

Signal Processing Software Development Tools

To achieve fast time-to-market with a new signal processing design, the designer needs best-in-class development tools. These tools, which include an integrated software development environment, evaluation system and emulator for debugging, can make the difference between success in the marketplace and a missed opportunity.

A survey about the different signal processing software development tools is required. A full description about each available tool is required. The description has to contain: the availability, the signal processing functions, the required hardware and the usability of the software tool.

Speech Coders

A survey about the different speech coders is required. The survey have to contain the state of the art of speech coders. The survey must contain a full description of the following speech coders:

- a. ADPCM or higher complexity waveform coder
- b. Sub-band coder using 2 or more bands
- c. LPC coder using pitch or full excitation
- d. Homomorphic coder
- e. Multi-Pulse LPC (MPLPC) coder
- f. Code-Excited LP (CELP) coder
- g. Channel Coder

Speech Recognizers

A survey about the different speech recognition systems is required. The survey have to contain the state of the art of speech recognizer. The survey must contain a full description of each recognizer. The description has to contain: pattern recognition tools used in building the recognizer, type of speech unite modeled, feature set used, vocabulary size of recognizer, training set for building models, and testing set for evaluating system performance