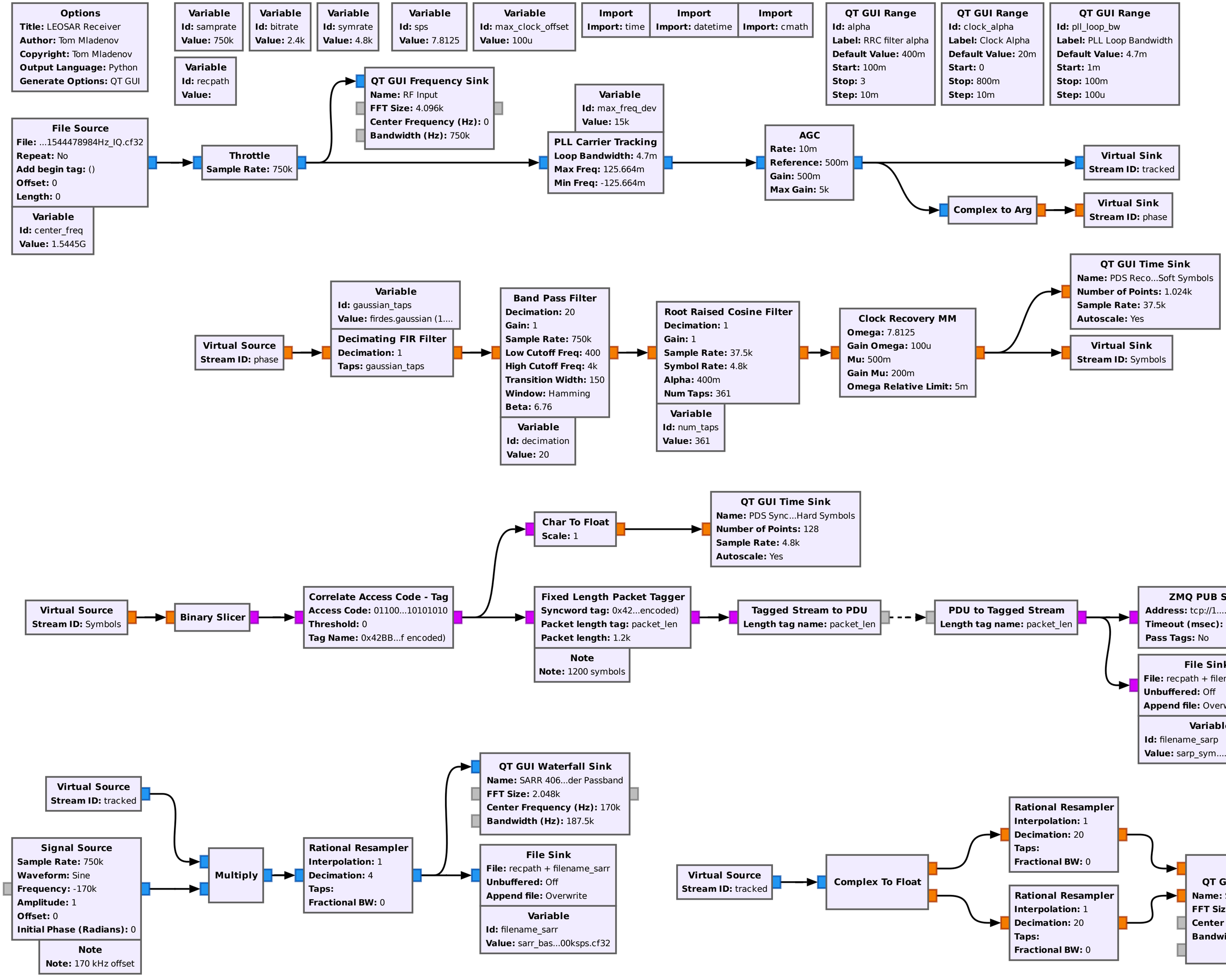
Options
Title: LEOSAR Receiver
Author: Tom Mladenov
Copyright: Tom Mladenov
Output Language: Python
Generate Options: QT GUI
Variable
Id: samprate
Value: 750k
Variable
Id: bitrate
Value: 2.4k
Variable
Id: symrate
Value: 4.8k
Variable
Id: sps
Value: 7.8125
Variable
Id: max_clock_offset
Value: 100u
Import
Import: time
Import
Import: datetime
Import
Import: cmath
QT GUI Range
Id: alpha
Label: RRC filter alpha
Default Value: 400m
Start: 100m
Stop: 3
Step: 10m
QT GUI Range
Id: clock_alpha
Label: Clock Alpha
Default Value: 20m
Start: 0
Stop: 800m
Step: 10m
QT GUI Range
Id: pll_loop_bw
Label: PLL Loop Bandwidth
Default Value: 4.7m
Start: 1m
Stop: 100m
Step: 100u
Variable
Id: recpath
Value:
QT GUI Frequency Sink
Name: RF Input
FFT Size: 4.096k
Center Frequency (Hz): 0
Bandwidth (Hz): 750k
File Source
File: ...1544478984Hz_IQ.cf32
Repeat: No
Add begin tag: ()
Offset: 0
Length: 0
Throttle
Sample Rate: 750k
Variable
Id: max_freq_dev
Value: 15k
PLL Carrier Tracking
Loop Bandwidth: 4.7m
Max Freq: 125.664m
Min Freq: -125.664m
AGC
Rate: 10m
Reference: 500m
Gain: 500m
Max Gain: 5k
Virtual Sink
Stream ID: tracked
Complex to Arg
Virtual Sink
Stream ID: phase
Variable
Id: center_freq
Value: 1.5445G
Variable
Id: gaussian_taps
Value: firdes.gaussian (1....
