Wipro does challenging WiMedia project with Ellisys test equipment

Client

Wipro-NewLogic
Bangalore, India
www.wipro-newlogic.com

WIPRO
Applying Thought

NewLogic

Challenge

To design intellectual property cores for Wireless USB and WiMedia based UWB solutions as quickly and carefully as possible.

Solution

For every level of system testing, Wipro-NewLogic uses a Wireless USB Explorer 300 protocol analyzer and a UWB 320 Generator from Ellisys.

Benefits

The Wipro-NewLogic engineers saved time in debugging issues and resolving corner cases that emerged in the WiMedia project.
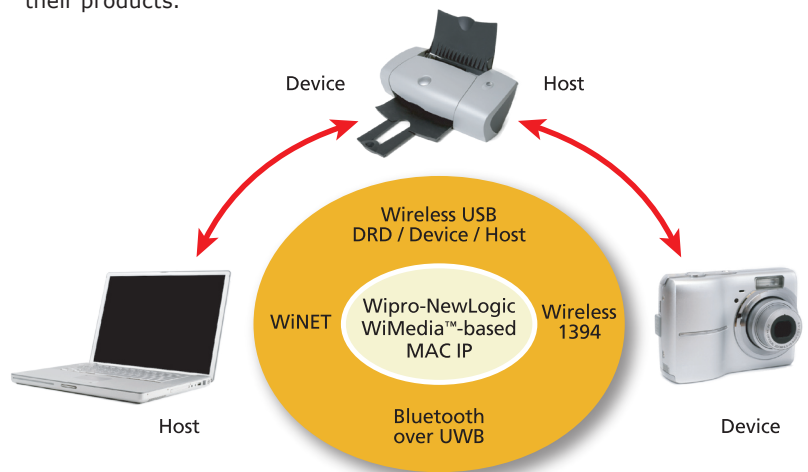
Quote

"The Ellisys equipment is very useful to us. After using it for almost a year now, we are quite satisfied."

Udaydutt Rao, Technical Manager,
Wipro-NewLogic

ellisys™

Ellisys is a leading supplier of cutting-edge USB, Wireless USB and Ultrawideband Protocol Analyzers. The company's products help hardware, software and test engineers save development effort, improve quality, and accelerate time to market. Ellisys protocol analyzers range from simple and cost-effective tools to high-end fully-featured equipment.

Wipro is one of the most successful IT companies in India, both in size and in quality.

With sales of more than $3 billion, Wipro is one of largest IT services company in the world. And with certifications for both ISO 9001 and level 5 PCMM, the company is equally focused on quality.

The company's Wipro-NewLogic division is the world leader in the sale of intellectual property (IP) cores that other companies use to add IEEE 1394 (FireWire), UWB, Wireless USB, Wireless LAN, and Bluetooth interfaces to their products.

When Wipro-NewLogic needed to develop IP for Wireless USB, company engineers used wireless test equipment from Ellisys to save time and guarantee top quality in all their designs.

Picking the right unit

Wipro-NewLogic engineers first saw the Ellisys equipment in action at a trade show in San Jose, CA in 2006. Among the half-dozen exhibitors with wireless gear, there seemed to be a channel conflict that was causing interference.
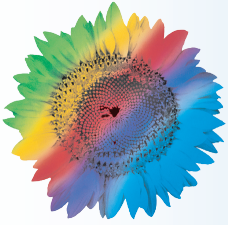
"The Ellisys people brought over their analyzer, hooked it to our PC, and looked for which channel we were working with. We actually solved that challenge at that time," says Sakharama Gunaga, Wipro-NewLogic's hardware project manager for Wireless USB IP.

Impressed by the test unit's effectiveness and petite size, his team acquired both a WiMedia protocol analyzer and a traffic generator in autumn of 2006. The test equipment is shared among about a dozen engineers.

