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July/August 2019

About the Cover

John Westmoreland, AJ6BC, discusses the origins of the Themis project and its design goals. Themis is an experimental Global Positioning System Disciplined Oscillator (GPSDO) for the Open High Performance Software Defined Radio, that can also be used as a stand-alone source for supplying a 10 MHz reference clock output. It includes an output to the Atlas bus, and provides several additional outputs intended for various levels of experimentation. AJ6BC describes the GPSDO control algorithms and some techniques for disciplining and synchronizing an Oven Controlled Crystal Oscillator (OCXO) with the GPS satellite system one-pulse-persecond (1PPS) signaling.

In This Issue



Features

- Perspectives
 Kazimierz "Kai" Siwiak, KE4PT
- Themis
 John C. Westmoreland, AJ6BC
- 14 A Different Look at the Phase Locked Loop
 Andrzej (Andy) Przedpelski, KØABP
- 16 Get Started with 3D Printing
 Joseph Pingree, WB2TVB
- Pi Networks With or Without Inductor Loss Part 1
 Tuck Choy, MØTCC
- 29 Errata
- Receiver Step Attenuator Scott Roleson, KC7CJ
- 36 Upcoming Conferences

Index of Advertisers

DX Engineering:	Cover III
Harris Corporation:	19
Kenwood Communications:	Cover II

SteppIR Communication Systems.....Cover IV Tucson Amateur Packet Radio:29