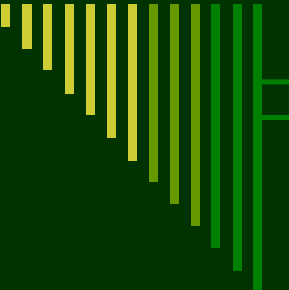




# Machine translation

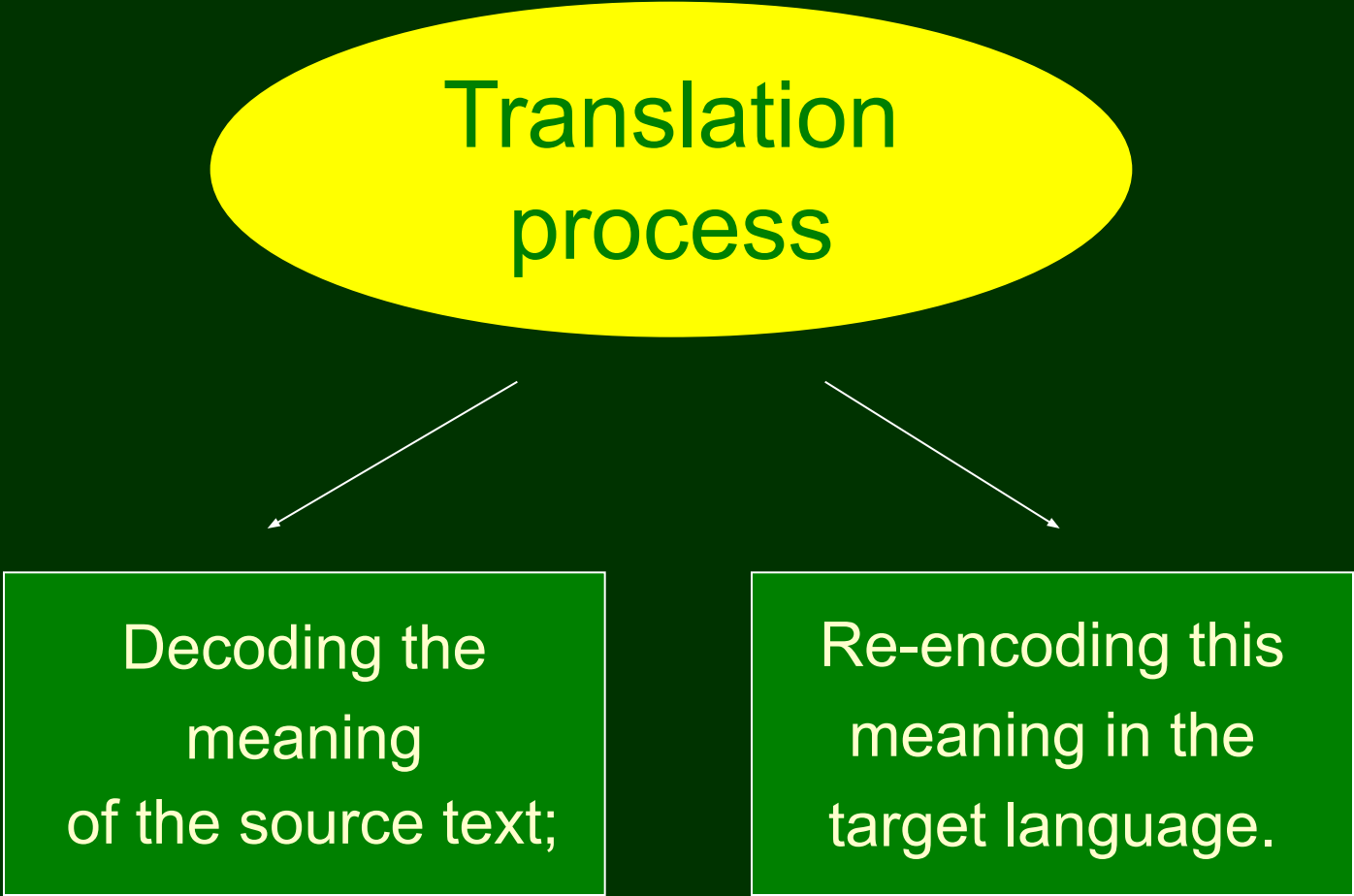


**Machine translation, sometimes referred to by the abbreviation MT, is a sub-field of computational linguistics that investigates the use of computer software to translate text or speech from one natural language to another. At its basic level, MT performs simple substitution of words in one natural language for words in another. Using corpus techniques, more complex translations may be attempted, allowing for better handling of differences in linguistic typology, phrase recognition, and translation of idioms, as well as the isolation of anomalies.**

