MEng Final Year Project: Audio Signal Zoom for Small Microphone Arrays

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Project Lead: Chi Hang Leung
Project Start Date: 10/16/2017 (Monday)

WBS	Task	Start	End	Cal. Days	% Done
1	**Capturing Audio Data and Establishing Testbench**	##########	##########	**9**	**100%**
1.1	Research on Room Acoustics and Generating Room Impulse Response (RIR)	##########	##########	3	100%
1.2	Capturing/Fetching Anechoic Speech Examples from available Databases	##########	##########	1	100%
1.3	Developing the RIR Generator Software	##########	##########	4	100%
1.4	Creating Test Cases with Scenarios with Different Microphones and Speaker Location	##########	##########	2	100%
1.5	Generating the Room Impulse Response and Filter the Anechoic Audio Data	##########	##########	2	100%
2	**Developing Processing Algorithm**	##########	##########	**20**	**25%**
2.1	Background Research on Time-Frequency Analysis	##########	##########	4	100%
2.2	Familiarising with Time-Frequency Analysis using Spectrogram and Overlap-add Method	##########	##########	2	100%
2.3	Experimenting Binary Oracle Mask based on Phase Difference of Arrival	##########	##########	3	75%
2.4	Background Reading on Clustering	##########	##########	4	10%
2.5	Developing the Algorithm with Clustering Time-frequency bins on Phase-Spectrogram	##########	##########	8	0%
2.6	Separation	##########	##########	3	0%
3	**Evaluating the Performance of the Algorithm**	##########	##########	**7**	**0%**
3.1	Setting the Standard to Evaluate the Performance of Audio Zooming	##########	##########	1	0%
3.2	Refining the Algorithm based on the evaluation according to the standard	##########	##########	1	0%
3.3	Demonstrating the final results (potentially with a real-time demo) in Presentation	##########	##########	4	0%