Options
Title: APRS Tra...key Signing
Author: gr-linux-crypto
Copyright: Copyright 2024
Description: APRS ...ulation.
Output Language: Python
Generate Options: QT GUI

QT GUI Entry
ID: aprs_message
Label: APRS Message
Default Value: >Hel...trokey.

APRS message text (will be signed before AX.25 encoding)

Variable
ID: samp_rate
Value: 48k

Sample rate for AFSK modulation

Variable
ID: baud_rate
Value: 1.2k

Baud rate for APRS (typically 1200 baud)

QT GUI Entry
ID: aprs_callsign
Label: Callsign
Default Value: N0CALL

Source callsign for APRS

Vector Source
Vector: [ord(c) for c in a...
Tags:
Repeat: No

out

Source APRS message data

Nitrokey gr-nacl APRS Signer

in

out

Nitrokey Interface
Slot Number: 1
Auto Repeat: False

in

out

Load Ed25519 private key from Nitrokey slot for signing

in

set_symbol_table

Chunks to Symbols
Symbol Table: 0, 1
Dimension: 2

out

Convert signed message bytes to symbols for AFSK modulation

Frequency Mod
Sensitivity: 157.079m

out

AFSK modulator - Bell 202 (1200 Hz mark, 2200 Hz space)

Throttle
Sample Rate: 48k
Limit: None

in

out

File Sink
File: ...ned_transmission.bin
Unbuffered: Off
Append file: Overwrite

in

Save AFSK modulated APRS signal to file (can be transmitted or analyzed)

QT GUI Time Sink
Name: Signed APRS Message
Number of Points: 1.024k
Sample Rate: 48k
Autoscale: Yes

in

Visualize signed APRS message data (before modulation)

QT GUI Frequency Sink
Name: AFSK Spectrum
FFT Size: 1024
Center Frequency (Hz): 0
Bandwidth (Hz): 48k

in

Visualize AFSK modulated APRS signal spectrum

QT GUI Entry
ID: nitrokey_slot
Label: Nitrokey Slot
Default Value: 1

Nitrokey slot number (0-15) containing Ed25519 private key