

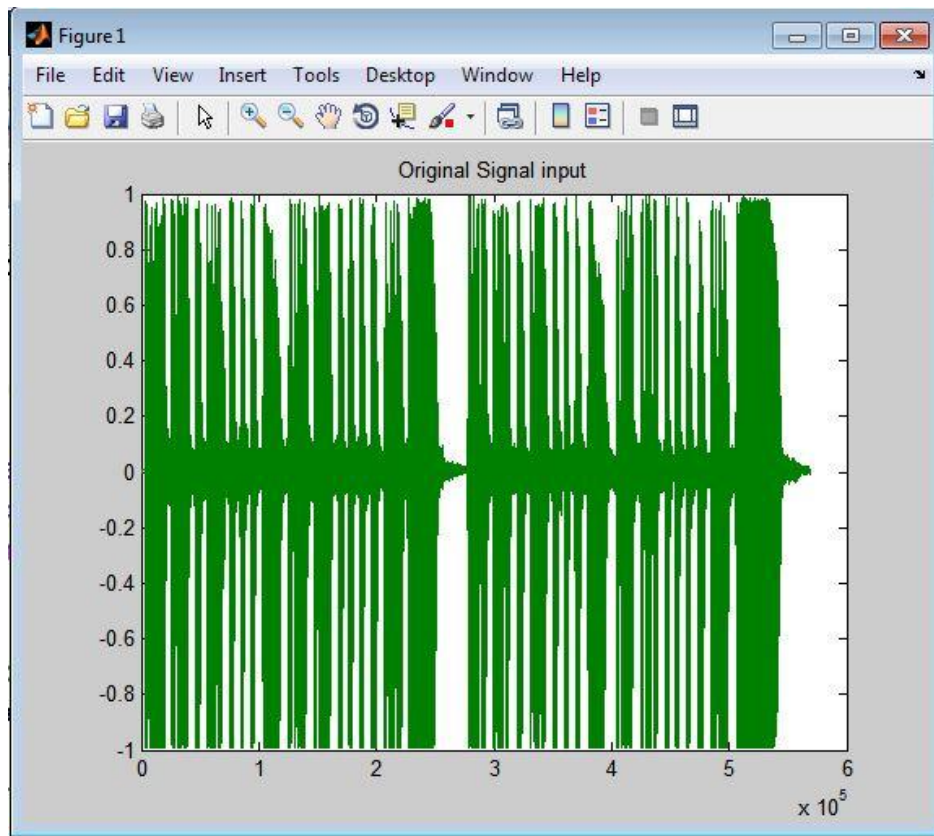
Communication Systems

Final Project

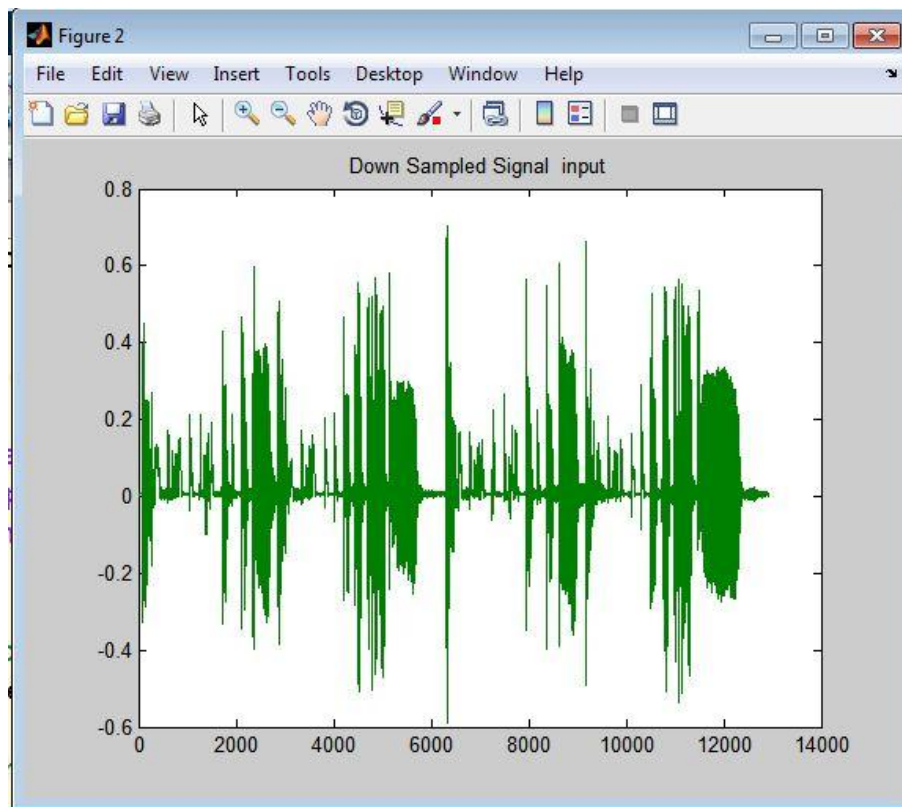
GSM (TX And Rx)

