BOWNE GLOBAL SOLUTIONS
transforming digital capital™

Bowne Global Solutions and OLIF

Industry Implementation

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Why is Bowne Interested in Standardized Data Exchange?

- Localization provider for over 300 clients => over 300 data models!
- → Optimize and simplify the process of interchanging terminological data

- MT lexicons for 22 language directions
- → Optimize and simplify the process of interchanging lexical data

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The Bowne Linguistic Repository

- **Single data repository** for all terminological, lexical and TM data
- Each entry may be used for HT/MT/NLP
- Incorporates project and general term/lex data
- Web-based access for managing and consulting data

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The Bowne Linguistic Repository

- **Terminological Data Categories**
  => “checked by” (ISO 12620)/ “QA Person” (BGS);
- **MT-Related Data Categories**
  => “InflectionClass” (OLIF)/ “Inflection Class” (BGS);
- **Localization-related Data Categories**

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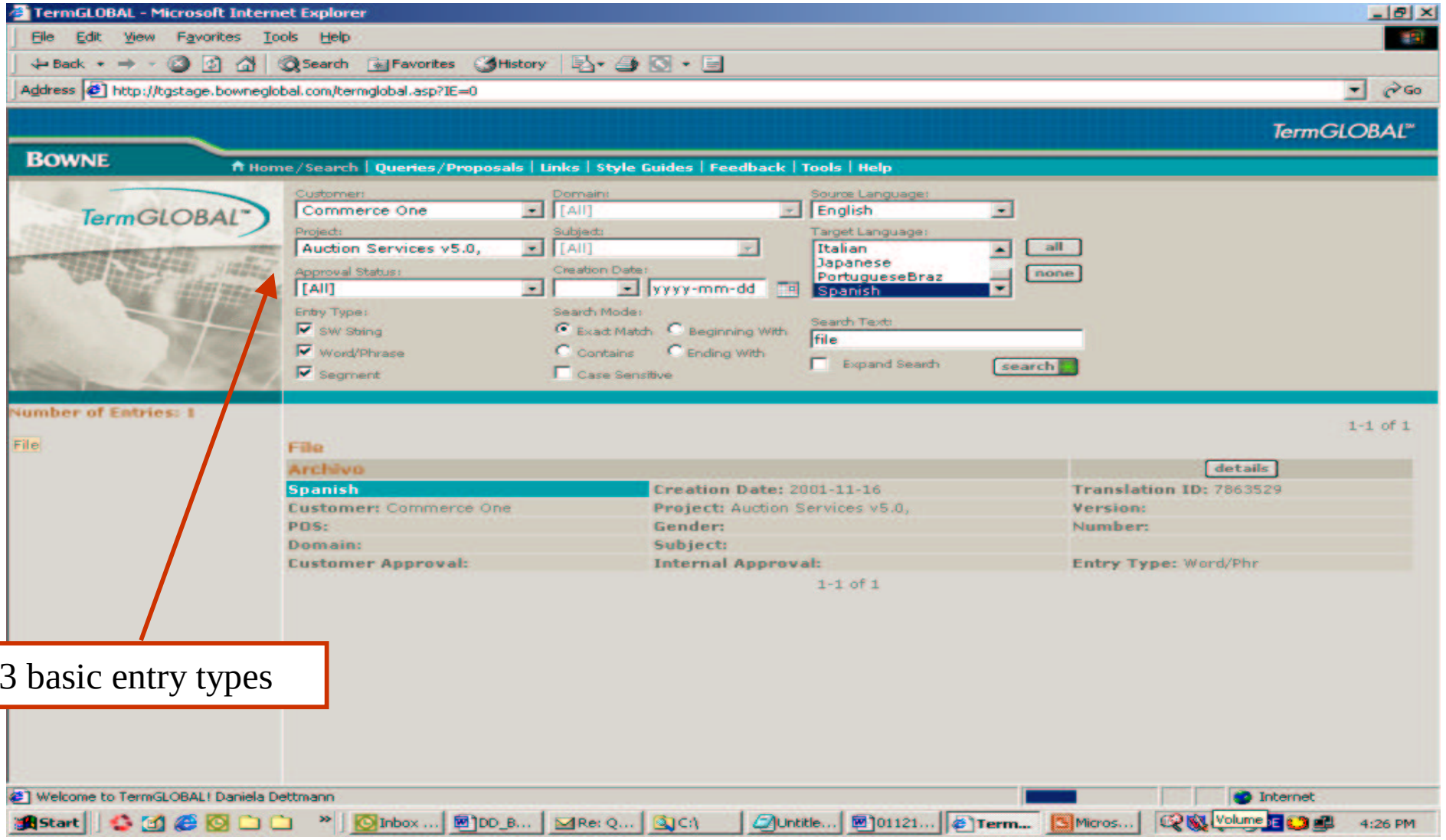
The Bowne Linguistic Repository



