A Proposal for SET TC Requirements
Agenda

- The Problem SET TC Addresses
- SET TC Goals
- Why a standard?
- The Requirements forseen
- The reasoner to be used?
- More Specific Requirements of TC Members
What is the Problem?
SET TC Goals

Provide a set of **Specifications** for the Semantic Representations of Electronic Business/Government Document Artifacts based on CCTS Framework

And hence facilitate the development of tools for document component discovery, reuse and translation among CCTS based document standards
Why try to make it a standard?

- At the end of the day, the semantics is expressed by using a machine processable ontology language and using a vocabulary.
- Different representations and vocabularies will make it difficult (if not impossible) to harmonize the semantics of document standards.
- In other words, it is necessary to agree on a common way of expressing the semantics of document artifacts.
- **CCTS based standards already made sharing some common semantics possible; can we express this in a standard way?**
Requirements forseen:

- Interoperability of several different interfaces used in eGovernment applications (Danube University Krems)
- Further dimensions of variability such as Namespaces, Content Models, Core Components, Variations in basic datatypes (and codelists), Naming and Design Rules and Context need to be addressed (SystML)
- Tools for semantic search of existing concepts inside the standardised specifications (ENEA)
- Rules to set up mapping between local views and global (standardised) view (ENEA)
- How to use SET TC results in eHealth and well-being (Helsinki University of Technology)
Requirements forseen...

- The Documents we are addressing are
  - CCTS based schemas since CCTS has already defined useful semantics
  - XML instances
- The approach should be “engineering (making things work:-) with the intention to put it into industrial use (rather than philosophical or theoretical)
- However developing supporting tools is not our responsibility but we realize that developing some prototypes making use of the semantics specified will help with the take-up of the standard
Requirements forseen...

- The semantics to be defined should serve the intended purpose
  - Not any semantics the document component may have but the minimum amount of semantics aimed to facilitate the discovery, reuse and translation

- The extracted semantics should be expressable in any ontology language

- But the ontology language should be OWL since there is a lot of tools that can be used
Requirements forseen...

- While defining semantics care should be given to the overall performance
  - We will use OWL features that fit our needs
  - For example OWL Full features should not be used for performance reasons
  - "OWL Full is meant for users who want maximum expressiveness and the syntactic freedom of RDF with no computational guarantees"
Requirements forseen...

- It seems we will need OWL DL features:
  - Boolean Combinations of Class Expressions:
    - UnionOf
    - ComplementOf
    - intersectionOf

- Use OWL DL features carefully to improve performance
  - If the inferred ontology is computed only once for a given set of document schemas, lower performance rates may be acceptable
  - However for continuously computed inferences, performance should be at the level acceptable by the industry
The reasoner to be used?

- Open source reasoners will be preferred however some commercial reasoners have better performance
- RacerPro has agreed to give SET TC Members a 90 days license for free to be used solely for SET TC purposes
- Details will follow later...
More Specific Requirements of METU and SRDC Ltd
iSURF Interoperability Service Utility

• Today, an enterprise's competitiveness to a large extent is determined by its ability to seamlessly interoperate with others.
• Recognizing this need, the European Commission’s Enterprise Networking Unit defined the Interoperability Service Utility (ISU) as a utility-like capability.
• The iSURF Project (http://www.iSURFProject.eu) is realizing ISU services that facilitate real-time information sharing and collaboration between enterprises by providing semantic support for electronic business document interoperability.
# The scope: iSURF Planning Documents

- **Forecast** document for the projected demand of an item.
- **Forecast Revision** in order to propose a set of changes to a forecast.
- **Product Activity** which provides product movement observations such as point of sales.
- **Performance History** which is a collection of performance metrics such as sales growth, forecast accuracy, etc.
- **Exception Notification** which represents variation of metrics in the forecast documents and the real values.
- **Exception Criteria** defines threshold for variances on which exceptions should be triggered.
- **Event** describes a promotion, inventory policy change or other planned events.
- **Item Information Request** requests information on product activity, forecast or performance data when it is not automatically sent.
Planning Documents in UBL

- We developed Planning Documents and submitted it to the OASIS UBL TC
Finally...

- The work METU will do in SET TC will be based on the ongoing PhD work of Yildiray Kabak
Thank you for your attention!
Questions?