



SIGNON

Sign Language Translation Mobile Application and Open Communications Framework

**Deliverable 9.2: Annual Ethical Report on Practices Towards Stakeholder
Communities**



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Acronyms

The following table provides definitions for acronyms and terms relevant to this document.

Acronym	Definition
MTSL	Machine Translation for Sign Languages
REC	Research Ethics Committee

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Note to reader:

Please note that this report and the content of our report in D9.5 is highly similar. This is because the information we wish to share here with our stakeholders is very similar to the content that we include in our internal ethics report (D9.5). Both contain information about the membership of our SignON REC, our meeting schedule, the work we have done to map our ethical procedures to our co-construction methodology. We also include in both reports, information relating to where we get our data from, what kinds of data we use at what parts of the research pipeline, and our concern (shared with deaf communities) around the fact that there is so little data that is 'born' as sign language material - instead much (most) content in the public sphere is interpreted data.

1. Overview

This report offers an overview of the work that the SignON Research Ethics Committee (REC) has completed over the first year of the project.

2. SignON Research Ethics Committee Membership and Meetings across 2021

The SignON Research Ethics Committee was established at the outset of the project and comprises the following members:

	Name	Institution	Country
1	Prof. Lorraine Leeson	TCD	IE
2	Dr. Dimitar Shterionov	TiU	NL
3	Dr. Vincent Vandeghinste	INT	NL
4	Dr. Bob Boelhouwer	INT	NL
5	Dr. Henk van den Heuvel	RU	NL
6	Prof. Josep Blat	UPF	ES
7	Caro Brosens	VGTC	BE
8	Prof. Myriam Vermeerbergen	KUL	BE
9	Dr. Catia Cucchiaroni	DLU	NL
10	Aoife Brady	DCU	IE

The Committee has formally met online 6 times across the year to date, on the following occasions:

- 3 March 2021
- 29 April 2021
- 20 May 2021
- 9 June 2021

- 29 October 2021
- 1 December 2021

3. Key Issues Addressed

3.1 European Code of Conduct for Research Integrity

We committed to the principles of the European Code of Conduct for Research Integrity (ALLEA (All European Academies), 2017) and are working to uphold the four key tenets of (i) reliability, (ii) honesty, (iii) respect and (iv) accountability.

3.2 Mapping Ethics to a Co-construction Philosophy

Key issues addressed by the SignON REC across 2021 included preparation of our deliverables D9.1, D9.2 and D9.5.

In developing D9.1, our “Ethical Guidelines and Protocols” document, we explored how our ethical philosophy would map to and support our project’s commitment to co-construction of content with our stakeholder communities – deaf, hard of hearing, interpreting communities and hearing communities.

We committed to the Sign Language Communities’ Terms of Reference Principles (Harris et al., 2009) which state that:

1. Investigators should acknowledge that Sign Language community members have the right to have those things that they value to be fully considered in all interactions.
2. Investigators should take into account the worldviews of the Sign Language community in all negotiations or dealings that impact on the community’s members.
3. In the application of Sign Language communities’ terms of reference, investigators should recognize the diverse experiences, understandings, and way of life (in sign language societies) that reflect their contemporary cultures.

4. Investigators should ensure that the views and perceptions of the critical reference group (the sign language group) is reflected in any process of validating and evaluating the extent to which Sign Language communities' terms of reference have been taken into account.
5. Investigators should negotiate within and among sign language groups to establish appropriate processes to consider and determine the criteria for deciding how to meet cultural imperatives, social needs, and priorities.

The team also adopted the Sign Language and Linguistics Society (SLLS)'s Ethics Statement and we are committed to embedding these principles in our approach to ethical engagement with deaf communities.¹ These principles are explicitly noted in D9.1, our SignON Ethical Guidelines and Protocols. For ease of reference, and as this is a public document that we seek to share with our stakeholders, we list them here too, reaffirming our commitment to the principles listed.

