Digital grammaticography

towards data-rich corpus-based interactive hypertext grammars

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Description and documentation

- grammatical descriptions should be based on naturalistic data (corpora)
- language description based on language documentation (Himmelmann 1998; McDonnell et al. 2018)
- usual scenario:
  1. `.wav` and ELAN files in archive (imported FLEx annotations?)
  2. description written in word processor → PDF/book
- separate (but digital!) products

A new approach

- text is written in markdown
- data is stored in a database
- different output formats can represent entities differently

grammars are prose interspersed with data[1]

Why would one do this?

- database (analytical) updates are directly reflected in final output
- non-linear and data-rich output formats (backwards compatibility with paper)
- increased "reproducibility" of grammatical descriptions
  - writers are forced to explicitly reference database entries
  - skeptical readers can search the underlying corpus
- data is easily reusable by other researchers (no copypasting data out of a PDF)

Implementation

- text is written in markdown (what else?)
- choice of database: CLDF (Forkel et al. 2017) and CLLD (Forkel et al. 2019)

Prose

- the text module of the cldfviz library[2] allows embedding CLDF database entries in markdown output
- pylingdocs (Matter 2023b): a general-purpose application for data-rich linguistic documents
  - different output formats (LaTeX, HTML, CLLD)
  - cross-references and example references
  - tables
  - multi-file documents
- database pointers: `[f](form-1)`, or more complex: `[ex](ex-04,ex-15?example_id=plur&title=Different functions of the pluractional suffix&with_primaryText=True)`

Data

- CLDF components for linguistic corpora (Matter 2023a)
  - available as a python library
  - integrated into *box and FLEx conversion libraries (Matter 2022a, 2023c)
  - lightweight, shareable datasets
- corresponding CLLD database models available as plugins

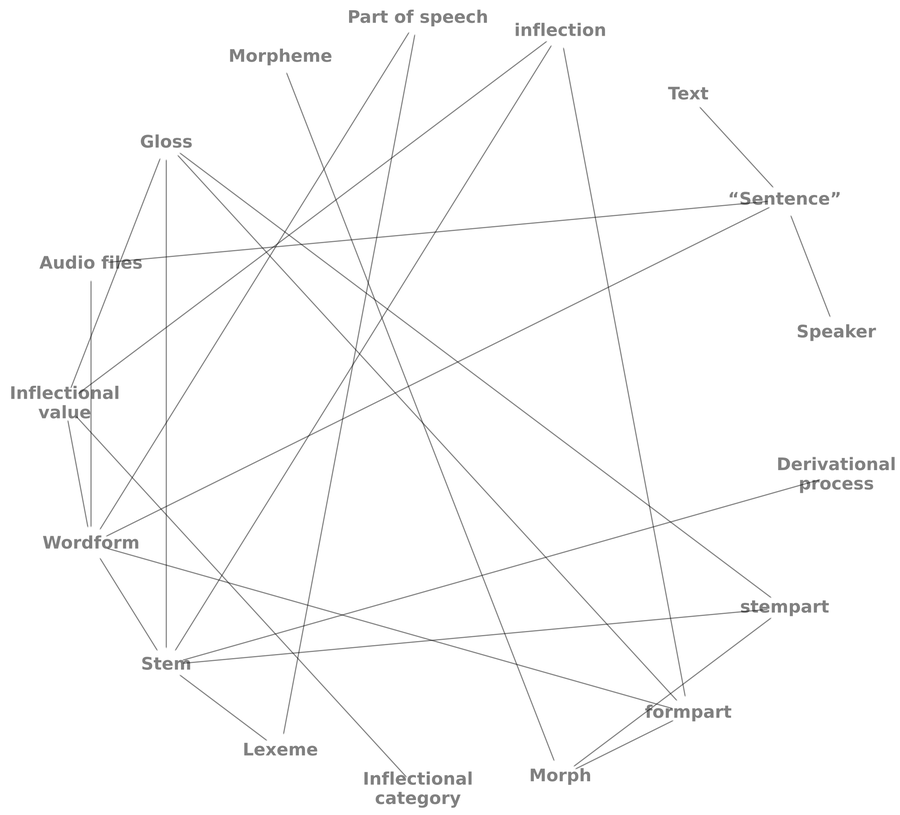
Interactive output

- InDiCoGram: interactive, digital, corpus-based grammar (Matter 2022b)
- lightweight CLLD template using several plugins
- everything is a link (almost)
- audio!
- example: yawarana-sketch.herokuapp.com

