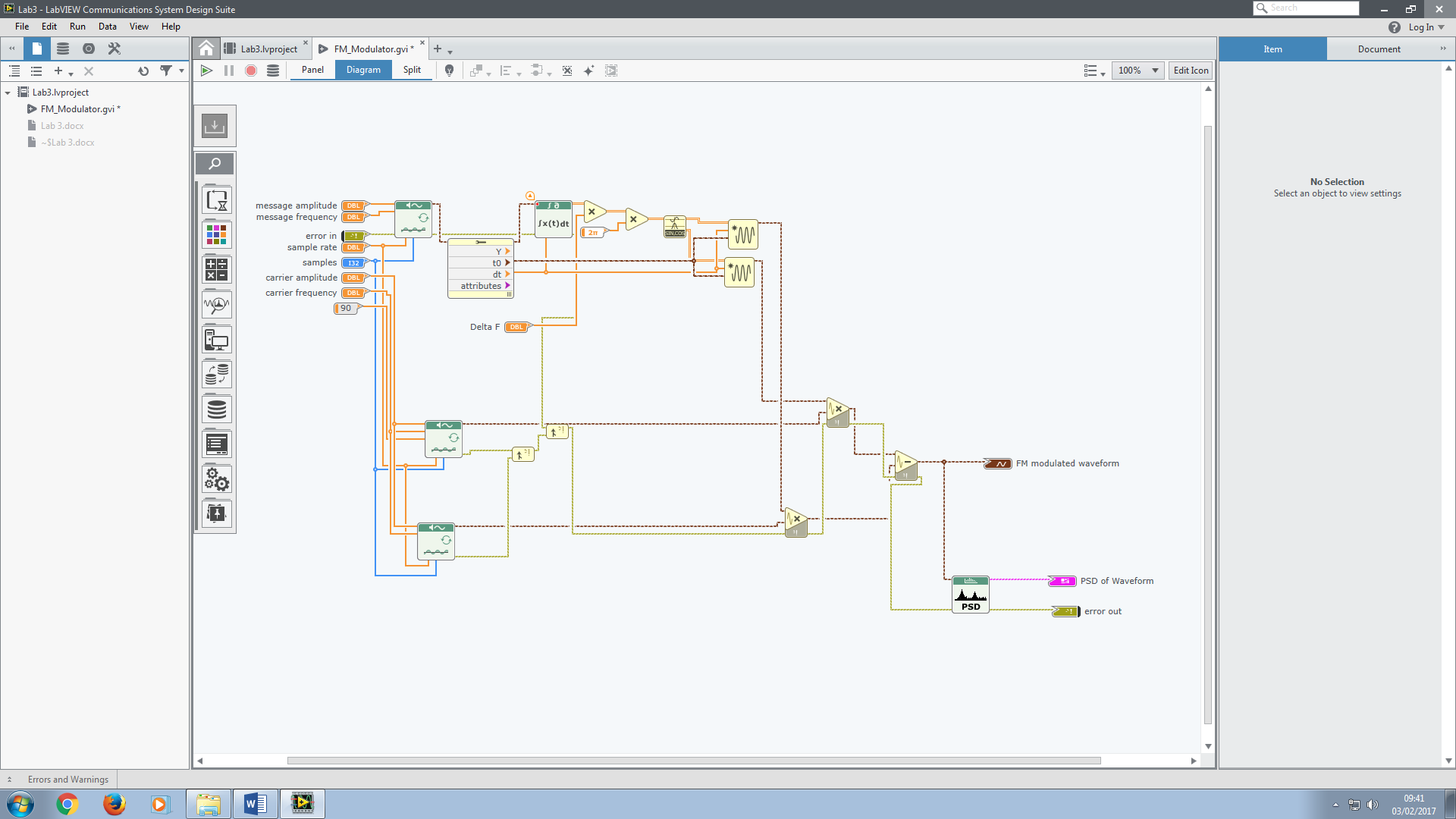
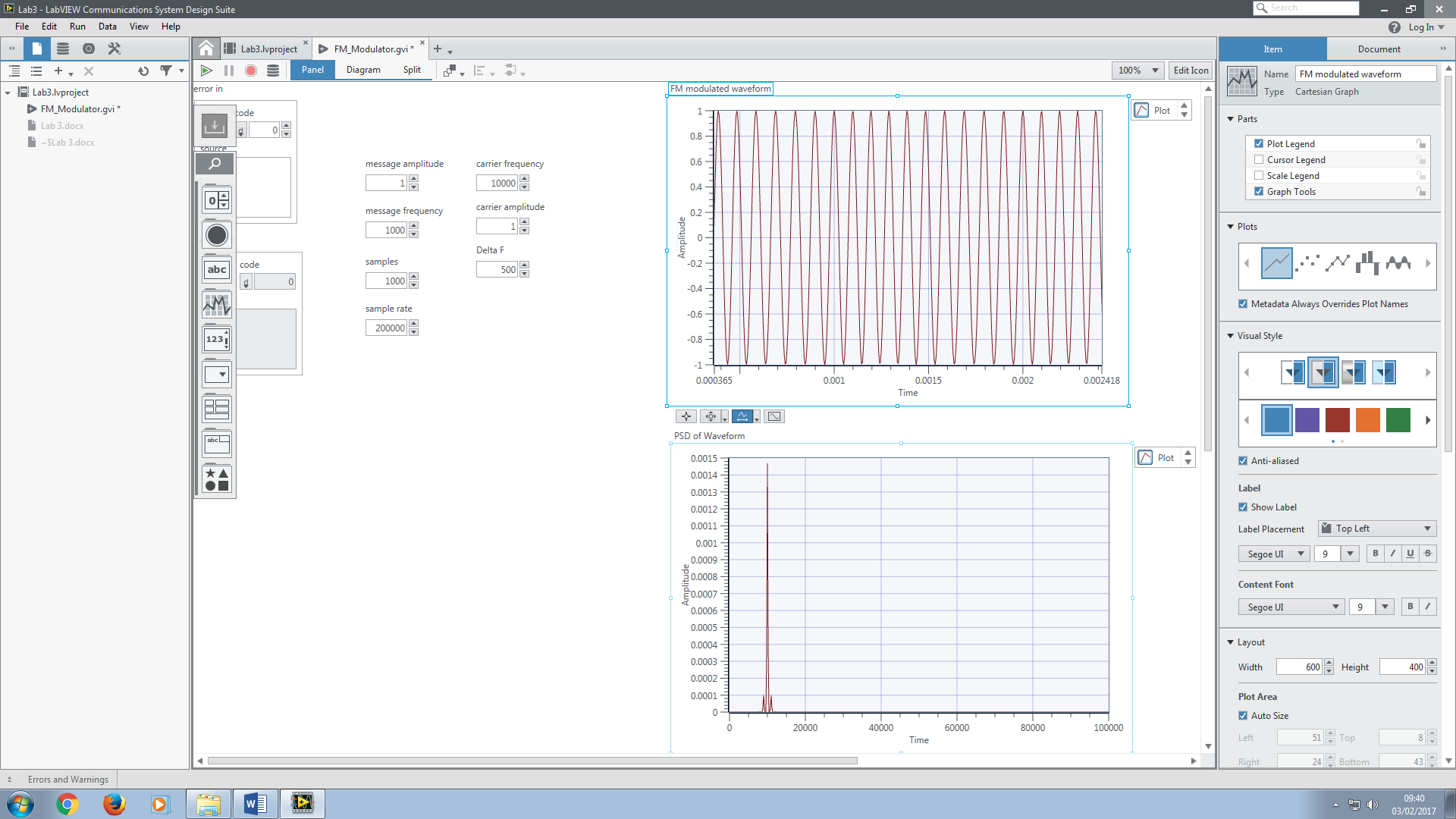
Lab 3

Ex1.

