MT Eval – Hands-on exercise

Preliminary results and comments

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Human evaluation: H4

- Georges Van Slype (1979)
  - It is a critical study of methods for evaluating the quality of Machine Translation. Final Report, Bureau Marcel van Dijk / European Commission, Brussels

Measuring intelligibility

- What is intelligibility?
- According to ISLE taxonomy:
  - Intelligibility / comprehensibility - how intelligible is the output under different conditions (e.g, are the sentence fragments translated while being entered). Comprehensibility reflects the degree to which a complete translation can be understood (whereas the intelligibility is based on the general clarity of translation, whether this is considered in its entirety or by segments out of context).

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Measuring intelligibility

- It is a subjective measure
- It is a user oriented metric
- It gathers in fact two metrics :
  - Syntactic correctness
  - Semantic correctness
- Sentence level rating

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Measuring intelligibility

- Measures intelligibility on a 0 to 3 scale
  - 3: Very intelligible: all the content of the message is comprehensible, even if there are errors of style and/or of spelling, and if certain words are missing,or are badly translated, but close to the target language
  - 2: Fairly intelligible:the major part of the message passes
  - 1: Basely intelligible:a part only of the content is understandable, representing less than 50% of the message
  - 0: Unintelligible: nothing or almost nothing of the message is comprehensible

Preliminary comments

- Chosen text : Taliban and women
  - Source text : French
  - Translation : English
  - 15 sentences in source text (including title and bibliographic information)

Preliminary comments

- Type of text: discourse
- Possible problem: coordination of long source sentences
- In reference translation:
  - sentences n°1 was split into 3 short sentences
  - Sentence n°3 was split into 2 short sentences

Each time this phenomenom occured in a translation i.e. : 1 source sentence=X target sentences these sentences were rated as one single entity

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Preliminary comments

- Untranslated words were rated as unintelligible translations
- Examples : intelligibility - NP : l'ordre Taliban
- Reference translation : the Taliban order – either :
  - **Not translated**
    - translation n°1 : the Taliban
    - Translation n°12: The order
  - **Acceptable** : the Taliban rules (translation n°2)
  - **Unacceptable** :
    - the order Taliban (n°8/n°11)
    - The command Taliban (n°10)

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Preliminary comments

- Short sentences generally intelligible
- Translations n°7 and n°13:
  - word to word
  - Untranslated words
  - Lexical incorrectness
    - (e.g.: imposé:taxed / L'ensemble de la société : the body of the corporation)
- translations n°8 and n°9
  - Long sentences were not split
  - Several suggested translations
  - Probably MT

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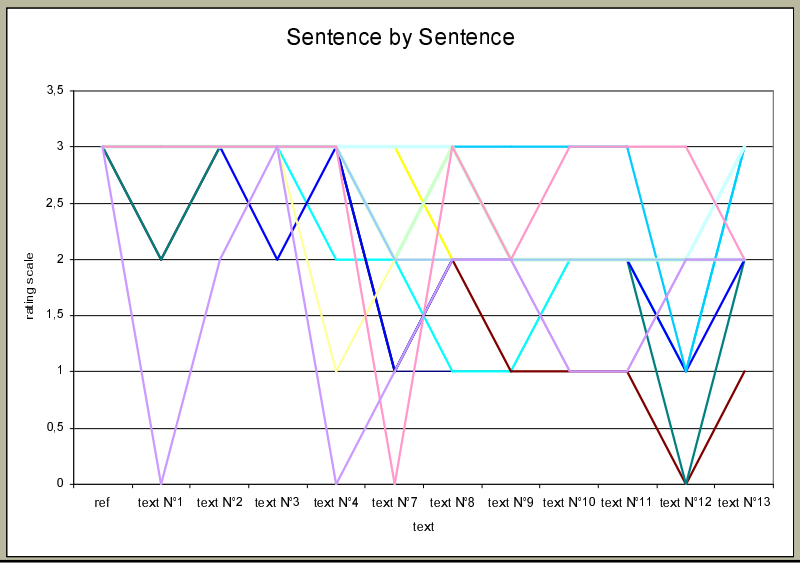
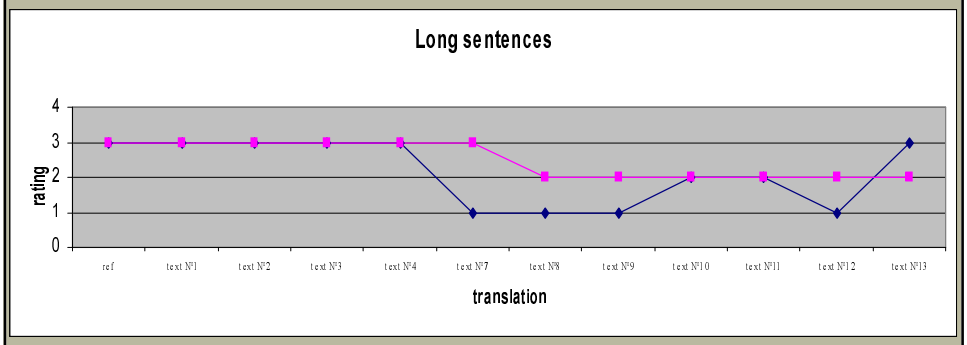
Preliminary results



