The Sign Language Dataset Compendium

Creating an Overview of Digital Sign Language Resources

Maria Kopf, Marc Schulder, Thomas Hanke
University of Hamburg, Institute of German Sign Language and Communication of the Deaf, Germany

Why?

- Identification of suitable sign language datasets challenging
- No single source of information
- Extensive literature review or word-of-mouth needed
- Amount of information varies widely
- Information distributed across different publications, data repositories and (potentially defunct) project websites

What is Described?

For Corpora

Languages: Languages of primary data; not including languages of annotation/ translation

Size: Token count, type count, recording hours, number of video clips, and/or file size

Participants: Publicly documented demographic information, such as number of participants, regions, age groups, gender distribution, and more

Metadata Format: File formats of machine-readable metadata

Translation: Amount and language of translations

Annotation: Amount of annotations, and conventions (paraphrased and/or with reference to published conventions)

Data Format: File formats of annotation/ translation data

For Lexical Resources

Languages: Signed and spoken languages used in resource

Size: Number of lexical items (signs or types)

Linguistic Information: ID-glosses, translational equivalents, citation form video, meanings, phonetic transcription or categorisations, frequency and other statistics, list of corpus occurrences, and more

For Corpora as well as Lexical Resources

Licence: Commonly used licence conditions such as Creative Commons or custom licences, link to the licence

Access: Identification of public and restricted parts, description of access

Webpages: Relevant websites such as project page, research dataset, portals for access by the general public, and more

Institutions: Universities and other organisations creating the dataset

References: Important bibliographic references, links to external lists of publications

The Compendium

- Extensive **overview of linguistic resources** for sign languages around the globe
- Naturally used language by signers with L1 language proficiency
- Info tables with **structured information** in thematic categories
- Standardised but flexible format through free-form description
- Machine-readable **metadata**
- Pointers to data, project websites, literature references, etc.
- **Interconnected** entries, providing links between resources, tasks, and languages
- Available as website and static document
- Growing resource with **regular updates**