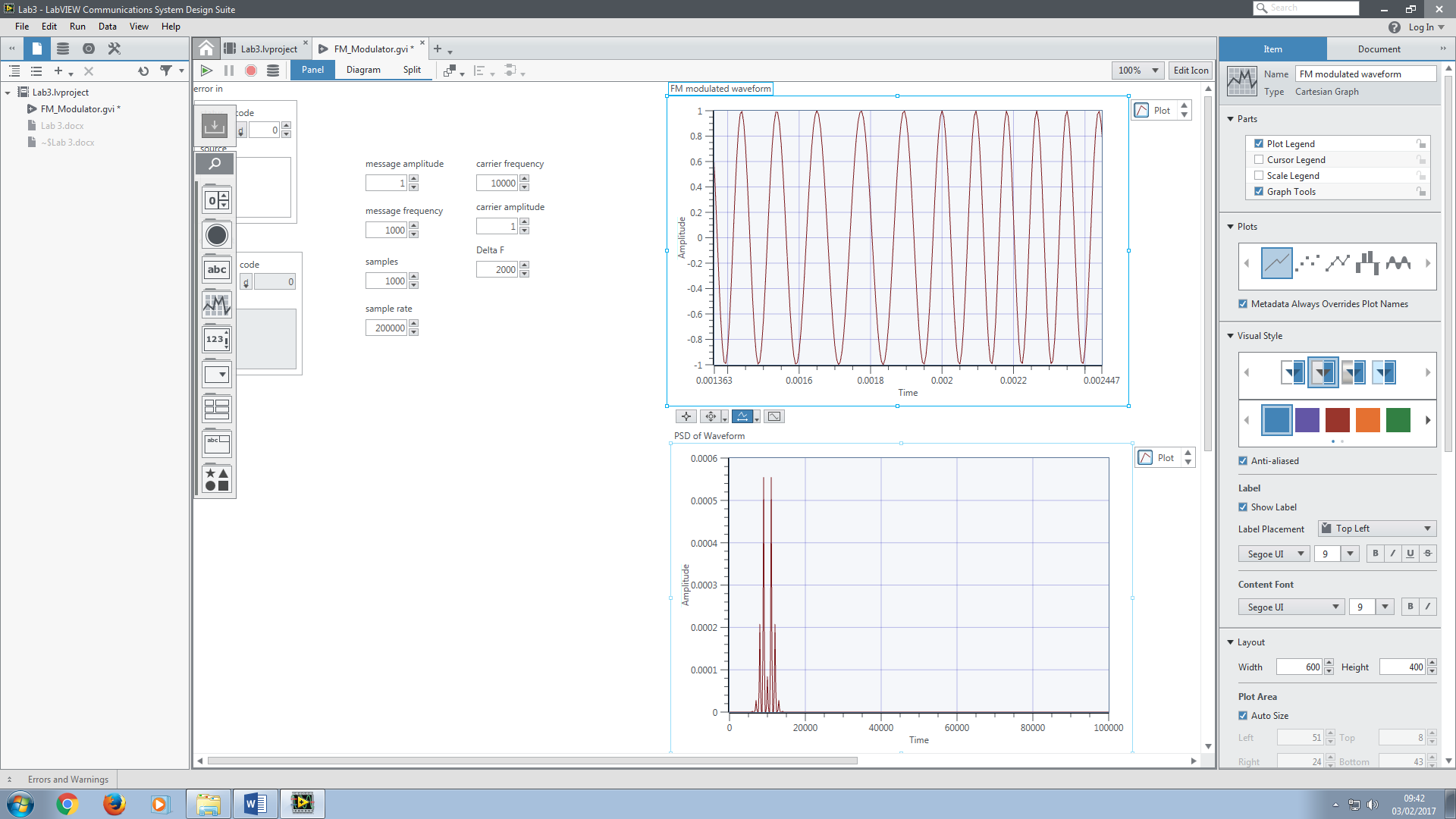
Block diagram



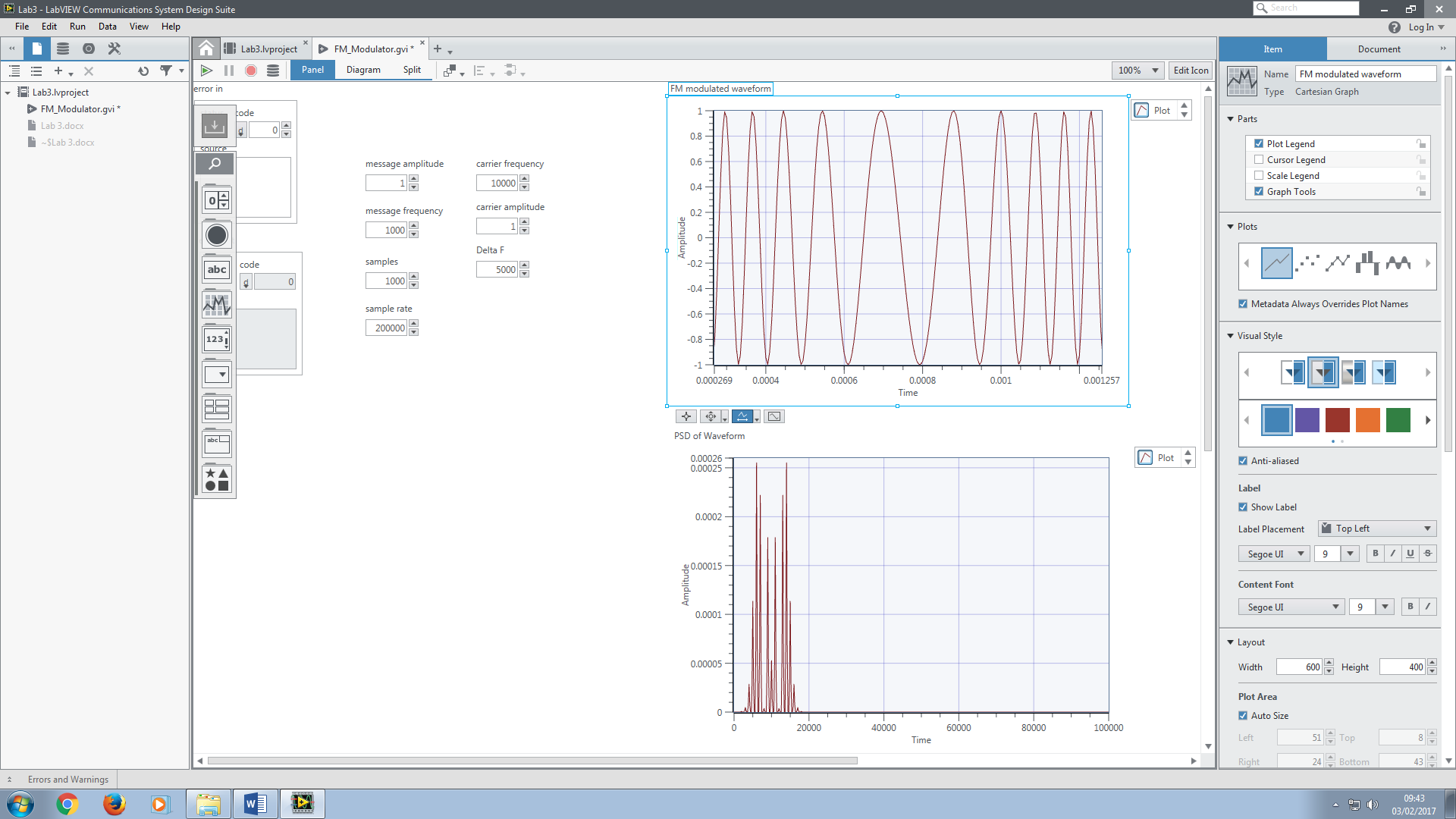
FM modulated signal with frequency deviation of 500Hz:



