D2.10 Design of the Atlas Questionnaire
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Version 1.0 – 30/11/2017

**Project title:** The SIGN-HUB: preserving, researching and fostering the linguistic, historical and cultural heritage of European Deaf signing communities with an integral resource

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**Work package:** WP2 Content

**Affected tasks:**
Task 2.2 – The Atlas of sign language structures

<table>
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<tr>
<th>Nature of deliverable&lt;sup&gt;1&lt;/sup&gt;</th>
<th>R</th>
<th>DEM</th>
<th>DEC</th>
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<td>PU</td>
<td>PP</td>
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<sup>1</sup> R: Report, DEM: Demonstrator, pilot, prototype, DEC: Websites, patent fillings, videos, etc., O: Other

<sup>2</sup> PU: public, PP: Restricted to other programme participants (including the commission services), RE Restricted to a group specified by the consortium (including the Commission services), CO Confidential, only for members of the consortium (Including the Commission services)
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## History of changes

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<td>1.0</td>
<td>30/11/2017</td>
<td>Initial version.</td>
<td>Carlo Cecchetto, Meltem Kelepir, Josep Quer, Jordina Sánchez Amat.</td>
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1. Scope of the document

This document reports the design of the Questionnaire, which is conducted in order to collect the information on the linguistic structures of the world’s sign languages. Based on the data elicited with the Questionnaire, the SIGN-HUB Atlas of sign language structures is going to be built. The first part of the document (chapter 2 and 3) describes the design of the overall Questionnaire and gives a sequential structure of its sections and slides. However, the current work progress concerns building a Pilot Questionnaire that precedes the release of the final Questionnaire. Hence, the second part of the document (chapter 4 and 5) presents an outline and the screenshots of the Pilot Questionnaire.
2. Introduction

Task 2.2 aims at a comprehensive comparative description and documentation of the basic linguistic structures of the sign languages (SLs) of the world. In order to collect the information about the linguistic structures of as many sign languages as possible, we are developing an online Questionnaire, which will be distributed among SL experts. Since most SL researchers are experts in a specific field and there are a lot of questions coming up for each section, we decided to divide the overall Questionnaire into the following 4 sub-Questionnaires: (1) Phonology + Lexicon, (2) Morphology, (3) Syntax, and (4) Pragmatics + Socio-History. Each sub-Questionnaire contains approximately 50 questions (i.e. 200 questions in total), regarding an overall collection of about 100 to 120 different grammatical features.
3. Design of the Questionnaire

This section gives an overview of the internal structure of the overall Questionnaire. The structure reflects the sequential order of the questions of the parts Phonology, Lexicon, Morphology, Syntax, Pragmatics and Socio-History, as they will be programmed with the Atlas Software tool. Note that the ongoing work on the sub-Questionnaires is a process conducted in successive stages. Therefore, the development of sub-Questionnaire 1 (Phonology + Lexicon) is more advanced than the development of sub-Questionnaire 4 (Pragmatics + Socio-History). This is reflected in the current overview. Questions that are selected to appear in the Pilot Questionnaire are highlighted in grey.

The design of the Questionnaire is organized in 4 different levels: level “meta” for meta questions, and level 1-3 for the hierarchical structure of the grammar sections. In the following, a “New Section” refers to an operation within the Atlas Software tool that creates a section, which will be represented with a header in the table of contents. In contrast, a “New Slide” creates a slide within a section. On each slide, one question and its respective answer options are created. Slides will not be represented in the table of contents.

- **Front slide (level: meta)**
  Contains the name of the project (Sign-Hub), name of Questionnaire (i.e. Pilot-Questionnaire), logo of Sign-Hub, logos of all parties, etc.

- **Introduction slide (level: meta)**
  Here, we welcome the content-provider, explain the purpose of the project, and the purpose of the Questionnaire.

- **Instruction slide (level: meta)**
  Here, we explain to the content-providers, what they have to do, and how they are supposed to answer the Questionnaire.

- **Metadata of Content-provider (level: meta)**
  Here, we ask for the content-providers’ meta data (name, affiliation, age, hearing status, sign language competence, etc.)

