1. THE DIGITAL ARCHIVE OF SOUTHERN SPEECH (DASS)
- Subset of the Linguistic Atlas of the Gulf States (LAGS) [7]
- 64 speakers recorded in sociolinguistic interviews from 1968 – 1983 in 8 U.S. Gulf States
- 30 female, 34 male; born 1886 – 1965; mean age 61 years
- 4 speakers for each of 16 LAGS geographical sectors [6] (Fig 1)
- 1 African American (AA) speaker, and 3 European American (EA) speaker “Types”

2. MOTIVATION FOR TRANSCRIBING DASS
- Within the Linguistic Atlas Project [5], a limited number of target lexical items were impressionistically transcribed in LAGS Protocols (Fig 2), with no acoustic analysis
- Maximum of 3031 transcribed items per speaker; little intraspeaker variation represented
- Transcribing full DASS interviews is expected to yield a searchable corpus of 1.5 million words, time-aligned to the audio, with corresponding acoustic data.

3. GOALS
- To offer methods for transcription and automatic phonetic analysis of a large speech corpus
- To automatically extract as much good acoustic data as possible from these legacy recordings
- To use this rich historical data to explore the sociophonetics of Southern speech

4. METHODS FOR LARGE-SCALE TRANSCRIPTION
- Transcriber software [2] is used for orthographic transcription (Fig 3)
- Facilitates user-friendly, precisely time-aligned, multi-tier transcription
- Approximately 40 undergraduates are assigned a single speaker each, and transcribe 1 reel at a time. Mean reel length: 54 minutes.

5. TRANSCRIPTION AND DATA PROCESSING WORKFLOW

6. FORCED ALIGNMENT AND FAVORITE EXTRACTION
- TextGrids and .wav files submitted to Dartmouth Linguistic Automation (DARLA) [8] for forced alignment (Fig 4) and vowel extraction
- DARLA filters data, and by default does not return measurements for every token
- We are testing DARLA against three non-filtering formant extraction techniques (Fig 5)
- In-house Praat script: extracts all data, but formant tracking is errorful for back vowels
- FAVE [9] extracts all tokens, but its Bayesian formant tracking algorithm is not specialized for Southern speech; training data come from many U.S. varieties
- Modified FAVE: extracts all tokens; Bayesian algorithm trained on mean formant values of 4 fully-transcribed DASS interviews; requires an extra step for data extraction
- Modified FAVE appears to perform best: it provides a clean, well-separated vowel space similar to DARLA’s output, but without data loss due to filtering

7. REFERENCES & ACKNOWLEDGMENTS

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