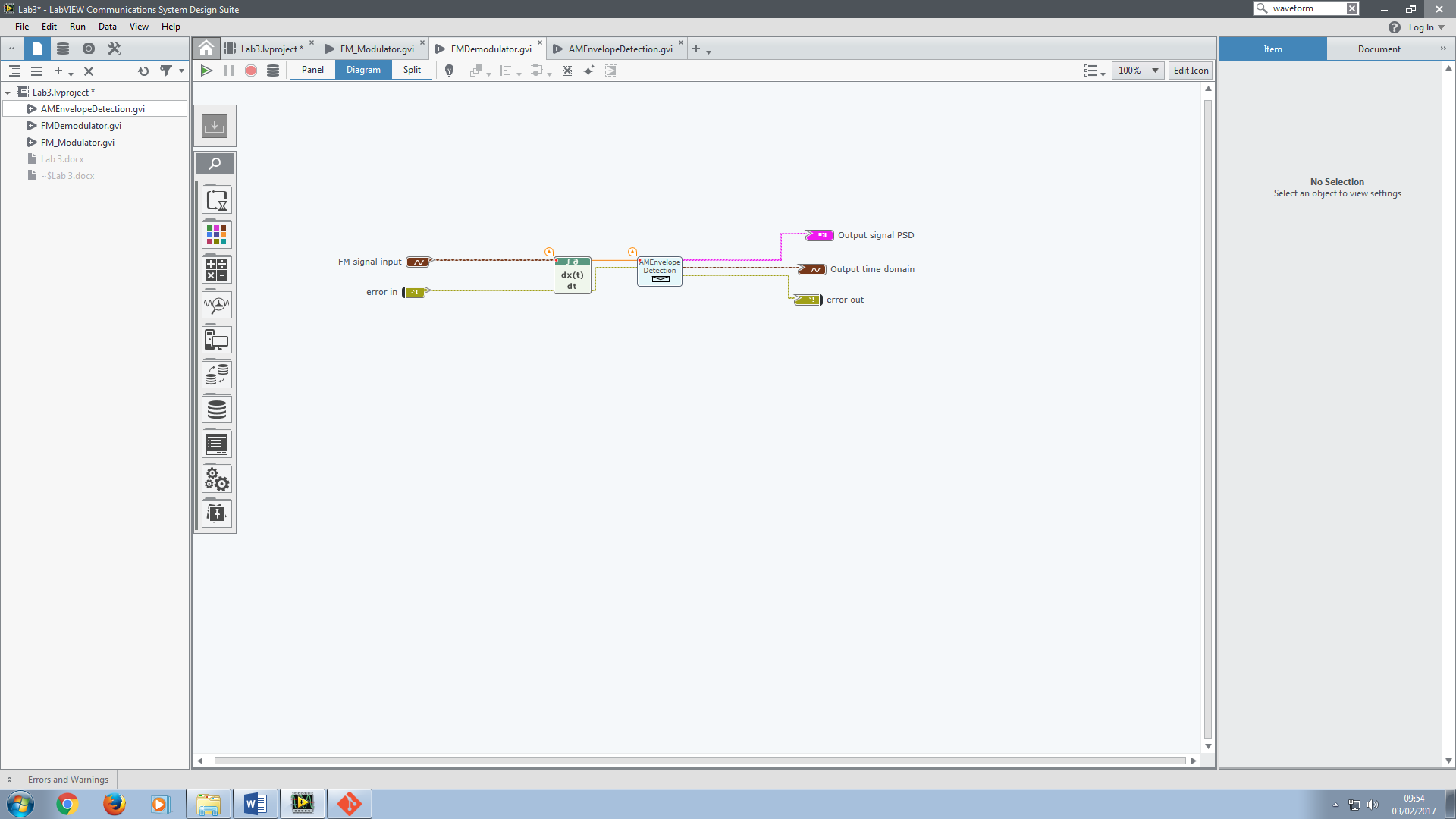
FM modulated signal with frequency deviation of 2000Hz:



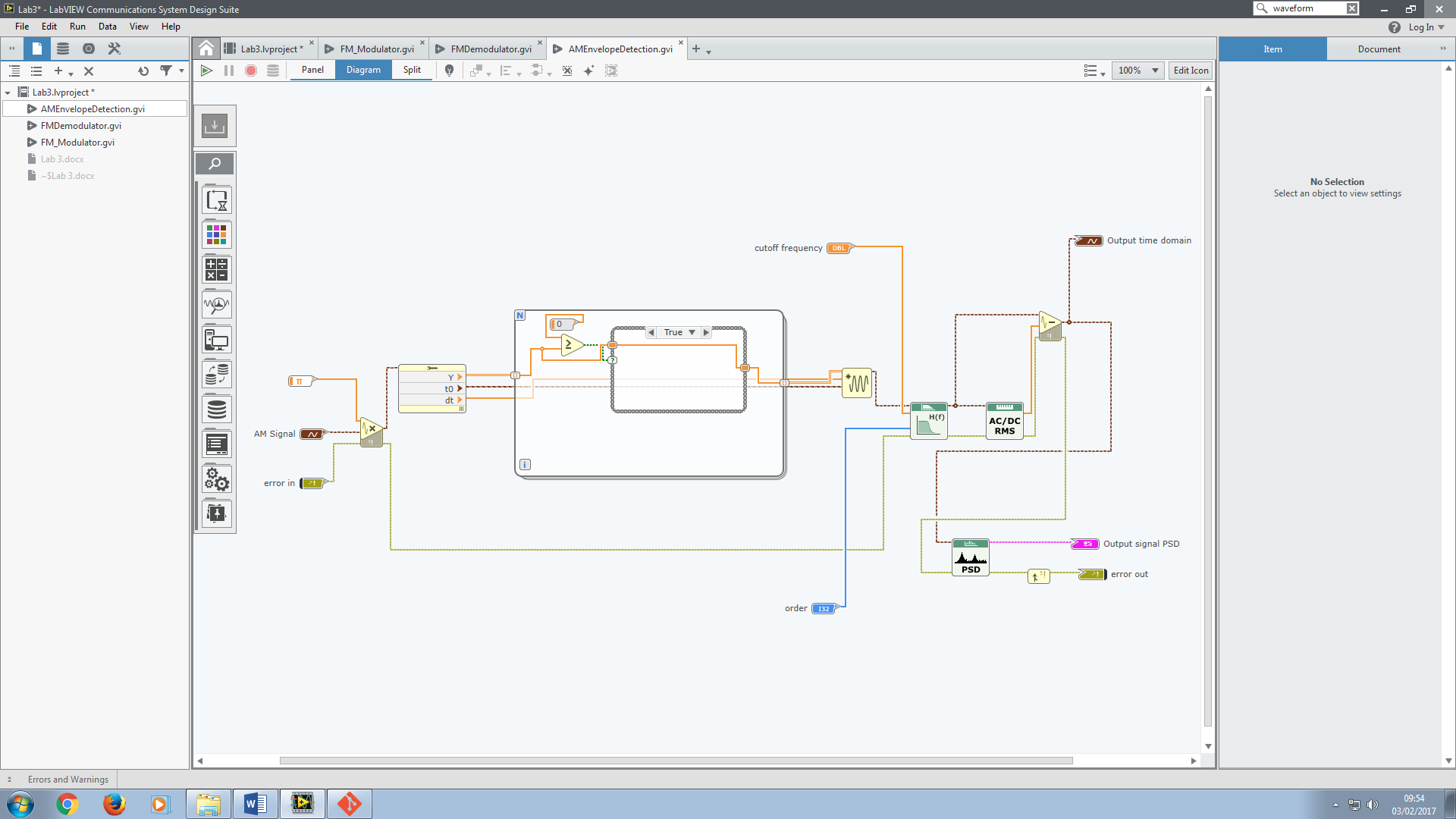
FM modulated signal with frequency deviation of 5000Hz:



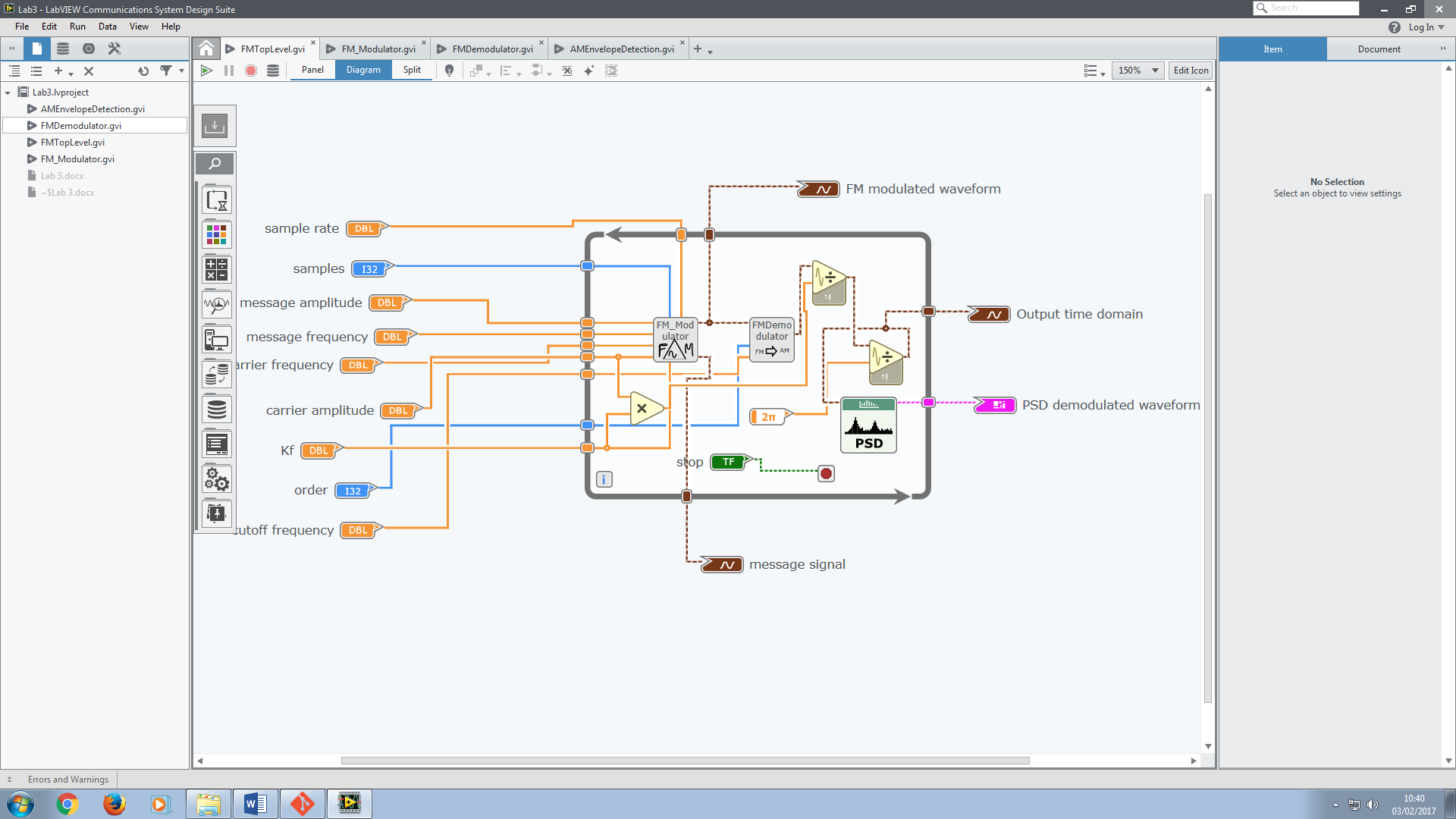
Ex2.