- Researchers should strive to train deaf research participants as assistants, research peers and leaders on research projects.
- The researcher must explain, in an accessible way, the general goals of the intended research before data collection begins (and, when appropriate, the most specific goals after the data collection is completed). If the researcher is not proficient enough in the sign language of the consultant, they must ask for linguistic mediation by another researcher or consultant who is proficient in that language or as a last resort, by a professional interpreter.
- Before starting to work, the researcher should ask for the informed consent of the consultant, either in video version in the relevant sign language or in written form in the ambient spoken language. The second option is dependent on the level of literacy of the consultant in the ambient spoken language, but checking for this creates an asymmetric relation at the start, so the choices should be offered as totally equivalent. Informed consent should not be seen as a formality, but as a way of ensuring that the consultant is aware of all the implications of providing data, of being video recorded, and (when applicable) of the long-term archiving and sharing of the obtained data as well as of the implications of research itself. To this end, the informed consent must be explicit about the setup, duration and number of research sessions,

¹ <https://slls.eu/slls-ethics-statement/>

the eventual use and storage of the data once recorded, the possibility of the data being further examined by other researchers on the team, to be included in publications or in presentations at research events, and to be incorporated into data repositories which may have restricted or open access. Special discussion of open access Internet dissemination is important: protection of the identity of the signer in a specific video is impossible to guarantee in that case. To preserve the confidentiality of the signer, they must also be asked whether they consent to having their metadata associated with the data files, as well as being acknowledged by name for their contribution to the research.

- Research results and, where possible, copies of the data itself should always be made accessible to the consultants who participated in the research.

The SLLS also sets out obligations that sign linguists have with regard to deaf communities. They write:

“To conduct sign language research, scholars must first and foremost respect the wishes of the signing community, and be careful to involve members of the Deaf community in appropriate ways. In the ideal situation, researchers are themselves Deaf; hearing researchers should work with Deaf researchers when possible, including co-authorship as appropriate. Linguists should not always take for granted that their work is by definition beneficial for the communities of signers and should try to explain in a clear fashion what the possible benefit can be of linguistic research on the target sign language. Visibility and recognition of sign languages as natural human languages should be one of the basic targets for the linguistic research undertaken with a Deaf community.”

We have adopted these principles in our work. Additionally, the SignON REC sets out to support SignON researchers in becoming acquainted with the cultural norms and values of the deaf communities we are engaging with, mediated, in part, by our deaf community partners through ongoing discussion and via training events. The SignON project has built our consortium around the SLLS principle of engaging with deaf community organisations from the very inception of this project in considering issues of archiving, distribution of data and where and how research results will be shared, including consideration of the languages of dissemination. Thus, we are considering the macro European Commission goals of Open Science and FAIR data while also considering the ethical and social justice considerations that are important to deaf communities.

The SLLS requires sign linguists to support the efforts of deaf people to become sign language linguists. SignON has sought to ensure that appropriate deaf applicants know about all available positions that are funded via the project in a bid to support capacity building in deaf communities and are encouraged to apply for these. We do this because we know that there are very few trained deaf linguists in Europe and the cultural and linguistic capital that such scholars bring to the field is invaluable - we know of 29 deaf, signing linguists (applied/theoretical) across the Council of Europe territories, with clusters of more than three only in Sweden, Germany and the UK. Of these, one is now retired and one has left academia. There is not a single deaf PhD holder working on sign languages in 34 of the 47 countries that are members of the Council of Europe to the best of our knowledge (as of 5 June 2021).

The SLLS also guides sign linguists to make research results on sign languages visible in academia in general and in particular, in the specific subfields where they are directly relevant. Further, the SLLS requires that sign linguists strive to make their research results available to the broader, non-specialized audience, with the ultimate aim to generalise knowledge about sign languages and signers and to remove the traditional prejudices about them. These are core to the SignON project team's mission.