Current Size

41
Corpora

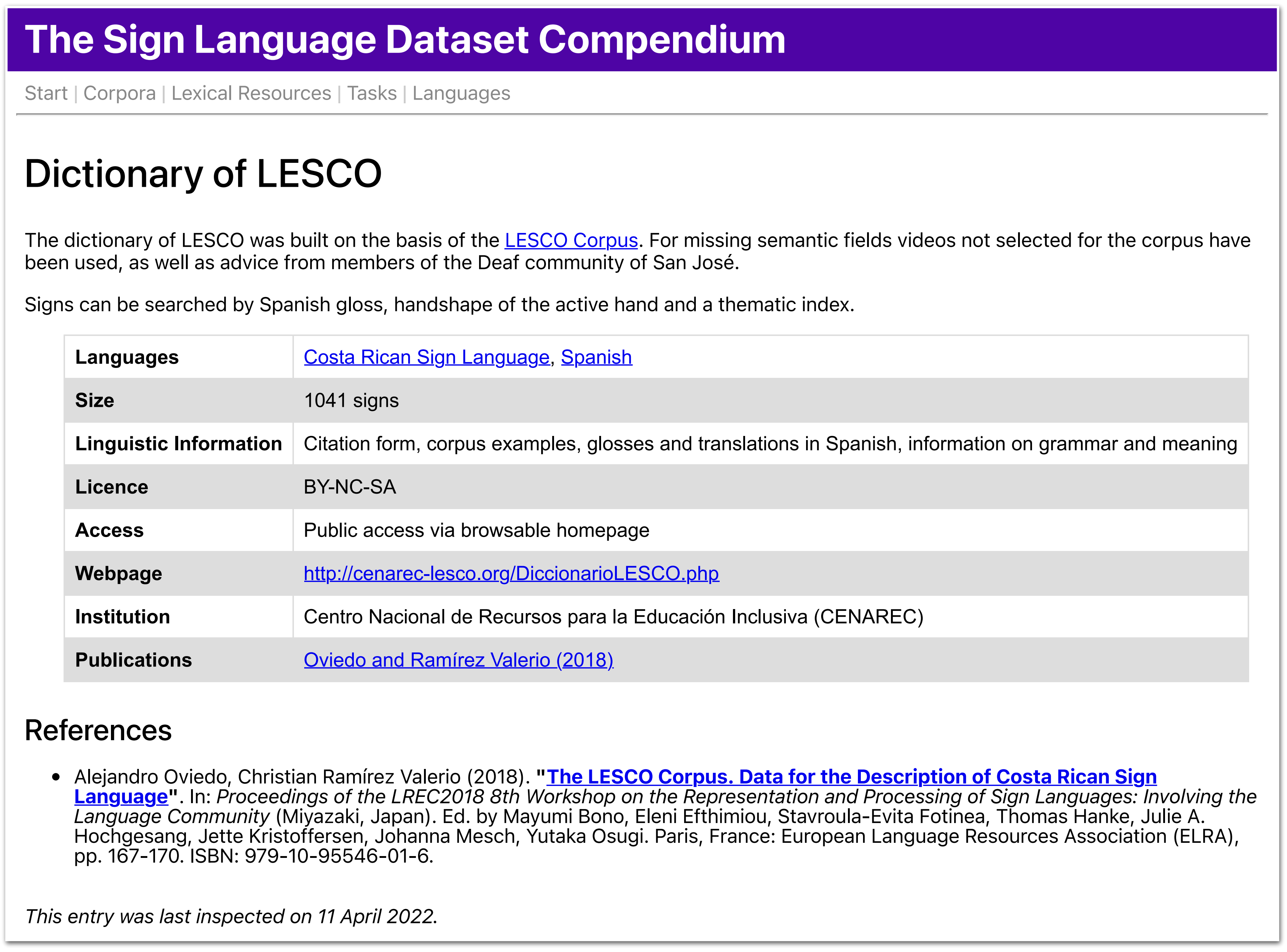
71
Lexical Resources

27
Collection Tasks

76
Sign Languages

Where to Find It?

https://www.sign-lang.uni-hamburg.de/lr/compendium/



The Sign Language Dataset Compendium

Start | Corpora | Lexical Resources | Tasks | Languages

Dictionary of LESCO

The dictionary of LESCO was built on the basis of the LESCO Corpus. For missing semantic fields videos not selected for the corpus have been used, as well as advice from members of the Deaf community of San José.