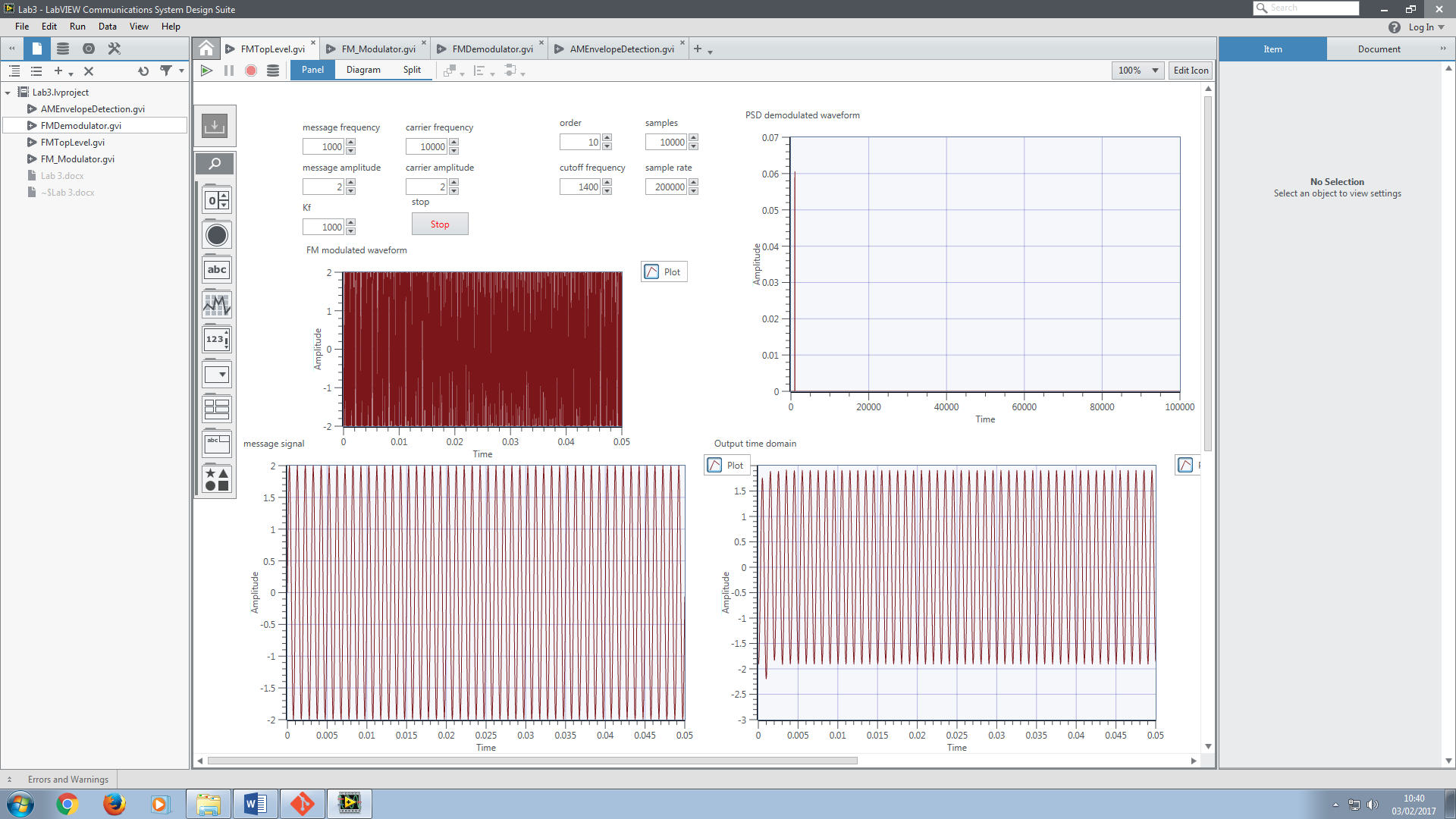


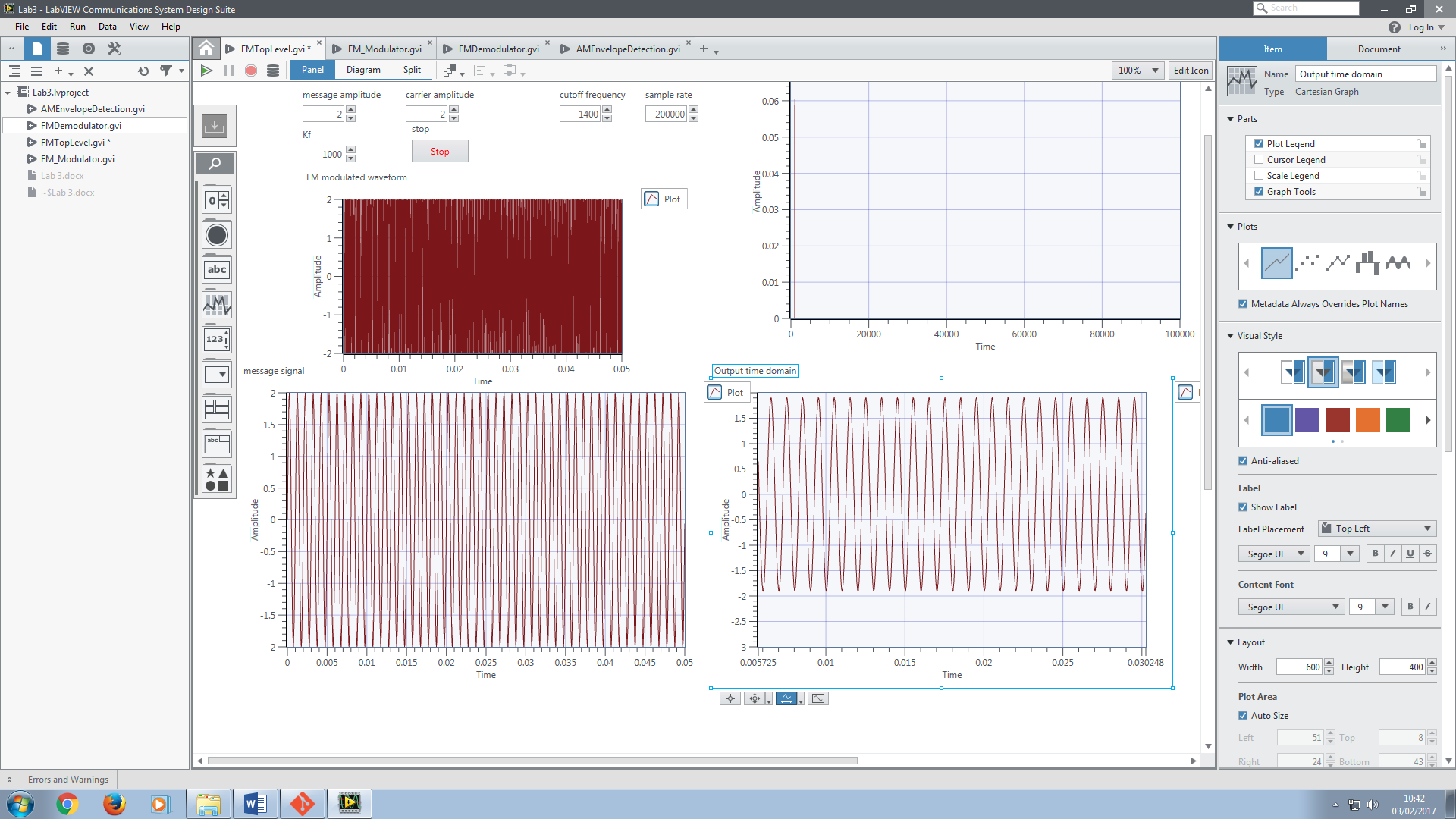
Envelope detection from previous lab:



