DGS Corpus Project

Development of a Corpus Based Electronic Dictionary German Sign Language / German

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Published sign collections

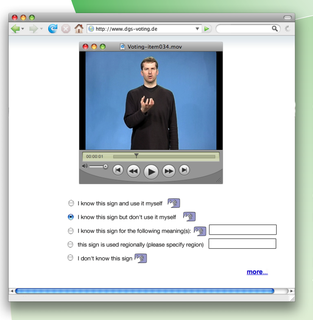
- no documented empirical basis
- valuable source for basic vocabulary
- a pool of signs to be evaluated by linguists and native signers

→ compilation of a preliminary basic vocabulary for DGS to be published after 5 years
→ ongoing validation by corpus data

DGS Corpus

- approx. 350–400 hours
- 250–300 informants
- approx. 2.25 m. tokens

- informants from all over Germany of different age, sex and social status; selected on grounds of language competence and regional rootedness
- comparable to large spoken language corpora in size & scope
- corpus should reflect a representative and well-balanced part of everyday communication
- design allows the use of the corpus for various tasks:
  - validation of the basic vocabulary,
  - thorough research on DGS grammar based on the transcriptions
  - identification of different meanings and collocations of a sign
  - the design anticipates a comparative sociolinguistic study comparable in kind and quality to Lucas et al. (2001) and Schembri/Johnston (2004).



Focus group

- direct representatives of the language community
- approx. 20 deaf experts from different regions
- trained and sensitized to linguistic questions
- consulted in cases of doubt concerning, e.g. the lexical status of a sign, citation form, language change, sign use and (regional) variation
- decisions concerning lemma selection or the well-formedness of grammatical constructions continuously validated by focus group

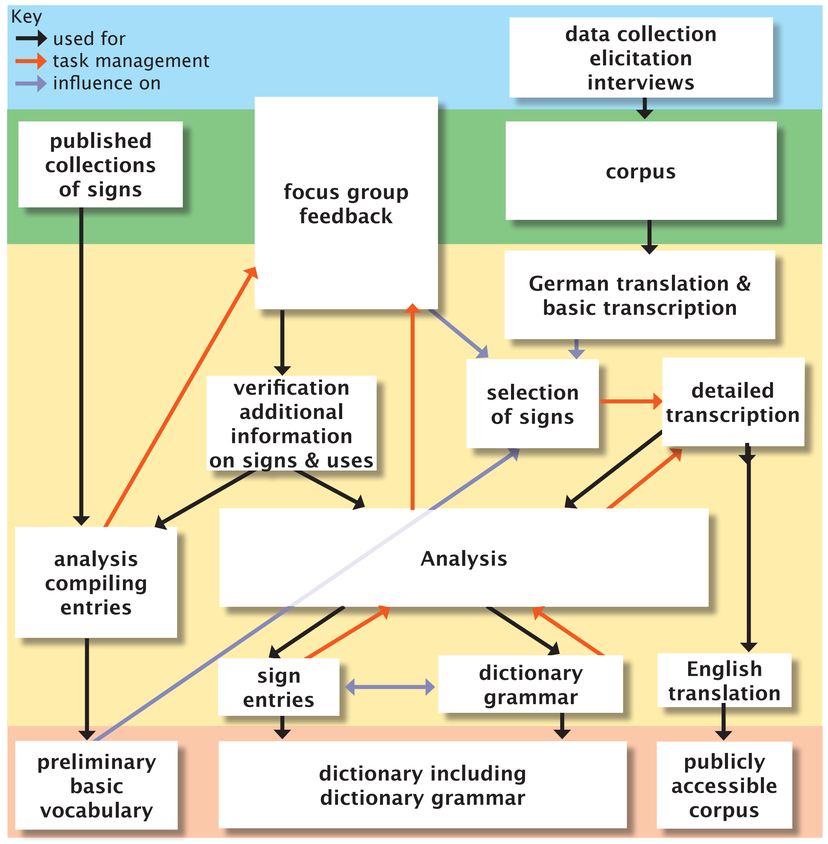
→ filling gaps, avoiding additional surveys