Against this backdrop, the positionality of researchers – and in particular, hearing researchers – working with deaf communities for research purposes is something that requires our attention.

Additionally, the SignON team is keen to ensure that we frame our ethical approach with due consideration to the cultures of deaf communities we engage with over the life cycle of our project.

3.3 Developing the SignON REC Process

The SignON REC also spent time developing the protocol to support any consortium partner who seeks to undertake research that involves human subjects. We developed a protocol for reviewing applications for local (institutional) research ethics approval, with a SignON REC preview of all applications that are submitted. This allows us to ensure that the principles we uphold as a consortium are consistently implemented in our documentation.

Our goal was not to supersede the institutional research ethics committees to whom university based partners must apply ahead of commencing on any data collection involving human subjects. Rather, on a

practical level, this means that the SignON Ethics Committee has sight of participant information that is shared with all stakeholder organisations who engage in our project related research activities (e.g. this allows us to confirm that Participant Information Leaflets (PILs) and Consent forms are available in accessible languages).

This is important for a number of reasons:

- Ensures access to information about the project in a language that is understandable to the participants.
- Ensures that the implications of participation are clearly articulated in an accessible language.
- Ensures that rights of withdrawal without consequence are clearly articulated in an accessible language.

To date, two applications have been reviewed and commented on, with additional applications due in early 2022. Both have successfully been approved at institutional level and data collection has taken place. This has helped facilitate the work of WP1, which focuses on engagement with deaf and hard-of-hearing communities, and seeks input from these communities around their experiences of MTSL, their hopes for the same, their aspirations and their concerns. The SignON REC process therefore facilitates a harmonisation of approach to our data collection and offers an additional layer of comfort with regard to ensuring that we are embedding the Sign Language Communities Terms of Reference and our co-construction principles in the work that most directly draws on deaf and hard-of-hearing communities input.

3.4 Data

An issue that we have spent quite some time discussing throughout 2021 is data provenance and usage, as this raises ethical questions that map to the issues of power (who gets to select data, who determines what level of quality of the sign language data input and output is satisfactory), authority (who determines what the quality of data input to the project should be), and future consequences (whose voice is heard by the European Commission and national funders – e.g. deaf communities call for investment in human resources and language documentation and natural language data set building projects yet large scale funding for such initiatives is extremely difficult to source. From data collected this year via WP1, we know that deaf communities have concerns when they see investment in large scale ‘tech solutions’ that may be very imperfect and do not address the pressing current needs of their

members; participants in our focus groups in 2021 have told us that there is a perception that those from the technical sphere are considered powerful (and mostly ‘hearing’) voices, more likely to secure funding than deaf-community driven funding applications).

Another point of concern raised by deaf communities and interpreting communities that we have engaged with across 2021 relates to the kinds of sign language data leveraged in machine translation for sign languages (MTSL). From the perspective of deaf communities, the use of data containing sign language materials that originates from within the community of deaf signers is the gold standard, but there is insufficient source sign language data in existence to work effectively with just these sets. Instead, interpreted data sets are also drawn on (e.g. online/broadcast data where (typically, hearing) sign language interpreters work simultaneously to present content in a target sign language). There are challenges here from a language quality perspective, which include (but are not limited to) the following issues:

- (i) Interpreted data is not spontaneous language use and may be heavily influenced by the source language resulting in so-called *translationese*;
- (ii) The majority of sign language interpreters have learned to sign as adults, with associated late learner “accents”, and reduced syntactic/semantic/pragmatic/lexical range vis-à-vis those who have a sign language as a first or preferred language;
- (iii) Working simultaneously places a significant cognitive load on an interpreter, with trade-offs for how the target language information is packaged, influenced by the source language structure.

