

# Presentation to the Language Access Advisory Board

Jeffrey Shaul

CTO, GoSign.AI

Member, Coalition for Sign Language Equity in Technology

10/22/2024

Coalition for Sign Language Equity in Technology

1

Hello. Thanks Holly for that wonderful presentation. And thank you to the members of the board for having us today. My name is Jeff Shaul. I'm the CTO of GoSign.AI, a Deaf-owned company specializing in sign language data collection to support the ethical and responsible training of AI models. I'm also part of CoSET, which is short for the Coalition for Sign Language Equity in Technology.

## Language Access Advisory Board

“The advisory board makes recommendations on improving meaningful access to the legislative process for populations with limited English proficiency to ensure effective communication and equitable participation.”

10/22/2024

Coalition for Sign Language Equity in Technology

2

The board makes recommendations to ensure equitable participation for those with limited English proficiency, including some Deaf people who communicate in ASL. Emerging technologies like AI interpreting are potential solutions.

## Interpreting SAFE AI Task Force

- Founded in 2023
- Sign and spoken language interpreters
- Advisory Group on AI and Sign Language Interpreting



10/22/2024

Coalition for Sign Language Equity in Technology

3

Before diving deeper, let me give some context about SAFE AI. Dr. Holly Silvestri mentioned the task force, but I want to highlight one point. They aimed to conduct a survey to gather feedback from Deaf and other language communities, including low-resource languages. To ensure accurate input, they involved Deaf and Deaf-adjacent individuals, leading to the formation of the Advisory Group.

# Coalition for Sign Language Equity in Technology (Co-SET)

- Our Goal
  - Develop standards that promote equity & functional equivalence in technology for sign language users
- Our Work
  - Formerly *Advisory Group on AI and Sign Language Interpreting*
  - Partners with Interpreting SAFE AI Task Force
  - Deaf organizations, universities, and sign language associations
  - **#DeafSafeAI Report** ([safeaitf.org/deafsafeai](https://safeaitf.org/deafsafeai))
  - **SAFE AI Guidance** ([safeaitf.org/guidance](https://safeaitf.org/guidance))
- Our Engagement
  - Webinars
  - Symposia
  - Workshops



10/22/2024

Coalition for Sign Language Equity in Technology

4

The Advisory Group became the Coalition for Sign Language Equity in Technology (CoSET), aiming to promote equity and functional equivalence in technology for sign language users. We partner with the Interpreting SAFE AI Task Force and consist of members from Deaf universities, organizations, and associations. CoSET engages the community through webinars, symposia, and workshops, and has published reports like #DeafSafeAI.

# Principles of AIxAI

1. End User **Autonomy**
2. Improving **Safety** and Wellbeing for End Users
3. **Transparency** of AI Quality for the General Public
4. **Accountability** by Companies for Errors and Harms to End Users



Read our Guidance at  
[safeaitf.org/guidance](https://safeaitf.org/guidance)

The Task Force and the Coalition worked together to develop principles of automatic interpreting by artificial intelligence. Now, Holly already went over this, so I don't need to repeat them. But I do want to point out that we're continually changing our thinking. We realize now that "end users" is problematic, because it implies that they're an afterthought, the last step in the design process. We want to flip that around, so we want to use "principal communicators" instead. Because Deaf people, people like me, have found they're afterthoughts. So whenever new AI systems are introduced, it's critical to ensure that the design process involves principal communicators like you and me, not just at the end, but also at the beginning, and every step in between.

# How We Developed Principles of AIxAI

- We did a study that resulted in the #DeafSafeAI Report

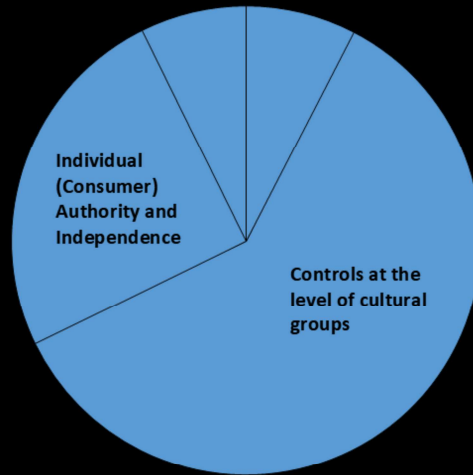


<https://safeaitf.org/deafsafeai/>



In the process of developing these principles, we hosted a series of webinars and invited members of the Deaf community to participate. We discussed our thoughts, feelings, concerns about emerging technologies like AIxAI. Broadly, they can be broken into three categories: results and outcomes, technological quality, and readiness. I'll touch on these concerns Deaf people have.

# Results and Outcomes

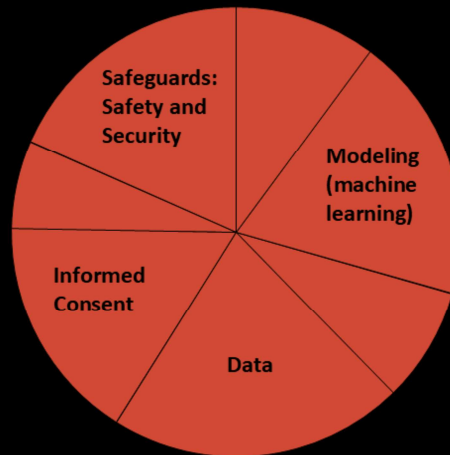


Advisory Group on AI and Sign Language Interpreting

Apr 10, 2024  
ACCESS - Advocating for #DeafSafeAI Regulations

With respect to results and outcomes, two broad themes emerged: the need for individual authority – what products and services can they choose to use or not to use? -- and the need for controls at the level of cultural groups such as the National Association of the Deaf. These representative organizations should be able to influence and advise decision makers on adopting new technologies. Which is happening here right now!