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# Translation process

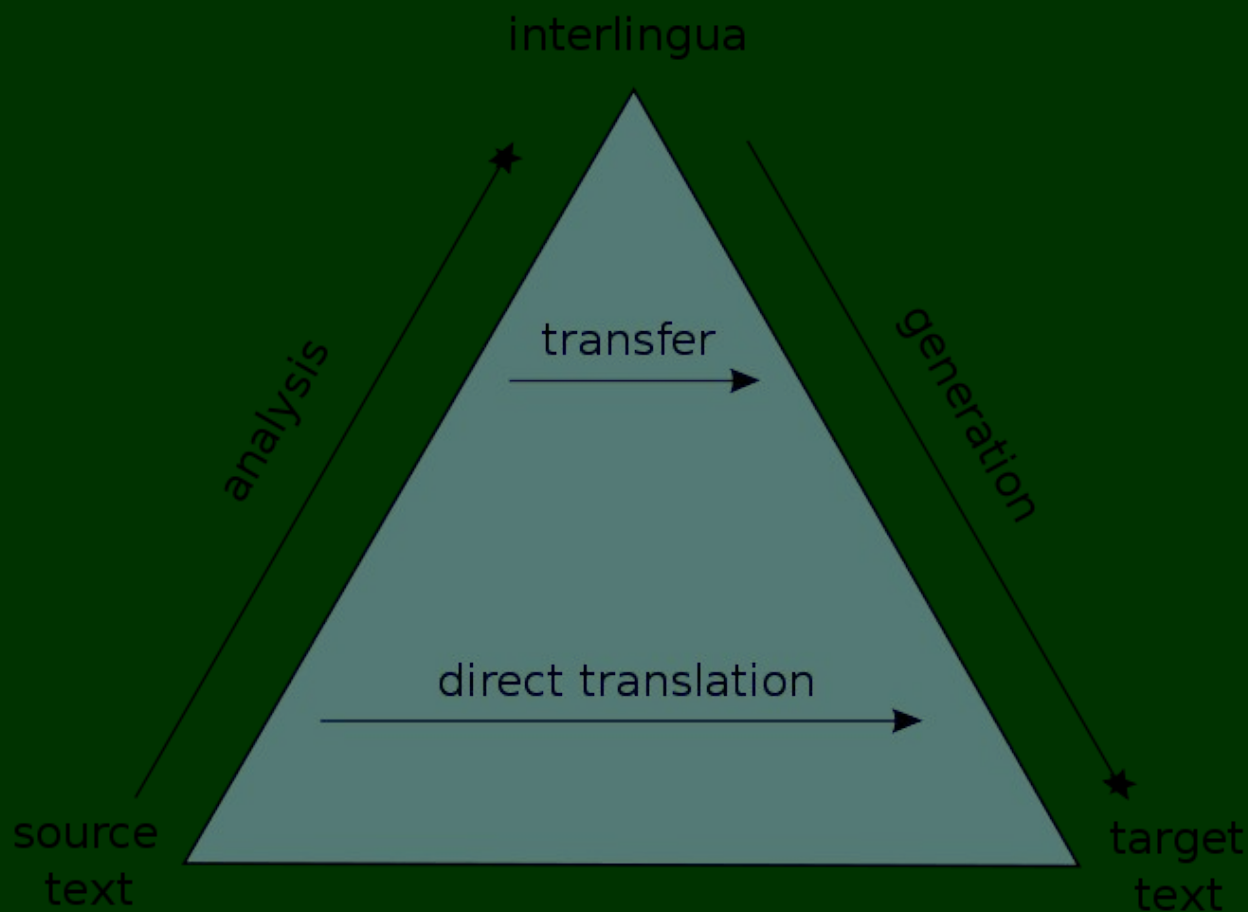


```
graph TD; A([Translation process]) --> B[Decoding the meaning of the source text;]; A --> C[Re-encoding this meaning in the target language.]
```

Decoding the  
meaning  
of the source text;

Re-encoding this  
meaning in the  
target language.