- **Consent form / Declaration of authorship (level: meta)**
  Here, we ask Content-providers to sign a consent form that allows us to use their data for the Atlas (and for other research); and we inform them that they accept authorship status for their part of the Questionnaire.

- **Transition slide (level: meta)**
  Here, we shortly summarize the important points, give our contact details, and wish the content-providers a good time filling in the Questionnaire.
PART A: Phonology (level: 1) [“New Section”]
Header of part with short introductory text [“New Slide”]

Section 1: Sublexical structure (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 1.1: Handshape (level: 2) [“New Section”]
- Question 1.1.Q1 + Answer 1.1.A1 [“New Slide”]
- Question 1.1.Q2 + Answer 1.1.A2 [“New Slide”]

Section 1.2: Orientation (level: 2) [“New Section”]
- Question 1.2.Q1 + Answer 1.2.A1 [“New Slide”]
- Question 1.2.Q2 + Answer 1.2.A2 [“New Slide”]

Section 1.3: Location (level: 2) [“New Section”]
- Question 1.3.Q1 + Answer 1.3.A1 [“New Slide”]

Section 1.4: Movement (level: 2) [“New Section”]
Very short introductory text explaining that we treat path movement and secondary movement separately. [“New Slide”]

Section 1.4.1: Path movement (level: 3) [“New Section”]
- Question 1.4.1.Q1 + Answer 1.4.1.A1 [“New Slide”]

Section 1.4.2: Secondary movement (level: 3) [“New Section”]
- Question 1.4.2.Q1 + Answer 1.4.2.A1 [“New Slide”]
- Question 1.4.2.Q2 + Answer 1.4.2.A2 [“New Slide”]

Section 1.5: Two-handed signs (level: 2) [“New Section”]
- Question 1.5.Q1 + Answer 1.5.A1 [“New Slide”]
- Question 1.5.Q2 + Answer 1.5.A2 [“New Slide”]

Section 1.5.1: Symmetrical signs (level: 3) [“New Section”]
- Question 1.5.1.Q1 + Answer 1.5.1.A1 [“New Slide”]
Section 1.6: Non-manuals (level: 2) ["New Section"]
- Question 1.6_Q1 + Answer 1.6_A1 ["New Slide"]
- Question 1.6_Q2 + Answer 1.6_A2 ["New Slide"]

Section 1.6.1: Mouthings (level: 3) ["New Section”]
- Question 1.6.1_Q1 + Answer 1.6.1_A1 ["New Slide"]
- Question 1.6.1_Q2 + Answer 1.6.1_A2 ["New Slide”]
- Question 1.6.1_Q3 + Answer 1.6.1_A3 ["New Slide”]

Section 2: Prosody (level: 1)

Section 3: Phonological processes (level: 1)

PART B: Lexicon (level: 1)
- Section 4: The native lexicon (level: 1)
- Section 5: The non-native lexicon (level: 1)

PART C: Morphology (level: 1) ["New Section”]
Header of part with short introductory text ["New Slide”]

Section 6: Compounding (level: 1) ["New Section”]
Header of section with short introductory text ["New Slide”]

Section 6.1: Native compounds (level: 2) [“New Section”]
- Question 6.1_Q1 + Answer 6.1_A1 ["New Slide”]
- Question 6.1_Q2 + Answer 6.1_A2 ["New Slide”]
- Question 6.1_Q3 + Answer 6.1_A3 ["New Slide”]

Section 6.1.1: Sequential compounds (level: 3) ["New Section”]
- Question 6.1.1_Q1 + Answer 1.4.1_A1 ["New Slide”]
- Question 6.1.1_Q2 + Answer 1.4.1_A2 ["New Slide”]
- Question 6.1.1_Q3 + Answer 1.4.1_A3 ["New Slide”]

Section 6.2: Loan compounds (level: 2) ["New Section”]
- Question 6.2_Q1 + Answer 6.2_A1 ["New Slide”]
- Question 6.2_Q2 + Answer 6.2_A2 ["New Slide”]
Section 6.3: Compounds w/ fingerspelled components (level: 2) ["New Section"]
  ○ Question 6.3_Q1 + Answer 6.3_A1 ["New Slide”]
  ○ Question 6.3_Q2 + Answer 6.3_A2 ["New Slide”]

