Translating Platform-Independent Code into Natural Language Texts

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Motivation

If you learned to speak Lojban, your communication would be completely unambiguous and logical.

Yeah, but it would all be with the kind of people who learn Lojban.
Problem and context
Possible solution

Everybody knows how to consume text

System Architect at Ericsson
M2T: Model-to-Text
NLG: Natural language generation

Model → Text planning → Model Abstraction

Sentence planning

Text planning

Text → Linguistic realisation → Text Abstraction
Case study

xtUML \text{Text and sentence planning} \rightarrow \text{Grammatical Framework}

\text{Linguistic realisation} \rightarrow \text{Text}
Examples

Action language
create object instance res of Reservation;
relate res to self across R4;
select many ress related by room -> Reservation[R2];

English
res refers to a Reservation
res and the BookingProcess share information
ress refers to many Reservations
Conclusion

• First attempt to translate Platform-Independent code into natural language text

• The challenge is not the transformation as such but
  — what is an appropriate abstraction?
  — how are the concepts of the metamodel mapped into linguistic concepts?
  — (e.g. should O_OBJ be mapped to mkCN, mkN or mkPN?)

• The approach needs industrial evaluation