

# InsideGNSS

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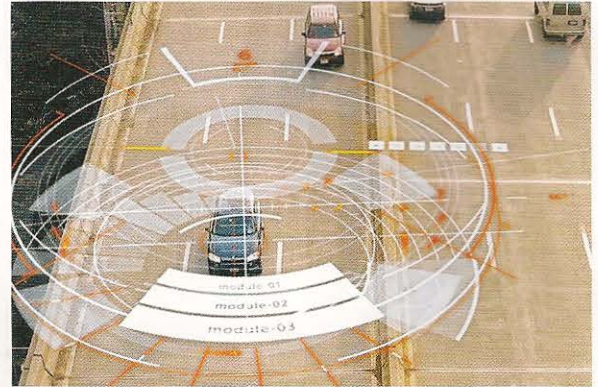
ON THE COVER

## 40 Towards Navigation Safety for Autonomous Cars

Emerging technologies bring cars closer to the ultimate goal of fully autonomous operation.

Mathieu Joerger and Matthew Spenko

Promising new technology has recently emerged to increase the level of safety and autonomy in driving, including lane and distance keeping assist systems, automatic braking systems, and even highway auto-drive systems. Here we investigate a path towards ensuring safety for “self-driving” or “autonomous” cars by leveraging prior work in aviation.



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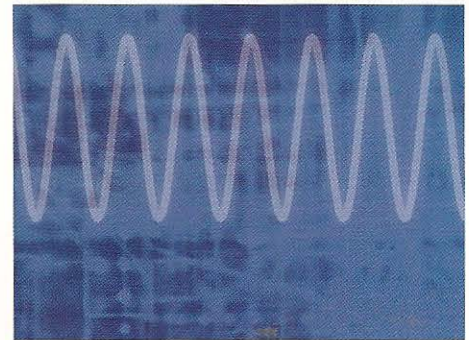
TECHNICAL ARTICLES

## 50 GNSS SDR Metadata Standard

The Institute of Navigation’s GNSS SDR metadata standard and associated open-source software project.

James Curran, Markel Arizabaleta, Thomas Pany, and Sanjeev Gunawardena

The past several years has seen a proliferation of software defined radio (SDR) data collection systems and processing platforms designed for GNSS receiver applications or those that support GNSS bands. For post-processing, correctly interpreting the GNSS SDR sampled datasets produced or consumed by these systems has historically been a cumbersome and error-prone process.



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Do modern multi-frequency civil receivers eliminate the ionospheric effect?  
Mark Petovello with Nadezda Sokolova, Aiden Morrison, and James T. Curran

**56 Working Papers**

Location Privacy Challenges and Solutions, Part 2: Hybrid- and Non-GNSS Localization  
Elena Simona Lohan, Philipp Richter, Vicente Lucas-Sabola, José A. López-Salcedo, Gonzalo Seco-Granados, Helena Leppäkoski, and Elena Serna Santiago

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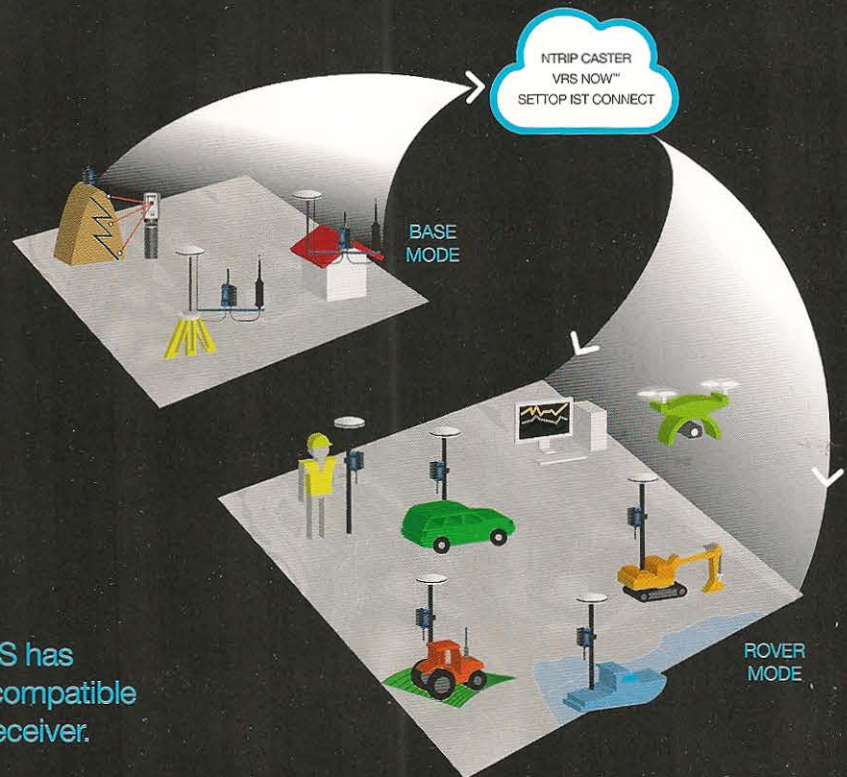
**12 Leica Geosystems bolstering its multi-GNSS arsenal**

Bernhard Richter discusses how the company is exploiting multi-constellation and multifrequency GNSS, including latest addition Galileo, to greatly improve the performance of high-precision RTK positioning.

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