"We were looking for a wireless protocol analyzer to reduce debug time and get rid of problems in some corner cases in our WiMedia MAC. We

were finding it difficult to isolate many of these issues between hardware and software," says Gunaga.

All levels of testing

With the Ellisys gear to help, these technical issues were about to become history.

With its crystal-clear software interface, the Wipro-NewLogic engineers found setting up and running the Ellisys test equipment to be quick and easy.

"I like the user interface very much, the way packets can be displayed and filtered," says Gunaga. "And it's no problem setting it up or using it, even for the first time."

The screen shot above shows Wireless USB traffic in the Ellisys WiMedia analysis software. The Ellisys Wireless USB overview presents data in a very familiar manner for USB 2.0 developers to ease the learning phase of the new Wireless USB protocol.

Today the equipment is in fairly constant use at Wipro-NewLogic for a wide assortment of tests.

"We use it for all our different levels of testing, from hardware-level diagnostic testing to complete system testing with our entire software. And since we are often using Wireless USB, we are finding it very useful."

Ellisys provides an objective standard

Having an objective, third-party reference standard is also valuable.

"In the initial stages during integration testing, we were going back-to-back with our own platform. We didn't have a reference to see where the problems were. With the analyzer, we can see specifically what is going on," says Gunaga.

The equipment pays off in other ways too.

"We use the analyzer to prove that this is Wireless USB that we are talking about," says Aditya Agarwal, Product Marketing Manager for Wipro-NewLogic. "We analyze what's going over the air to show that it's really working."

Wipro-NewLogic managers agree that the Ellisys test equipment has saved them a substantial amount of development time.

"We were sure it would save time, and it has helped save a lot of time in debugging," says Gunaga. "During the hardware-level diagnostics, the analyzer is used about 30 percent of the time. And it's often carried between several different labs at our company site in Bangalore."
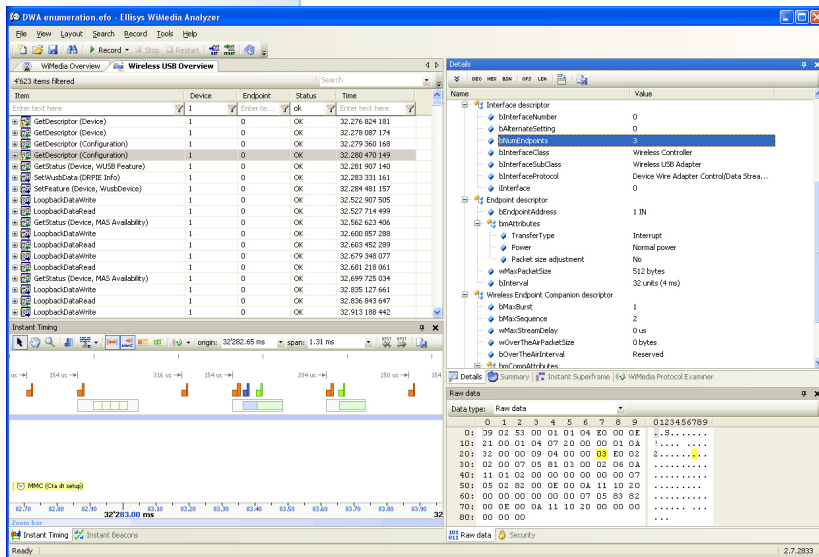
Meeting the grade

Ellisys engineers stay in close contact with their customers. So as a company, Ellisys has been quick to respond to any suggestions or concerns from Wipro-NewLogic.

"From a technical point of view and from the response in my interactions, I have found Ellisys very good, and very helpful," says Gunaga.

On that all-important question — would you recommend this company to your colleagues? — the answer is a resounding "yes."

"A couple of people have asked me, 'How good is this analyzer?' and I say, 'I love it!'" adds Agarwal. "We actually want to get some more of them for our further development."

After a year of constant use, the wireless test equipment from Ellisys has met the grade, helping Wipro engineers save time, and deliver top-quality designs for a challenging project.