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Author: Paula Dowie

About Packet White Papers

Abstract

Packet White Papers (PWPs) are a Packet Radio version of the Internet RFC (Request For Comment) series. Their purpose is to collate and disseminate information, to focus thinking and aid collaboration, to stimulate new ideas, and to archive prior art.

PWPs started as Paula G8PZT's personal project, as a means of indexing useful Packet Radio documents, avoiding duplication. Where possible they are now being recovered and published. New PWPs are being added alongside this effort.

Anyone is allowed to submit a document for inclusion in the PWP series. This memo explains what content is acceptable, the basic structure of a PWP, and how to publish.

Status of This Memo

This memo provides information for the Packet Radio community. It does not specify a standard of any kind. Distribution of this memo is unlimited.

Copyright Notice

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1. Introduction

Packet White Papers (PWPs) are a Packet Radio version of the Internet RFC (Request For Comment) series.

PWPs are mainly intended for sharing ideas and information between persons interested in Packet Radio development, and for stimulating discussion and development.

PWPs are also a canonical record of prior art and Packet Radio history.

2. Motivation

The motivations behind the PWP series are as follows:

a) Collation and sharing of ideas and knowledge

Ideas breed ideas, knowledge breeds knowledge, and enthusiasm breeds enthusiasm. The more we share, the faster we advance the art of Packet Radio. Collecting knowledge together in one place makes it faster and easier to find.

b) Requests for Comment

New ideas sometimes contain unseen flaws. Inventors sometimes get "inventors block", or get bogged down by having to consider too many possibilities. At times like these, opening up the idea for comments by others may bring fresh knowledge and perspectives, aiding the iteration towards a robust solution.

c) Stimulation of development

Many good ideas have fallen by the wayside simply because they were not documented, not documented properly, or not shared. A well written PWP gets the idea out into the open, where it can be implemented or developed by others. It is better to fully document a new protocol and the thinking behind it, than to have others reverse engineer it incorrectly.

d) Historical record of prior art and practice

Packet Radio is constantly evolving. In the rush to embrace the latest software or gadget, old knowledge and wisdom is being lost. Mistakes that were made, and learned from, in the past are being made again. Some of the "new" ideas being lauded today, aren't new at all, and are someone else's Intellectual Property. It is important to preserve past knowledge, so that it may inform the future.

3. Origin of PWPs

In the early days of Amateur Packet Radio there wasn't much information sharing, because there was no global network on which to

share it. There may have been some ad-hoc sharing of ideas on academic networks and telephone bulletin boards, but most development was independent.

De-facto “standards” were created by Packet software such as KA9Q, WA7MBL, W0RLI, G8BPQ, G8PZT, G1NNA, F6FBB, SV1AGW etc., but were hardly ever written down, let alone shared. There was very little “open source” back then. Packet developers observed and mimicked the actions of each others' products, as best they could.

In many ways, this was healthy. It encouraged developers to think for themselves, instead of robotically copying each others' code. But there was a great danger that incompatible standards would arise. And it slowed the pace of development because it took a long time for each new idea to catch on.

By the early 1990s, a global Packet network now existed. Some useful text documents began to circulate on Packet, although the major developers still held on to their secrets. Crumbs of information were grabbed by sysops and placed in BBS file areas. But there was no agreed naming convention. Each sysop named the file as best they could within the constraints of DOS “8.3” file names. Thus, although information was available, it was difficult to find, and the same information was duplicated under many different file names.

At one of the UK Packet Sysop or IP meetings, someone suggested assigning numbers to the files, to create a Packet version of the Internet RFCs. The acronym RFF (Request For Flamage) was suggested. A few RFF documents were published, but the idea never caught on.

Meanwhile, Paula G8PZT was building a library of Packet documents on her BBS, and chose to name the files numerically, with an index for quick reference. Each new file that wasn't a duplicate was assigned a serial number, and added to the index. Thus at that time, files were ordered roughly by date of reception, rather than by date of creation. In order to distinguish them from RFC's and other BBS files such as recipes and humour, they were given the prefix PWP - Packet White Paper.

So far, PWPs have been randomly stored on assorted floppy disks, hard drives, pen drives, scraps of paper etc.

Many numbers are missing from the canon at present, because:

- The historical practice was to assign a PWP number at the instant of creation, to aid the management of multiple concurrent PWPs.

- Many documents were permanently or semi-permanently lost on corrupted floppies and hard drives. Technology may one day help to retrieve them.

- Some documents are still hiding on abandoned PC's in obsolete word processor formats.

- Gaps were left in the sequence for documents from other sources to be inserted into the timeline.

- Some documents were started, but never completed.

- Some documents were completed, but never formatted to a consistent style.