# Technological Quality



As for technological quality, there were many concerns that usually arise with technology such as privacy, security, and informed consent. I want to point out two themes that were most relevant to participants: modeling and data.



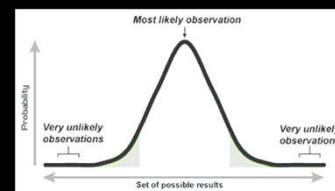
# Automatic Interpreting by Artificial Intelligence (AIxAI)

- ~~Artificial Intelligence~~
- **Models & Algorithms**
  - Predict patterns in new data informed by **prior datasets**
  - Map patterns to other patterns informed by **prior datasets**

Let's admit it. AI is a buzzword. It's mainly a marketing term to disguise the fact that they are fundamentally models and algorithms relying on prior datasets. We need to be able to understand these algorithms. Part of that understanding is the inputs – the data.

# Data & Datasets

- Datasets organize data
- What is included or excluded?
- **Comprehensiveness**
- **Representativeness**
- Statistical Discrimination



10/22/2024

Coalition for Sign Language Equity in Technology

10

Simply put, datasets organize data. The big question here – what’s included? And maybe the even bigger question – what’s excluded? Datasets that are used for applications such as AI need to be comprehensive and representative. For example, the sign used for PORTLAND in Maine is actually understood as PURPLE elsewhere! Similar idea with accents, regional dialects, pidgins, etc. In my years, I’ve seen 3-4 different signs for COLORADO!

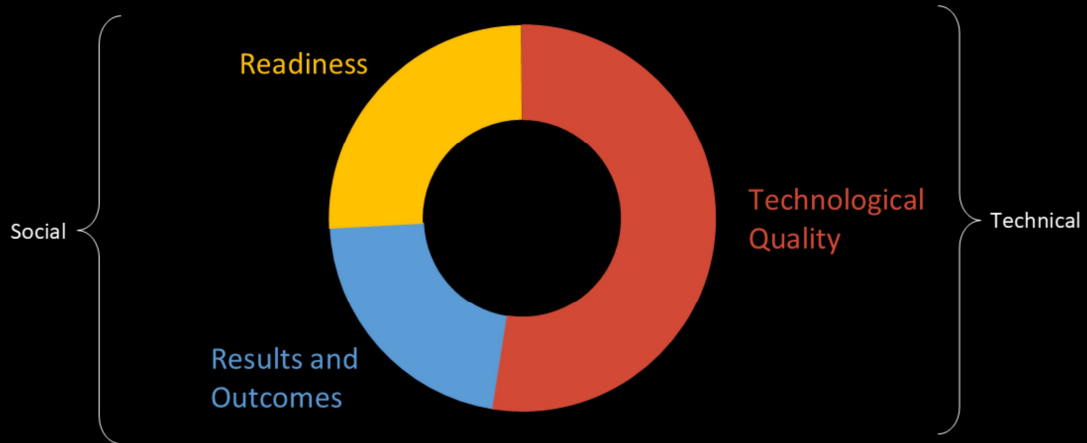
Also, with dataset curation, there are factors such as statistical discrimination. Algorithms trained on data inevitably cater toward the statistical majority. Outliers have less statistical power and thus, the model may not work as well in these contexts. For deaf people, there is a wide spectrum of sign language proficiency. Not all deaf people in America sign the same way.

# Readiness



Finally, the third category of themes that appeared in the webinars was that of readiness. This is more of a question of whether technologies and societies are actually ready to take on the responsibilities. For example, are there established channels to collect complaints? Do we have legal frameworks to assign accountability and liability? Do these technologies have established accreditations? Are deaf communities aware and educated about their choices and possible consequences?

# Sociotechnical Systems



Advisory Group on AI and Sign Language Interpreting

Apr 10, 2024  
ACCESS - Advocating for #DeafSafeAI Regulations

So taken all together, these themes emerge into two distinct systems: the social and the technical. Putting them together gives us sociotechnical systems. It's just a high-level way of looking at emerging technologies. You can't look at technology in isolation. The social systems that the technology interact with must also be considered.

# Sociotechnical Systems

- **Design process framework** that leads to mutual optimization of social and technical subsystems



From a design perspective – sociotechnical systems can be thought of as a design process framework. Start small with technological experiments. Start small with strategies to improve readiness. Iterate off each other.

## Making Intersectional Benchmarks



**Inclusion at every step**

We're almost finished and bringing it back to the Language Access Advisory Board. Your role is to make recommendations about language access in the legislative process. Having me here today is a good start, but it's just one step. I represent only a small part of the Deaf community. It's crucial to include principal communicators from all sorts of language communities throughout the design process, from selecting outcomes to evaluating deployments.

# Recommendations

- Treat emerging technologies as **sociotechnologies**
- Put **principal communicators** first, not end users last
- Low-risk, high-risk not a continuum
- Instead of automation, consider augmentation
- Use technologies that observe the 4 principles
- Observe Maryland language access outcomes (Md. Code § 10-1103)

10/22/2024

Coalition for Sign Language Equity in Technology

15

Finally, we close by making some specific recommendations. First, always consider the social systems at play whenever evaluating emerging technologies. Second, put principal communicators first, rather than putting end-users last. Third, recognize that low-risk and high-risk is not necessarily a continuum. Some innocuous situations can turn out to have serious consequences. What if an automated interpreter failed to communicate that I have a peanut allergy? Fourth, use emerging technologies to augment human work rather than to automate it. Fifth, use technologies that observe the 4 principles. And finally, observe other states' similar actions such as Maryland's law that recently went into effect. What works for them may or may not work for the people of Colorado. Thank you for your time and for having us.