3 basic entry types

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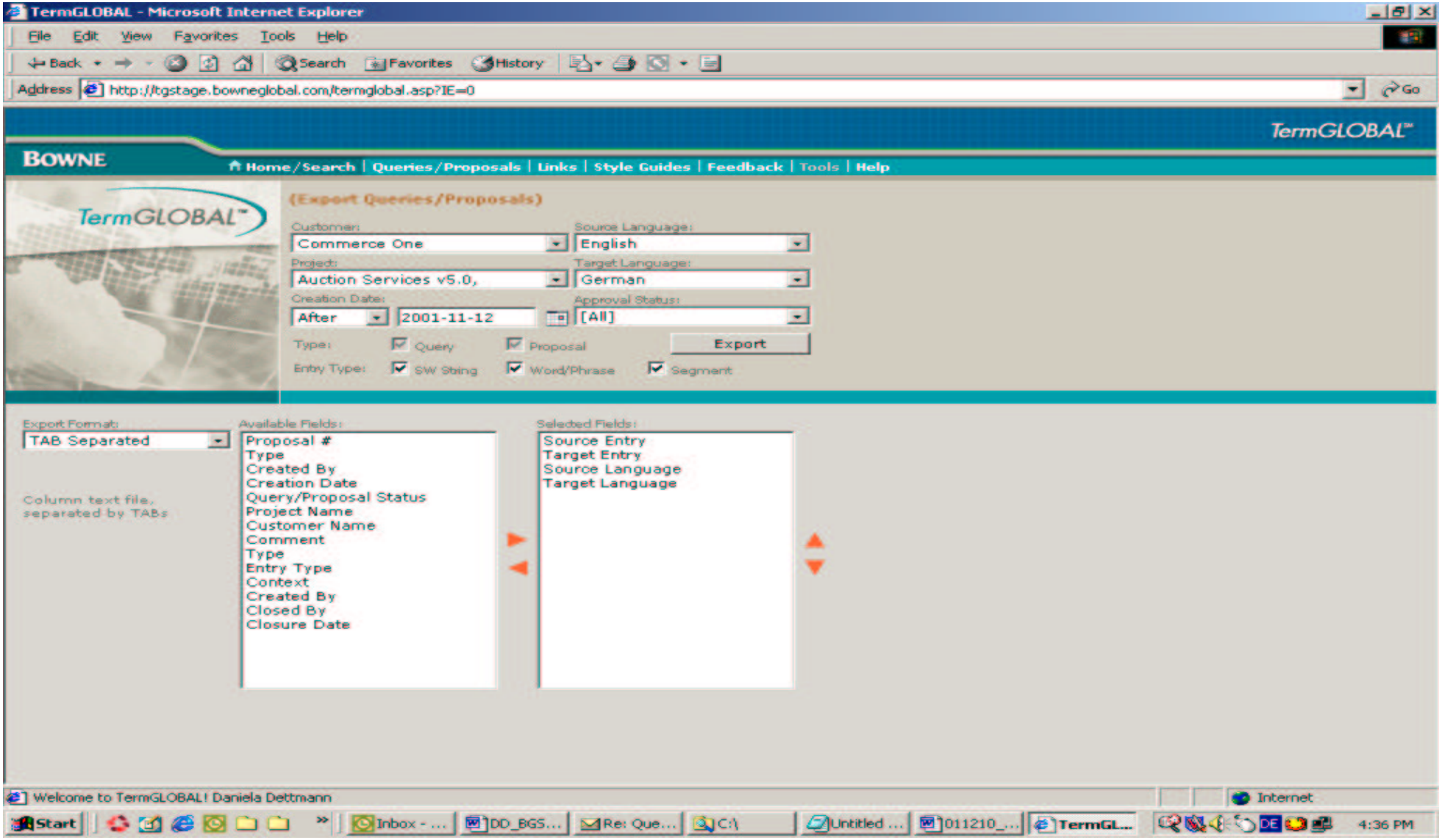
The Bowne Linguistic Repository



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Mapping Bowne Data to ISO/OLIF in RDF

- **Specify data categories** used in the BGS database, adding exact definitions for mapping.
- **Map data categories** to existing standards or interchange formats (ISO 12620, OLIF); define supplemental data categories; propose new data categories for standardization (TC37/SC4).
- **Define export format** using tools and formats developed by the SALT group to create an XML environment for BGS' terminological entries designated for interchange with TBX.
- **Create or identify converters** to export BGS data to TBX, and to import BGS data into other databases (e.g., customer dbs) and data from other dbs into the BGS Linguistic Repository.