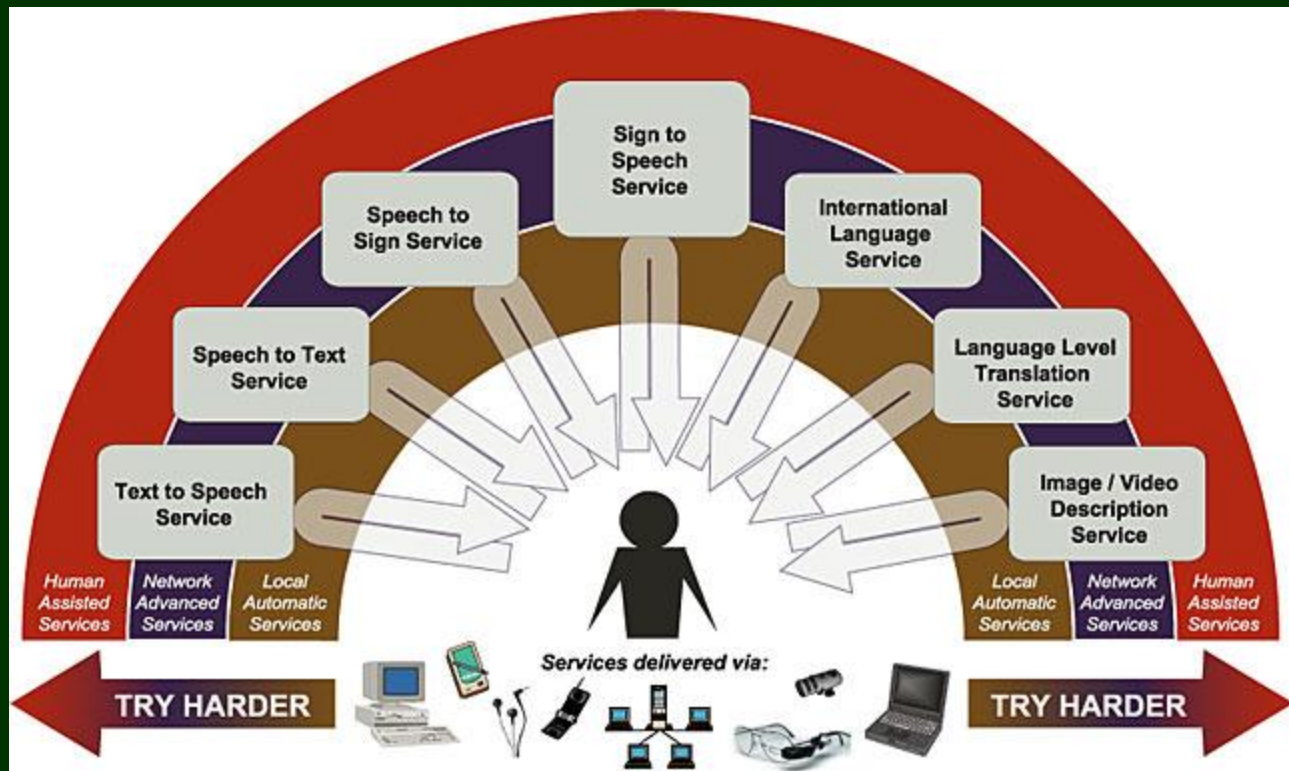
Pyramid showing comparative depths of intermediary representation,  
interlingual machine translation at the peak, followed by  
transfer-based, then direct translation.



## Evaluation of machine translation



- There are various means for evaluating the performance of machine-translation systems. The oldest is the use of human judges[17] to assess a translation's quality. Even though human evaluation is time-consuming, it is still the most reliable way to compare different systems such as rule-based and statistical systems. Automated means of evaluation include BLEU, NIST and METEOR.

