

Copyright (C) 2023 mirage335
See the end of the file for license conditions.
See license.txt for pumpCompanion license conditions.

Everyone should be using something like this, as well as maybe not many other related things. But you probably don't know what this is, so have fun. (ie. rewrite this placeholder text later)

Usage

```
./ubiquitous_bash.sh
```

Standards

input.rrf
framed.rrf
output.rrf

Any automation of the preprocessing/postprocessing step by 'gr-pipe' may use a separate 'flowgraph' pointing to 'framed.rrf' .
Similarly, shell/batch files may perform this step.

Design

Conclusions

*) Framing arbitrary size files with stock GNURadio is not possible, due to 'Stream to Tagged Stream', at least with the stock version, blocking output until a multiple of the specified length for tagging.

*) Cygwin installation of GNURadio may be possible. Possibly also gr-pipe .

Safety

Reference

<https://github.com/greatscottgadgets/hackrf/issues/1159>

MAJOR - SEVERE - 'Possible solution: at TX startup, have the M4 not run `baseband_streaming_enable` until the first two 16KB transfers have arrived from the host, meaning that the M0 has a full buffer ready to transmit.'

https://aaronscher.com/GNU_Radio_Companion_Collection/Audio_modem.html

<https://wiki.gnuradio.org/index.php?title=CygwinInstallMain>

https://wiki.gnuradio.org/index.php/Package_Communications

MAJOR - 'Functionally it replaces a 'File Source' block and a 'Stream to Tagged Stream' block. The advantage of this block is that when the input file size is not an exact multiple of the selected packet length, the remainder at the end of the file is not lost in the 'Stream to Tagged Stream' buffer. This precludes the need for a pre-processor such as the text padding program above.'

https://raw.githubusercontent.com/gnuradio/gnuradio/master/gr-digital/examples/ofdm/ofdm_loopback.grc

https://wiki.gnuradio.org/index.php/Package_Communications

MAJOR - 'Header Format Object' .

MAJOR - 'Using Header Format Default and Correlate Access Code' .

https://wiki.gnuradio.org/images/f/fd/Pkt_7_base_fg.png

'Protocol Formatter' 'Format Obj'

'Header/Payload Demux'

https://wiki.gnuradio.org/images/8/89/Pkt_7_base.grc

Format Obj.: `hdr_format`

https://github.com/gnuradio/gnuradio/blob/master/gr-digital/examples/ofdm/tx_ofdm.grc

Format Obj.: `header_formatter.base()`

https://www.gnuradio.org/doc/doxygen/classgr_1_1digital_1_1packet__header__default.html

'packet_header_default'

<https://www.youtube.com/watch?v=RnAgqGR-D-8>

<https://www.youtube.com/watch?v=VR0mej2o-SM>

Windows... HackRF...

Copyright

This file is part of pumpCompanion.

pumpCompanion is free software: you can redistribute it and/or modify it under the terms of the GNU Affero General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

pumpCompanion is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Affero General Public License for more details.

You should have received a copy of the GNU Affero General Public License along with pumpCompanion. If not, see <http://www.gnu.org/licenses/>.