Feedback from the sign language community

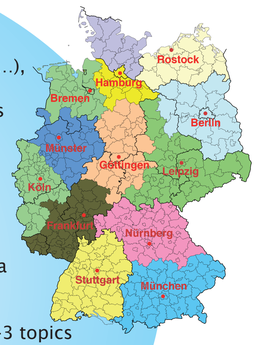
- web-based feedback system
- all interested members of the language community are entitled to give feedback (after registration)
- verification of signs of previously published sources and basic sign vocabulary
- validation of dialectal variants
- discussion of probable variants, sign forms and sign meanings

State of the art:

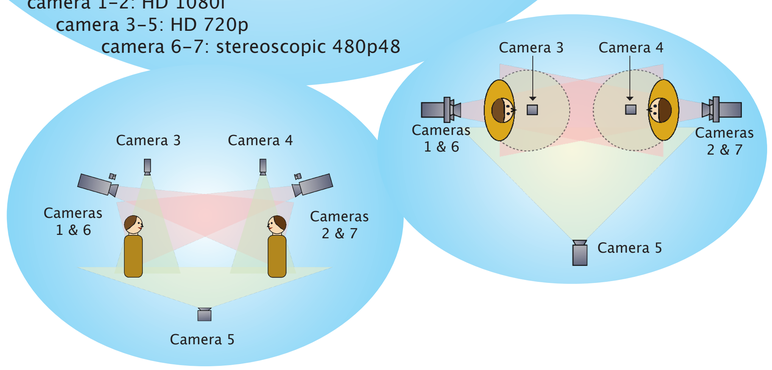
- ✘ no large corpus of DGS available
- ✘ no comprehensive dictionary of DGS on linguistic principles available
- ✔ many sign collections of DGS available; differing in size, standard and degree of documentation
- ✔ several smaller project-based corpora from technical sign dictionaries available
- ✔ complex lexical database system (iLex) available
- ✔ experience and know-how from more than 10 years of dictionary making in Hamburg
- ✔ several other national corpus projects under way or in preparation → cooperations, transfer/exchange of know-how, workshops



Data collection (Methods and Setting)



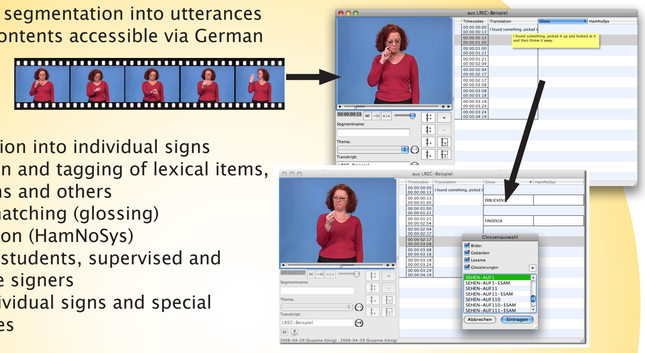
- 12 different locations (see map); areas of relatively high deaf population density (deaf schools, deaf centres…), which are easy to reach from surrounding rural areas
- mobile studio is successively set up in each of the locations
- each elicitation: pair of two informants
- peer-to-peer procedure
- interviews conducted by a local deaf contact person to secure an elicitation of regional sign variants with as little influence from the interviewer as possible
- each elicitation consists of
  - (i) a standardized interview covering language and social data (approx. 20 min./informant); aim: description of data on metadata level → IMDI standard
  - (ii) filming of spontaneous conversations on a given topic (2–3 topics from a list, 60–90 min. for each pair of informants). → elicitation of as much basic vocabulary as possible; list of topics covers about 20 subject areas.
  - (iii) different tasks with selected stimuli (approx. 120 min. for each pair). Tasks aim at capturing special phonological, morphological, syntactic and lexical phenomena.
- setting: see illustrations
  - camera 1–2: HD 1080i
  - camera 3–5: HD 720p
  - camera 6–7: stereoscopic 480p48



Basic transcription

- translation into German
- segmentation into utterances

→ contents accessible via German



- segmentation into individual signs
- identification and tagging of lexical items, productive signs and others
- token-type matching (glossing)
- form description (HamNoSys)
- carried out by students, supervised and checked by native signers