- Many documents were handwritten, numbered, but never digitised.

- Etc…

The plan is to retrieve as many as possible and store copies on the OARC wiki, but a proper home needs to be found.

4. Why PWP not RFC?

Conventional RFC's are concerned with Internet development, not Packet Radio. It is doubtful whether any RFC submitted by a radio amateur would be accepted, because it would be too "niche". Plus there is too much “noise” - it would be difficult to find Packet documents among the mountain of Internet-related ones.

Having a separate system for Packet documents allows the Packet community more freedom, much like the early days of RFC's.

5. Writing A PWP

Anyone can write and submit a PWP. It is better to publish an idea than to let it wither and die. Anyone who is doing or planning something interesting with Packet Radio is encouraged to write it up.

PWPs MUST be about Packet Radio in some relatively direct way - a list of rigs suitable for packet, or how to modify a rig for packet is acceptable, but a treatise on using FT8 with an Icom 7300 is completely out of scope. Too many Packet Radio organisations and publications have become totally sidetracked by SDR, digital voice, and non-packet data modes, to the point where they are no longer relevant or even interesting to "Packet Heads".

Humorous documents, April Fools Jokes etc. are acceptable, so long as they are Packet Radio related.

Requests for comment, blue-sky ideas, results of experiments, well thought-out commentary and opinions on the state of Packet Radio are all valid, as are minutes or summaries of important Packet Radio meetings etc.

Verbatim use of copyright material is NOT acceptable, unless the original author gives express permission. Authors must try to avoid infringing patents where possible, but the PWP series cannot be guaranteed to be patent-free. After all, we are Amateurs.

6. Assignation of PWP Numbers

To avoid duplication, it is important that PWP numbers are assigned only by the PWP Editor, in strict sequence.

Once a number has been assigned to a PWP, the number is never changed. There must never be more than one PWP with the same number, or more than one number for the same PWP. If a PWP is modified or updated, it becomes a new document, with a new number.

The current de-facto PWP Editor is G8PZT, who is willing to fulfil that role until such time as anyone else feels they should be the one to undertake it. See Authors Address section for details.

7. Preferred PWP Format

PWPs have traditionally been published and will continue to be published primarily in plain ASCII text, using ASCII art for diagrams. ASCII text requires no special software, and can be sent via Packet Radio.

Submissions are acceptable in any commonplace electronically editable format, but the preferred format is plain ASCII text where possible.

While the primary version of a PWP is always an ASCII text file, secondary or alternative versions may be provided in other formats, if mandated by the presence of complex diagrams.

PWP authors should try to follow the tried and trusted RFC style as much as possible. A PWP MUST include the following:

a) A “Header Block” containing:

+ PWP number (assigned by PWP editor)
+ PWP number(s) that the document updates or obsoletes
+ Name(s) of the author(s)
+ Author's affiliation (if appropriate)
+ Document's creation date

b) Unnumbered sections as follows:

+ Title - Succinct but descriptive
+ Abstract - a brief summary of the document
+ Status of the document
+ Copyright Notice
+ Table of Contents covering the numbered sections

C) Numbered sections, including something like:

+ Introduction / Motivation
+ Terminology / Conventions / Glossary
+ The proposal, idea, information etc
+ Security Considerations (if appropriate)
+ Author's contact details
+ References
+ Appendix (if required)

If in doubt, please look at some recent PWPs, and prepare yours in a similar style. That said, authors should not be bogged down trying to follow rules. The PWP Editor will make adjustments where necessary.

8. Publishing A PWP

These days, there is nothing to prevent anyone from self-publishing documents and calling them PWPs.

However, for the sake of consistency and avoidance of confusion, it is highly recommended that authors submit prospective PWP documents to the PWP Editor, who will assign a number, check the format, agree any modifications, index and publish it.

Documents may be submitted by email, via Google Docs, Discord or any other file sharing site.

The PWP Editor may make minor changes to the document, mainly to the formatting and style, but occasionally to the text, e.g. if a word is incorrectly spelled.

The PWP Editor reserves the right to refuse a document, if it is not appropriate material for a PWP.

9. Obsoleting and Updating

Once a PWP is published, it can not be changed. It becomes a historical document.

A PWP can be obsoleted or updated by the publication of a new PWP with a different number.

A PWP that "updates" a previous PWP is a supplement, that cannot stand on its own, and must be used in conjunction with the original.

A PWP that "obsoletes" a previous PWP completely replaces it, and can be used without reference to the previous PWP.

10. Security Considerations

There are no known security considerations.

11. Author's Address

The following person is both the author of this document, and the current PWP Editor:

Paula Dowie
Email: g8pzt[at]blueyonder.co.uk (replace '[at]' with '@')
WhatsPac: G8PZT