| | |
|-------------------------|-----|
| Aya Ahmed Mahmoud | 4 |
| Ahmed Reda Refaat | 20 |
| Dina Ahmed Kamal | 95 |
| Mahmoud Muhammed Ramdan | 203 |
| Wessam Saeid Elsayed | 265 |

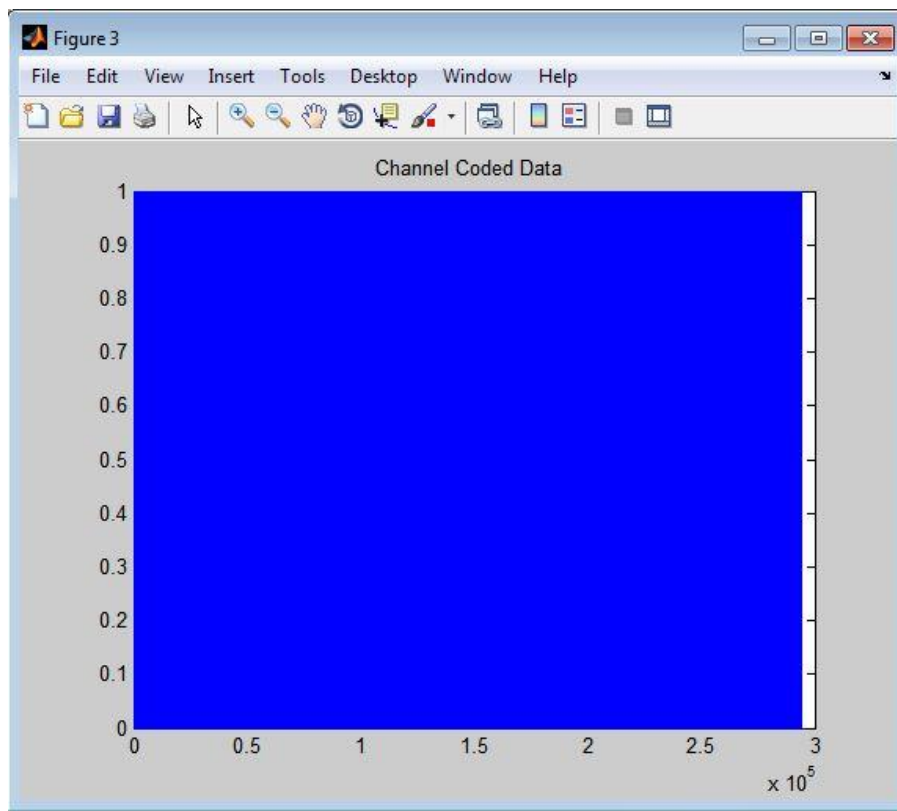
***Original Song**



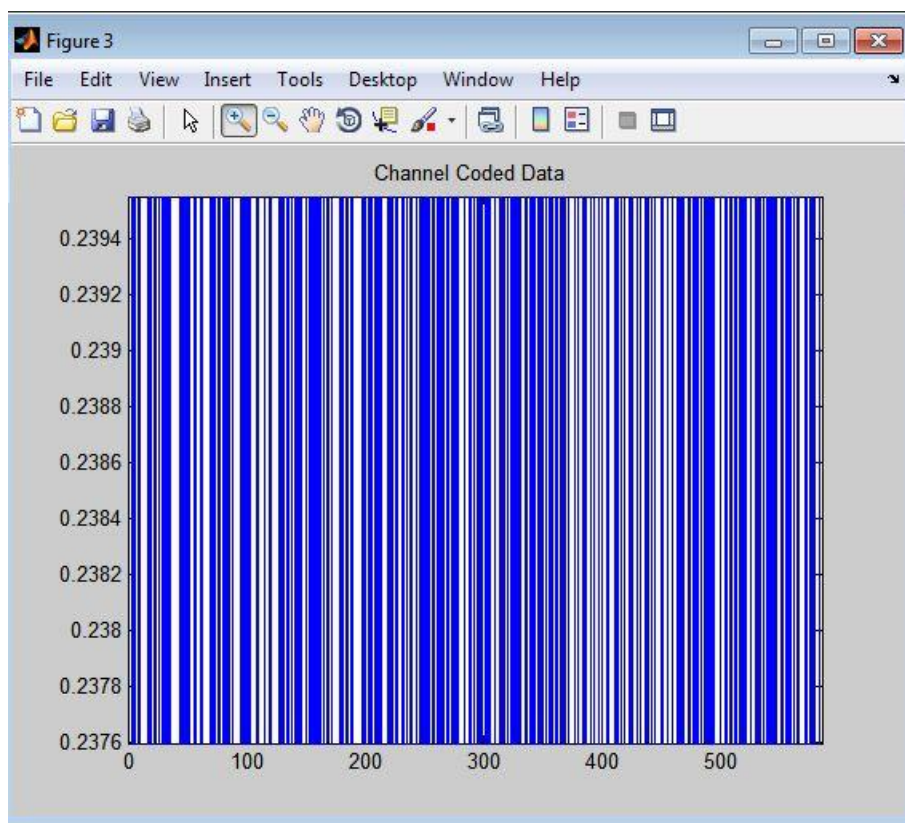
***Downsampled original signal (1000 sample per second)**



