Phase 4 Ground Spectrum Sensing

Autonomously Differentiate Between DVB-T2, DVB-T, DVB-S2, DVB-S2X

Automatic differentiation between different communications standards enables autonomous operation between payloads.

The standards supported are DVB-T, DVB-T2, DVB-S2/X. DVB-T in order to support Digital Amateur Television Network interoperability, DVB-T2 for Groundsat payloads, and DVB-S2/X for any spacecraft that comply with Phase 4 Ground air interface.

Manual configuration is the baseline operation for Phase 4 Ground. This document describes an optional accessory shift-knob that supplies meaningful input to the radio in order to allow the radio to automatically change modes based on what type of downlink appears in the receiver passband.

Energy detection?

Pilot signal classification?

Cyclostationary spectrum density (CSD) estimation?