Additionally, datasets that do exist are not appropriately marked up for use in projects as no standard annotation process currently exists for use with sign language data sets and no automatic tagging system has yet been developed to assist in the process of data tagging. Thus, we note the need for investment of resources in deaf community originated sign language content (e.g. expanded corpora) and annotation projects to support the development of more robust datasets for a wider range of European sign languages to help us to ensure that we can build MTSL products that are informed by natural sign language content as articulated by signers who use the language as their preferred or first language. At the same time, it is clear that the reasons why certain kinds of data suffice for different points in the MTSL pipeline have been unpacked and discussed. In regular MT research data usually comes in the form of parallel training data, consisting of source text with sentence-aligned translations in the target

language. As there is no standardised written form of SLs, and no unified annotation approach in different sign language corpora for different languages, this is a challenge. Apart from the fact that many of the SL corpora are only partially annotated, certain features of the SL can be automatically extracted by computer vision techniques. It remains to be seen, through experimentation, which are the most effective features to be used. Datasets that have an SL as source are already scarce, having a reliable translation in a spoken language is even rarer. Discussions with deaf communities about which datasets are suitable are ongoing. While the AI researchers usually adopt a *there is no data like more data* approach, deaf communities have a key concern that the data are to be of high quality (i.e. approved or generated by a deaf community). This discussion is still ongoing. In light of this, our Belgian colleagues, including AI researchers, interpreters and members of the Flemish deaf community, will meet in December 2021. Their goal is to exchange ideas and concerns regarding the data in order to improve the cooperation and enhance understanding.

We have also committed to having a consortium wide discussion about data at our February 2022 meeting to ensure that this point – one that is extremely important to the deaf communities we engage with – is fully understood by everyone working on the SignON team, and that we (within the consortium) understand why different kinds of data are appropriate (or not) for use at different phases of the project's work. This, in turn, will situate us all to be better able to engage in an open and clear discussion on this matter with our local deaf communities.

3.5 Data Management Plans (DMPs)

The SignON REC has also played an important role in the management of research data associated with the project. A generic Data Management Plan (DMP) was set up and submitted as deliverable D7.8. This deliverable outlines the framework and the principles which individual DMPs in the project should meet in line with the contract obligations stipulated in Article 29.3 of the Grant Agreement of the project. D7.8 is complemented by the specific DMPs for each partner. These will be delivered in D7.10 which is due in M36. In order to accommodate for the dynamic nature of DMPs intermediate versions of D7.10 are scheduled for M12 and M24. These specific DMPs are reviewed by SignON's Research Ethics Committee (REC). The first versions of the DMPs of individual partners have now been written and reviewed by the REC. Last, but not least, a template for a Data Transfer Agreement is in preparation which will allow SignON partners to share (personal) data amongst each other.

4. Key Deliverables

The key deliverables that the SignON Research Ethics Committee were responsible for developing in 2021 were threefold:

- (i) Ethical Guidelines and Protocols (D9.1) (Completed June 2021)
- (ii) Annual Ethical Report on Practices towards the Stakeholder Communities (D9.2) (This deliverable, due December 2021)
- (iii) Annual Ethical Report on Internal Affairs (D9.5) (Due December 2021).

5. Summary

Across 2021, the SignON REC has worked collaboratively and effectively to support the work of the project consortium. While mainstream ethical considerations, which address all research, are addressed by our REC, the particular considerations of what it means to be a multi-disciplinary team comprising mostly hearing members working with deaf signing communities that have been marginalised has been a key focus. Discussions that have emerged here have informed work in WP1 and WP3, and fed back into wider conversations at the Project Management Team Meetings. Our discussions will inform further consortium wide reflection and feed into ongoing conversations with stakeholders in our target communities.

References

- ALLEA (All European Academies). (2017). The European Code of Conduct for Research Integrity (Revised Edition). In. Berlin: ALLEA (All European Academies).
- Harris, R., Holmes, H. M., & Mertens, D. M. (2009). Research ethics in sign language communities. *Sign Language Studies*, 9(2), 104-131.