## Background

We assume that the way of perceiving/feeling in our minds is expressed as our brain states. In this exhibit, we will demonstrate our new technology to extract individual perceptions from brain by EEG-based similarity analysis to utilize them in communication.

Summary

We confirmed that subjective perceptions are reflected in brainwaves and developed a technology to analyze brainwave responses based on their similarity. We also developed a demonstration that extends human creativity by using this analysis in communication with an image-generating AI.
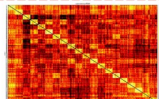
Technology Overview

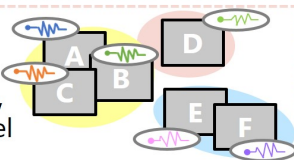**EEG acquisition while viewing multiple images**
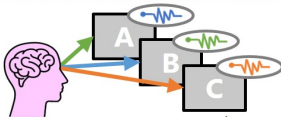
Generation of brain representation model
Extract similarity structure of brain activity (Representational Similarity Analysis)

Display a graph that expresses sensitivity
Based on the analysis results, display which images you feel are closer or farther away

Key Points of Results

By analyzing EEG as raw information that reflects our inner state (sensitivity), **you can understand your own sensibilities and the differences between your own and others**

sensitivity — sensitivity — **differences**
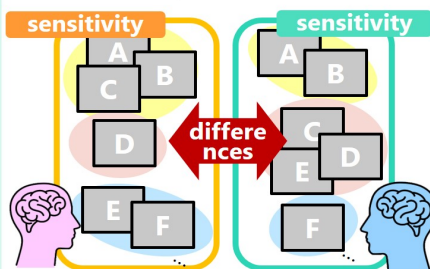
Case Study

Automatic translation of sensibilities into optimal expressions that can be interpreted by AI
→Be able to reflect your own sensibilities without having to verbalize your ideas!

The result of analyzing EEG (≒sensitivity) Generative AI

verbalization
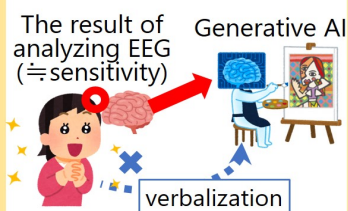
Features

- Visualizing the relationships between content and categories based on brainwave similarities, it provides a detailed representation of the user's subjective perception
- Creating new content that reflects the user's sensibilities by extracting content features from the user's subjective perception and using them as input for generative AI

Future_benefits

By achieving understanding and communication of sensitivities, we aim for a world where people with diverse sensitivities understand and respect each other.

Exhibiting Company

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

Contact

rdforum-exhibition@ml.ntt.com