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Mapping Bowne Data to ISO/OLIF in RDF

```
</dcsd:DataCategory>
- <dcsd:DataCategory dcsd:DCName="synonym" dcsd:DCIdentifier="ISO12620A-020102" dcsd:DCType="C"
  dcsd:DCOccurrence="0..1">
  <dcsd:DCDefinition>Any term that represents the same or a very similar concept as the main entry term in a term
    entry.</dcsd:DCDefinition>
  - <dcsd:DCComment>
    <dcsd:conceptComment>Synonymy is generally relative, i.e., synonyms rarely cover all aspects of the same concept
      in all instances. The resulting degree of synonymy (A.2.10) is treated using the conventions defined for degree of
      equivalence (see A.3.1). BGSExpl: A term that has the same meaning as the entry. The synomyms_ID is the key
      for the relation entry_in_this_table to synonyms; it addresses the Synonym table that contains all information
      specific to the synonym.</dcsd:conceptComment>
    <dcsd:Example>"dynamicizer" in annex C, figure C.2</dcsd:Example>
  </dcsd:DCComment>
  <dcsd:DCContent dcsd:DataType="basicText" />
  - <dcsd:DCAdmin dcsd:EditionDate="2001-11-05" dcsd:Status="Accepted" dcsd:StatusDate="2001-11-05">
    <dcsd:StatusNote>Added 2001-11-05 DD; BGS: Edited 2001-11-05</dcsd:StatusNote>
  </dcsd:DCAdmin>
  - <dcsd:DCParent>
    - <rdf:Alt>
      <rdf:li>term</rdf:li>
    </rdf:Alt>
  </dcsd:DCParent>
</dcsd:DataCategory>
- <dcsd:DataCategory dcsd:DCName="syntactic frame" dcsd:DCIdentifier="OLIF-synFrame" dcsd:DCType="C"
  dcsd:DCOccurrence="0..1">
  <dcsd:DCDefinition>Data category that describes the syntactic frame data categories for the entry string
    (subcategorization).</dcsd:DCDefinition>
  - <dcsd:DCComment>
    <dcsd:conceptComment>OLIF datcat name: synFrame BGSName: syntactic frame; BGSExpl: Sequence of POS in a
      phrase.</dcsd:conceptComment>
    <dcsd:sourceComment>...</dcsd:sourceComment>
    <dcsd:Example>...</dcsd:Example>
    <dcsd:DictionaryID>???</dcsd:DictionaryID>
  </dcsd:DCComment>
```

OLIF and ISO Categories

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Exchanging Lexical Data: LIF Data Categories

- Lemma
- Translation
- Part of Speech
- Attribute(s)
- Comment
- Headword
- Morphology
- Initials
- Date
- Sanitized Headword

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LIF Data Categories and Attributes

Lemma	Translation	PoS	Attributes	Comment	Headword	Morph.
a.m.	por la mañana	5	+Time		a.m.	1
aardvark	cerdo* hormiguero*	1	+Animate		aardvark	1
abandonment	entrega* de sí mismo	1	+Abstract		abandonment	1
abandonment	desamparo	1	+Abstract		abandonment	1
abase	humillar	3	+TakesDO		abase	10
abasement	humillación	1	+Abstract		abasement	1
abash	desconcertar	3	+TakesDO		abash	8
abbess	abadesa	1	+Animate+Human+Occupation		abbess	2
abbey	abadía	1	+Place		abbey	1
abductor	raptor	1	+Animate+Human		abductor	1
arma* blanco*	cold steel*	1	+Feminine+StressedA		arma	0
casilla* de verificación	checkbox	1	+Feminine		casilla	0
edición* electrónico*	desktop publishing	1	+Feminine		edición	3

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Mapping Data Categories: Localization

