Transforming Business Rules into Natural Language Text

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Knowledge Based Systems and Document Processing
Motivation

- conceptualization of eBusiness models will be realized in a formal way

- communication and explanation of business rules defined in an eBusiness model
  
  **problem:**
  
  specification ≠ implementation ≠ documentation

- documentation of these complex models: expensive process
  - time and cost consuming
  - complete and understandable
Project FormDoc

- FormDoc: *Formalization and Documentation of Electronic Market Place Rules of Real Internet Platforms*

- main task is the design of an appropriate semantic representation for business rules, which should be useable for
  - implementing the market place,
  - simulating the market place, and
  - generating natural language documentation about the rules of the market place
Project FormDoc

- Tasks:
  - to analyse the language used in real eBusiness documents,
  - to investigate current representations formats for business rules (e.g. CLP), and
  - to specify the requirements for an NLG architecture for the documentation task
FormDoc: Model for NLG

formal semantic representation

natural language text

model: market place rules

abstract concepts, classification (conceptual → linguistic)

meta data about rule:
- relevance
- prioritisation
- summarizing/grouping
- linguistic terms
- implicit knowledge

WordNet
- synonyms

pattern:
- canned phrases
- synonyms/similar structures, phrases
- summarized pattern
- case frame representation

restrictions/parameters for generation:

communication to:
- customer
- staff

document type:
- tutorial
- legal documentation
- guidelines, instructions
- ...

document layout

for each language