

Access and use of available packet nodes
WWARES -- 9 April 2020

1. A packet node is a relay for packet connections. It extends the range of a packet connection to another station, or through other nodes to another station because of its location (generally high points in the terrain) providing a much longer line-of-sight.
2. The packet nodes in this area use simplex frequencies, so they operate as store-and-forward. The incoming packet signal is recorded and then re-transmitted.
3. Connect to a node in Winlink either using a script or "digipeater". A script is preferred, as digipeater mode is limited to two hops. Example scripts are posted on www.wwares.org.
4. Nodes are identified by a call sign plus a secondary station identification number and an alias. Either can be used for connections. There are 5 packet nodes available in and around Walla Walla County:

Alias	Call sign	Freq	Location	Coverage / Comments
W2W	AL1Q-7	145.07	Lewis Peak	SE Washington Supports AL1Q-10 (WL2K gateway)
WBRG	KB7BDT-7	145.07	Waitsburg	Touchet River Valley Link through either ATHENA or W2W
ATHENA	W7NEO-7	145.07	Weston Mountain	SE Washington, part of Umatilla County Supports AL1Q-10 (WL2K gateway)
W2W2	AL1Q-9	145.53	Lewis Peak	SE WA, connects to other EWA nodes. Hardwired to W2W.
SPOUT	AL1Q-12	145.53	Above Toll Gate	NE OR / SE WA / central ID. Connection to Union County on 144.93 through KK7MA-12

- W2W, ATHENA, and WBRG are dedicated to Walla Walla and Umatilla Counties. This is the same frequency as the AL1Q-10 gateway.
- W2W2 and SPOUT both link into the Eastern Washington packet network, which is unreliable as of 4 April 2020. But they are available for P2P connections.

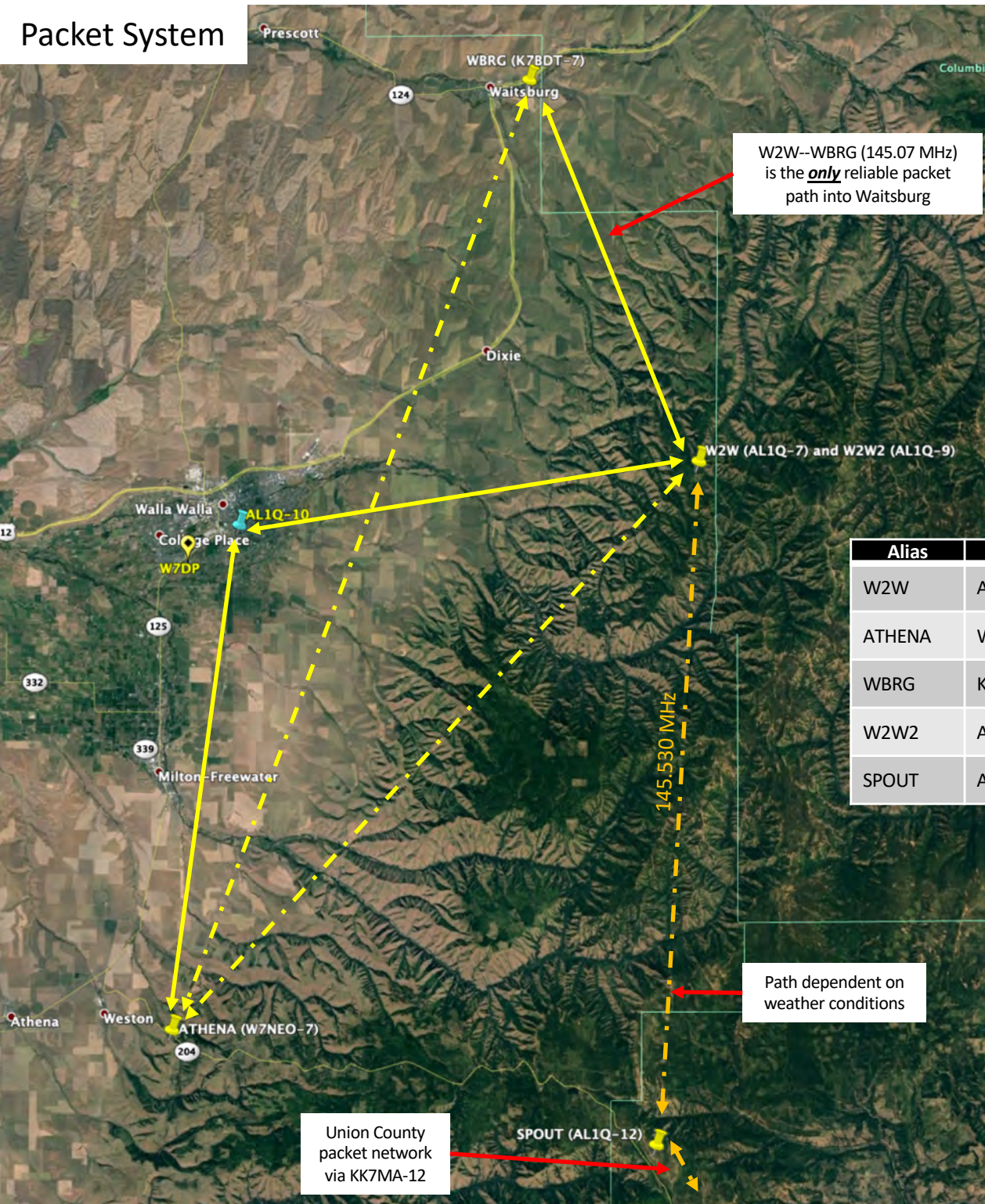
5. The nodes are set up to detect other carrier signals; they won't transmit unless the frequency is clear. This means that every time if someone transmits simplex on a packet node frequency, that node will hold a transmission until the frequency is open. This effectively doubles connection time. At 1200 baud, there isn't much bandwidth to spare, and two separate connections appears to be the maximum on 2 meters. And sometimes, one station may not hear others, but the others can hear that one, so signals walk over each other. So it's better if you conduct direct P2P connections on other than 145.07 and 145.53, where possible.

6. While it's possible to "hop" between more than one node, single node hops or direct connections are the best practice. They take less time, and are less prone to repeats. The best "one hop" node paths in our area are:

- W2W \leftrightarrow AL1Q-10
- ATHENA \leftrightarrow AL1Q-10

Connecting to Waitsburg is either through W2W, or W2W and WBRG, depending on the location of the station. W2W2 and SPOUT may be used for P2P connections if direct or relays are not practical.

Packet System



W2W--WBrg (145.07 MHz) is the **only** reliable packet path into Waitsburg

Path dependent on weather conditions

Union County packet network via KK7MA-12

Alias	Call	Freq	Comment
W2W	AL1Q-7	145.07	Priority to Waitsburg for AL1Q-10 and all P2P connections
ATHENA	W7NEO-7	145.07	Priority to local connections to AL1Q-10, then P2P connections
WBrg	KB7BDT-7	145.07	Covers Touchet River Valley, link to ATHENA and W2W.
W2W2	AL1Q-9	145.53	Priority to P2P traffic external to Walla Walla County. Cross-linked to W2W.
SPOUT	AL1Q-12	145.53	Priority to P2P and BBS in Union County, then P2P connections with other stations

- ◄ - . - . - ► Path not reliable
- ◄ — — — ► Path reliable