Preliminary results



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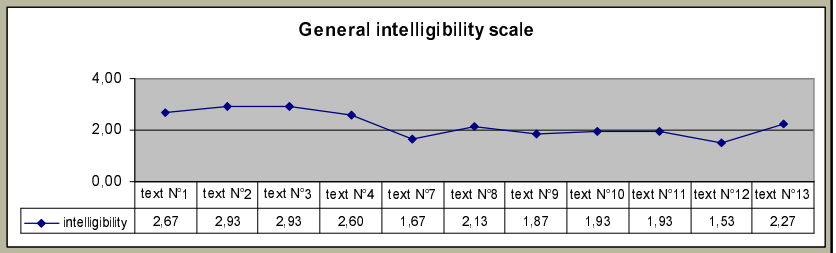
Preliminary results



	text N°1	text N°2	text N°3	text N°4	text N°7	text N°8	text N°9	text N°10	text N°11	text N°12	text N°13
intelligibility	2,67	2,93	2,93	2,60	1,67	2,13	1,87	1,93	1,93	1,53	2,27

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A6: any other ideas ?

- Yes – we had an idea

Aim: introduce the idea and consider it together

  - This exercise is the result of our previous studies at the hands-on machine translation workshops (2001 Geneva workshop (article for MT Summit – further work presented at the poster session during this conference)

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A6: Any other ideas

- Geneva 2001: work on a translation made by Reverso on the INRIA corpus on bio-technologies
- we had chosen to count the number of *NPs* (noun phrases) and *VPs* (verb phrases) in source text and target texts, a first indication being given by non parallel data

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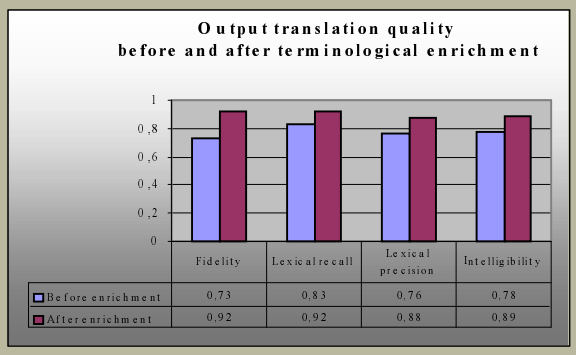
A6: any other ideas

- Another study, presented the results on the same corpus after terminological enrichment



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A6: any other ideas?

- But this methodology is still imprecise and limited to a first indication of MT system's analysis failure, when a gap is observed on non parrallel data.

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A6: any other ideas?

- Nevertheless, the use of finer grained criteria such as adjectives or prepositional phrases count could also be envisaged.
- A methodology including a test tool that would implement source and target transfer rules might probably prove more accurate and also apply to non isomorphic languages.

Any idea?

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Thank you very much…
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