Section 7: Derivation (level: 1) [“New Section”]
  Header of section with short introductory text [“New Slide”]

Section 7.1: Manual markers of derivation (level: 2) [“New Section”]
  Very short introductory text that we distinguish between manual and non-manual markers of derivation and that we have questions in each section. [“New Slide”]

  Section 7.1.1: Sequential derivation (level: 3) [“New Section”]
  ○ Question 7.1.1_Q1 + Answer 7.1.1_A1 [“New Slide”]

  Section 7.1.2: Sequential derivation – Agentive (level: 3) [“New Section”]
  ○ Question 7.1.2_Q1 + Answer 7.1.2_A1 [“New Slide”]

  Section 7.1.3: Sequential derivation – Negative (level: 3) [“New Section”]
  ○ Question 7.1.3_Q1 + Answer 7.1.3_A1 [“New Slide”]

  Section 7.1.4: Simultaneous deriv. – Noun-Verb pairs (level: 3) [“New Section”]
  ○ Question 7.1.4_Q1 + Answer 7.1.4_A1 [“New Slide”]
  ○ Question 7.1.3_Q2 + Answer 7.1.3_A2 [“New Slide”]

Section 7.2: Non-manual markers of derivation (level: 2) [“New Section”]
  ○ Question 7.2_Q1 + Answer 7.2_A1 [“New Slide”]

  Section 7.2.1: Diminutive and augmentative (level: 3) [“New Section”]
  ○ Question 7.2.1_Q1 + Answer 7.2.1_A1 [“New Slide”]
  ○ Question 7.2.1_Q2 + Answer 7.2.1_A2 [“New Slide”]

  Section 7.2.2: Intensive (level: 3) [“New Section”]
  ○ Question 7.2.2_Q1 + Answer 7.2.2_A1 [“New Slide”]
Section 8: Verbal inflection

Section 8.1: Agreement

Section 8.1.1: Number markers

Section 8.1.2: Number markers – Dual

Section 8.1.3: Reciprocal markers

Section 8.2: Tense

Section 9: Nominal inflection

Section 10: Classifiers
PART D: Syntax (level: 1) [“New Section”]

Header of part with short introductory text [“New Slide”]

Section 11: Sentence types (level: 1) [“New Section”]

Header of section with short introductory text [“New Slide”]

Section 11.1: Declaratives (level: 2) [“New Section”]

○ Question 11.1_Q1 + Answer 11.1_A1 [“New Slide”]

Section 11.2: Interrogatives (level: 2) [“New Section”]

○ Question 11.2_Q1 + Answer 11.2_A1 [“New Slide”]

Section 11.2.1: List of wh-signs (level: 3) [“New Section”]

○ Question 11.2.1_Q1 + Answer 11.2.1_A1 [“New Slide”]

○ Question 11.2.1_Q2 + Answer 11.2.1_A2 [“New Slide”]

○ Question 11.2.1_Q3 + Answer 11.2.1_A3 [“New Slide”]

Section 11.2.2: Position of wh-signs (level: 3) [“New Section”]

○ Question 11.2.2_Q1 + Answer 11.2.2_A1 [“New Slide”]

○ Question 11.2.2_Q2 + Answer 11.2.2_A2 [“New Slide”]

Section 11.2.3: Doubling of the wh-sign (level: 3) [“New Section”]

○ Question 11.2.3_Q1 + Answer 11.2.3_A1 [“New Slide”]

Section 11.3: Negatives (level: 2) [“New Section”]

○ Question 11.3_Q1 + Answer 11.3_A1 [“New Slide”]

Section 11.3.1: Manual marking of negation (level: 3) [“New Section”]

○ Question 11.3.1_Q1 + Answer 11.3.1_A1 [“New Slide”]

Section 11.3.2: Non-manual marking of negation (level: 3) [“New Section”]

○ Question 11.3.2_Q1 + Answer 11.3.2_A1 [“New Slide”]

○ Question 11.3.2_Q2 + Answer 11.3.2_A2 [“New Slide”]

○ Question 11.3.2_Q3 + Answer 11.3.2_A3 [“New Slide”]
Section 12: Clause structure (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 13: Coordination and subordination (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 14: The noun phrase (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

