Recordings of Australian English and Central Arrernte using the EchoBlaster and AAA

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We recently recorded seven speakers of Australian English, and seven speakers of Central Arrernte, a language of Central Australia, using the Telemed Echo Blaster 128 CEXT-1Z, the Articulate Instruments stabilization helmet, the Articulate Instruments pulse-stretch unit, and the AAA software version 2.16.07. In addition we used an MBox2 Mini soundcard, a Sony lapel microphone (electret condenser ECM-44B), and an Articulate Instruments Medical Isolation Transformer. Typical frame rate was 87 f.p.s., using a 5-8 MHz convex probe set to 7 MHz, a depth of 70 mm and a field of view of 107.7 degrees (70%).

The recordings of Australian English served primarily as practice before taking the equipment to Central Australia for field recordings. Many problems were initially encountered, particularly regarding synchronization, and this required bug fixes to the software. Data from one speaker was entirely discarded, and other speakers had sporadic synchronization problems.

For both the English and the Arrernte recordings, one speaker of each language did not display a visible contour outline for the tongue – in the case of Arrernte, this speaker was simply not recorded, since we had ended up discarding the data from the English speaker who displayed this particular characteristic. For each language, about 2-3 speakers displayed good tongue contour outlines; the remaining speakers have slightly less clear outlines. The English speakers' data have been tracked using the AAA software, with manual corrections where needed.

Both WAV and Spline data for English have been exported from AAA and read into the EMU speech analysis system, interfaced with the R statistical package. Simple plotting routines have been successfully conducted on the English data, which focused on hVd, hVl and lVp sequences of English (i.e. effects of preceding vs. following laterals on the various vowels of Australian English). Tongue contours have been plotted across time for a given token, and also at the temporal midpoint for a given set of tokens. We plan to present these preliminary English results in Hong Kong.