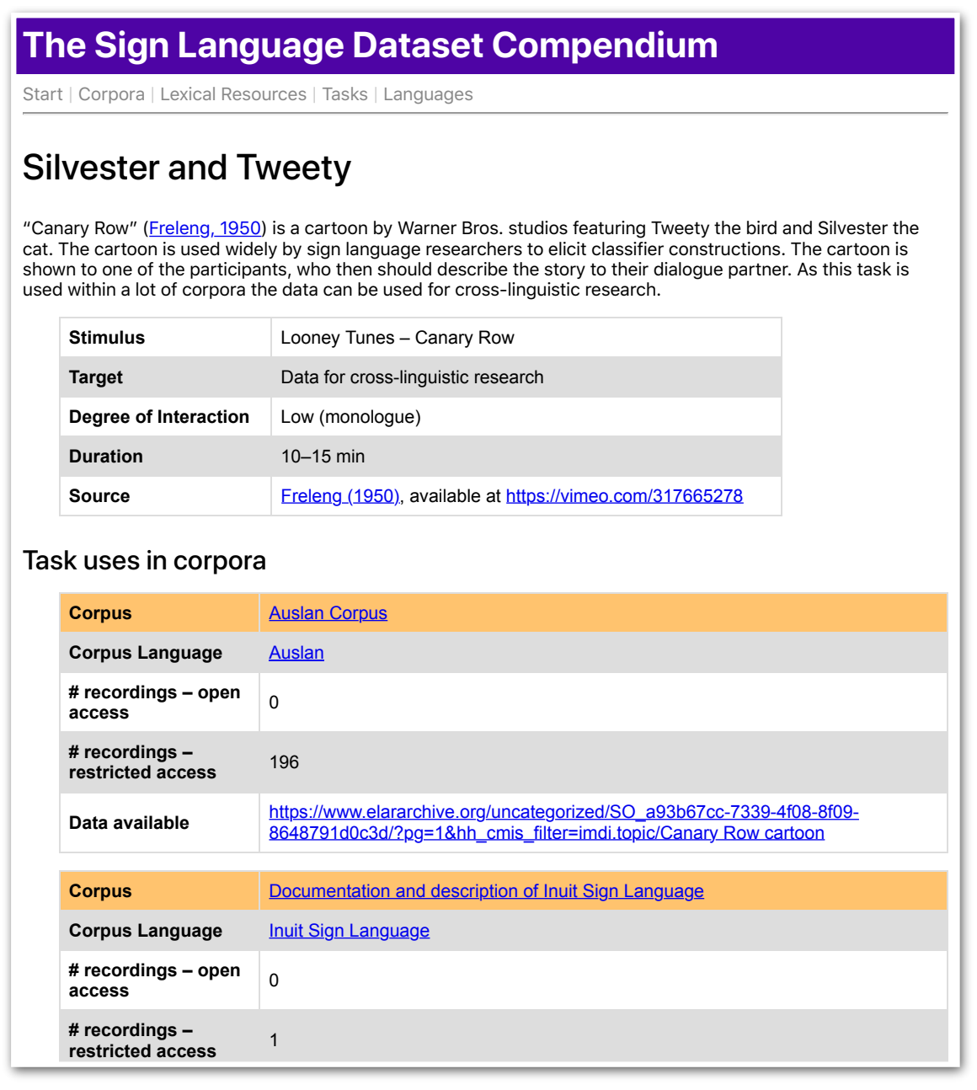
Signs can be searched by Spanish gloss, handshape of the active hand and a thematic index.

Languages	Costa Rican Sign Language, Spanish
Size	1041 signs
Linguistic Information	Citation form, corpus examples, glosses and translations in Spanish, information on grammar and meaning
Licence	BY-NC-SA
Access	Public access via browsable homepage
Webpage	http://cenarec-lesco.org/DiccionarioLESCO.php
Institution	Centro Nacional de Recursos para la Educación Inclusiva (CENAREC)
Publications	Oviedo and Ramírez Valerio (2018)

References

- Alejandro Oviedo, Christian Ramírez Valerio (2018). "**The LESCO Corpus. Data for the Description of Costa Rican Sign Language**". In: *Proceedings of the LREC2018 8th Workshop on the Representation and Processing of Sign Languages: Involving the Language Community* (Miyazaki, Japan). Ed. by Mayumi Bono, Eleni Efthimiou, Stavroula-Evita Fotinea, Thomas Hanke, Julie A. Hochgesang, Jette Kristoffersen, Johanna Mesch, Yutaka Osugi. Paris, France: European Language Resources Association (ELRA), pp. 167-170. ISBN: 979-10-95546-01-6.

This entry was last inspected on 11 April 2022.



