

# The project Tilltal

Making spoken cultural heritage accessible for research

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## Poster abstract

This poster presents the project Tilltal in which we examine how speech technology methods can make the historic speech recordings more accessible to researchers.

Currently, the large amounts of recorded speech available at Swedish memory institutions are rarely used due to the lack of effective methods for handling archival sounding material. The Tilltal project explores how speech technology methods and tools can be adapted and developed to process large amounts of historical voice recordings from the archives of the Institute for Language and Folklore (ISOF).

The project is a collaboration between Digisam, ISOF and the Royal Institute of Technology (KTH). The project have funds from the Swedish Foundation for Humanities and Social Sciences from 2017 to 2020.

### [Three studies in different research areas](#)

The project includes three sub-studies and a user study. The three sub-studies examine how speech technology can be used to investigate research questions in various disciplines (folklore, dialectology and conversation research). The user study use activity theory to examine research activities surrounding the archival materials. Considering the needs of the researchers, we will propose language technology solutions and assess their usefulness in practice will be assessed by means of use cases.

### From experience stories of cultural heritage

The first sub-study is the examination of Karl Gösta Gilstring's collection at the Archives for Dialect and Folklore Uppsala. The collection consists of tens of thousands of letters and records, as well as 250 hours of recorded interviews. Language technology methods will be used to handle the large and varied material. It is hoped that the various categories of materials can be combined so that, for example, links can be made from an interview situation to when the same subject or story is mentioned in a letter or other written material.

### Linguistic variation in time and space

The aim of this study is to develop new approaches to language variation and change in speech materials. In the study, investigations of linguistic variation will be conducted at different levels: phonetic/phonological, prosodic and syntactic. Previous studies in this area are important starting points, and the use of speech technology methods for the same type of research will give us an idea of what these methods can bring. An example is that of using speech technology methods to automatically find and collect all the instances of a particular sound. The methods will be adapted and developed to analyze spoken language with dialectal character.

### Interaction Patterns in space and time

Speech technology has created models for answering research questions in conversation research: how speakers take turns, how feedback works, how backing up or questioning is expressed, and how common understanding is reached. The third sub-study aims to develop such an interaction model for material that consists of various types of conversations, and comparable materials from different times. This will result in a description of the similarities and differences between types (synchronous comparisons) and time (diachronic comparisons; language development) from an interaction perspective.

### Project goals

The long-term goal is to make the Swedish speech archives more accessible in general, and to SSH researchers in particular. We hope to achieve this not only by describing methods by which speech technology can be used to reach SSH research goals, but also by providing examples of fruitful interdisciplinary collaborations.