The Phon software program for phonetic and phonological analysis

Yvan Rose
Memorial University of Newfoundland

Phon is a software program that greatly facilitates a number of tasks related to the analysis of transcript-based and acoustically-measured speech data. Built to support research in phonological development (including babbling), second language acquisition, and phonological disorders, Phon can be used for virtually all types of phonological investigations (e.g. loanword phonology, fieldwork in phonology, sociolinguistic studies).

Phon supports multimedia data linkage, unit segmentation (e.g. utterance, word), multiple-blind transcription, automatic labeling of data (features, syllabification), and systematic comparisons between target (model) and actual (produced) phonological forms. Phon is also equipped with many facilities for data analysis, including query methods for phonology (e.g. phones, features, syllables, …) as well as acoustic data.

Version 2 of Phon, launched during the fall of 2014, brings together two of the most important areas of empirical investigation in the area of child phonology, as it integrates transcript-based analyses of phonological data with the facilities for acoustic analysis provided by Praat. With this new version of Phon, and in addition to the functions listed above, the user can now:

- Import existing TextGrids into Phon sessions
- Generate TextGrids from existing Phon records
- Visualize TextGrids directly into Phon
- Send TextGrids to Praat for editing in a single click
- Run speech analysis functions directly from the Phon Query menu
- Export speech measurement data for further analysis

All of these functions are accessible through a user-friendly graphical interface. Databases managed within Phon can also be queried using a powerful search system adapted for the needs of the phonologist. This software program works on Mac OS X, Windows and Linux platforms and is compliant with the XML data format developed for the CHILDES/TalkBank databases. Phon is being made freely available to the community as open-source software. Phon facilitates data exchange among researchers and is currently used for the elaboration of the shared PhonBank database, designed to support empirical needs of research in all areas of phonology, phonological development and language disorders.