M17 Protocol Codeplug

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Part II - Codeplug:

CHAPTER 1

Recommendation for the codeplug structure

1.1 Introduction

Codeplugs are ordinary text files with *.m17* extension. They provide an information on:

- channel banks
- channel frequencies
- destination IDs
- transmission mode
- payload type
- encryption mode

Codeplugs should be human-readable and easily editable with common text editors.

1.2 Codeplug file structure

We recommend using YAML for the codeplug files.

1.2.1 Keywords

codeplug:

author: String - Codeplug author, max 16 characters

version: Date and time in YYYY-MM-DDTHH:MM:SS format

bank:

name: String - Channel bank name, 16 characters maximum

channel:

name: String - Channel name, 16 characters maximum

descr: String - Channel Description, 16 characters maximum

freq_rx: Integer - Channel RX Frequency in Hz

freq_tx: Integer - Channel TX Frequency in Hz

mode: Integer - Channel mode. Valid modes are: 0 - Analog, 1 - Digital Voice, 2 - Digital Data, 3 - Digital Voice and Data

encr: Integer - Is encryption enabled? 0 for no encryption, 1 - AES256, 2 - scrambler etc. (refer to M17_spec for details)

nonce: String - 14-byte hex value without leading 0x. nonce for ciphers or initial LFSR value for scrambler

gps: Boolean - If true, and mode value enables digital data, gps data will be transferred along with payload

1.3 Example Codeplug

```
codeplug:
  author: SP5WWP
  version: 2020-28-09T13:20:49
  - bank:
    name: M17
    - channel:
      name: M17_DMO
      descr:
      freq_rx: 439575000
      freq_tx: 439575000
      mode: 2
      encr: 0
      nonce: 0
      gps: false
    - channel:
      name: M17_DMO_2
      descr:
      freq_rx: 439975000
      freq_tx: 439975000
      mode: 2
      encr: 0
      nonce: 0
      gps: false
  - bank:
    name: Repeaters
    - channel:
      name: SR5MS
      descr:
      freq_rx: 439425000
      freq_tx: 431825000
      mode: 2
      encr: 0
      nonce: 0
      gps: false
#codeplug end
```