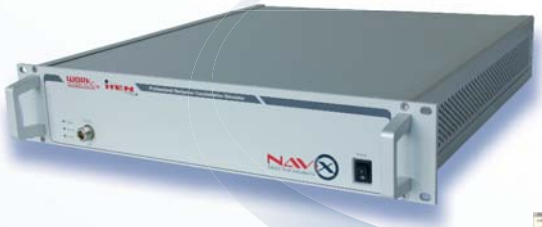
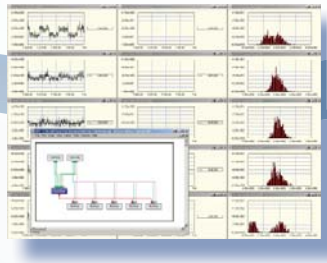
pushing the boundary with NavX

NAVX
GNSS Test Solutions





NavX® - GNSS Test Solutions

- Closed Loop GNSS Testing -

▶ GATE

Galileo Test Range - a real world environment providing Galileo SIS

▶ NavX®-NCS

Multi-GNSS Laboratory RF Navigation Constellation Simulator

▶ NavX®-NTR

Multi-GNSS Customizable Navigation Test Receiver

▶ NavX®-PAT

Receiver Performance Assessment Tool

N 48° 10' 17"
E 11° 48' 31"

Made in Germany

IFEN GmbH

pushing the boundary with NavX

NavX® GNSS Test Solutions

Test Solutions Overview

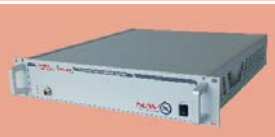
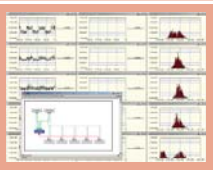
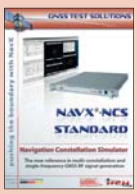
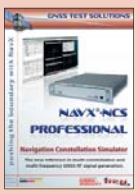
The NavX® test solutions not only provide individual GNSS test products, but a range of world class testing equipment and service complementing each other.

The baseline product is the NavX®-NCS RF constellation simulator, offering leading edge laboratory GNSS signal simulation capability for controlled and repeatable tests.

With GATE, a complementing outdoor Galileo test range is available, enabling tests under real local signal effects (interference & multipath) under dynamic conditions.

With the NavX®-NTR a customizable test receiver is available, providing reliable reference measurements for performance comparison.

The NavX®-PAT provides the measurement analysis and comparison capability, closing the whole test-loop.

	GATE	NavX®-NCS	NavX®-NTR	NavX®-PAT
Description	Galileo Test Range	GNSS Constellation Simulator	GNSS Test Receiver	Performance Analysis Tool
Image	 View from GTS 5 to GATE test area	 NavX®-NCS Professional 19" 2HU signal generator	 NavX®-NTR 19" 2HU GNSS test receiver	 NavX®-PAT user interface
Application	Outdoor test range for simulating Galileo satellites, also in combination with Galileo IOV satellites for early Galileo equipment & application testing	Multi-frequency/multi-constellation RF signal generator for laboratory system R&D, integration and production testing for GNSS navigation equipment	Multi-frequency/multi-constellation customizable GNSS test receiver for laboratory and real world research & development	Multi-frequency/multi-constellation measurement analysis tool for receiver performance analysis evaluation
Features	Emulating of realistic SIS of 6 virtual Galileo satellites according to Galileo SIS ICD, supporting: Galileo E1 BOC/CBOC Galileo E6 (w/o encr.) Galileo E5ab	GPS L1 C/A & P (incl. SBAS L1) GPS L2P & L2C GPS L5 Galileo E1 BOC/CBOC Galileo E6 (w/o encryption) Galileo E5ab GLONASS G1 GLONASS G2 (coming) QZSS L1 CA & SAIF	GPS L1 C/A & P (incl. SBAS L1) GPS L2P & L2C GPS L5 Galileo E1 BOC/CBOC Galileo E6 (w/o encryption) Galileo E5ab GIOVE B GLONASS G1 GLONASS G2 (coming)	Processing of real-time measurements from different receiver manufacturers (NovAtel, Javad, Septentrio, ...) and IFEN NTR. Processing of RINEX 3.0 data for GPS, GLONASS and Galileo. Comparison of results.
Availability	Operational since 2008, Galileo OS SIS ICD available in 2009	Available as Professional, Standard and custom LBS and Pseudolite	Available in Q2 / 2010	Available in Q3 / 2010
Remarks	With the unique 'Virtual Satellite Mode' the simulation of realistic Galileo SIS is possible, enabling to test COTS Galileo receivers in GATE	Up to 9 frequencies simultaneously Scalable up to 108 channels GNSS signals per SW license	Used as Galileo FOC payloa test receiver, EGNOS RIMS NG bread board and GATE reference & user receiver	Based on IFEN GNSS Simulation & Processing Framework GSPF®
More Information	 GATE Flyer	 NCS-Standard Flyer  NCS-Professional Flyer	 NavX®-NTR Flyer	NavX®-PAT Flyer available in Q4 / 2010
Relations & Acknowledgement	GATE is a project of the DLR, funded by the Federal Ministry of Economics and Technology (reg. code 50NA0802)	Developed in cooperation with: WORK MICROWAVE	NavX®-NTR is based on developments in the cooperative project ARTUS, co-funded by the European GNSS Supervisory Authority	NavX®-PAT is based on know-how developed over the last 10 years in the frame of ESA EGNOS & Galileo projects

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E 11° 48' 31"

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