# dotNetRDF Design Document

## dotNetOWL

Library: dotNetOWL.dll  
Version: 0.1.0  
Target Date: January 2011  
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Proposed Implementer: Rob Vesse  
Last Updated:

## Required Features

* API representation of OWL 2
* Parsers and serializers for all main OWL syntaxes

## Time Permitting Features

* OWL 2 DL Reasoner

## Known Issues/Bugs to Fix

* N/A for first release

# Design

## API Representation

Based on the OWL 2 structural specification implement a data model that allows all of OWL 2 to be represented sensibly in-memory.

Define IOntology as the interface for Ontologies and then add a standard implementation. Use a BaseTripleCollection style paradigm for storing the Axioms and Annotations.

## Parsers and Serializers for OWL Syntaxes

* OWL Functional
* Manchester
* OWL/XML
* Support mapping OWL to RDF and vice versa (should this be a separate library?)

## OWL 2 DL Reasoner

Using an existing open source reasoner like Hermit/Fact++ implement an OWL reasoner. Alternatively talk to Clark & Parsia about the possibility of doing a Pellet implementation in .Net though this would necessitate different licensing from our standard licenses.