**Report on Text to speech and speech to text**

As part of this project we were required to look into and incorporate the Watson text to speech and speech to text features to allow users to communicate with our avatar via voice instead of just keyboard input. As reposible for this part of the project I looked into and made myself familiar with the nodeRed.js service and how you are able to use the premade node to create a system, IBM also have specialised nodes to allow you incorporate the Watson services into your application. I used tutorials and sites provided by our sponsor to learn how to use the nodeRed.js developer and worked on some practice flows first.

However, when discussing the speech to text functionality with our sponsor he talked about the difficulties and unreliability of the services and added that it can sometimes be inaccurate when dealing with a range of accents and therefore suggested to us that it may be in our interest to focus on the text to speech element to allow the avatar to respond in voice.

When I began working on the text to speech flow I ran into a problem while using the IBM Bluemix system to develop the flow. This was due to the limitations of the “Lite” accounts we had set up to work within the bluemix environment during the project. Although I managed to get a small web application to read input which would be similar to what we needed to allow the system to read the text output out, wasn’t able to use the text to speech facility. I looked for solutions and tried to create a text to speech service to connect the flow to but after asking our sponsor for advice found that it was due to the limitations of the “Lite” accounts we had set up. The Lite accounts do not allow the use of the text to speech node within flows and therefore the advice was therefore to unfortunately avoid using the text to speech and that are application would just have to output with plain text.

This was disappointing as the text to speech was a big part of the interaction between the user and system. However, we will now use the extra time we have to improve other elements of the system to maintain a high level of user interaction and retention.