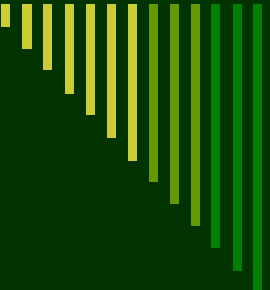




# Mobile translation

- Mobile translation is a machine translation service for hand-held devices, including mobile telephones, Pocket PCs, and PDAs. It relies on computer programming in the sphere of computational linguistics and the device's communication means (Internet connection or SMS) to work. Mobile translation provides hand-held device users with the advantage of instantaneous and non-mediated translation from one human language to another, usually against a service fee that is, nevertheless, significantly smaller than a human translator charges.
  - Mobile translation is part of the new range of services offered to mobile communication users, including location positioning (GPS service), e-wallet (mobile banking), business card/bar-code/text scanning etc.
-



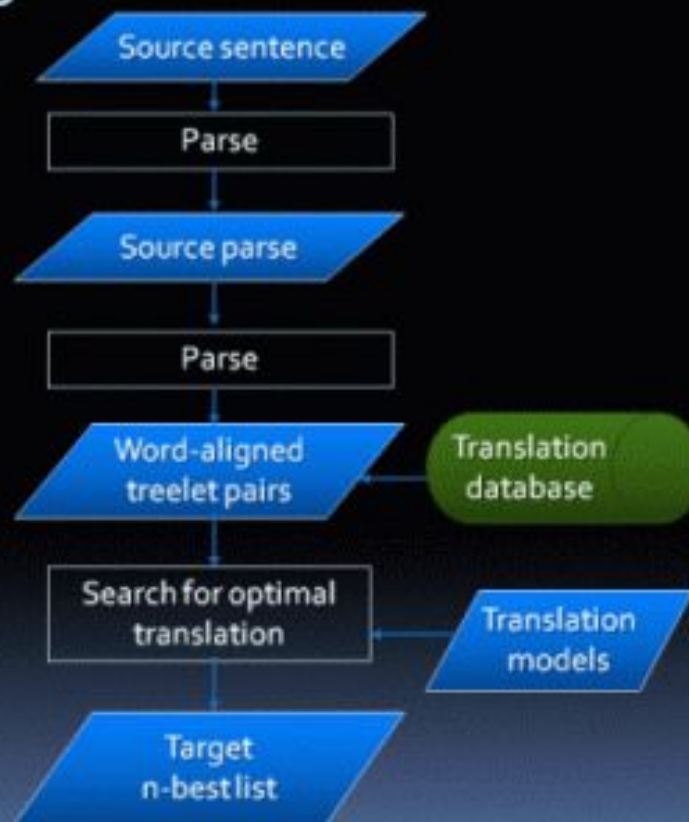
- 
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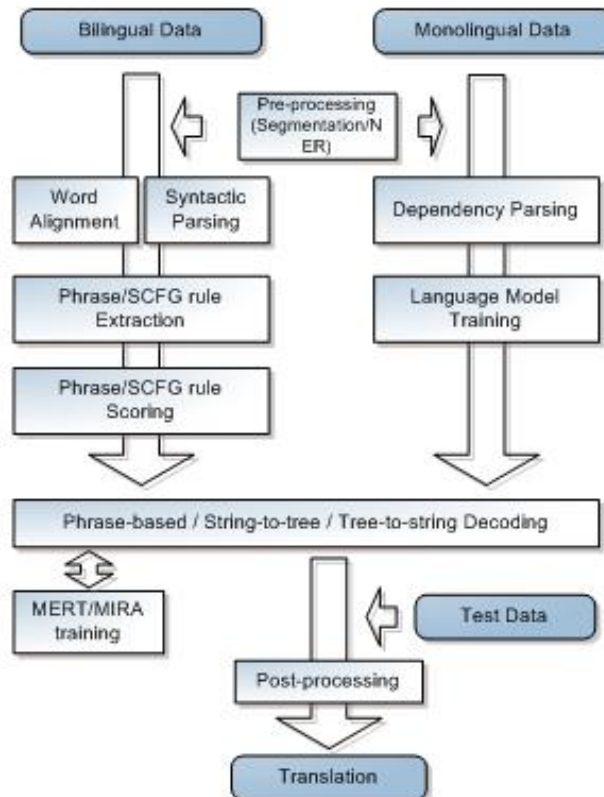


