Portable Software Modules
for Speech Recognition

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Because speech recognition R&D is conducted in large part through the creation and modification of computer software, productivity depends heavily on software engineering issues - the ease of writing new software and reusing existing software. These issues are relevant not just to the work within a particular R&D group, but also to the exchange of technology among different groups. In particular, technology transfer among speech recognition groups is inhibited by the lack of convenient and powerful means for exchanging programs and data.

Under a Phase I SBIR grant from DARPA, Entropic will begin the development of a new Speech Recognition Package (SRP) using advanced software engineering techniques, including abstract interfaces, object-oriented programming, machine-independent numeric types, and self-describing objects. These techniques have already been applied to speech and signal processing in two commercial products -- the Entropic Signal Processing System (ESPS) and waves+ (the ESPS graphics interface). ESPS and waves+ will be used as a technology base for the SRP.

The Phase I effort will include an analysis of requirements followed by the design and implementation of prototype modules.