Namaste Handheld Overview

By W5NYV

Background

2006: "Hand-held capability for quick and easy emergency communications." –Jim Sanford

2006: "We concluded that the handheld digital voice goal is not supportable by a spacecraft we can fly. This capability has been an important goal, but analysis of the communications links revealed it was simply not achievable with our spacecraft– the numerical analysis was unequivocal. We realized that handheld text messaging is possible and after analysis of requirements, link budgets, and power available/required, it was concluded this service is best provided at U/V-band. Trying to do it in the microwave bands would have consumed the majority of all the transmitter power and limited the number of voice grade channels to much less than any desirable level of service. The resulting system will allow a small U/V package that can be parachuted into an emergency area if necessary." –Bob McGwier

2006: "Action item11 Detailed uplink link budget and user ground station design for "handheld" Class 1 service on U/V. Find team to define Class 1 signals and design ground segment hardware. AB2KT will do Class 1 signaling. KD6OZH in charge of RX. TX team TBD."

Current Status

If the frequency of the device is U/V, then the project would appear to fall outside the original scope of Namaste, which is a microwave-band satellite transceiver for amateur radio. However, I'd like to consider a super-portable version of Namaste, and at the very least assist in getting the project started. Here is what we need.

1) A definition of how it would be used for emergency communications. Provide a use case for emergency communications. Who would use it, when, where, why, and how?
2) A definition of how it would be used for amateur radio communications. Provide a use case for amateur radio application. Who would use it, when, where, why, and how?
3) A protocol suited for high-latency links needs to be selected. This protocol may or may not be the same across all versions of Namaste due to the differences in data rates, but any departure needs to be justified in writing.
4) Infrastructure independent operation described. No central server, no login transactions.
5) Antenna requirements.
6) Functional requirements. What is this device expected to be able to do? This should come directly from the use cases in 1) and 2).