Meeting 6 with Prof Rubin

16 October 2017, 12:00

- We asked Prof Rubin if we could use the project budget to purchase some headphones so we could do the testing at open day.
  - He suggested we go to the components workshop at wits to see if they have a pair we could borrow
  - Or we could ask them to purchase a pair on our behalf
- Joyce asked about if we are using the project budget to pay for the poster
  - Prof Rubin is unsure, but he thinks the school uses a separate budget for that. He said he will check for us.
  - He also suggested that to save money we can print the poster on A4 sheets and then stick them together.
- Listened to the re-synthesised voice using the GMM
  - People commented on the choice of sentence used
  - Prof Rubin made the comment that the voices sound quite similar and still sound robotic
  - Bianca commented on how the voice actually sounds distinctly different to the initial robotic voice
  - Prof Rubin agrees and then comments on the fact that he has realised that it is not the sound or modifying the harmonics of the voice that makes it sound robotic it is the prosody and pacing of the voice that makes it sound robotic
  - Lindzi explains that it the prosody and the duration etc was not supposed to change using LPC coefficients rather the sound of the voice
  - Prof Rubin states again that the robotic problem is one of pacing but its good that we have figured this out. Also fixing pacing is a different problem all together
    - Lindzi mentions a report that used GMM to map the excitation signal and how that produced better results.
    - All agreed we wouldn't have time to implement it but we must comment on it in the report
- Bianca informed Prof Rubin that she got the transformed voice's bode plot to follow the trend of the human one but it did not make a difference to the sound of the voice
- Then Dr Levitt confirmed we get an amount of money to specifically use for the poster
- Then Bianca commented on the fact that now we have 2 mapping mechanisms which we can use to compare results in out report
  - Prof Rubin says that is a great idea and a good lab project, it doesn't matter if we didn't solve the worlds problems but it's a good lab project
- Peter says they have come up with a plan to deal with the normal distribution using a matlab function
- Joyce says that they have narrowed down the training set to 6 people
  - Professor Rubin says that is fine and that 6 people can actually give a lot of data
- Peter asks Prof Rubin what would be better to change the reference point of the voices every 5 years or to use the young one as the reference point
  - Prof Rubin says that is a good idea but what you actually looking for in your investigation is something that tells you the age of the person ie how to modify a voice to make them sound older

- o Thus maybe then its not good to have the 5 year reference points
- o What you really want to do is look at what the characteristics are at 30 at 60 etc
- o Peter comments on how they took it as tracking the progression and then track the progression of another person so you can see the similarities
- o Rubin states the fundamental question is: "if you have had a laryngectomy and 50 years down the line we want to give you a voice that sounds age appropriate, what aspects of it will we change?"
- Schedule another meeting for Friday at 12:30
- Peter asks about sampling frequency
  - o If he is using 8 kHz then max is 4 kHz because of Nyquist theory
  - o Anti-aliasing is important
  - o Looks at LPF in Audacity