The Sign Language Dataset Compendium

Start | Corpora | Lexical Resources | Tasks | Languages

Silvester and Tweety

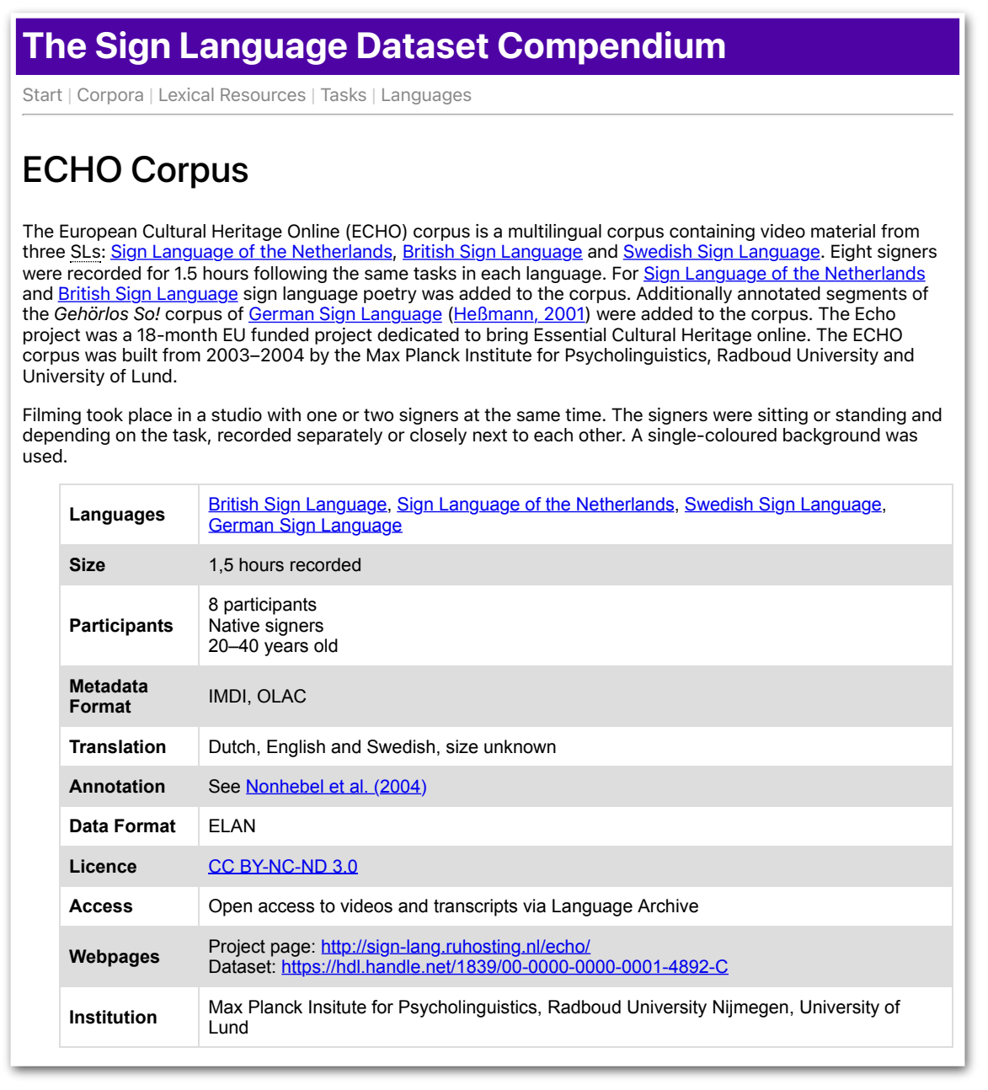
"Canary Row" (Freleng, 1950) is a cartoon by Warner Bros. studios featuring Tweety the bird and Silvester the cat. The cartoon is used widely by sign language researchers to elicit classifier constructions. The cartoon is shown to one of the participants, who then should describe the story to their dialogue partner. As this task is used within a lot of corpora the data can be used for cross-linguistic research.

Stimulus	Looney Tunes – Canary Row
Target	Data for cross-linguistic research
Degree of Interaction	Low (monologue)
Duration	10–15 min
Source	Freleng (1950), available at https://vimeo.com/317665278

Task uses in corpora

Corpus	Auslan Corpus
Corpus Language	Auslan
# recordings – open access	0
# recordings – restricted access	196
Data available	https://www.elararchive.org/uncategorized/SO_a93b67cc-7339-4f08-8f09-8648791d0c3d/?pg=1&hh_cmis_filter=imdi.topic/Canary Row cartoon

Corpus	Documentation and description of Inuit Sign Language
Corpus Language	Inuit Sign Language
# recordings – open access	0
# recordings – restricted access	1



