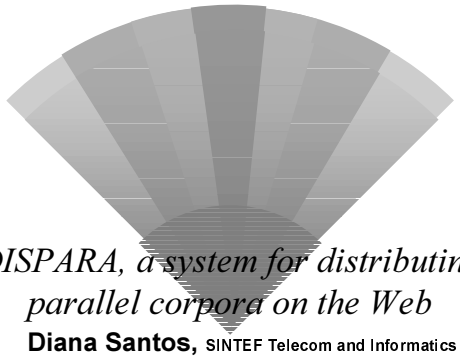
1



DISPARA, a system for distributing parallel corpora on the Web

Diana Santos, SINTEF Telecom and Informatics
Computational processing of Portuguese

What is DISPARA?

- A system for distributing
- parallel aligned corpora
- on the Web
- built on top of the IMS CWB

DISPARA was first developed in connection with the *COMPARA* corpus. *COMPARA/DISPARA* is a collaboration project with Ana Frankenberg-Garcia, under the framework of the Computational Processing of Portuguese project

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Why present DISPARA?

- Focus on the generality of the system
  - so far it has only been presented in connection with *COMPARA*
- Insist on the importance of making the work available on the Web
  - and therefore OS independent
- Augment the user community (for both corpus users and corpus providers)
  - informing about the work involved

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Presentation plan

- Parallel corpora
- What is involved in Web distribution
- DISPARA proper: encoding, search and display options
- DISPARA context: COMPARA
- DISPARA at work: users, use, problems

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Uses of parallel corpora

- To study/teach translation
- To study/teach the differences and similarities between languages
- To create systems
  - that do NLP tasks (machine translation, word sense disambiguation, terminology extraction,...)
  - that help translators
- To do cultural studies

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Parallel corpora...

- are hard to compile
  - not all kinds of text are translated
  - translation quality differs widely
  - for each text one needs (at least) two more permissions
- come in two flavours
  - aligned (the same content)
  - comparable (the same kind)

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Examples of parallel corpora

- MLCC-DEB EU parliamentary debates
- ECI-MCI EU calls
- ENPC / OMC
- COMPARA
- NILC abstracts
- the Web
- multilingual IR test collections

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Ways of using parallel corpora

- Exploration
- Hypothesis test
- Evaluation of systems
- Creation of exercises or didactic material
- Dictionary or terminology construction
- Creation of NLP systems

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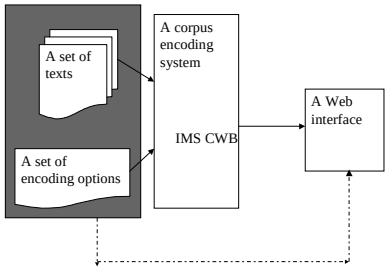
Distributing corpora on the Web



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Encoding options - macro level

- More than one translation per original
- Alignment always 1-x (alignment unit)
- Encoding of translation notes
- Encoding of addition, deletions and reorderings at sentence level, as well as alignment type
- Encoding of variant and date (both for original and translation(s))
- Encoding of titles, foreign expressions and simple emphasis

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Encoding options - micro level

- What is a token?
- What is a sentence?
- What to do with spelling errors?
- What to do with ordinary notes, or headings?
- What is reordering?
- What is addition?
- What is deletion?

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The corpus encoding system

- DISPARA is based on IMS-CWB abilities
- Features heavy AC/DC reuse
- In the IMS Corpus Workbench, alignment is one kind of annotation, previous to actual search
- INTEX is a dynamic annotation system, an environment to develop grammars and lexicons (linguistic resources)

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Search options vs display options

two independent things!

- Search: restrict by all encoded information
  - basic and advanced search modes
- Display: distribution of the results by all encoded information
  - quantitative wrap up; distribution of forms
  - show translation notes
  - special display of sentence reordering
  - context size; maximum number of hits
  - basic error handling

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Users of DISPARA

1. Us
2. Real users
3. Prospective users
   - translators
   - teachers
   - NLP developers
4. Ideal users
   - people who would also comment / give feedback / help with annotation / gather texts

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Use of DISPARA (serving COMPARA) since May 2000

- 10,000 searches
- 1,062 - 1,342 different users/IP addresses
- 205,000 results returned
- 75% using the English interface
- 73% using the simple interface
- 9% using complex query restrictions
- 3% requiring special display capabilities

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Short presentation of COMPARA

- 16 text pairs (10 Portuguese, 4 English originals) (+45 already copyright cleared)
- 284,582 Portuguese words (136,274 original)
- 296,910 English words (146,113 original)
- 17,639 alignment units (95.7% 1-1) (9,400 PE)
- (18 + 79) translation notes
- (250 + 267) titles; (443 + 206) foreign; (152 +191) emphasis

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Feedback/wishes from users

- Actual reporting of problems and bugs
- Detection of recurrent problems by logs observation
- Asking for deleting examples from a concordance

  ... use a simple text editor
- Augment the concordance context

  ... trivial in the source but not in the target
- Get the translation pattern of a particular word

  ... requires word alignment
- POS tagging, lemmatization, semantic tagging

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Further information

- Try DISPARA at

http://www.portugues.mct.pt/COMPARA/

- Read about its instantiation in COMPARA in several papers and on the Web
- Other instantiations (proof of concept):
  - the SQUIRREL project: Norwegian - Portuguese (raw) - Portuguese (corrected) ...

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