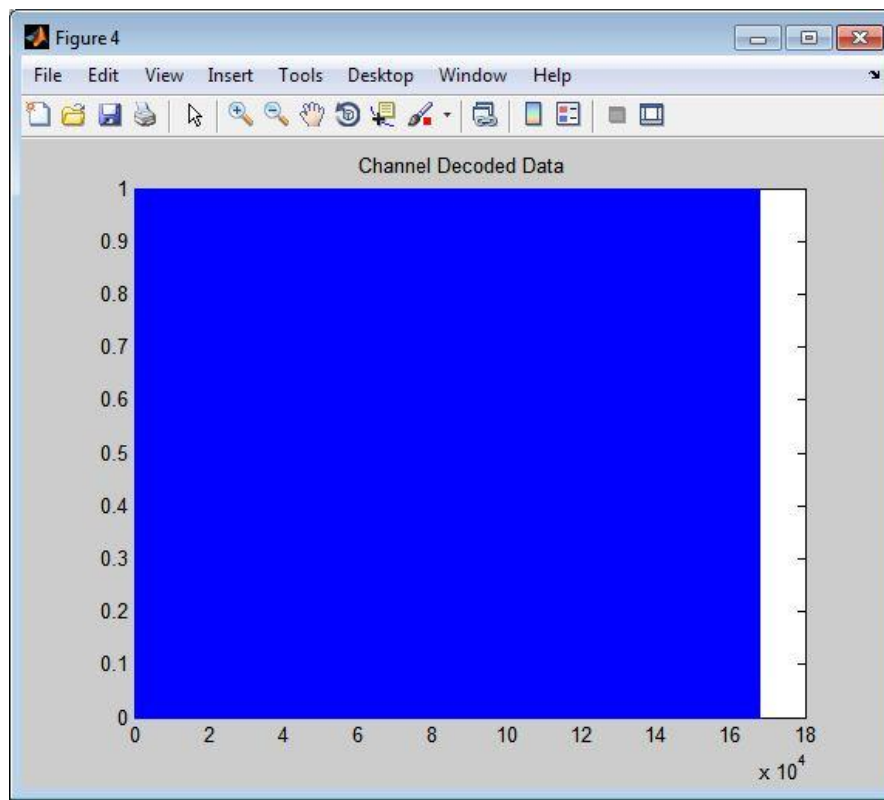
*Channel Coding



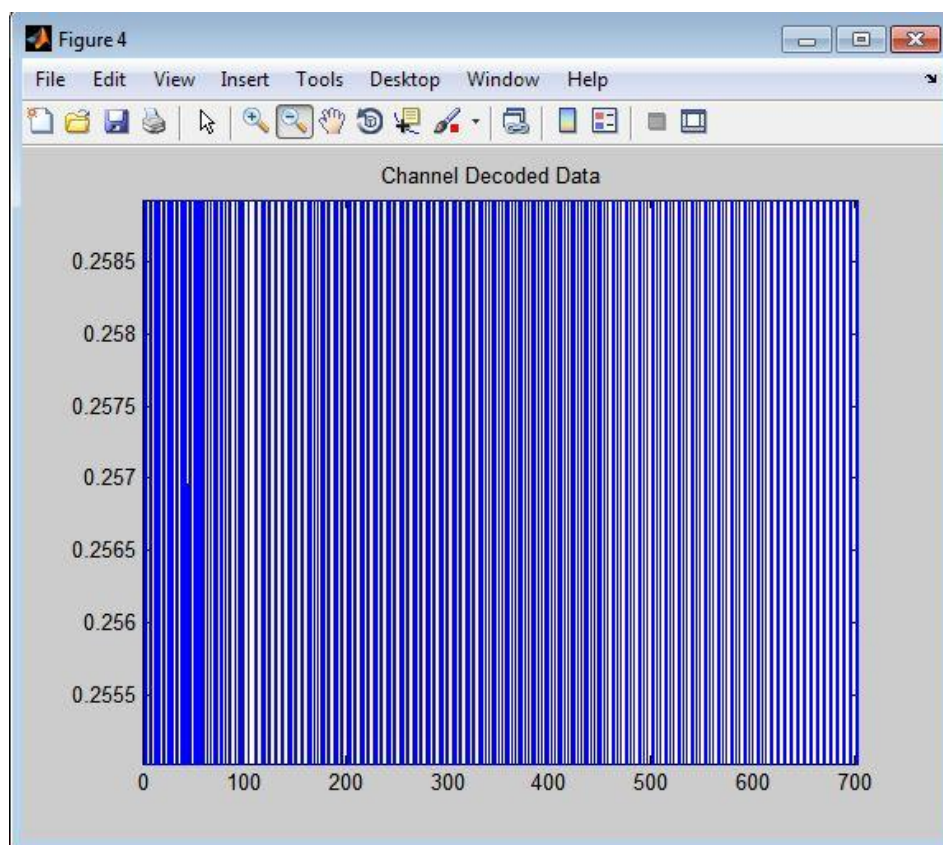
*Channel Coding with zooming