The Sign Language Dataset Compendium

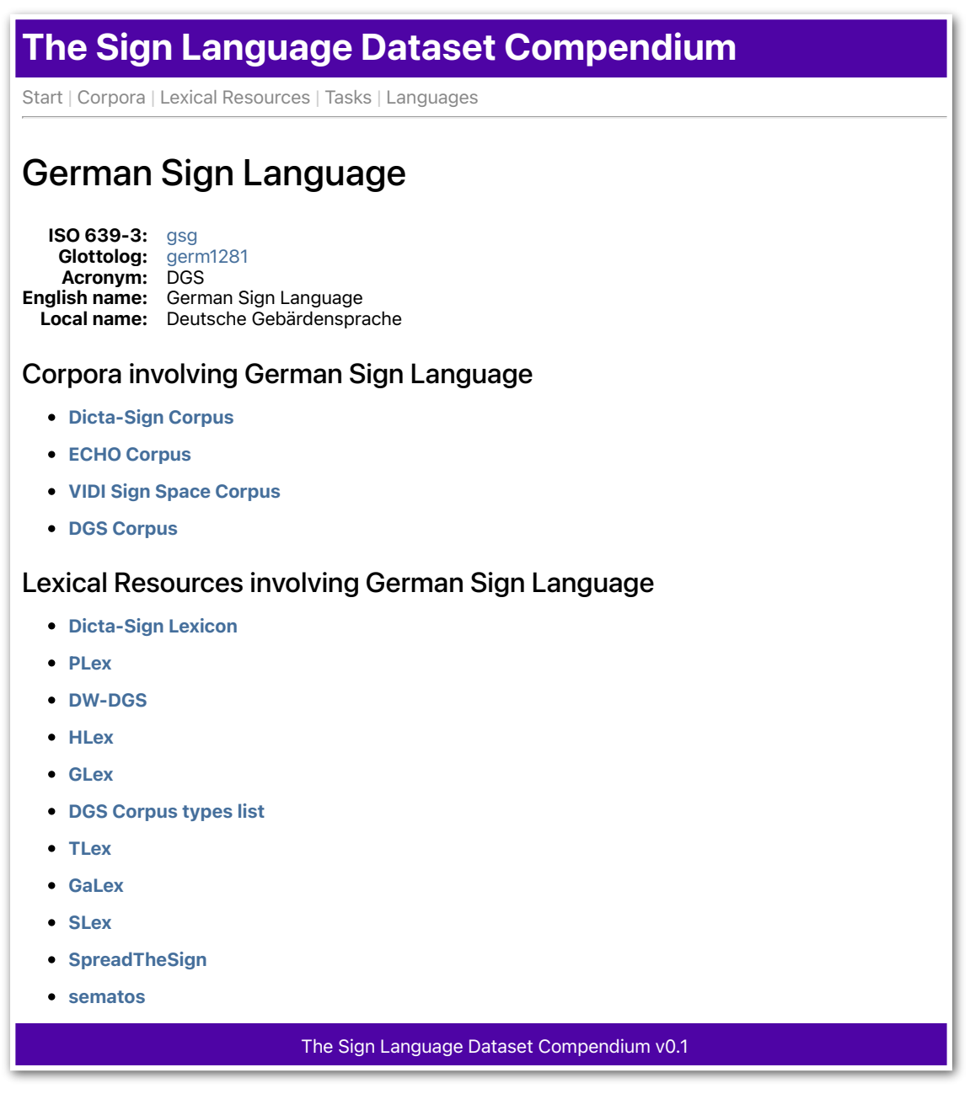
Start | Corpora | Lexical Resources | Tasks | Languages

ECHO Corpus

The European Cultural Heritage Online (ECHO) corpus is a multilingual corpus containing video material from three SLs: Sign Language of the Netherlands, British Sign Language and Swedish Sign Language. Eight signers were recorded for 1.5 hours following the same tasks in each language. For Sign Language of the Netherlands and British Sign Language sign language poetry was added to the corpus. Additionally annotated segments of the *Gehörlos So!* corpus of German Sign Language (Heßmann, 2001) were added to the corpus. The Echo project was a 18-month EU funded project dedicated to bring Essential Cultural Heritage online. The ECHO corpus was built from 2003–2004 by the Max Planck Institute for Psycholinguistics, Radboud University and University of Lund.

