

AN APPLICATION USING EXAMPLE-BASED MACHINE TRANSLATION ELEMENTS

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Outline

- **General principles of EBMT**
- System architecture
- Evaluation
- Further work
- Conclusion

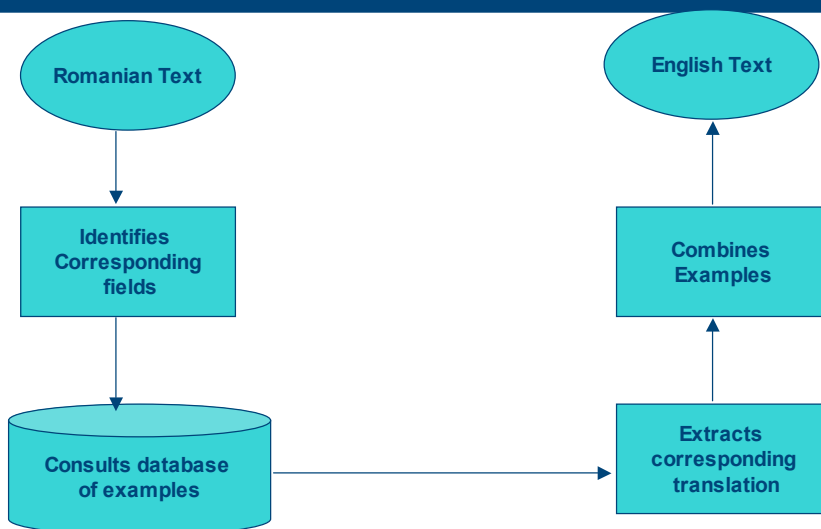
General principles of EBMT

- A database of aligned sentences in the source and target languages. Examples have to be domain-relevant, long enough to capture specific particularities of a construction.
- A matching algorithm that identifies the examples that most closely resemble all or part of the input sentence
- A combination of algorithm which rebuilds the input sentence, through combination of retrieved fragments
- A transfer and composition algorithm that extracts corresponding target fragments and combines them into a sentence in the target language

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System architecture



System architecture

- **Alignment**
- **Matching**
- **Recombination**

Alignment

- Manual
- Field by field
- e.g. *Numele si prenumele tatalui = Name and surname of the father*

System architecture

- Alignment
- **Matching**
- Recombination

Matching

consists of matching the Romanian field with the English field of the future English document in the database of examples

System architecture

- Alignment
- Matching
- **Recombination**

Recombination

- only at the level of the order in which the translation chunks appear

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Evaluation

- Used for 7 types of documents
- Database of about 1400 aligned examples
- No syntactic or semantic information
- Precision 96 %
- Recall 6 %

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Further work

- Extend the database
- Add syntactic and semantic information
- Add a new direction: English – Romanian and other languages
- Adapt the system to other domains where matching and recombination steps could be used more effectively

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Conclusion

- Prototype Tool to be used in translation offices emerged
- Easy to use
- Effective

Thank you!