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InsideGNSS

GPS | GALILEO | GLONASS | BEIDOU

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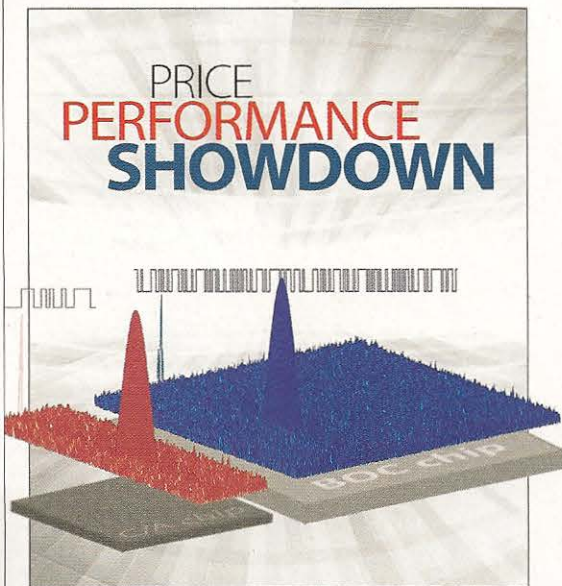
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COVER STORY



30 Who's Your Daddy?

Why GPS Will Continue to Dominate Consumer GNSS
Frank van Diggelen

A GNSS Forum commentary takes us on a journey through the evolution of consumer GNSS and a look into the future, asserting that GPS is the dominant GNSS system and will remain so for years to come.

FEATURE ARTICLE

44 An Airborne Experimental Test Platform

From Theory to Flight (Part 1)
F. Adhika Lie, Andrei Dorobantu, Brian Taylor, Demoz Gebre-Egziabher, Peter Seiler, Gary Balas

In this first part of a two-part series, a research team based at the University of Minnesota-Twin Cities describes the activities at a UAV research lab there, including design of simulations and research avionics, and operation of small UAVs that make aircraft safer and more fuel-efficient.

TECHNICAL ARTICLE



60 Galileo Works!

Results of the Galileo In-Orbit Validation Test Campaign
Edward Breeuwer, Stefano Binda, Gustavo Lopez-Risueno, Daniel Blonski, Alexander Mudrak, Francisco Gonzalez, Roberto Prieto-Cerdeira, Igor Stojkovic, Jörg Hahn, Marco Falcone

Nine years after the start of the Galileo In-Orbit Validation (IOV) phase in 2004, ESA conducted a test campaign to demonstrate that the system configuration currently deployed is on track to deliver its expected performance. ESA engineers describe the campaign and its results.

COLUMN

67 Working Papers

Fast and Flexible – Tracking and Mitigating a Jamming Signal with an Adaptive Notch Filter

Daniele Borio, Cillian O’Driscoll, and Joaquim Fortuny

The rise of inexpensive yet powerful GNSS jammers is driving numerous R&D efforts to find ways to thwart the use of such devices. Researchers at the European Commission Joint Research Center describe their use of an infinite impulse response adaptive notch filter to mitigate the effects of jamming.

42 Thought Leadership Series

Sponsored Feature – New Signals, with A. J. Van Dierendonck

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Paternity Suit

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14 360 Degrees, GNSS Hotspots

News from the world of GNSS

DoT Agrees to Start of GPS CNAV Broadcasts

NIST Plans GPS Cybersecurity Research

House Moves to Block Loran-C Teardowns

NextGen Costs Could Triple as Project Slips Years

GPS SV Battery Charging Will Extend Missions

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GIVE YOUR INS THE EDGE

Stand alone INS

Drifting at 2 degrees / Hr due to low dynamics (varies with IMU)

Enhanced EDGE-INS

Heading maintained to 0.05 degrees with a 3m GNSS baseline and EDGE-INS



ReACT MASTER



ReACT ROVER

EDGE-INS

Part of the FSL EDGE-WARE package designed for ReACT and MICROpod

Takes roll, pitch, heading from current INS

Effectively removes INS heading drift when stationary or moving

Rapid initialisation of the INS at start-up

Alternative positioning with improved accuracy

Removes any suspected biases and errors from your INS

Corrects GNSS baseline heading into the INS reference framework



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