Filming took place in a studio with one or two signers at the same time. The signers were sitting or standing and depending on the task, recorded separately or closely next to each other. A single-coloured background was used.

Languages	British Sign Language, Sign Language of the Netherlands, Swedish Sign Language, German Sign Language
Size	1,5 hours recorded
Participants	8 participants Native signers 20–40 years old
Metadata Format	IMDI, OLAC
Translation	Dutch, English and Swedish, size unknown
Annotation	See Nonhebel et al. (2004)
Data Format	ELAN
Licence	CC BY-NC-ND 3.0
Access	Open access to videos and transcripts via Language Archive
Webpages	Project page: http://sign-lang.ruhosting.nl/echo/ Dataset: https://hdl.handle.net/1839/00-0000-0000-0001-4892-C
Institution	Max Planck Insitute for Psycholinguistics, Radboud University Nijmegen, University of Lund



The Sign Language Dataset Compendium

Start | Corpora | Lexical Resources | Tasks | Languages

German Sign Language

ISO 639-3:	gsg
Glottolog:	germ1281
Acronym:	DGS
English name:	German Sign Language
Local name:	Deutsche Gebärdensprache

Corpora involving German Sign Language

- Dicta-Sign Corpus
- ECHO Corpus
- VIDI Sign Space Corpus
- DGS Corpus

Lexical Resources involving German Sign Language

- Dicta-Sign Lexicon
- PLex
- DW-DGS
- HLex
- GLex
- DGS Corpus types list
- TLex
- GaLex
- SLex
- SpreadTheSign
- sematos

The Sign Language Dataset Compendium v0.1

How?

Method

- Literature review of 363 publications in the sign-lang@LREC Anthology
- Inspection of
  - Additional literature
  - Datasets
  - Project websites
- Personal correspondence with data creators
- Language specific curation criteria depending on size and number of available resources

Curation Criteria

General criteria:

1. Must include video data
2. No sign-supported systems
3. No language acquisition data
4. No historical sign languages
5. Data must be attainable
6. Criteria for corpora
7. Must be (semi-)spontaneous signing
8. L1 signers
9. Data must have at least a partial translation and/or gloss annotation
10. At least 5 hours (minimum) or 10 hours (strict) of sign language recordings.

For Lexical Resources:

11. Must include index
12. At least 100 (minimum) or 1000 (strict) different signs.

For data collection tasks:

13. Used by multiple resources

What are Commonly Used Tasks?

Stimulus: Description of stimulus provided to participants

Target: Linguistic phenomena intended to elicit

Degree of Interaction: Estimate of amount of interaction, reason for given degree

Duration: Estimate of duration of the task, based on instances observed in corpus data or published documentation

Source: References to material (e.g. books, films) or related scientific publications

Which Corpus Uses which Task?

# recordings – open access: Number of recordings publicly available

# recordings – closed access: Number of recordings non-publicly available

Data available: Links to corpus recordings of this task with disambiguating notes to help find the task on the referenced page

Poster presented at the 10th Workshop on the Representation and Processing of Sign Languages: Multilingual Sign Language Resources. LREC 2022. Marseille, France. June 25th, 2022.

Funded by the Horizon 2020 Framework Programme of the European Union

We would like to thank the following people for their valuable input, advice, and their information on individual resources: Ronice Müller de Quadros, Csilla Bartha, Eleni Efthimiou, Hope E. Morgan, Johanna Mesch, Katalin Liszi, and Thomas Troelsgård.
This work is supported in part by the EASIER (Intelligent Automatic Sign Language Translation) Project. EASIER has received funding from the European Union's Horizon 2020 research and innovation programme, grant agreement n° 101016982.
This work has in part been produced in the context of the joint research funding of the German Federal Government and Federal States in the Academies' Programme, with funding from the Federal Ministry of Education and Research and the Free and Hanseatic City of Hamburg. The Academies' Programme is coordinated by the Union of the Academies of Sciences and Humanities