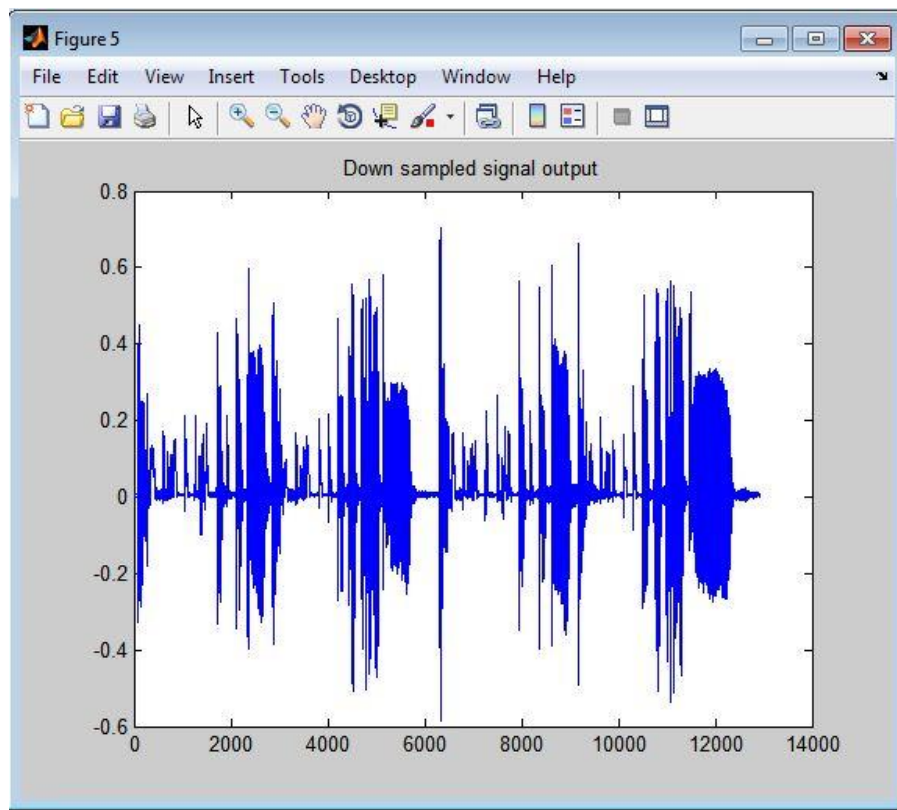
*Channel Decoding



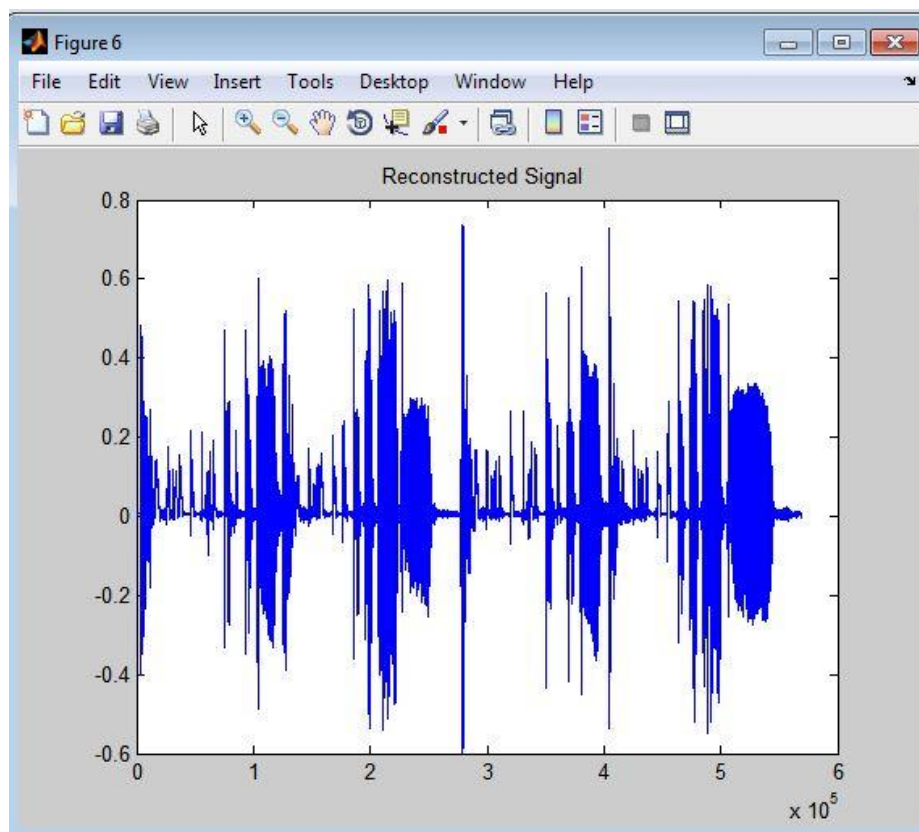
*Channel Decoding with zooming



***Reconstructed downsampled signal (1000 sample per second)**

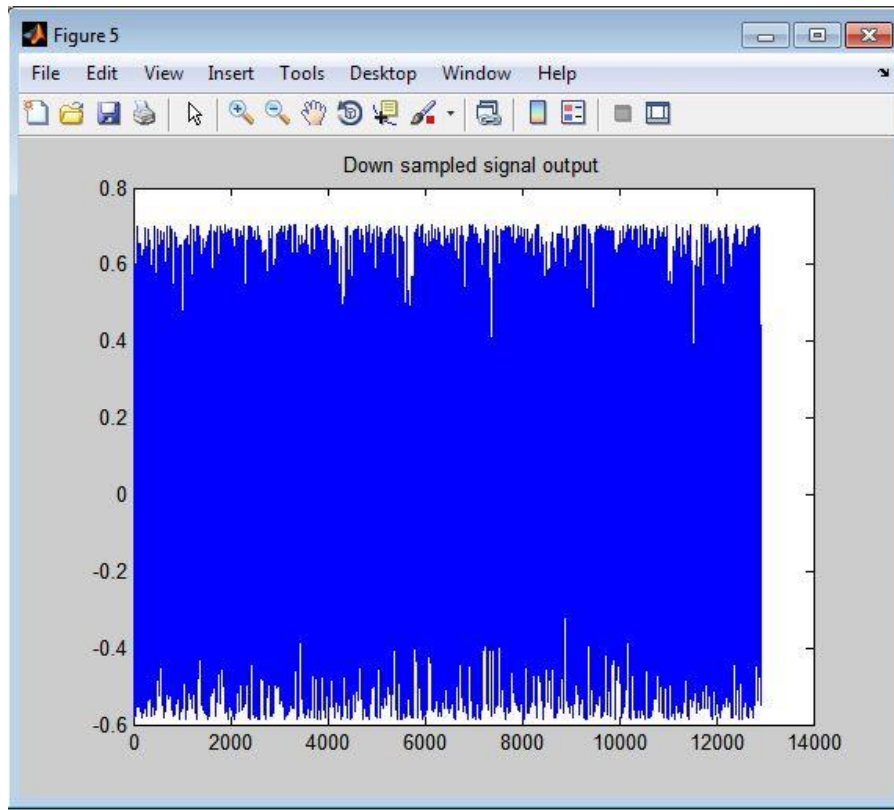


***Reconstructed The Original Signal (after up sampling)**

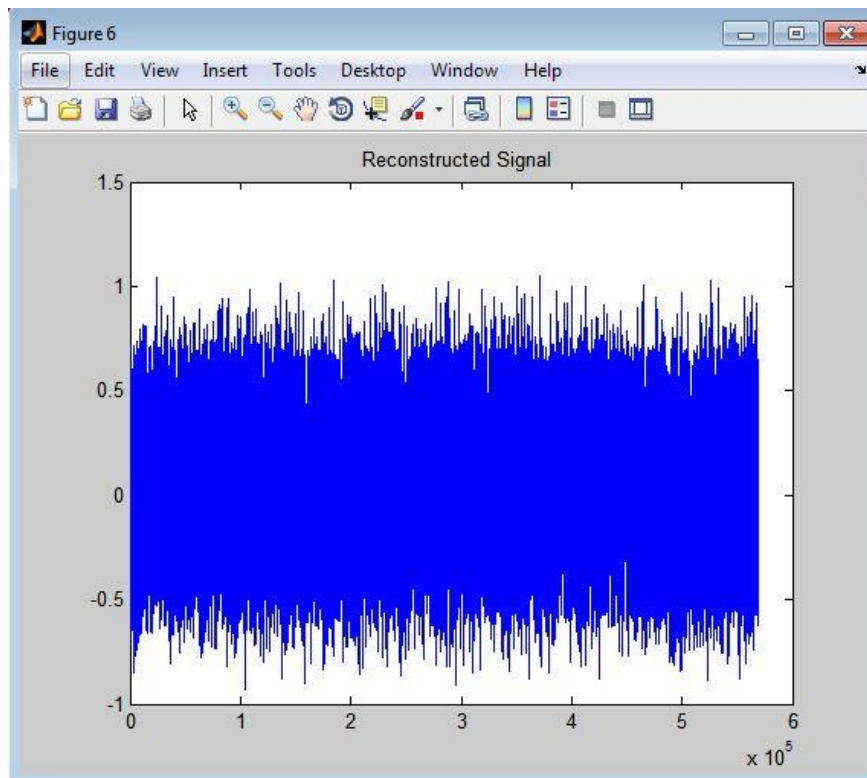


After Appling AWGN

SNR=0 (Received noise only)

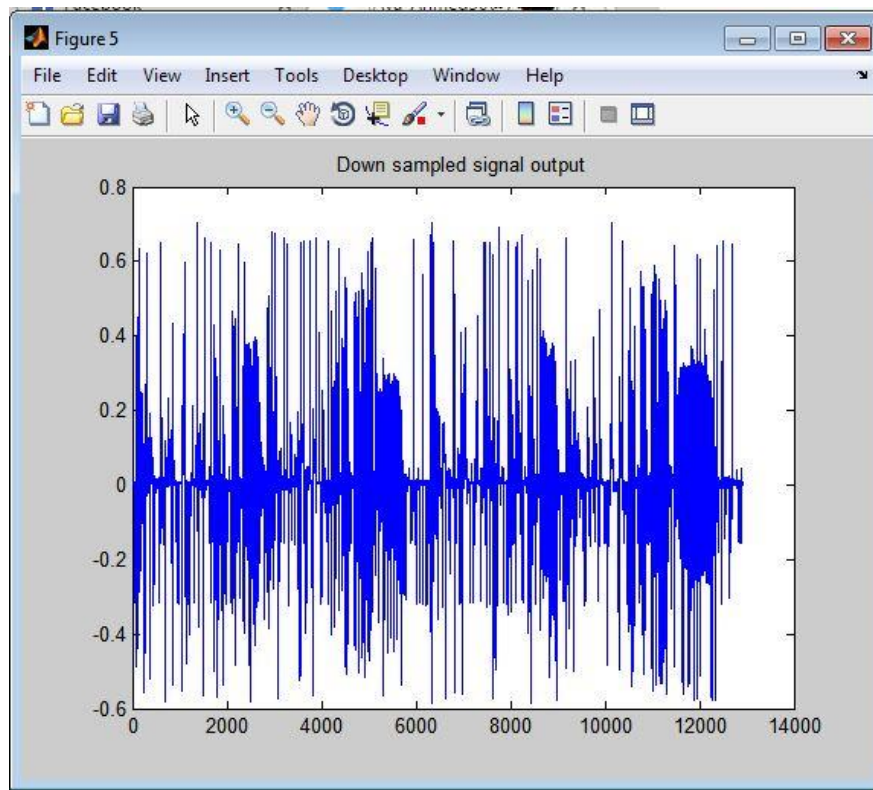


Reconstructed The Original Signal (after up sampling

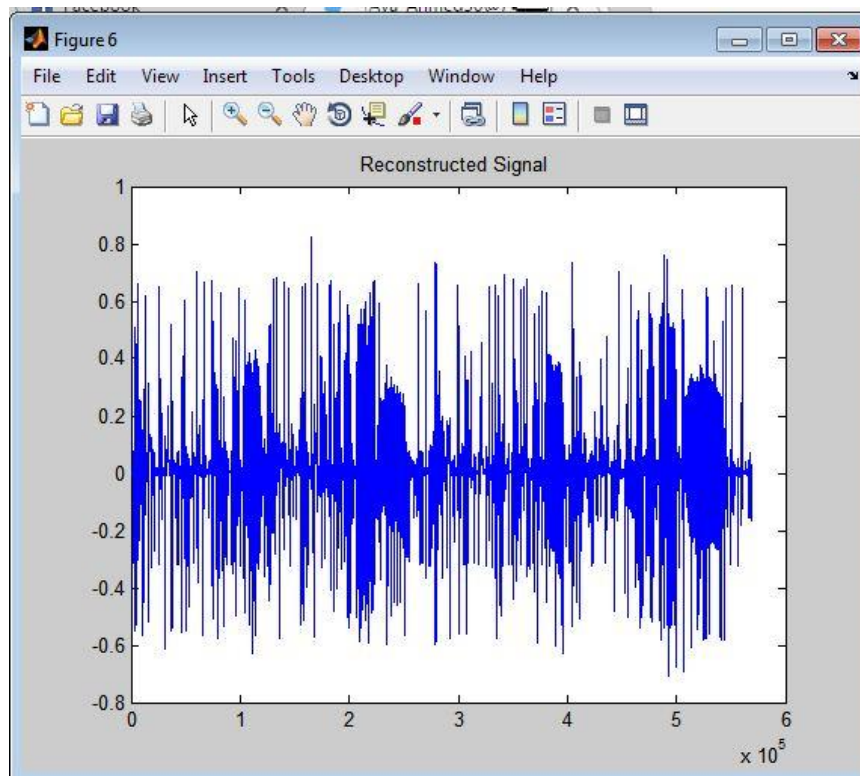


***SNR=10**

***Reconstructed downsampled signal (1000 sample per second)**

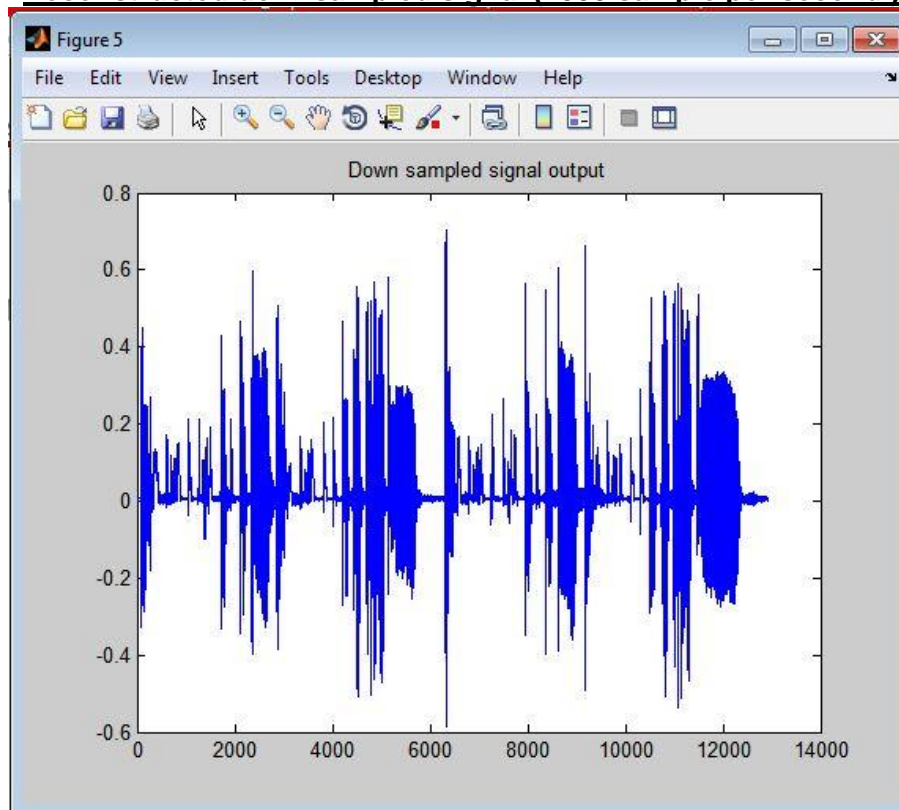


Reconstructed The Original Signal (after up sampling



***SNR=25**

***Reconstructed downsampled signal (1000 sample per second)**



Reconstructed The Original Signal (after up sampling)