PART E: Pragmatics (level: 1) [“New Section”]
Header of part with short introductory text [“New Slide”]

Section 15: Reference (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 16: Reference tracking (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 17: Speech acts (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 18: Information structure (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

PART F: Socio-Historical Background (level: 1) [“New Section”]
Header of part with short introductory text [“New Slide”]

Section 19: History (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 20: The sign language community (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

Section 21: Status (level: 1) [“New Section”]
Header of section with short introductory text [“New Slide”]

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Section 22: Linguistic study (level: 1) ["New Section"]

Header of section with short introductory text ["New Slide"]

Finishing slide (level: meta)

Here we thank the Content-provider for finishing the Questionnaire; we also summarize the main points regarding authorship, consent form, data evaluation and data management.

End slide (level: meta)

Here, we repeat our contact address and we close the Questionnaire.
4. Outline of the Pilot Questionnaire

Before releasing the final version of the Questionnaire, we are currently conducting a Pilot Questionnaire with a smaller set of questions that reflects the design of the final Questionnaire.

Creating a Pilot Questionnaire gives us the following advantages:

- Creating a Pilot Questionnaire gives us the chance to work with the Atlas Software tool and learn how to build and administer a Questionnaire from scratch.
- By launching the Pilot Questionnaire, we get feedback on the general handling of the Questionnaire, i.e. how content-providers could navigate within the Questionnaire and how user-friendly they found it to be.
- By launching the Pilot Questionnaire, we get feedback on the structure and parts of the content of the Questionnaire from deaf and hearing researchers with different linguistic orientations and different backgrounds in linguistics.

The Pilot Questionnaire will include a total of approximately 20 questions that come from all parts of the 4 sub-Questionnaires. In contrast, the final sub-Questionnaires will have 50 questions each, which sums up to a total of about 200 questions. The Pilot will be programmed in the same way as the final sub-Questionnaires. This means, all types of questions and all types of answers will be represented in the Pilot. The main idea behind the Pilot Questionnaire is getting feedback and anticipating possible problems by sending it to deaf and hearing researchers with different linguistic orientations, working on Western as well as non-Western sign languages at different stages of investigation.

In order to reflect the different characteristics of potential content-providers and of the investigated sign languages of the final Questionnaires, we want the following conditions to be represented in the Pilot:

- With regard to the pool of researchers (5-6 people), who will participate in the Pilot Questionnaire, this pool will include:
  - both deaf and hearing researchers
  - researchers with different backgrounds in linguistics (formal and functional approaches)
  - researchers with different levels of competence in English

Likewise, the sign languages under investigation should meet the following criteria:

- should be well-, medium- and not-well-investigated
- they should belong to western and non-western sign languages

Regarding the list of potential contributors to the Pilot, we selected the following persons:

- (1) Ronice Müller de Quadros – Brazilian Sign Language (LIBRAS)
- (2) Myriam Vermeerbergen – Flemish Sign Language (VGT)
- (3) Jordan Fenlon – British Sign Language (BSL)
- (4) Jens Cramer – German Sign Language (DGS)
- (5) Nick Palfreyman – Indonesian Sign Language (BISINDO)
- (6) Diane Brentari – American Sign Language (ASL)

The seventh test person will be a member of the SIGN-HUB crew, who does not work on Task 2.2., in order to give feedback on the Pilot Questionnaire with an internal perspective.

To get structured feedback from the test persons of the Pilot Questionnaire, we will come up with meta questions regarding the Pilot itself. These will concern the English language, the terminology, and the difficulty of the questions. Additionally, the test persons will be asked about the general presentation and handling of the Pilot Questionnaire.

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The results of the Pilot Questionnaires’ evaluation will be taken into consideration for the final design of the sub-Questionnaires.