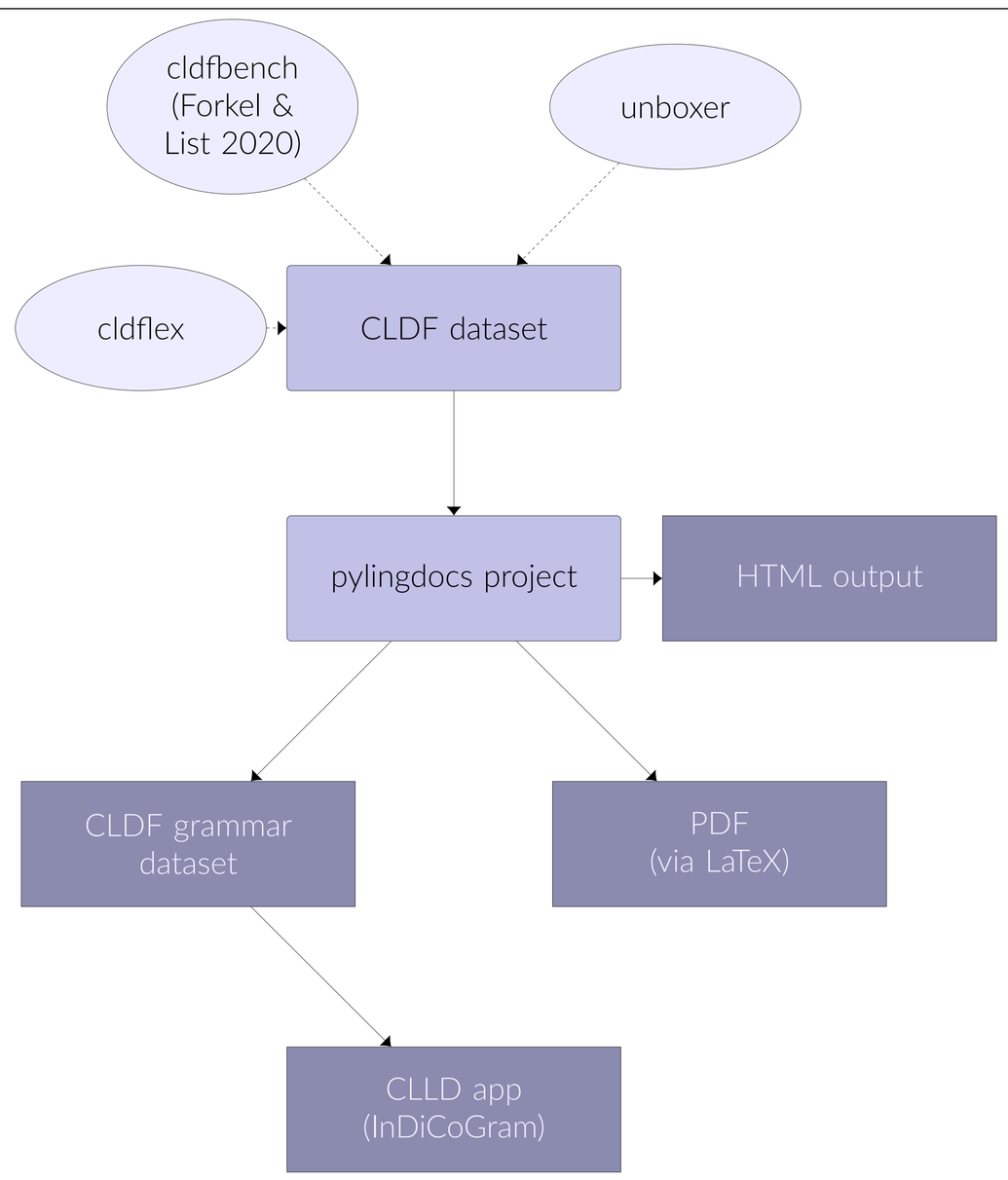
[1] See Nordhoff (2012)

[2] github.com/cldf/cldfviz/

Current database tables



Workflow



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