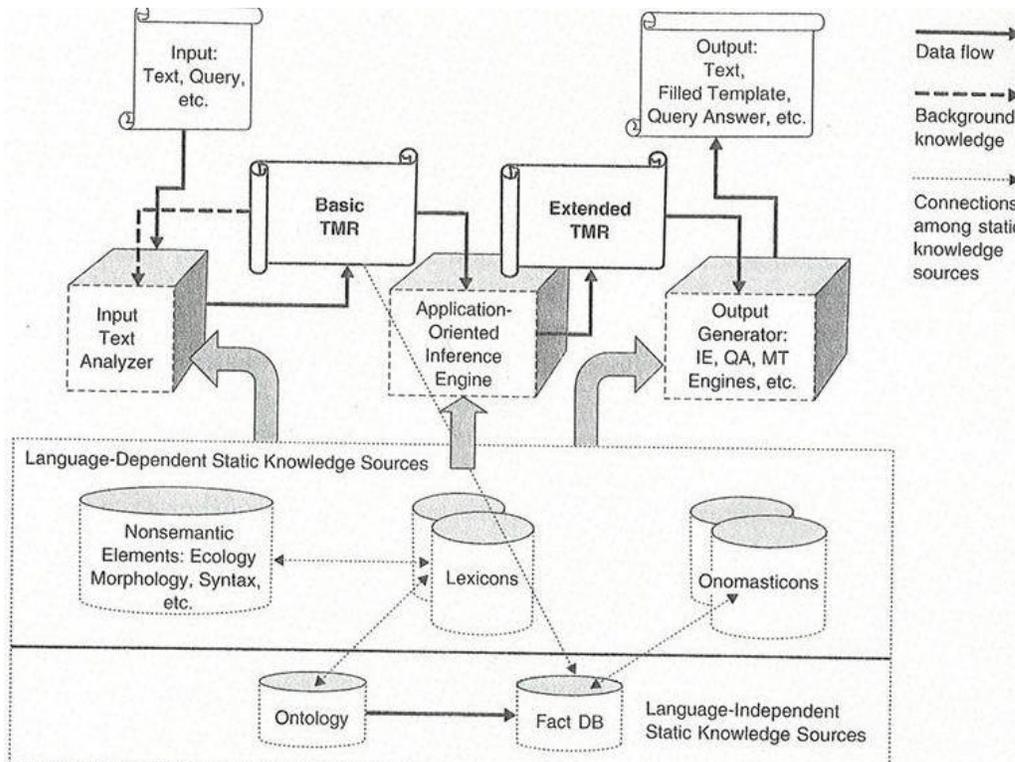
PMI's standards, from the Project Management Body of Knowledge® to the Organizational Project Management Maturity Model (OPM3), are beginning to codify the processes of the profession. In fact, *shalls* are beginning to appear in the standards, and each standard is moving toward maturity assessments in some manner. This critical profession is ripe for gleaning knowledge rules.

We see PMI encoding *shall* and *should* best practices in the W3C rule language for each standard, and either hosting the fact database at the PMI domain or licensing the repository. Métier believes a PMI fact database stands a much better chance of wide acceptance than a propriety approach. While PMI is just beginning to understand the importance of XML/XSD as an important interoperability mechanism, there appears to be a critical mass to move the organization into more modern computing concepts. Further, the PMI standards organization has just initiated development a lexicon for project management. From a knowledge capture perspective, PMI has done an admirable job of identifying the knowledge of the project manager. The next step is codification. The confluence of standards sophistication, coupled with the W3C's work in rule language development may portend a rather quick implementation of a very useful ontology-based system for the profession.

## Use Case Applied

In 1998, Métier began development of a taxonomy focused application for managing projects as an interrelated portfolio. The application, WorkLenz, includes the WordNet ([wordnet.princeton.edu](http://wordnet.princeton.edu)) lexical database to extend the taxonomy into a cognitive “activity” space of project tasks. Further, the application provides several statistical approaches to modeling these activities. At the Year 2000 Census program, the prototype was used to manage the deployment of the census data capture technology. From there, the tool is now in use in diverse settings such as the FBI, BMW, and a small California consultancy. Métier analysts and developers have presented papers at the North American Association for Computation Social and Organizational Science ([www.casos.ece.cmu.edu](http://www.casos.ece.cmu.edu)) on findings related to use of the software.

Métier has begun development of a follow-on technology termed, Ontology Based Semantic Matching (OBSM). The basic premise is to perform an intelligent search using an ontology. We sometimes refer to this as template based search. The first application of the technology is in support of the intelligence community for targeting terrorist projects. As a general outline of capabilities, the OBSM concept mirrors much of Nirenburg’s and Raskin’s *Ontological Semantics* ([mitpress.mit.edu/](http://mitpress.mit.edu/)). Métier believes that a robust rule language for ontologies will accelerate the development of enterprise applications for the project management environment. From the graphic below, Métier believes that all of the knowledge areas represented by the *Language Dependent Static Knowledge Sources* box should be based on open standards.



*Ontological Semantics*, Nirenburg and Raskin, 2004

(TMR is defined as text meaning representation)