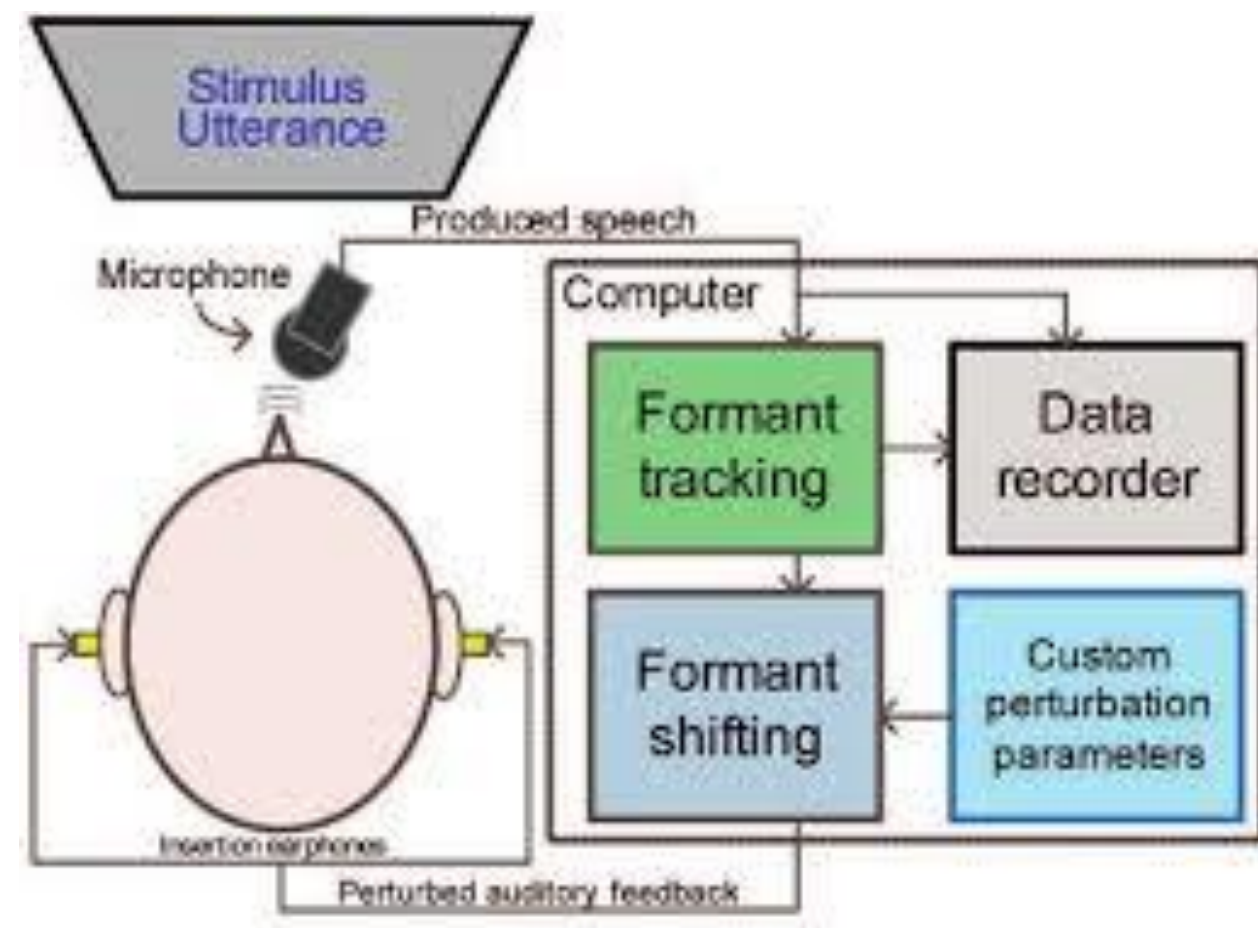


A Software and Manual for Data Analysis in Audio Perturbation Experiments

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Background



Auditory perturbation is a well-established speech task that is used to investigate a phenomenon called speech adaptation.