# Runtime decoding

Confirm the new password



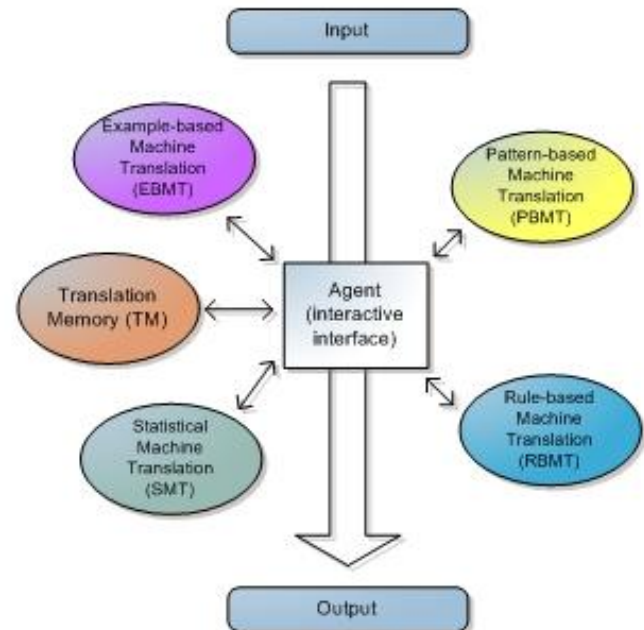
## NEUTrans SMT Platform



### Features

- Combining 3 SMT systems into 1 platform
- Easy to modify and improve for the scientific research and application purpose
- Continuous improvements in translation speed
- Designed for multi-lingual translation tasks
- Achieved one of the best performance in CWMT09

## Multi-Engine Translation Platform

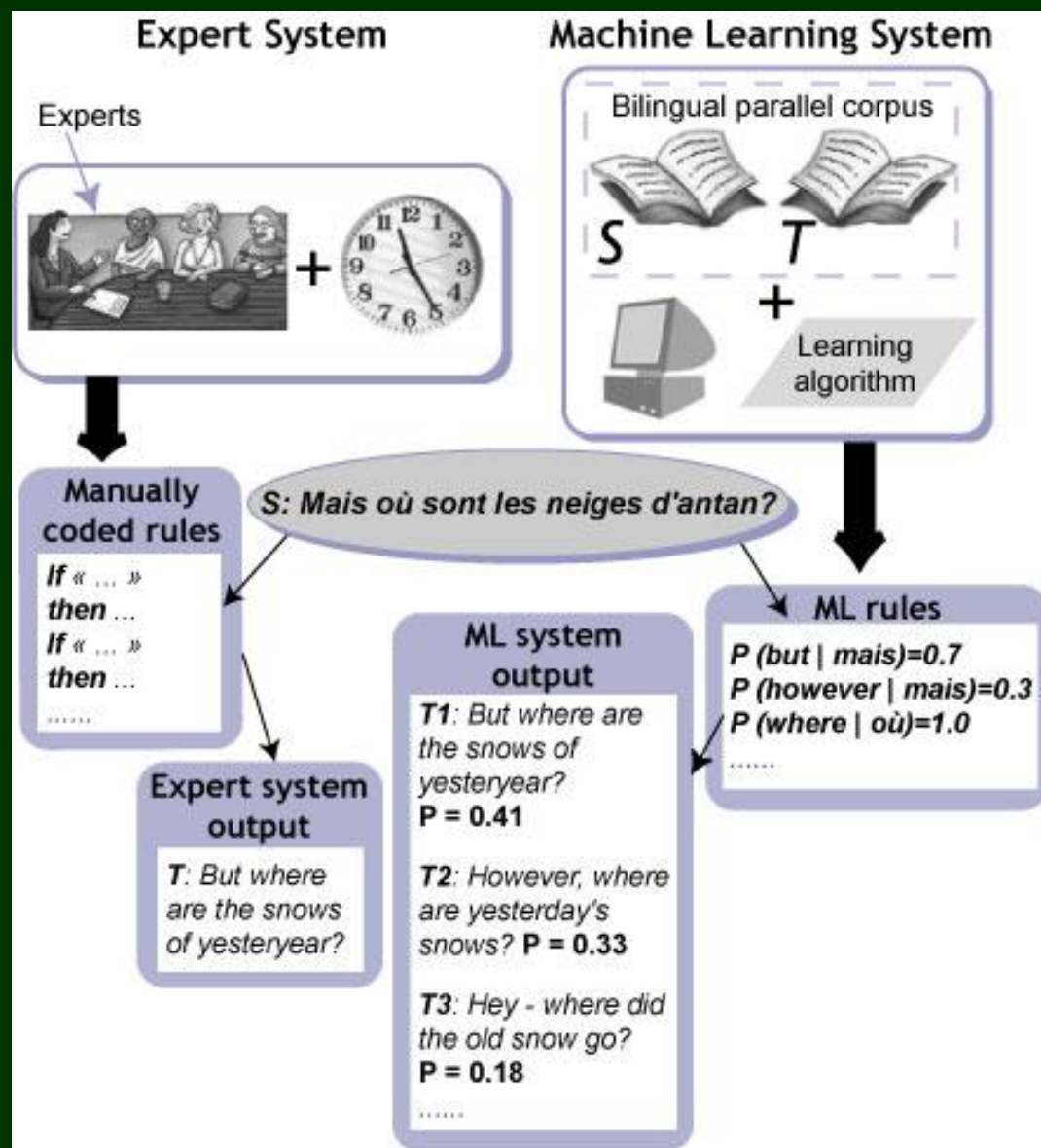
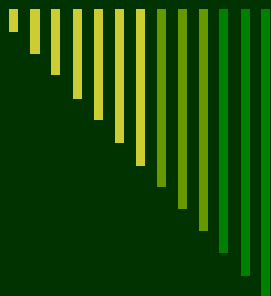


