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

Project Supervisor: Dr. Patrick Naylor
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**	**Mon 16/10/17**	**Sun 17/12/17**	**9**	**100%**
1.1	Research on Room Acoustics and Generating Room Impulse Response (RIR)	Mon 16/10/17	Sun 05/11/17	3	100%
1.2	Capturing/Fetching Anechoic Speech Examples from available Databases	Mon 23/10/17	Sun 29/10/17	1	100%
1.3	Developing the RIR Generator Software	Mon 30/10/17	Sun 26/11/17	4	100%
1.4	Creating Test Cases with Scenarios with Different Microphones and Speaker Location	Mon 20/11/17	Sun 03/12/17	2	100%
1.5	Generating the Room Impulse Response and Filter the Anechoic Audio Data	Mon 04/12/17	Sun 17/12/17	2	100%
2	**Developing Processing Algorithm**	**Mon 18/12/17**	**Sun 06/05/18**	**20**	**25%**
2.1	Background Research on Time-Frequency Analysis	Mon 18/12/17	Sun 14/01/18	4	100%
2.2	Familiarising with Time-Frequency Analysis using Spectrogram and Overlap-add Method	Mon 08/01/18	Sun 21/01/18	2	100%
2.3	Experimenting Binary Oracle Mask based on Phase Difference of Arrival	Mon 15/01/18	Sun 04/02/18	3	75%
2.4	Background Reading on Clustering	Mon 29/01/18	Sun 25/02/18	4	10%
2.5	Developing the Algorithm with Clustering Time-frequency bins on Phase-Spectrogram	Mon 19/02/18	Sun 15/04/18	8	0%
2.6	Separation	Mon 16/04/18	Sun 06/05/18	3	0%
3	**Evaluating the Performance of the Algorithm**	**Mon 07/05/18**	**Sun 24/06/18**	**7**	**0%**
3.1	Setting the Standard to Evaluate the Performance of Audio Zooming	Mon 07/05/18	Sun 20/05/18	2	0%
3.2	Refining the Algorithm Based on the evaluation according to the standard	Tue 08/05/18	Mon 21/05/18	2	0%
3.3	Demonstrating the final results (potentially with a real-time demo) in Presentation	Mon 28/05/18	Sun 24/06/18	4	0%