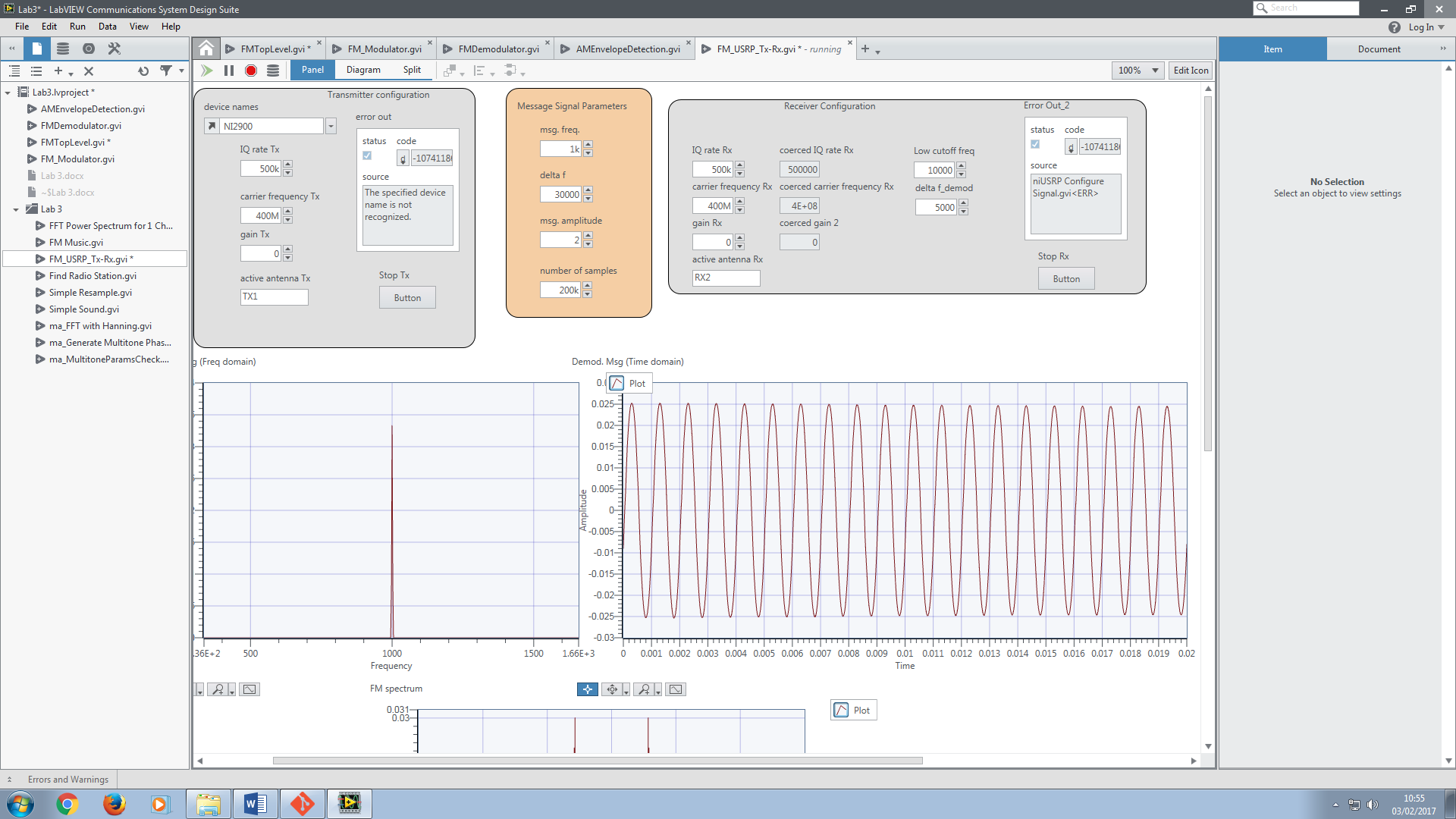
Ex 3.