Virtual Source
Stream ID: phase
Decimating FIR Filter
Decimation: 1
Taps: gaussian_taps
Band Pass Filter
Decimation: 20
Gain: 1
Sample Rate: 750k
Low Cutoff Freq: 400
High Cutoff Freq: 4k
Transition Width: 150
Window: Hamming
Beta: 6.76
Variable
Id: decimation
Value: 20
Root Raised Cosine Filter
Decimation: 1
Gain: 1
Sample Rate: 37.5k
Symbol Rate: 4.8k
Alpha: 400m
Num Taps: 361
Variable
Id: num_taps
Value: 361
Clock Recovery MM
Omega: 7.8125
Gain Omega: 100u
Mu: 500m
Gain Mu: 200m
Omega Relative Limit: 5m
QT GUI Time Sink
Name: PDS Reco...Soft Symbols
Number of Points: 1.024k
Sample Rate: 37.5k
Autoscale: Yes
Virtual Sink
Stream ID: Symbols
Virtual Source
Stream ID: Symbols
Binary Slicer
Correlate Access Code - Tag
Access Code: 01100...10101010
Threshold: 0
Tag Name: 0x42BB...f encoded)
Char To Float
Scale: 1
QT GUI Time Sink
Name: PDS Sync...Hard Symbols
Number of Points: 128
Sample Rate: 4.8k
Autoscale: Yes
Fixed Length Packet Tagger
Syncword tag: 0x42...encoded)
Packet length tag: packet_len
Packet length: 1.2k
Note
Note: 1200 symbols
Tagged Stream to PDU
Length tag name: packet_len
PDU to Tagged Stream
Length tag name: packet_len
ZMQ PUB Sink
Address: tcp://1....0.1:38211
Timeout (msec): 100
Pass Tags: No
File Sink
File: recpath + filename_sarp
Unbuffered: Off
Append file: Overwrite
Variable
Id: filename_sarp
Value: sarp_sym....4864373.u8
Virtual Source
Stream ID: tracked
Signal Source
Sample Rate: 750k
Waveform: Sine
Frequency: -170k
Amplitude: 1
Offset: 0
Initial Phase (Radians): 0
Note
Note: 170 kHz offset
Multiply
Rational Resampler
Interpolation: 1
Decimation: 4
Taps:
Fractional BW: 0
QT GUI Waterfall Sink
Name: SARR 406...der Passband
FFT Size: 2.048k
Center Frequency (Hz): 170k
Bandwidth (Hz): 187.5k
File Sink
File: recpath + filename_sarr
Unbuffered: Off
Append file: Overwrite
Variable
Id: filename_sarr
Value: sarr_bas...00ksps.cf32
Virtual Source
Stream ID: tracked
Complex To Float
Rational Resampler
Interpolation: 1
Decimation: 20
Taps:
Fractional BW: 0
Rational Resampler
Interpolation: 1
Decimation: 20
Taps:
Fractional BW: 0
QT GUI Frequency Sink
Name: SARP PLL...onverted PDS
FFT Size: 1.024k
Center Frequency (Hz): 0
Bandwidth (Hz): 37.5k