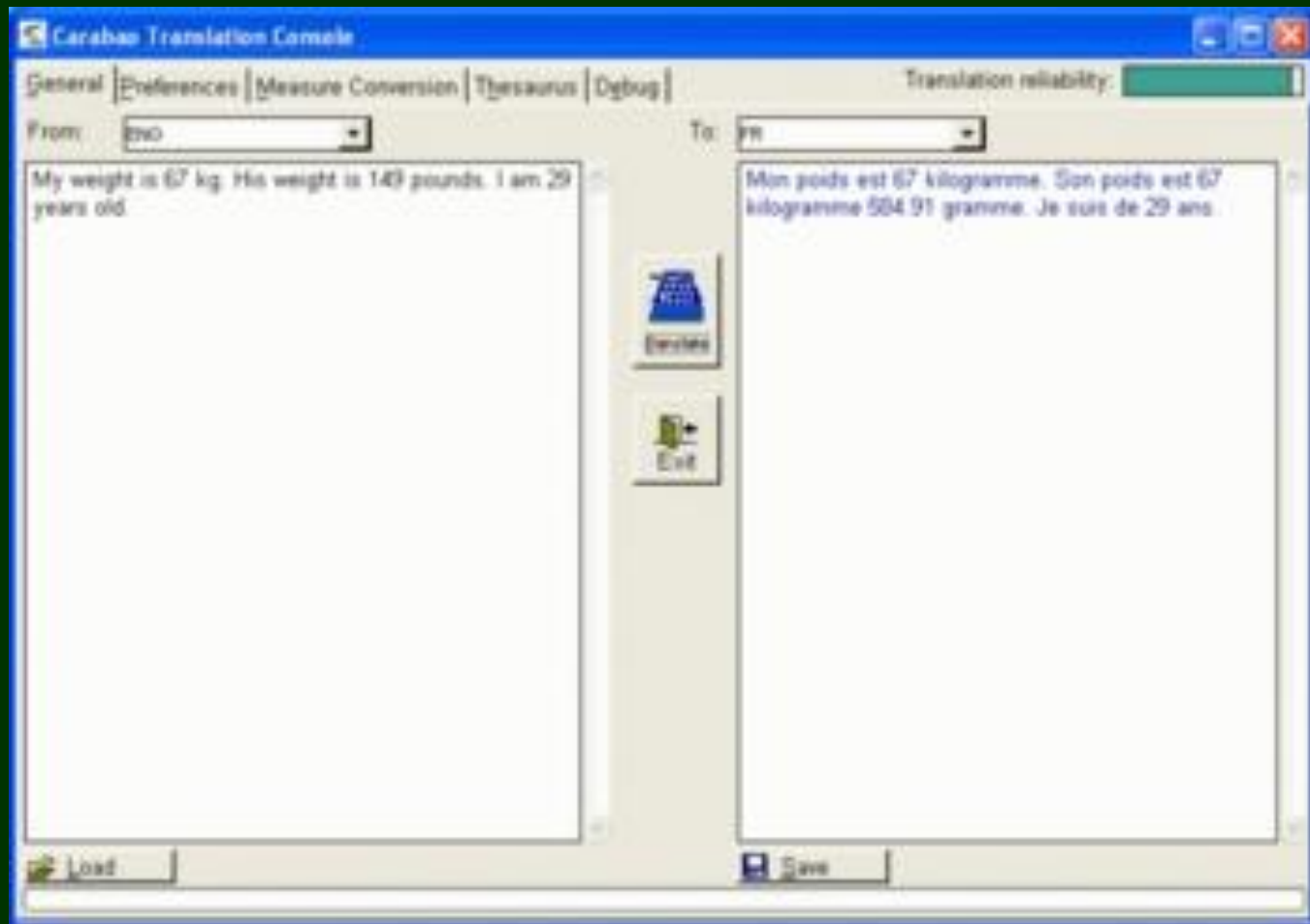
### System Combination

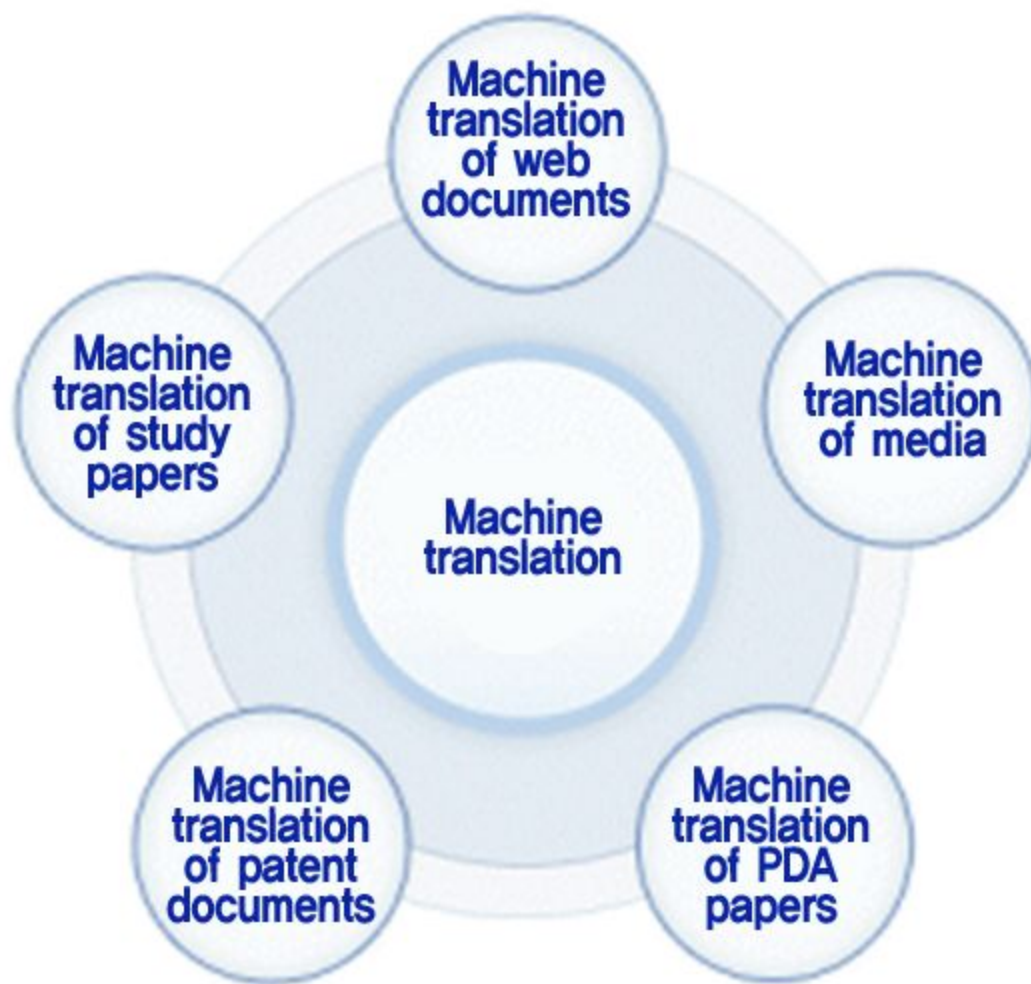
- Framework combination instead of the combination of different systems in a single framework

