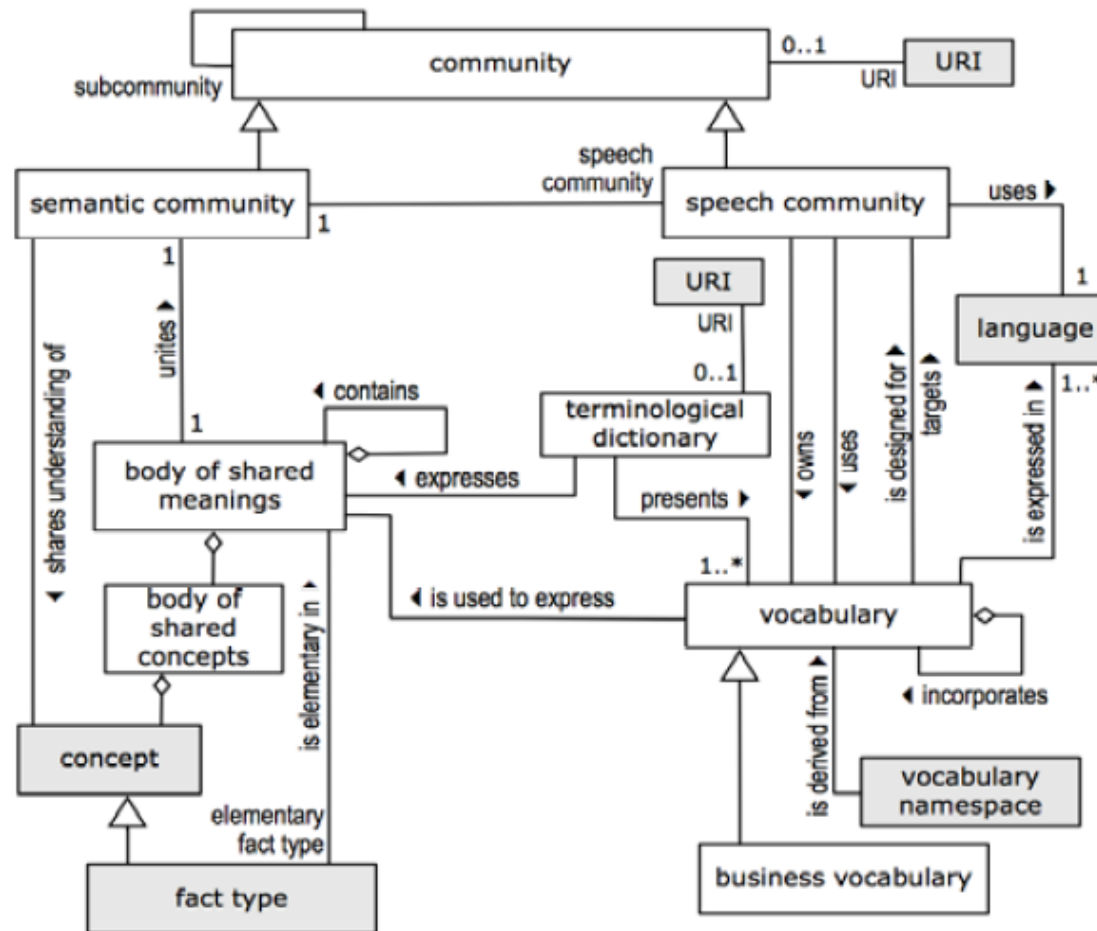


Clause 11: Business Vocabulary

- Clause 11 specifies a vocabulary providing words for describing business vocabularies along with the designations and fact type forms they contain.
- A full description of a business vocabulary involves
 - ◆ its relationship to semantic communities and speech communities,
 - ◆ its relationship to other vocabularies,
 - ◆ the concepts represented, their definitions and other information about them.

Communities, Meaning and Vocabularies



Community

community

Definition:	group of people having a particular unifying characteristic in common
Dictionary Basis:	group of people having a religion, race, profession, or other particular characteristic in common [NODE 'community']
Reference Scheme:	a <u>URI of the community</u>
Example:	The <u>Car Rental Community</u> -- people who work in the car rental business
Example:	The <u>EU-Rent Community</u> -- all EU-Rent employees
Example:	The <u>EU-Rent German Community</u> -- employees of EU-Rent's German division

NODE = The New Oxford Dictionary of English.



Semantic Community

semantic community

Definition: community whose unifying characteristic is a shared understanding (perception) of the things that they have to deal with

Example: The EU-Rent Community -- those who share the body of concepts about general and specific things of importance to the EU-Rent business.

- A semantic community defines the scope of an SBVR Body of Shared Meanings:
 - ◆ what concepts (both noun concepts and verb concepts) are to be included
 - ◆ what business rules it needs to build on them
- Usually, the most important semantic community is the organization for which you are building the SBVR Body of Shared Meanings, e.g. EU-Fly.
 - ◆ You will often have to consider other semantic communities that do or could share some of the vocabulary, e.g. the airline industry, national trade associations, EU-Fly customers
- When you define rules, you do it from the perspective of the owning semantic community
- Two kinds of Semantic Communities in business:
 - ◆ Collaborative Community, e.g. a department, cross-function programme team
 - ◆ Community of Practice, e.g. project managers, operational excellence champions, departmental budget managers

(Chapin et al 2008)



Body of Shared Meanings

body of shared meanings

Definition: set of concepts and elements of guidance for which there is a shared understanding in **a given semantic community**

Example: The EU-Rent Car Rental Business has a body of shared meanings which contains the set of concepts of general and specific things of importance to the EU-Rent car rental business

body of shared meanings unites semantic community

Definition: **the** body of shared meanings **is** the set of concepts and elements of guidance for which there is a shared understanding in **the semantic community**

Necessity: **Each** semantic community **is united by exactly one** body of shared meanings.

Necessity: **Each** body of shared meanings **unites exactly one** semantic community.

Note: Understanding the body of shared meanings that unites a semantic community is an obligation for participation in the semantic community. Communication within the community is based on an assumption of mutual understanding of the body of shared meaning.



Speech Community

- A speech community is a subcommunity of a semantic community. It has the same “body of shared meanings”, but expresses them in a particular, shared vocabulary

speech community

- Definition: subcommunity of a given semantic community whose unifying characteristic is the vocabulary and language that it uses
- Dictionary Basis: group of people sharing a characteristic vocabulary, and grammatical and pronunciation patterns for use in their normal intercommunication [W3ID ‘speech community’]
- Example: The EU-Rent German Community shares the German-based vocabulary of designations used in EU-Rent’s business. The designations include German words for EU-Rent’s concepts plus designations adopted from other languages.

speech community uses language

- Definition: the speech community communicates in the language
- Necessity: Each speech community uses exactly one language.

semantic community has speech community

- Necessity: Each speech community is of exactly one semantic community.



Vocabulary

- A vocabulary is drawn from one shared language, which may be:
 - A natural language, such as English, German, Dutch
 - Specialised terminology such as that used by lawyers or engineers
 - A constructed language such as the UML (or SBVR Structured English)
- Each vocabulary expresses only one Body of Shared Meanings
- A vocabulary includes
 - terms and names for the noun concepts
 - ‘readings’ for the verb concepts
- SBVR users are strongly encouraged to limit the amount of internally managed vocabulary, and:
 - use everyday natural language as much as possible, backed up with a standard dictionary
 - adopt as much as possible from authoritative sources, such as ISO standards and industry standard glossaries.

(Chapin & Hall 2006)



Vocabulary

vocabulary

- Definition: set of designations and fact type forms primarily drawn from a single language to express concepts within a body of shared meanings
- Dictionary Basis: sum or stock of words employed by a language, group, individual, or work, or in a field of knowledge [MWCD 'vocabulary ']
- Example: The sets of designations represented in EU-Rent's internal glossaries, in the natural languages in which the company does business, together with the vocabularies it has adopted, including those defined in:
- * Industry standard glossaries for car rental business,
 - * Standard (e.g., ISO) glossaries of business terms,
 - * Authoritative dictionaries for the relevant natural languages.

vocabulary is designed for speech community

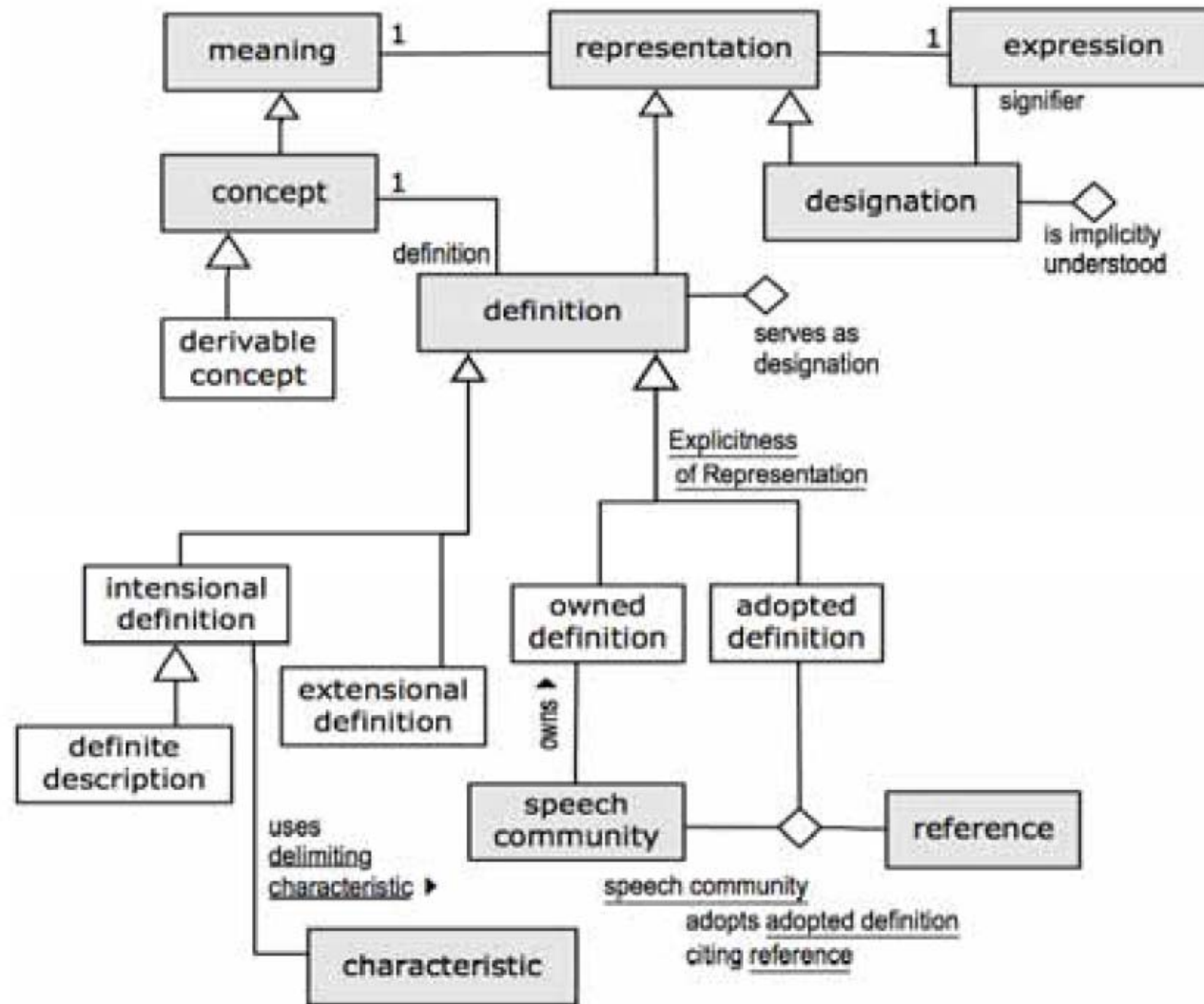
- Synonymous Form: vocabulary targets speech community
- Definition: the vocabulary is created for use by a speech community that does not own the vocabulary

vocabulary is expressed in language

- Definition: the designations of the vocabulary are primarily within the language
- Synonymous Form: language expresses vocabulary
- Synonymous Form: vocabulary uses language
- Necessity: Each vocabulary is expressed in at least one language.
- Note: Typically, the language would be a natural language, but not necessarily. See 'language'.



Kinds of Definition



Definition

intensional definition

- Source: ISO 1087-1 (English) (3.3.2) ['intensional definition']
- Definition: definition which describes the intension of a concept by stating the superordinate concept and the delimiting characteristics
- General Concept: definition
- Necessity: No intensional definition is an extensional definition.

definite description

- Definition: intensional definition of an individual
- Example: the car movement that has the movement id "UK-12345-abc-xyz"
- Necessity: Each definition of an individual concept is a definite description.
- Necessity: Each definite description is the definition of an individual concept.
- Necessity: Each definite description uses a reference scheme for the individual.

extensional definition

- Source: ISO 1087-1 (English) (3.3.3) ['extensional definition']
- Definition: description of a concept by enumerating all of its subordinate concepts under one criterion of subdivision
- General Concept: definition
- Necessity: No extensional definition is an intensional definition.



Expressing Definitions

One Definition Form (e.g. Intensional)

- The sales tax rate for a rental is the sales tax rate at the pick-up branch of the rental on the drop-off date of the rental.

can be expressed in many language, notation & speech community combinations:

- Expressed in English

- The sales tax rate for a rental is the sales tax rate at the pick-up branch of the rental on the drop-off date of the rental.

- Expressed in French

- Le taux de taxe de vente pour une location de voiture est le taux de taxe de vente à l'agence de départ de la location à la date de retour de la voiture

- Expressed in SBVR Structured English

- The sales tax rate for a rental is the sales tax rate at the pick-up branch of the rental on the drop-off date of the rental.

– ...

(Chapin & Hall 2006)



Exercise: Definition

- Give definitions for the following concepts:
 - ◆ weekday
 - ◆ working day
 - ◆ weekend
- Are the definitions intensional or extensional?