



ALMA MATER STUDIORUM
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HYPERMODELEX



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FrameNet and Legal Definitions

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Silvia Brambilla, Monica Palmirani

University of Bologna

CIRSFID/ALMA AI – Department of Legal Studies

WHY DEFINITIONS AND FRAMES



Definitions **confer specific or novel meanings** to phrases or words that will be utilized in documents' composition.

They play a crucial role in legal discourse, serving both as a **tool to avoid interpretative ambiguities** and as a premise to **support the application of a rule** to a specific case.

The reason for choosing to annotate with FN frames lies in the granularity of such an annotation. This would grant:

1. An easier access to legal information enhancing the efficiency and effectiveness of its management.
2. A better and more efficient processing of definitions improving also the retrieval of pertinent information from legal texts.
3. A greater transparency.



FRAMENET



- Lexical – semantic database
- Based on Fillmore's **Frame Semantics Theories** (Fillmore, 1982, 1985)

The meaning of words is understood in relation to the *semantic frames* to which they are associated.

Frame

Conceptual structure that represents specific situations or scenarios

Lexical Unit (LU)

Word or MWE that constitutes the lexical anchor that recalls and evokes the frame structure

Frame Elements (FEs)

Semantic roles that characterize the participants, objects, or attributes relevant to the frame

Sample Sentences (SSs)

Sentences sampled from large corpora that exemplify the linguistic instantiations of frames and FEs

Core Non-core



FRAMENET AND LEGAL LANGUAGE



FN is suited for adding semantic information to legal text because of:

- Granularity;
- Independence from PoS constraints;
- Ability to annotate beyond the boundaries of individual constituents;



greater flexibility: easily adaptable to specialized and sector-specific languages.

- Ability to capture both the structure of the definition and the semantic articulation of its content.

Possible needed modifications:

- a. Changes in FEs coreness status,
- b. Changes in FEs Semantic Type,
- c. The introduction of new FEs,
- d. The introduction of whole new frames.



DEFINITIONS COMPLEXITY



- **Standard.** standard form *X means Y*
- **Definitions that contain external references.** For example: references to articles, annexes, etc., present in the corpus of European law.
- **Definiens is structured as a list.** For example: The Definiendum corresponds to a multiterm Definiens and the terms are presented as alternatives. The structure of the Definition will then be: *X means Y or Z or W.*
- **Definitions that involve the exclusion of specific cases.**
- **Conditional Definition.**
- **Definitions with jurisdiction specification.**
- **Definitions with explicit time limits.**



CUSTOMIZATIONS NEEDED



MISSING FEs

- FE **Type** for the frame **Information**

now the FE **Topic** is used to specify both who or what the information is about and the type or kind of information

In cases such as:

‘data concerning health’ means personal data related to the physical or mental health of a natural person

“personal” and “related to the physical or mental health of a natural person” have to be annotated with the same FE, even though “personal” would rather be annotated with a FE **Type**, better capturing its nature.



CUSTOMIZATIONS NEEDED



MISSING FRAMES

1. **Definition** evoked by words such as “mean.v”, “be.v” or “define.v”, for the concept of legal definition, which involves a Definendum, a Definiens and their further specifications.
2. **Count_as** for cases in which is presented a different name for an entity or concept and its exact correspondence with another used term or expression.
3. **Legal_participant** for expressions such as “natural_person.n” or “legal_person.n” that need to be grouped within the same frame, and cannot be annotated using current FN frames, for example People, such as they can identify entities that do not correspond to people.
4. **Instance** to indicate situations in which one or more instances of a category are presented. (Some of its LUs would be: “such_as.prep”, “instance.n”, “example.n” etc.)



DEFINITION A FRAME EXAMPLE



Definition

A DEFINENDUM, which can be presented also via an alias (ALIAS_DEFINENDUM), is defined via one or more DEFINIENS according to specific TIME, GEOGRAPHICAL_SPACE, JURISDICTION, CONTEXT and specific CONDITIONS.

LUs: *define.v, mean.v, be.v, include.v*

FE Core	Description
DEFINENDUM	The term or expression defined within the definition.
DEFINIENS	The expression that defines the DEFINENDUM.
ALIAS_DEFINENDUM (unexpressed)	A term or expression indicated as an alternative to the DEFINENDUM and that can stand for it.



DEFINITION A FRAME EXAMPLE



FE Non-core	Description
TIME	The time in which the Definition can and should be applied.
GEOGRAPHICAL_SPACE	The geographical space in which the Definition can and should be applied.
JURISDICTION	The jurisdiction in which the Definition can and should be applied.
CONTEXT	The context in which the Definition can and should be applied.
CONDITIONS	The conditions that should be met in order for the Definiens to be applied to the Definendum.
EXCLUDED_CASE	The exception, a case in which the Definition does not apply.
EXCLUDED_JURISDICTION	The jurisdiction(s) in which the definition does not apply



DEFINITION A FRAME EXAMPLE



Sample Sentences

[‘data concerning health’]_{DEFINENDUM} [means]_{LU} [personal data related to the physical or mental health of a natural person, including the provision of health care services, which reveal information about his or her health status]_{DEFINIENS}

[‘recognised third-country investment firm’]_{DEFINENDUM} [means]_{LU} [a firm]_{DEFINIENS} meeting all of the following conditions: [(a) if it were established within the Union, it would be covered by the definition of an investment firm;]_{CONDITION}
[(b) it is authorised in a third country;]_{CONDITION}
[(c) it is subject to and complies with prudential rules considered by the competent authorities as at least as stringent as those laid down in this Regulation or in Directive 2013/36/EU]_{CONDITION}



ANNOTATION CHOICES – multiple Definiens for the same Definendum



1) Multiply the labels of the FEs:

DEFINIENS_1, DEFINIENS_2 ... DEFINIENS_N

If the various Definiens are linked to specific conditions, contexts, etc also the relative FEs labels will be multiplied

→ a Condition relative to *DEFINIENS_2* will be labeled as *CONDITION_2*

2) Annotate a different frame for each term of the Definiens:

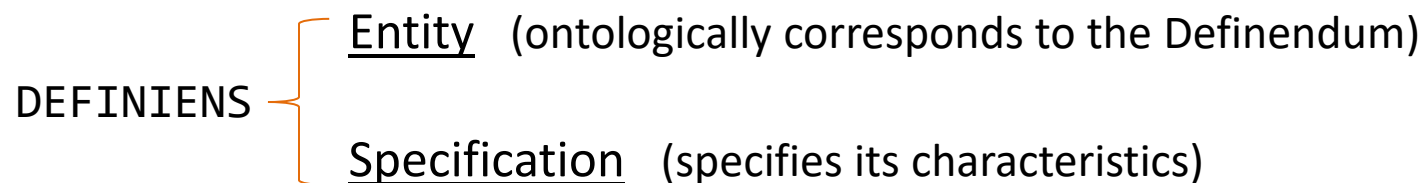
Each frame would then contain a single Definiens and all the accompanying conditions, contexts, etc.



FUTURE WORK



- Further **analyse the Definiens with respect to its internal structure.**



We could create sub-FE labels in order to annotate this internal structure by creating subFEs ENTITY DEFINIENS and SPECIFICATION DEFINIENS to remap to a top-level FE Definiens.

- Elaborate a way to **annotate external text** (i.e. that is referenced within the Definitions, but that lies outside of the document boundaries, either by creating a local copy or a link to the external resource)





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Thank you for your attention.

silvia.brambilla2@unibo.it; monica.palmirani@unibo.it