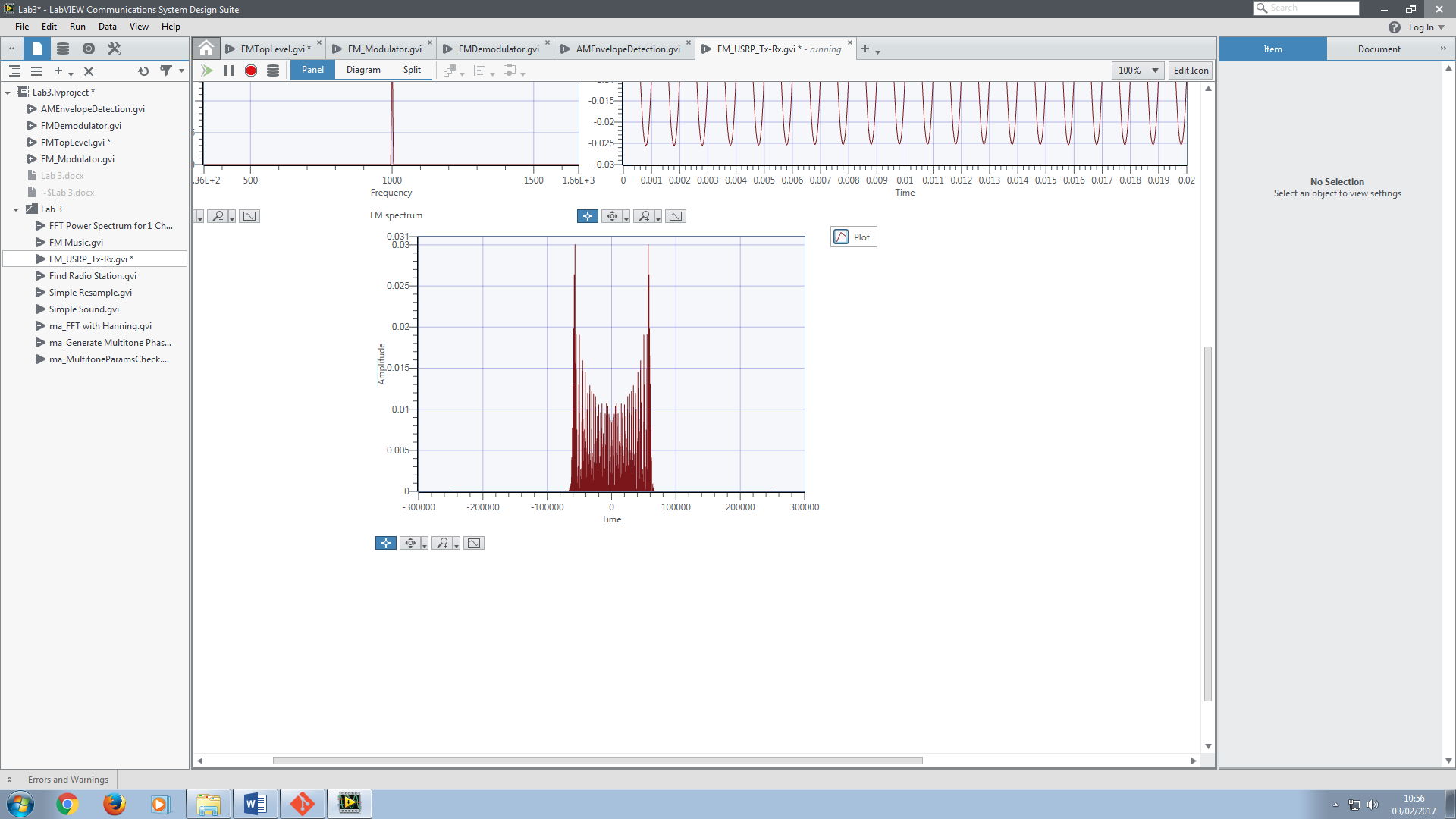


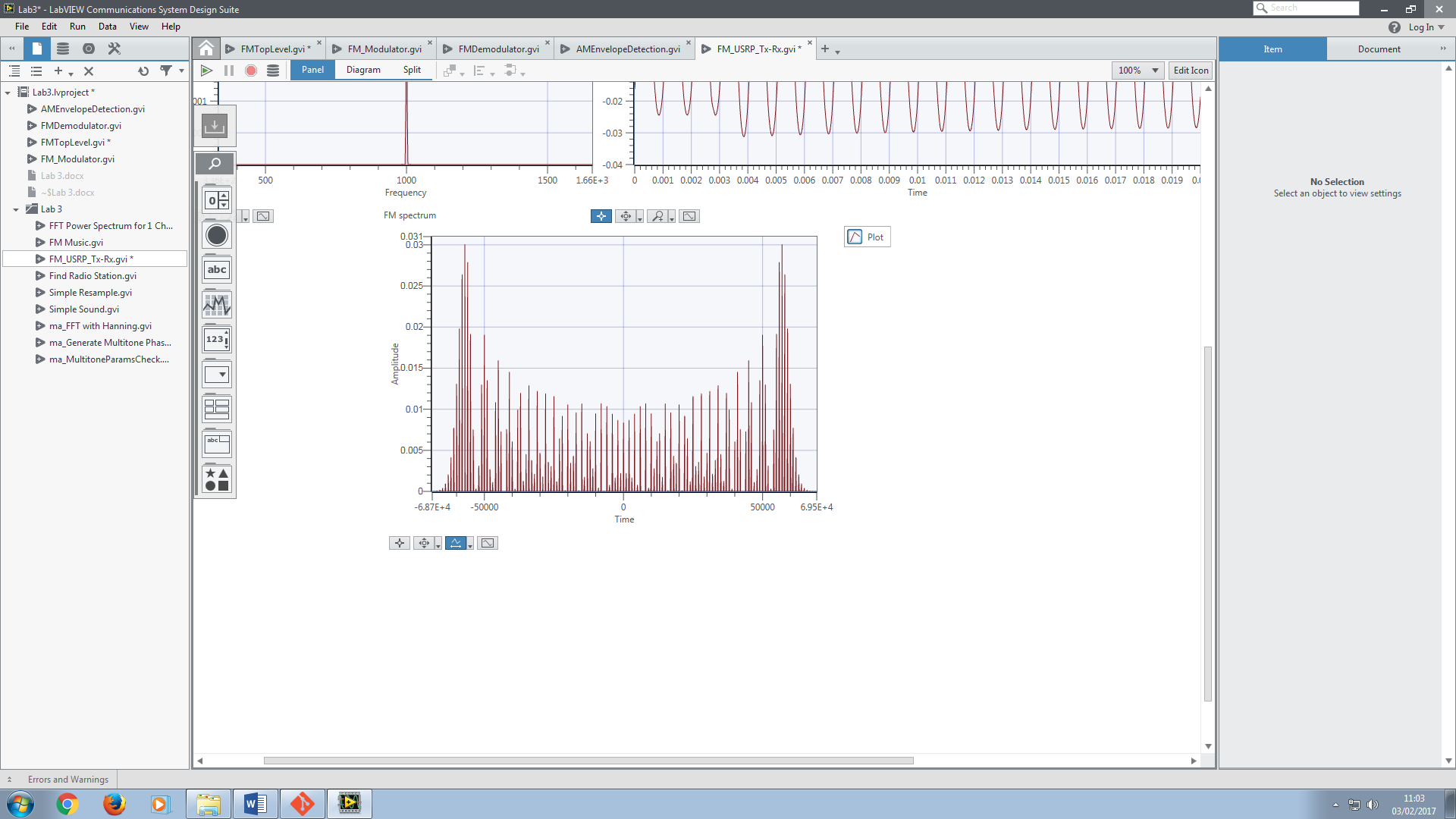




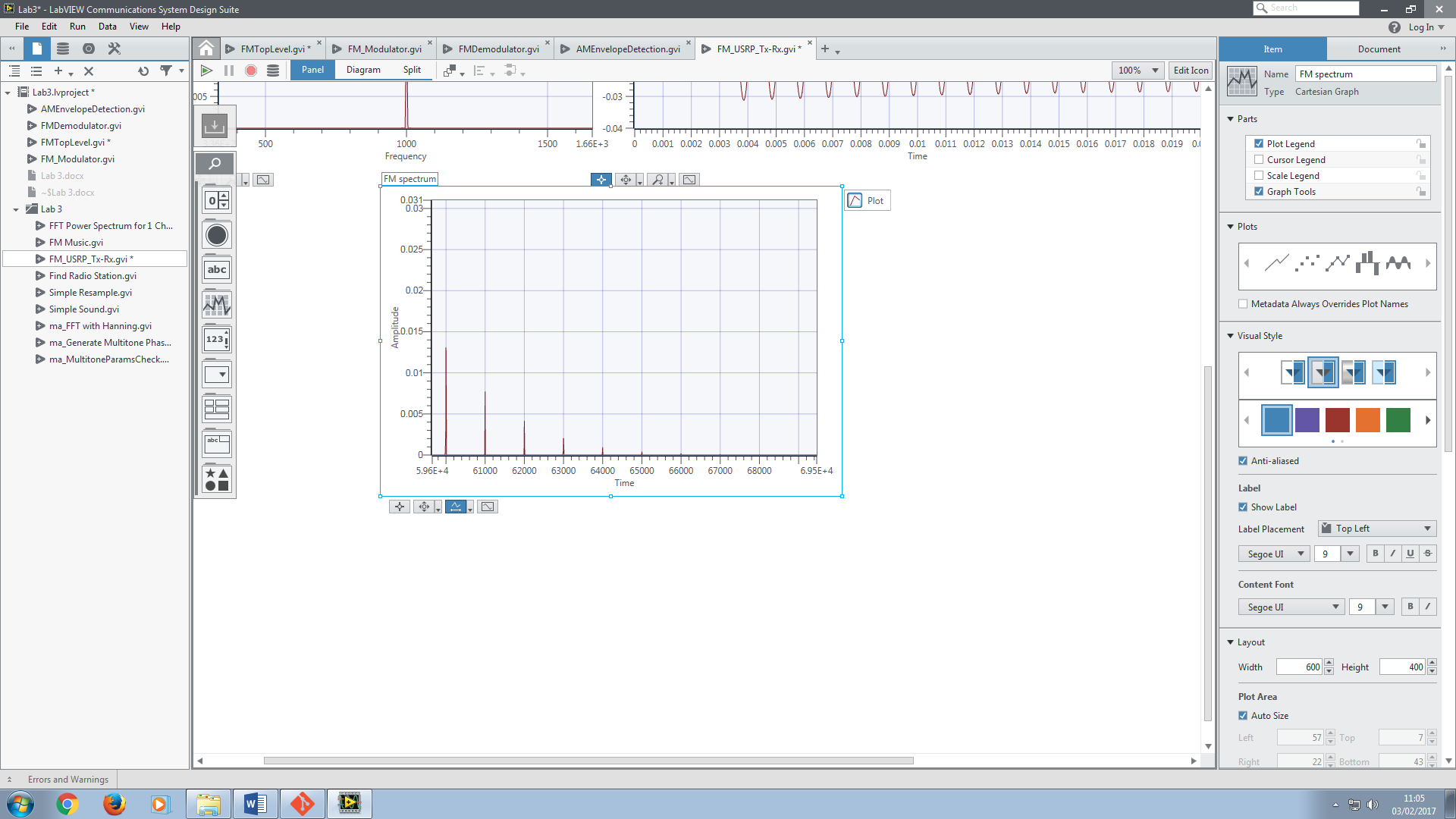
30k



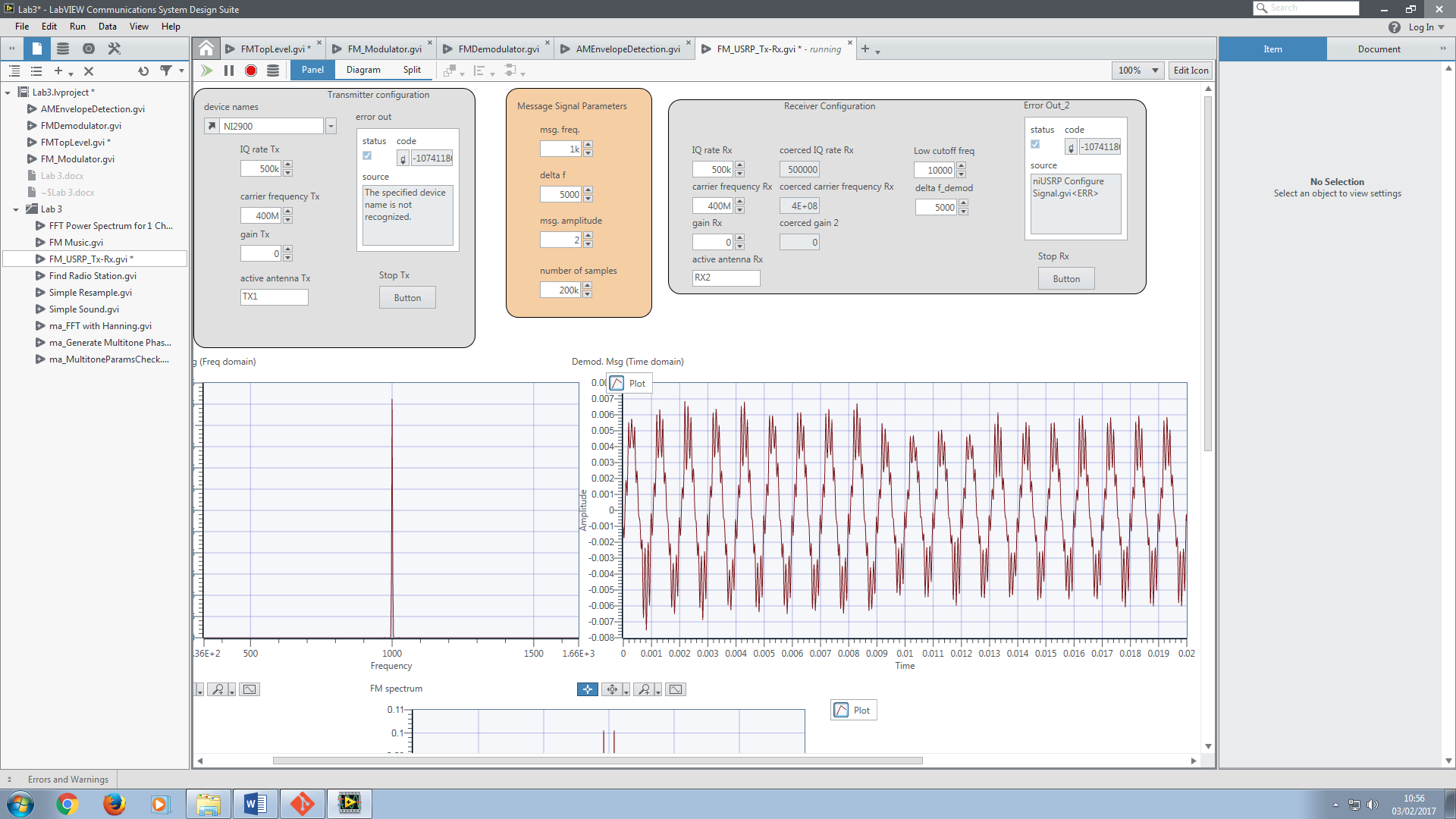


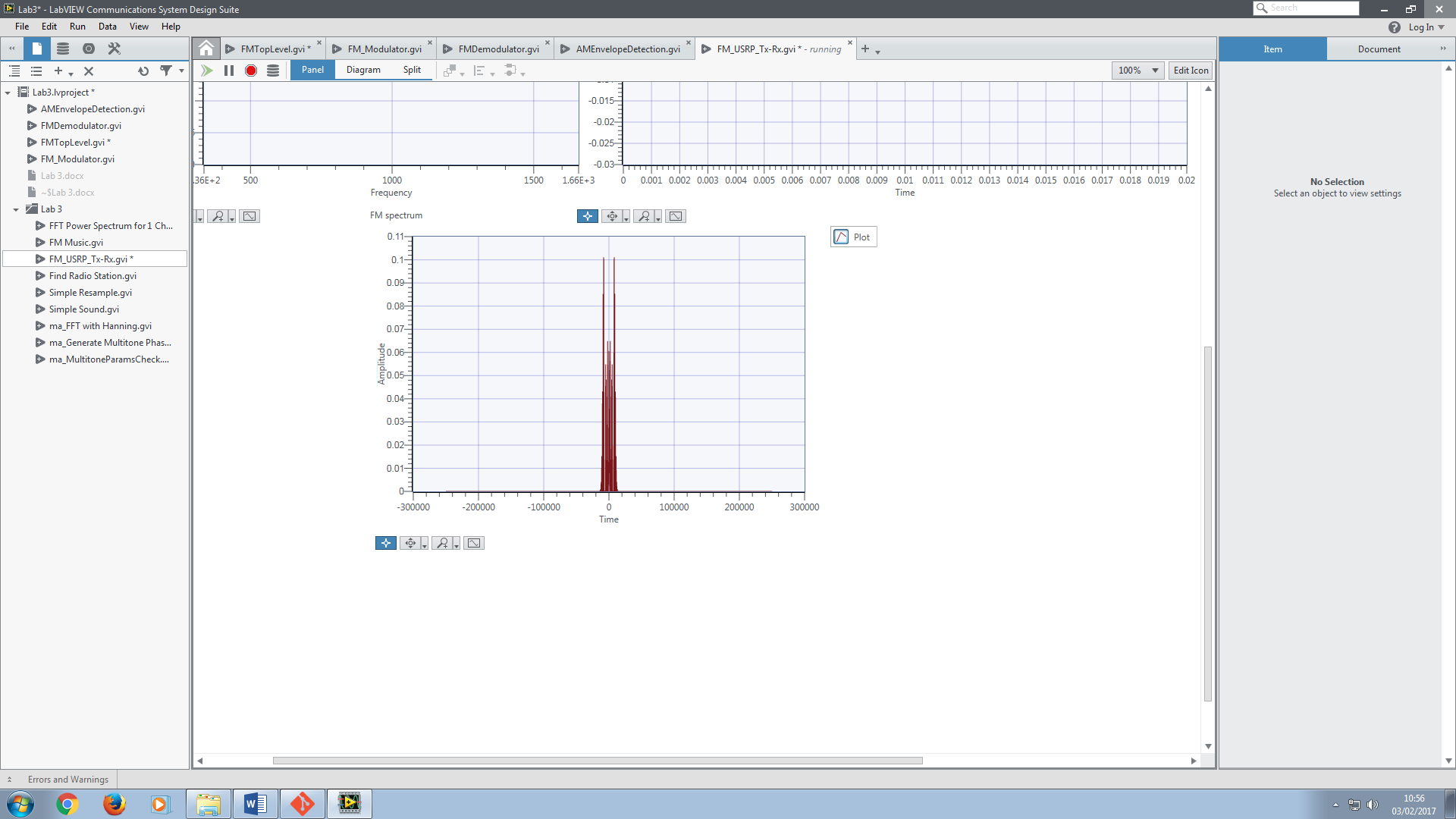


As we can see the bandwidth of the FM modulated message is approximately twice the value of Kf + the original message frequency 2(30k + 1k) = 70k and our FM modulated frequency has a bandwidth of about 66k.