The Pilot Questionnaire as well as the final sub-Questionnaires will be launched on the SIGN-HUB platform. Content-providers will have access to the Questionnaire via a link and a personalized account and password. Therefore, also the technological aspects of the platform will be checked and evaluated during the piloting of the Questionnaire.
5. Screenshots of the Pilot Questionnaire

At present, we are constructing the Pilot Questionnaire with the Atlas Software tool slide-by-slide. In this section, we present screenshots of the first slides of the Pilot Questionnaire. The screenshots show the content-providers’ perspective, as they will see the Questionnaire. Content-providers will have access to the Questionnaire via a link and a personalized account and password. After reading the introduction and instruction slides, content-providers enter the Questionnaire with the respective first part, here Section A: Phonology. On the left hand side, content-providers see the table of contents. The table of contents reflects the position where content-providers are, by changing the color of the header from blue to red for the respective section. Short introductory texts and the questions are presented in the middle white area. If a content-provider has answered a question, he/she can get to the next question by pressing the button “Next”. If a question can not be answered by the content-provider, he/she is requested to press the button “no Answer”. This gives us clear feedback that this information is not available. On the right hand side, a progress bar informs the content-provider about the percentage of questions that have already been answered.

Screenshot of:

- **PART A: Phonology** (level: 1) [“New Section”]
  
  Header of part with short introductory text [“New Slide”]
Section 1: Sublexical structure

Sublexical structures:
The section on sublexical structures deals with the phonology below the level of the syllable, which in sign language tends to overlap with single signs. Hence, the sublexical phonological structure contains all the formal aspects of signs (in terms of phonological features) without reference to their morphological or other functions. A prominent part of the discussion about sublexical structures in sign languages is devoted to manual versus non-manual articulation. We address both in the upcoming questions.

Section 1.1: Handshape

Allophone handshapes. Some sign languages are reported to have two (or more) handshapes that are not distinctive. Hence, using either of the two handshapes in a sign does not lead to a change of meaning. Does your sign language have allophone handshapes? If yes, please describe which two (or more handshapes) are affected, and – if possible – upload a picture of each of them.
Screenshot of:

- **Section 1.2: Orientation** (level: 2) [“New Section”]
  - Question 1.2_Q1 + Answer 1.2_A1 [“New Slide”]

Below, you see a set of different hand orientations that commonly appear in different sign languages. Which hand orientations are used in your sign language? Please select all hand orientations that are considered part of your sign language.

If there are any hand orientations that you missed in the provided set, please upload a picture of a hand showing the missing orientation.

Screenshot of:

- **Section 1.2: Orientation** (level: 2) [“New Section”]
  - Question 1.2_Q2 + Answer 1.2_A2 [“New Slide”]

A change of hand orientation is distinctive if using one hand orientation instead of another hand orientation leads to a change of meaning in a sign. Is a change in hand orientation, i.e., the facing of the palm, distinctive in your sign language?

- Yes
- No
Section 1.5: Two-handed signs (level: 2) [“New Section”]

- Question 1.5_Q1 + Answer 1.5_A1 [“New Slide”]

There are sign languages that equally use both hands as manual articulators and sign languages that predominantly use only one hand as manual articulator. Would you categorize your sign language as mainly articulated by one hand or as many articulated by both hands?

- Mainly articulated with one hand
- Mainly articulated with both hands

We are aware of the fact that this classification draws upon a personal estimation and is (most likely) not scientifically attested for sign languages. Please give feedback on the basis of your judgment. (Only one answer is possible.)

- Judgment based on a documented analysis
- Judgment based on personal estimation

- No Answer

Section 1.5: Two-handed signs (level: 2) [“New Section”]

- Question 1.5_Q2 + Answer 1.5_A2 [“New Slide”]

Many sign languages that are mainly articulated with both hands differentiate between a dominant hand and a non-dominant hand in articulation. This concerns the articulation of both signs and does not include word-hand-switch. Does your sign language have hand dominance? And does your sign language allow for dominant hand-switch between left and right hand?

- Yes, hand dominance is attested in my sign language; and a switch in hand-dominance is rare.
- Yes, hand dominance is attested in my sign language; but a switch in hand-dominance occurs often.
- No, there is no specific hand dominance attested in my sign language

- No Answer

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In contrast, here we present the editing mode, in which we construct each slide and each section. The middle white field is the area where we build each question slide. The working tools appear on the left hand side, whereas pictures or videos that will be included in a question are listed on the right hand side.

Screenshot of designing Question 1.6_Q2 + Answer 1.6_A2: