

USRP as Linux Interface

Setup

- 1 USRP Nano Workboard
- 1 DOWELLAR Dongleboard
- Universal Hardware Driver (UHD) Interface
- GNURadio Software Defined Radio

Conclusion

- Frequency tuning is critical to for efficient RF communication
- Quality of RF communication is affected by distance between USRPs and time of experiment
- Modulation schemes should be carefully selected based on the application

Future Work...

- Transmission of the real time video over RF medium
- Automate the frequency tuning process

The First Step...

- Established basic connectivity between the USRPs
- Transmitting Sinusoidal Wave & receive the same on other side
- Varying transmission frequency and analyse effect on received output

A little ambitious...

Real time Video Transmission over USRP

- Use VLC streamer to stream real time audio from webcam
- Create a UNIX pipe
- Read data into this Unix pipe to receive it in the GNURadio
- Simulate by having transmission and reception on the same PC

Problem Description

- To provide wireless connectivity between two desktops using USRP-as-wireless-card
- To implement frequency tuning in software between the two USRPs

Moving Ahead...

Streamed Audio Transmission over USRP

- Read the audio file into GNURadio
- Modulation and Transmission over RF Interface
- Reception and Demodulation of the signal
- Play back received audio and save it in a file
- Varying frequency as transmitter and see frequency slider to lock the receiver on transmitted frequency

USRP as Linux Interface

Setup

- 1 USRP Nano Motherboard
- 1 XCV3K100 Development Board
- Universal Hardware Driver (UHD) Interface
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Problem Description

- To provide wireless connectivity between two desktops using USRP as wireless card
- To implement frequency tuning to enhance between the two USRPs

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Problem Description

- *To provide wireless connectivity between two desktops using USRP as wireless card*
- *To implement frequency tuning in software between the two USRPs*

Setup

- *2 USRP N210 Motherboard*
- *2 XCVR2450 Daughterboard*
- *Universal Hardware Driver (UHD) Interface*
- *GNURadio Software Defined Radio*



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Real time Video Transmission over USRP

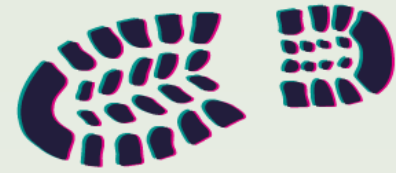


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- 1 USRP Nano Motherboard
- 1 XCV30450 Daughterboard
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- GNURadio Software Defined Radio

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