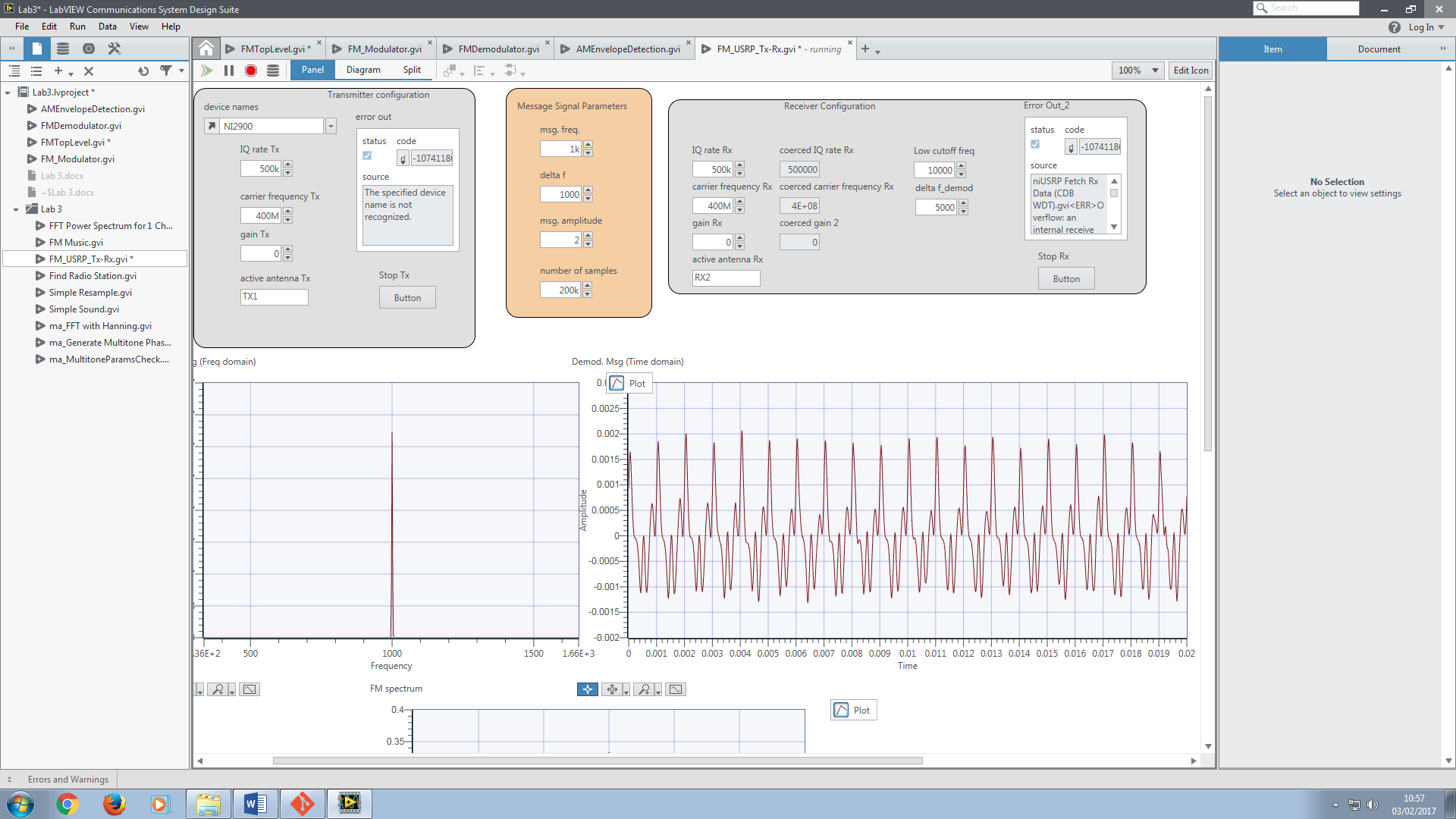


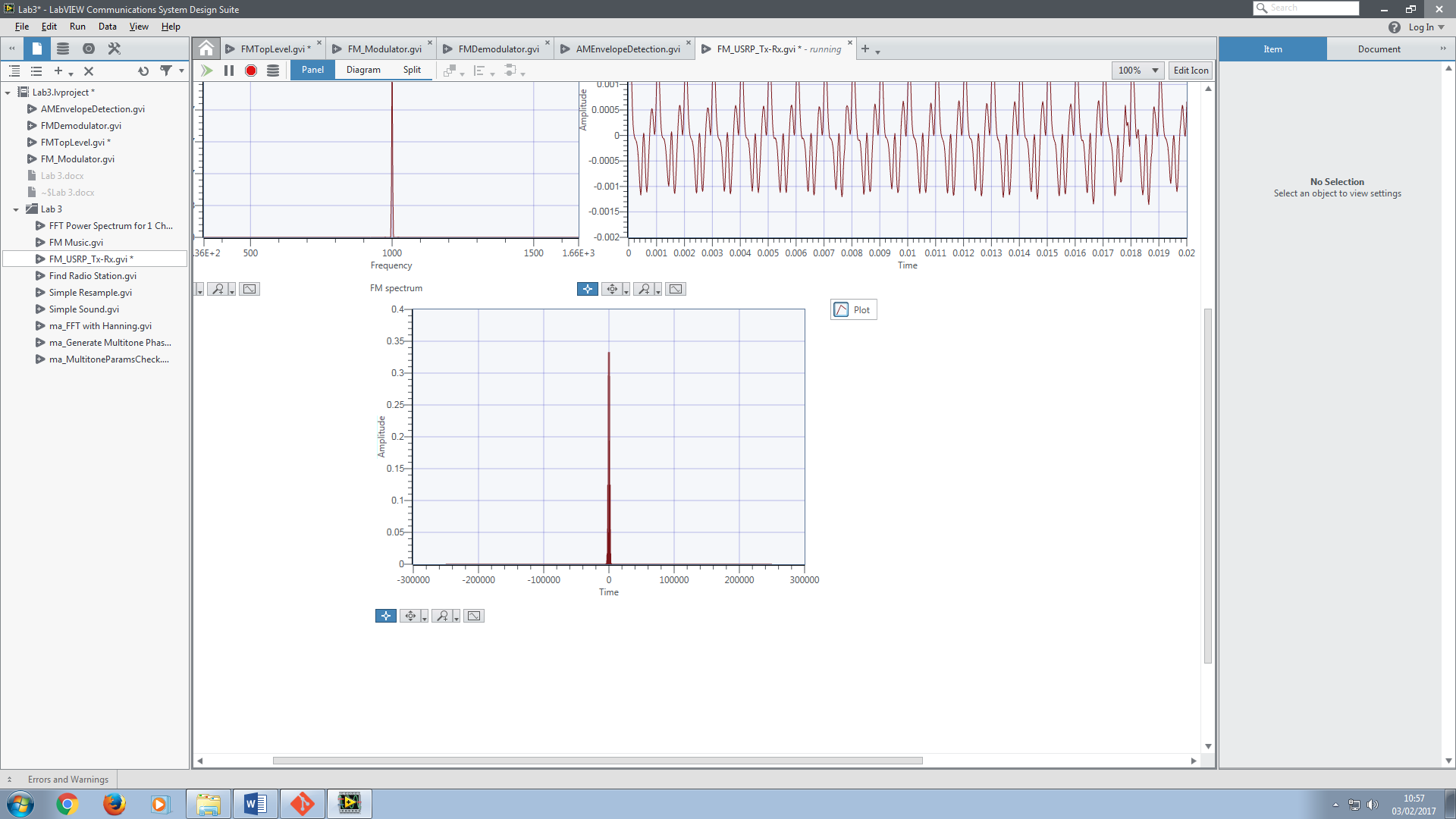
5k

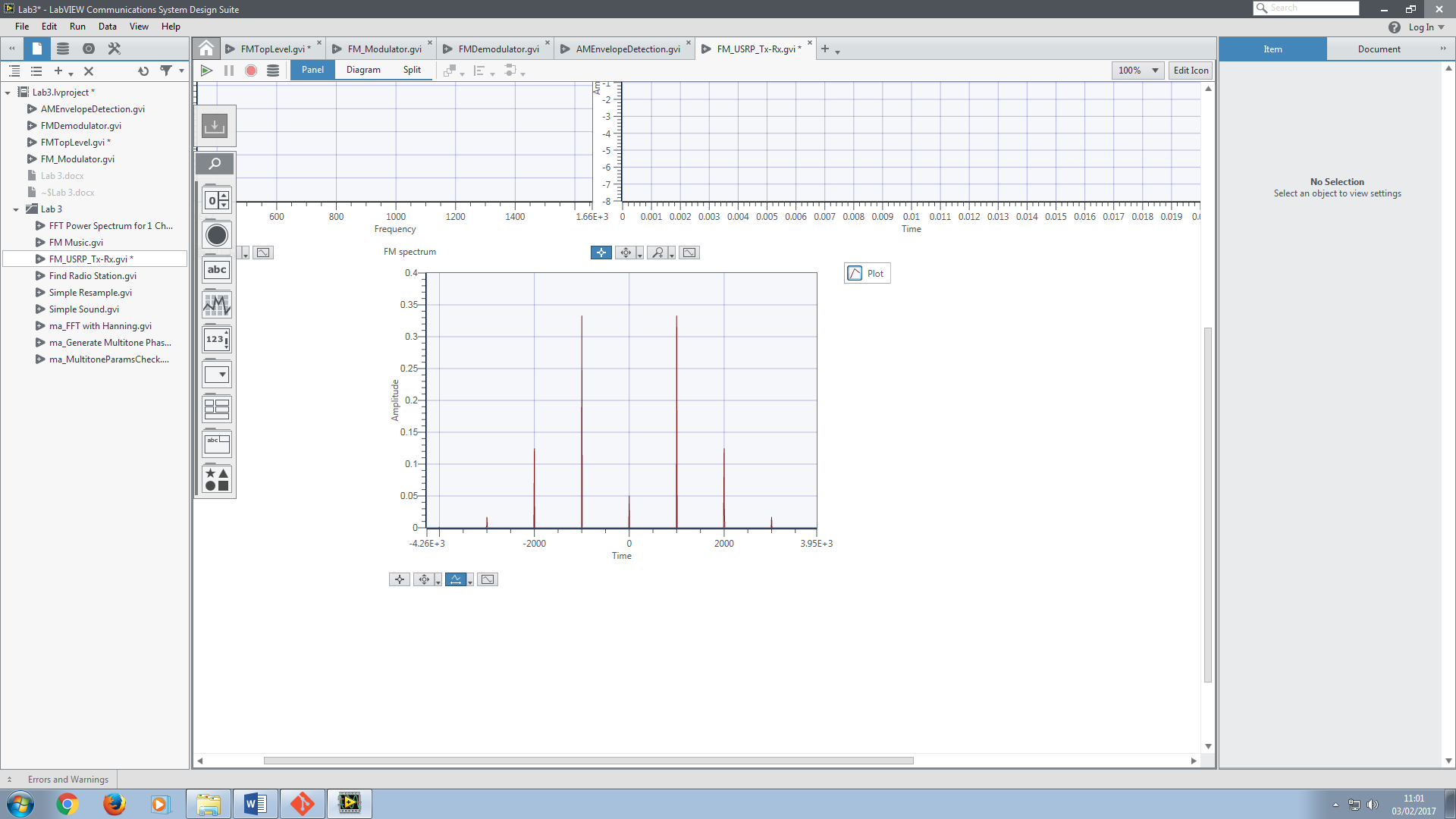




1k







Ex 5.