

[Click here to be redirected to the virtual room of the Project Expo.](#)

Project acronym: COMPRISE

Project name: Cost-effective, Multilingual, Privacy-driven voice-enabled Services

Project coordinator: Emmanuel Vincent (emmanuel.vincent@inria.fr)

Project consortium:

- Inria
- Ascora
- Netfective Technology
- Rooter Analysis
- Tilde
- Universität des Saarlandes

Funding: 3.2 M€

Project duration: 12/2018 – 11/2021

Main key words: voice assistants, ASR, SLU, MT, privacy, multilingualism, platforms

Background of the research topic: While voice-enabled applications are becoming ubiquitous, their development requires increasing amounts of human-labeled voice and text data and must be repeated in every language. This raises critical privacy concerns, incurs high costs for voice technology companies and application developers, and fails to address all languages and users.

Goal of the project: COMPRISE has contributed to building voice interaction technologies that are more secure, more cost-effective, and more inclusive.

Project abstract: To do so, COMPRISE has released a series of innovative software tools to hide personal attributes in voice and text data, train automatic speech recognition and natural language understanding systems from partially unlabeled data, and quickly expand their usage to multiple languages or accents. These tools have been integrated in the COMPRISE SDK and the COMPRISE Cloud Platform, which provide full-fledged functionality for voice technology companies and mobile application developers.

Publications: <https://www.compriseh2020.eu/>



[Click here to be redirected to the virtual room of the Project Expo.](#)

1-3 Pictures of consortium, project meetings or other impressions (including caption):



The COMPRISE consortium in Jan. 2019



PRIVACY-BY-DESIGN

Train state-of-the-art voice/text AI models on user inputs while preserving user privacy



INCLUSIVENESS

Enlarge user base and quality of experience through multilingual, personalised dialogue



COST-EFFECTIVENESS

Reduce the cost of developing multilingual voice-enabled apps and the need for manual data labelling

COMPRISE benefits



COMPRISE SDK

Quickly create private-by-design multilingual voice-enabled apps



COMPRISE PLATFORM

Collect, store, and manage voice/text AI models and data in the cloud



VOICE TRANSFORMER

Hide the speaker identity from a voice signal



TEXT TRANSFORMER

Hide personal information in text



SPEECH-TO-TEXT TRANSLATION

Translate voice input into a different language



WEAKLY SUPERVISED NLU

Automate training data labelling for natural language understanding



WEAKLY SUPERVISED STT

Automate training data labelling for speech-to-text

COMPRISE software