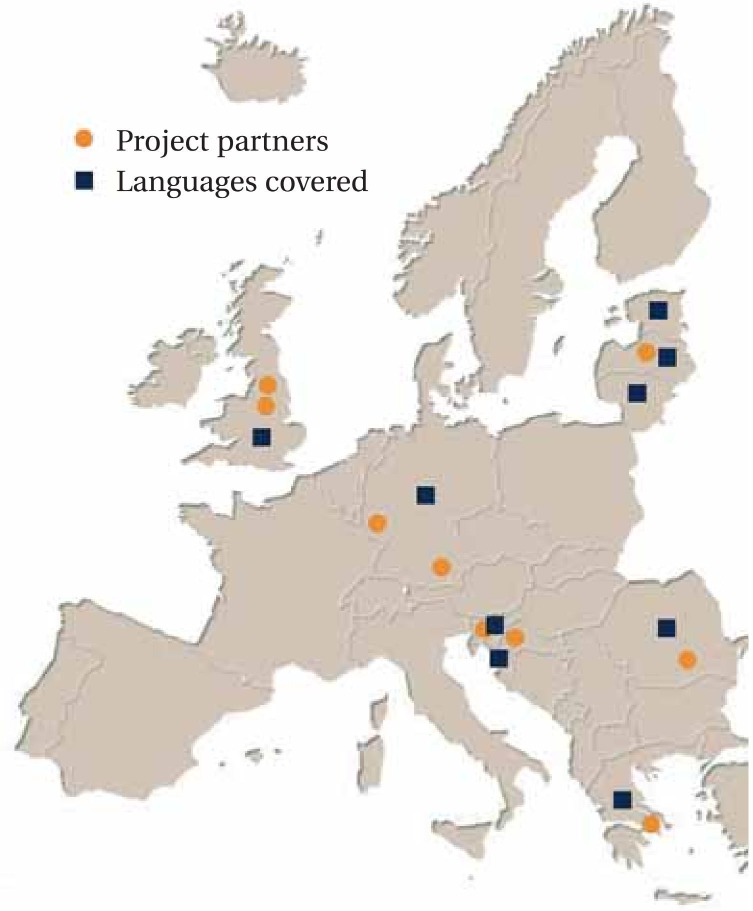
Analysis and Evaluation of Comparable Corpora for Under Resourced Areas of Machine Translation



A true cross-European project connecting under-resourced languages, that are either EU official languages or are in the process of becoming one soon, with well-resourced languages such as English and German.

Languages covered by the project: Latvian, Lithuanian, Estonian, Romanian, Greek, Croatian, Slovenian, English and German.

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Project partners

TILDE: Tilde SIA, Riga, Latvia

USFD: University of Sheffield, Computer Science Department, NLP Group, Sheffield, UK

CTS: University of Leeds, Centre for Translation Studies, Leeds, UK

ILSP: Athena Research and Innovation Center in Information Communication & Knowledge Technologies, Institute for Language and Speech Processing, Athens, Greece

FFZG: University of Zagreb, Faculty of Humanities and Social Sciences, Department of Linguistics, Zagreb, Croatia

DFKI: Deutsches Forschungszentrum für künstliche Intelligenz, LT Lab, Saarbrücken, Germany

RACAI: Romanian Academy, Research Institute for Artificial Intelligence, Bucarest, Romania

LT: Linguatec GmbH, Munich, Germany

ZEMANTA: Zemanta d.o.o., Ljubljana, Slovenia

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SEVENTH FRAMEWORK PROGRAMME

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How ACCURAT is your translation?

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Main goal

To develop methods and techniques to overcome one of the central problems of Machine Translation (MT) – the lack of linguistic resources for under-resourced areas of machine translation. The main goal is to find, analyze and evaluate novel methods that exploit comparable corpora in order to compensate for the shortage of linguistic resources, and ultimately to significantly improve MT quality for under-resourced languages and narrow domains.

Using comparable corpora

The applicability of current data-driven methods directly depends on the availability of large quantities of parallel corpus data. For this reason the translation quality of current data-driven MT systems varies dramatically from quite good for language pairs with large corpora available (e.g. English and French) to almost unusable for under-resourced languages and narrow where little data is available domains (e.g. Latvian and Croatian).

The goal of ACCURAT is to achieve increase in translation quality for under-resourced languages and narrow domains:

- for under-resourced languages covering Latvian, Lithuanian, Estonian, Greek, Croatian, Romanian and Slovenian;
- narrow domains (data processing, automotive engineering etc.)

Important results so far

- **Comparability metrics and associated tools developed** – identified features that may be used to measure comparability of corpora;
- **Research methods for alignment and extraction of lexical, terminological and other data** from comparable corpora based on available techniques for parallel corpora;
- **Developed research methods for automatic acquisition of a comparable corpora** from the Web;
- **Several multilingual comparable and parallel corpora have been gathered** from the Web;
- **Measure improvements** from applying acquired data against developed baseline results from SMT and RBMT systems.

Use cases investigation started

Adjusting MT to narrow domain by comparable corpora that have already been built for domains of:

- renewable energy
- sports news
- political and financial news
- ITC news
- news on disasters
- automotive engineering, etc.

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