- Category
- Platform
- Module

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Mapping Data Categories: Comments

- OLIF <note>
- OLIF <usage>

- Bowne Comment Fields

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Mapping Data Categories: More Examples

- Domain Hierarchy Levels
- “Component” Information
- Inflection Class, Domain and Semantic Type Information

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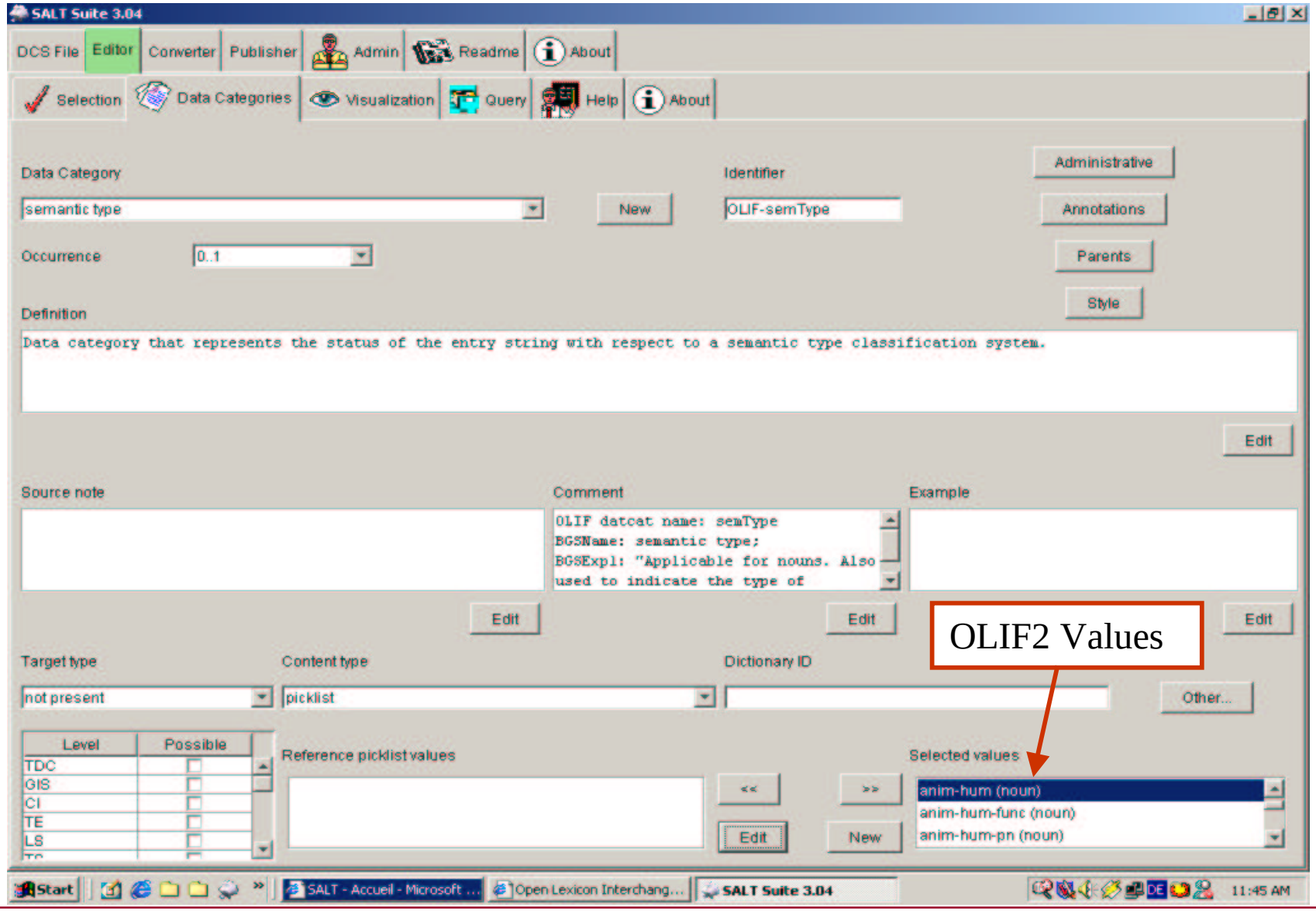
Mapping Data Categories: Semantic Type



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More Proposals and Comments

- Promote OLIF guidelines for formulating canonical forms
- Tool for mapping OLIF data categories
- Expandable OLIF category value lists for domain and semantic type

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