

# PROJECT STATUS REPORT 1

## NOISE AND ECHO CANCELLATION IN A TELECONFERENCE

DATE: 15<sup>TH</sup> APRIL 2015

### PROJECT STATUS SUMMARY

Our goal in this project is to appropriately apply noise cancellation in such a way which enables the system to extract only the voice signal removing as much noise as possible for a great teleconference experience.

To complete the project successfully, our project group and tasks are divided into 3 parts: Android group, Theory group and Management group.

The project schedule is perfectly in line with the schedule and we are confident to complete the project within due date. If required, the members are also planning to accelerate the progress by working weekends and extended hours in the next few weeks.

### WORK PLANNED TILL 15<sup>TH</sup> APRIL, 2015

**Android Part:** Our initial target was to complete at least 4 android tasks within 15<sup>th</sup> April and complete all the android tasks by 20<sup>th</sup> April, 2015.

**Theory Part:** Our initial target was to design an efficient LMS algorithm for noise cancellation within 15<sup>th</sup> April, 2015.

**Management Part:** Our initial target was to design a comprehensive Project plan with detail Resource allocation, Gantt chart and Task Calendar. Moreover, following up the progress of the group was also set as the core responsibility of the management group.

### WORK COMPLETED TILL 15<sup>TH</sup> APRIL, 2015

**Android Part:** We have successfully managed to complete all the seven tasks by 15<sup>th</sup> April which is ahead of the schedule. As a result we can put more time and effort on the other implementation parts of the project. There were 7 tasks within these segment and our progress on individual tasks are stated briefly in the table below:

Task No.	Progress / Outcome
1.	Accelerometer data recorded in a log file and it was done in the elevator of Q-building.
2.	A car was drawn successfully using the “draw” functions and the canvas.
3.	Seeing the car from left and right side every second alternatively was done successfully.
4.	A continuous sound was recorded and played with two echoes successfully.
5.	Sound was recorded on one phone and it was played to the other phone with short buffering.
6.	Sound was recorded using two phones. These two sounds were added together

	and played on the third phone successfully with short buffering.
7.	The test harness for the non-trivial algorithm relevant to our project was implemented successfully.

**Theory Part:** We have started working with the LMS algorithm for noise cancellation, and successfully managed to have a working design.

**Management Part:** Project plan was successfully designed and submitted with Resource allocation, Gantt chart and detail Task Calendar. Moreover, every member of the group was assigned tasks based on their work interest and it was monitored and followed-up as required to finish everything within the set timeline.

## WORK PLANNED FOR NEXT WEEK

We are planning to design an efficient RLS algorithm and check with our system for better competency. But based on our previous experience it is less likely that RLS would be better in terms of computational issues compared to the LMS. So we are actually planning to do trial and error check and find out what works best for our design.

## OPEN ISSUES

We are still working on our algorithm design to improve it further to make it more efficient and implement in our project successfully. Our main concern is the delay we are experiencing with our best final performance (1000 taps).

## RISK ANALYSIS

The update of the risk analysis remains as the one in the project plan (see the table below).

Nr	Risk	P	C	R	Action
1	Do not find a good theoretical model	1	4	4	Read more literature
2	Do not pass the mid-term evaluation	1	4	4	Re-schedule the TRP
3	Problems with real time	2	4	8	Help and re-schedule TRP

As per the above table, the risk number 1 & 2 are less likely to affect our project outcome because we have good theoretical model with good performance and we have already completed all the 7 android tasks assigned for the mid-term evaluation.

Currently our main concern is the third risk factor, which might take a lot of time, but we are working hard to eliminate this risk factor as much as we can.

## KEY PERFORMANCE INDICATORS (KPI'S)

To have a better understanding of the progress of the project the Gantt chart and the working hours of every individual compared to resource allocation table is attached as annexures below:

## EQ2400

[illegible]

Annex 2	Cost/hour (SEK)	Day	30/3	31/3/2015	1/4/2015	2/4/2015	3/4/2015
Animesh Das	400	Outcome (h)	0	0	0	4	2
		Plan (h)	0	0	4	4	4
Jonas Sedin	400	Outcome (h)	4	5	5	4	2
		Plan (h)	3	5	4	4	3
Mohammad Abdulla	400	Outcome (h)	6	5	2	6	0
		Plan (h)	4	4	2	6	2
Thomas Gaudy	400	Outcome (h)	5	6	5		3
		Plan (h)	4	4	4		4
Xavier Bush	400	Outcome (h)	6	3	5	0	2
		Plan (h)	4	4	5	4	2
		Outcome (h)					
		Plan (h)					

4/4/2015	5/4/2015	6/4/2015	7/4/2015	8/4/2015	9/4/2015	10/4/2015	11/4/2015	12/4/2015
2	2	4	5	5	4	4	2	1
2	2	2	5	5	5	5	2	2
		4	5	5	6	3	3	
		5	4	4	5	4		
5	6	5	5	6	6	5		5
	5	4	5	5	5	5		4
2	0	9	3	8	3	5	0	0
1	1	4	4	4		4	1	1
		4	0	5	5	1		
		3	5	5	5			

13/4	14/4	15/4	16/4	17/4	18/4	19/4	20/4	21/4
5	6	5						
6	6	6	6	6			4	6
3	6	5						
5	5	5	5	6			5	6
6	6	2						
5	5	5	5	4		4	5	5
8	7	3						
6	6	6		6	1	1	6	6
6	0	3						
6	6	6	6	6			6	6