Networked On-Line Audio Dilation

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Audio Dilation:

Control over incoming live audio tempo for increased intelligibility and comfort.
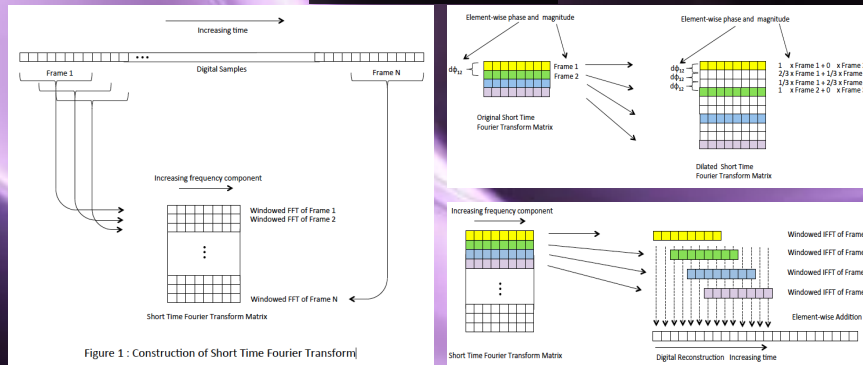
Equipment

Project Applications

- ✓ Public Safety
- ✓ Pilot/Flight Controllers
- ✓ Generational Communication
- ✓ Native/Non-native speaker comprehension
- ✓ Managing interactional communication

System Features

- ✓ On-line/real-time audio dilation
- ✓ Networked, full duplex communication
- ✓ **Independent** variable dilation rates
- ✓ Variable voice activation detection
- ✓ Lengthy (visual) audio storage buffer

Algorithm

Figure 1 : Construction of Short Time Fourier Transform

Interaction

D. Ellis, A Phase Vocoder in Matlab, http://labrosa.ee.columbia.edu/matlab/pvoc/
J. S. Novak, III et al., "On-Line Audio Dilation for Human Interaction," Proc. Interspeech 2013.
J. F. Schmitt, "The effects of time compression and time expansion on passage comprehension by elderly listeners," Journal of Speech and Hearing Research, vol. 26, 1983.