

## NTS Services Spotlight: ZigBee

### Smart Energy 1.1 Test Harness



SETest emulates the various types of ZigBee Smart Energy devices, allowing you to test your product prior to submission.



SETest will keep a clear log for all cases you run including packets sent, received as well as the RegEx comparing results and the verdict.



Let NTS be your primary destination for ZigBee testing and certification, as well as ZigBee certified test tools.

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### ZigBee Experts

If you are looking to bring a ZigBee Smart Energy (ZSE) product to market, your company needs the National Technical Systems (NTS) ZigBee SE Test Harness (SETest). As the leader in ZigBee testing and the first authorized ZigBee test lab, NTS has the experience and tools to help you get your ZSE product certified and to market quickly.

Since 2004, NTS has worked on testing ZigBee products throughout the development of the standard and the application profiles, including the ZigBee Smart Energy profile. ZigBee Smart Energy (ZSE) is a 2.4GHz and 900 MHz protocol that has already been adopted by countless utilities and manufacturers for the design of their Smart Grid devices. ZSE devices include thermostats, in-home displays, load control devices, smart appliances, and smart meters, millions of which are being installed by manufacturers around the country. Over 90% of the logo'd ZigBee Smart Energy devices have been certified by NTS using our SETest tool. Contact NTS today to rent or purchase NTS's SETest for your own ZigBee development.

### SETest 1.1 New Features and Advantages

NTS SETest includes reference hardware and firmware that emulates any type of ZSE device and software which facilitates execution of the certification suite. SETest automates and/or facilitates the test cases in the ZSE test specification making it easy for you to prepare for certification, and verify your product before you submit it for certification. With the release of SETest 1.1, several additional features have been added to the test harness:

- ▶ **New hardware** to support the latest ZigBee 1.1 standard consisting of the EM260 board and a Linux board, in a custom built enclosure.
- ▶ Ability to **write your own custom test scripts** allows flexibility for situations where you want to test corner/boundary cases not covered by the test specifications, or when more stringent limits are desired. The test script is written in a text file based on the models provided and SETest will automatically load scripts and add them to test case options.
- ▶ **Improved command line interface (CLI)** makes running manual tests easier. Custom functions can also be created, added to the library file, and recalled from the CLI to perform more complex operations.
- ▶ SETest 1.1 is capable of **emulating a real time meter** by varying its attributes. Set the instantaneous demand to vary randomly, and the current summation to constantly increase to easily test how the product behaves while reading dynamic metering data.
- ▶ The harness has **increased memory (128MB)** for more complex tests, such as the OTA test.
- ▶ Ability to **run all security test cases** and more; such as the flexibility to introduce error conditions, bad certificates and other factors on the fly for complete security coverage in testing.

### About NTS

NTS is a trusted partner helping organizations to access domestic and international markets. We are your single source for a full range of integrated engineering solutions, product testing, standards compliance, project management, and managed services. Globally accredited by leading regulatory agencies, NTS can provide cost-effective programs to meet your requirements - at your site, or at one of our many US or international facilities. NTS is the nation's largest independent standards compliance and product testing company, serving companies within the aerospace, defense, automotive, wireless and telecommunications, electronics, energy, medical device, software, and hardware markets.