Verbal Valency in the MT Between Related Languages

Verb 2010, Pisa
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Research Outline

- **Languages**: Czech and Russian (Slavic languages)
  - Rich morphology: 6 cases in Russian, 7 in Czech
- **Valency**: Vebrs + surface form of their arguments
  - Frames were extracted from the Ruslan dictionary
  - They were sorted on prepositional and non-prepositional
  - Ex. It demands special attention.Gen-ru/Acc-cz
    - Czech: To vyžaduje zvláštní pozornost.Acc vs.
    - Russian: Это требует особого внимания.Gen
- **Machine Translation**: evaluation ad-hoc
List of Valency Differences

- Not many verbs with different valency structure
- Different simple frames:
  - CZ:rušit+Acc vs. RU:мешать + Dat - to disturb
  - CZ:vyžadovat+Acc vs. RU:требовать+Gen - to demand
- Different prepositional frames:
  - záviset (na(loc) vs. зависеть от (gen)) - to depend on
  - narazit na(acc) vs. столкнуться c(ins) - to run into
- Others (mixed):
  - docházet (k(dat) vs. возникать(nom) - to happen
Machine Translation

• Ad-hoc evaluation:
  ▫ Rule-Based MT system for Slavic - Česílko
  ▫ Evaluate MT output wrt. valency
  ▫ Say if our list of differences can help or not

• Number of mistakes in valency is not so big
• A little valency dictionary is enough