Team Name: Invictous

App Name: SHIP/HELICOPER/BALLOON :D

Platform Targeted: Windows Phone 7.X/8

Tools Used: Visual Studio 2010/2012, FFT Algorithms,

Summary of the Idea

The idea and motivation behind the app to shift the viewpoint of playing games. Today, for playing games we have to use our hands to swipe and there are few defined gestures for the defining the navigation of game too. We want to shift the complete control of a particular set of games to voice rather than touch. We have the seen the flappy bird game where we have tap the screen to make the bird fly but we can achieve the same thing via voice application. Instead of using tap we have made an app which can detect the blow sound made by the user and make the bird/ship fly which far more intuitive and suits the game. For now, we have made three prototype games which uses this concept. First of all we made a WindowsPhoneGame similar to helicopter/flappy bird. For triggering the movement we used drag rather than blow. As we know that the blow sound contains low frequency content and our speech in general has high frequency content and it is a bit shrill. So we found out FFT (fast fourier transform) usinf the api provided and then we checked for the magnitude of the each frequency (for a particular sound buffer). If the sound contains much magnitude of low frequency ranges rather than higher ones then we can differentiate between blow and other sounds. The comparison is calibrated in environment in which the application has to be run.

FFT ALGO: <http://developer.nokia.com/community/wiki/Audio_Noise_Reduction_in_Windows_Phone>

<http://mobileorchard.com/tutorial-detecting-when-a-user-blows-into-the-mic/>

This is the sample screen shot of the game. The helicopter goes up and down according to the blow and it has to be safe from fire and get coins. The point system also has been added.

