

Course 212:

Test, Evaluation, and Signal Simulation

Chateau Sonesta Hotel
New Orleans, Louisiana
January 11, 2006

Course notes now in full color!

Courses

Wednesday	
	Mr. Peter Boulton Spirent Communications
8:30	The Need for Test and Evaluation (T&E) Areas for T&E and simulation Testing needs at different stages of the research, development, prototype and production cycle Types of test, purpose of testing Test parameters
9:45	The T&E Process: Signals, Equipment and Procedures Signal generators, modulation, power levels, user dynamics Simulation of GNSS signals and dynamics Simulator system architecture: functions and basic elements Applications and capabilities Customer needs; inputs, outputs, environment
11:00	The Stages of Test, Evaluation and Simulation Benefits of simulation Examples of T&E situations; specific cases, results Cost/benefit factors; process, determination Application areas for T&E and simulation Demonstration of typical hardware configurations
12:00	<i>Lunch is on your own</i>
1:30	Building a Simulation for GPS / GNSS T&E Simulation example Inputs and outputs required; dynamics Specific problem areas Optimizing test configurations Simulation process, solutions, system performance
2:45	Case Studies and Examples Specific project examples; vehicle types, activities Atmospheric effects, modeling Multiple systems (eg. GPS + WAAS) Error modeling and analysis Testing systems to the limits
4:00	Advanced Techniques Customization of the test/simulation process Unusual and difficult requirements; examples and workarounds Specific problems and concerns: class discussion Course summary; Q&A session, conclusion
5:00	

Fee: \$795
0.6 CEUs

About This Course

The need for simulators for the test and evaluation of GPS/GNSS products has been increasing with the growth of the GNSS market. In order to be sure that systems perform properly, testing is done throughout the development and manufacturing process. Due to the widespread use of GPS/GNSS signals in various implementations and applications, this course will be of interest to both military and civil users. This course addresses the need for test and evaluation and gives examples of how to build a simulation during the process. The instructor addresses a variety of equipment analysis and design techniques that can be used to customize the simulation. One hour addresses case studies and examples of using simulation in the field.

Instructor: Mr. Peter Boulton



Prerequisites

- *Course 122* or an understanding of GPS principles.
- Familiarity with GPS receiver engineering terms and receiver operations.

Who Should Attend

The course is for those engineers, designers and analysts concerned with ensuring the proper functioning of GNSS systems (applications and equipment) during the manufacturing process. The course is appropriate for those concerned with improving the performance capabilities of existing or planned systems.

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Materials You Will Keep

- A notebook which includes all materials presented in the course.
- Navtech's CD-ROM containing a variety of GPS articles and references.



To register, or for more information, call Navtech at 1-800-NAV-0885 or 703-256-8900, or fax to 703-256-8988, or e-mail to courses@navtechgps.com. For updated information, go to: www.navtechGPS.com.