→ access via individual signs and special sign categories

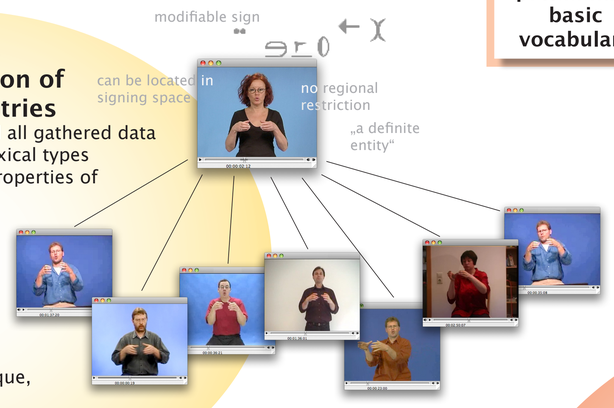
Lemma selection and controlling of detailed transcription

- lemma selection on grounds of frequency of occurrence and distribution among signers, votes from focus group and public voting (see left side)
- approximately 6000 lemma entries expected
- review of all tokens of selected signs
- preliminary assessment of sign kind (invariant or modifiable sign)
- selection of signs in context: differentiation of separate meanings (senses) of a sign, instances of grammatical uses of a sign, different sign forms
- selection of suitable utterances as sample sentences for the dictionary
- preparation of information for focus group and feedback

→ selection of passages for detailed transcription

Analysis and compilation of dictionary entries

- abstracting from occurrences and all gathered data on a sign to obtain a description of lexical types
- description of regular grammatical properties of classes of lexical items
- description of form,
  - phonological variants,
  - use of space,
  - morphology,
  - word class/syntactic functions,
  - meaning(s),
  - possible translations into German,
  - iconic value & visualisation technique,
  - dialectal information,
  - cross references to related and similar signs,
  - synonyms, antonyms,
  - examples of use



Detailed transcription

- approx. 50% of the basic transcriptions
- differentiation of phonological variants, grammatical sign forms (e.g. plural, negation), modifications
- coding of mouthing & mouth gesture, (lexical) facial expression, notation and classification of token form, contextual meaning, syntactic category, aspects of spatial use…
- tagging of phrases and sign strings (within utterances)
- coding and annotation of productive sign forms
- more detail: transcription of surrounding context of a sign

Comprehensive, corpus based, electronic dictionary DGS-German

- contains approx. 6000 sign entries
- all contained information is corpus based
- entries contain descriptive information on signs
- entries include example sentences taken from the corpus
- dictionary focus on DGS part
- German part provides access to DGS for hearing users; deaf users get basic information about German words
- combination of different types of dictionary functions
- primarily serves the following target groups:
  - DGS learners, e.g. hearing parents of deaf children, students of Deaf Studies/sign language interpreting
  - professional sign language interpreters for DGS – German,
  - native signers of DGS: deaf adults, CODAs,
  - deaf children or pupils, acquiring DGS as native language,
  - sign language teachers, linguists and others concerned with sign language structure

Preliminary basic vocabulary

- basic vocabulary of DGS and German
- not based on corpus data but on published sign collections
- signs verified by focus group and public voting
- to be replaced by the general, comprehensive dictionary after 10 years

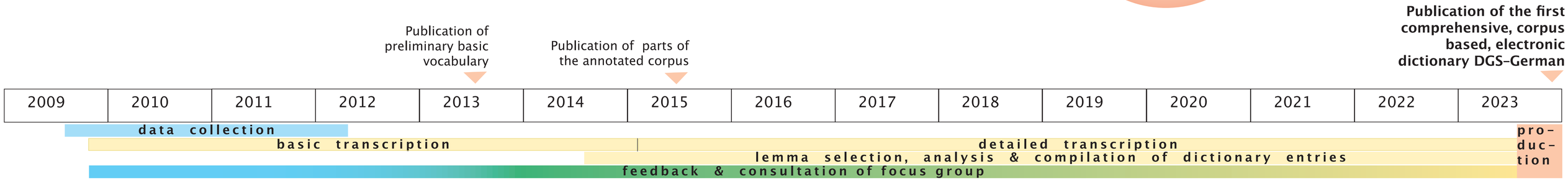
Dictionary grammar

- based on the corpus and information from the focus group
- general overview of the most important grammatical features of DGS, supplemented by examples taken from the corpus
- written in easily understandable terms

→ sign entries become shorter, more compact and therefore more clearly

Annotated public corpus

- representative parts of the corpus (approx. 50 hours)
- English translation of content, glosses and metadata
- suitable exchange formats provided (e.g. ELAN, IMDI)
- accessible online



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