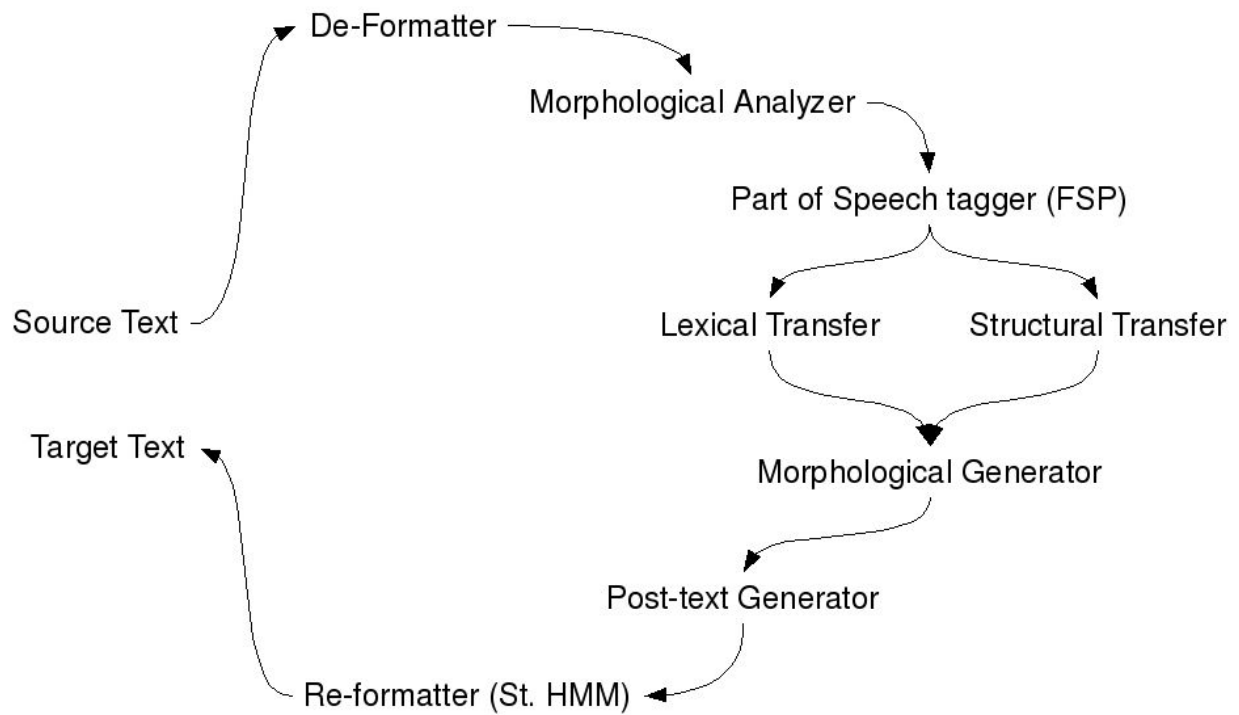
### Features

- Several state-of-the-art MT systems work collaboratively
- Interactive machine translation
- User-friendly interfaces for machine-aided translation
- Application-oriented design and implementation
- Good ability on domain adaptation











# The UNL System