Audio Perturbation data is difficult and tedious to analyze

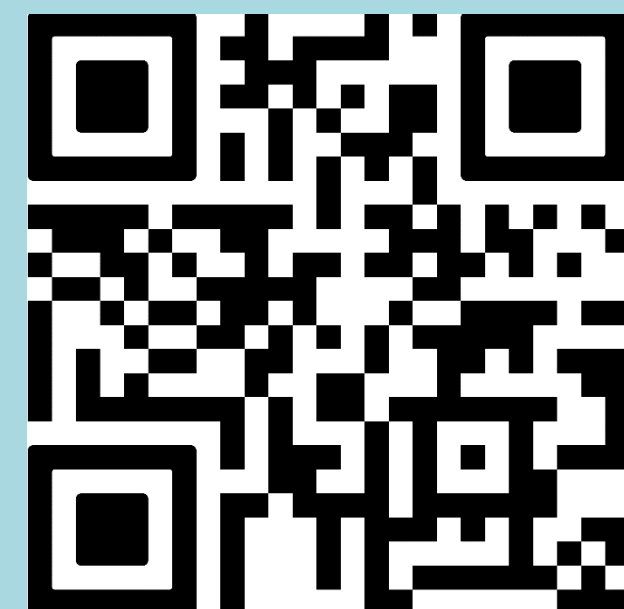


A simple, customizable data analysis program allows researchers more freedom and time

Methods and Analyses

1. Scan recent publications on Audio Perturbation studies
2. Identify key features of their Data Analysis
3. Create Software and a Configuration File (similar to settings in a smart phone) to accommodate common paradigms found

A data analysis software for use in Audio Perturbation Experiments



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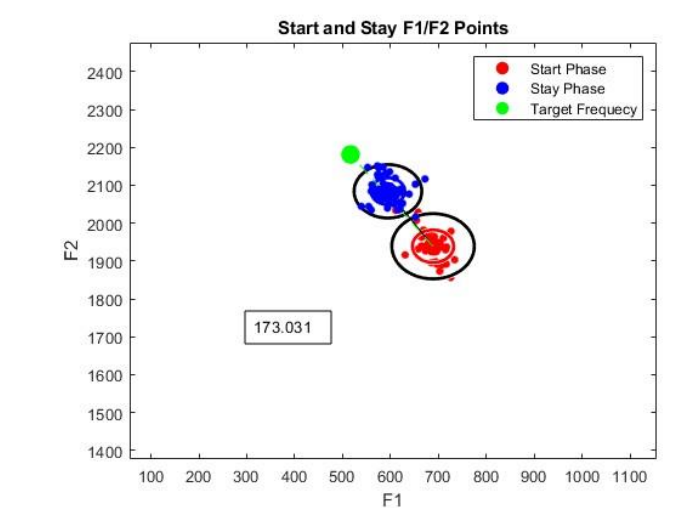
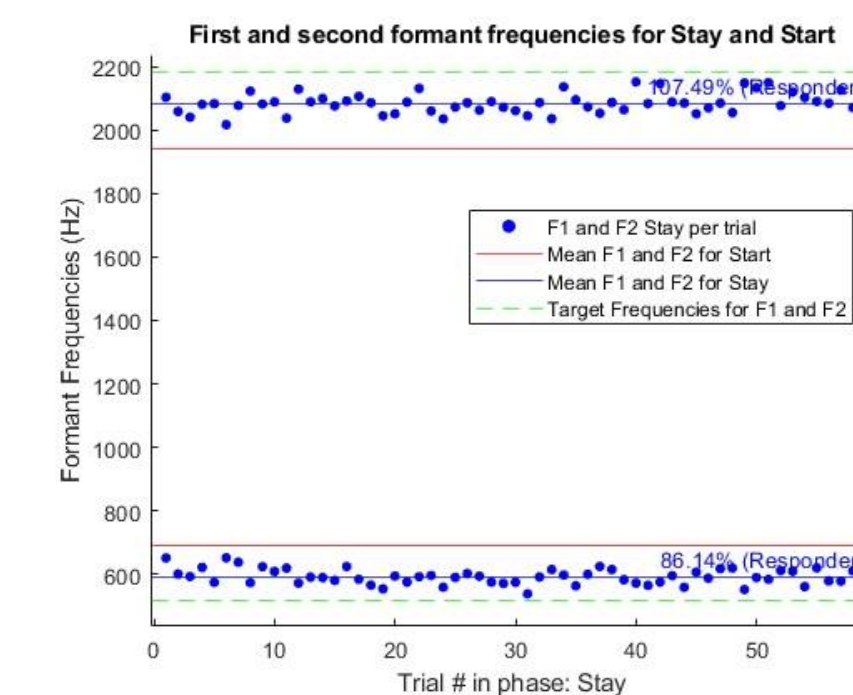
Results

