Options
Title: DCF77 Channel
Author: henningM1R
Output Language: Python
Generate Options: QT GUI

Complexity: 122ubal

QT GUI Range
ID: NoiseGain
Label: NoiseGain
Default Value: 1
Start: 10m
Stop: 3
Step: 10m

Variable
ID: samp_rate
Value: 48k

Variable
ID: freq_DCF77
Value: 77.5k

QT GUI Range
ID: fading_freq
Default Value: 1.25M
Start: 1M
Stop: 6M
Step: 100k

low frequency => slower fades
high frequency => faster fades

Variable
ID: v
Value: 277.778m

speed
(faster than in reality)

Variable
ID: c
Value: 300M

speed of light

QT GUI Time Sink
Name: DCF-Sign...hannel, Time
Number of Points: 192k
Sample Rate: 48k
Autoscale: No

QT GUI Frequency Sink
Name: DCF77 Si...l, Frequency
FFT Size: 1024
Center Frequency (Hz): 0
Bandwidth (Hz): 48k

TCP Source
Address: 127.0.0.1
Port: 55.553k
Mode: Client

out → in0

Add
out

Fast Noise Source
Noise Type: Gaussian
Amplitude: 1
Seed: 0
Variate Pool Size: 8.192k

out → in1

Fading Model
Num Sinusoids (SoS model): 12
Normalized Max Doppler (fD*Ts): 24.112...7n
LOS Model: Rayleigh/NLOS
Seed: 0

in / out

Selector
Enabled: Enabled
Number of Inputs: 2
Number of Outputs: 1
Input Index: 0
Output Index: 0

in0
in1
en
iindex
oindex
out

QT GUI Toggle Button
ID: fading_toggle_button
Label: Fading (on/off)
Default Value: 0
Initial State: Released
Pressed: 1
Released: 0

enable/disable slow
fading effect

state

TCP Sink
Mode: Server
Port: 55.554k