Info File

Info File for each participant's data giving information on their results

```
Participants gender is female
Trial time stamp is 16-Jun-2022

Start phase number of trials is 30
Start phase original mean F1 is 622.17 and original mean F2 is 1939.13
Start phase altered mean F1 is 670.35 and altered mean F2 is 1924.48
Start phase original Linear Standard Deviation for F1 is 34.61 and for F2 is 30.66
Start phase altered Linear Standard Deviation for F1 is 33.58 and for F2 is 17.50
Start phase original Circular Standard Deviation is 56.40
Start phase altered Circular Standard Deviation is 34.52
```

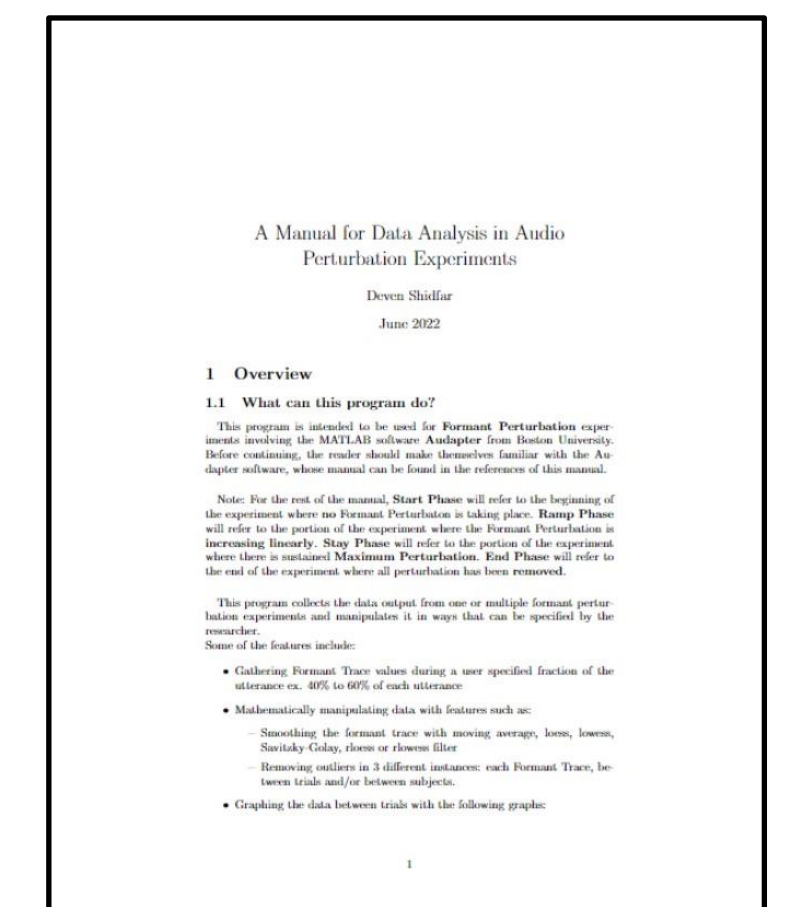


Graphs

Easy to reference graphs to visually understand a participant's data

Manual

A manual explaining the software for future researchers to use



Conclusions/Relevance

Holland Bloorview
Kids Rehabilitation Hospital

Software allows researchers to perform Audio Perturbation studies much easier - including an ongoing study in the CONNECT Lab



Potential for specific purpose computer with a Graphical User Interface to enable all-in-one place Audio Perturbation experiments