

And the Winner is... Cool Module Design Contest.

CoolRunner CPLDs and Insight make it easy to create low power designs for Visor PDAs.

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We initiated the Cool Module Design Contest at the January 2001 Portable Design show in Santa Clara, California, to generate interest in the Insight Springboard™ development platform for Visor™ handheld PDAs (Personal Digital Assistants). The platform is based on the Xilinx CoolRunner™ XCR3256XL CPLD which enables ultra low power designs. With the Visor Springboard slot, you can develop a multitude of applications that run on Handspring PDAs, including communications and wireless connections, multimedia, ebooks, games and sports, and productivity tools. With the Insight Springboard development kit, you can quickly develop these Visor add-on designs.

The Contest

We reviewed over 100 entries from which ten finalists were chosen – it was a difficult task to select the most ingenious, complete, and comprehensive idea. The designs were divided into the following categories:

- Biometrics
- Medical Electronics
- Sports
- Communications and Wireless
- Audio
- Video and Display Technology
- Electronic Test
- Manufacture Test
- Physical Measurement

- Interface
- Other Unique Implementations

The ten finalists were shipped an Insight Springboard development kit and a Handspring Visor Platinum PDA. These finalists then implemented their conceptual ideas and competed for the grand prize of \$10,000. The winner was chosen by a team of three industry technologists from Xilinx, Handspring, and Portable Design Magazine.

The Finalists

The ten finalists included these selections:

- A device for the recording, display, and distribution of a fingerprint. This focuses on child safety, which is now a national campaign for the recovery of lost children.
- A multipurpose device for cycling enthusiasts.
- A Springboard idea to connect to the Family Radio Service (FRS). FRS devices are readily available from manufacturers such as Motorola (T6300 radio).
- A musical instrument tuner.
- A musical Instrument Digital Interface (MIDI) recorder and sequencer.
- A spectrum analyzer.
- A logic analyzer.
- An engine analyzer for an onboard diagnostic (OBD) to monitor car engine information.
- A portable MIL-STD-1553 bus analyzer.
- An ultrasonic distance measuring device.

The Grand Prize Winner

The winner was “Cool Trak,” created by frog design; it’s an add-on module that collects and displays many crucial statistics for the bicycle enthusiast. The module measures speed, distance traveled, pedaling rate, air temperature, humidity, barometric pressure, altitude, and the rider’s heart rate.

“The Cool Trak module is designed for recreational cyclists with an eye on fitness, as well as competitive or professional riders looking to achieve maximum performance,” said Preston Brown, director of electrical engineering at frog design (www.frogdesign.com). “CoolRunner CPLDs are ideal for low-power and low-cost applications such as the Cool Trak module, and the free Xilinx WebPACK™ VHDL design environment allowed us to rapidly complete the project.”



From left to right: Jeff Hawkins: founder, chairman, and chief product officer at Handspring, Inc. Bill Carter: former Xilinx chief technology officer. Richard Nass: editor-in-chief of Portable Design Magazine

“We were impressed by the innovation put forth by the teams submitting entries into the Cool Module design contest,” said Jeff Hawkins, founder, chairman and chief product officer at Handspring, Inc. “Our hats go off to Xilinx for sponsoring the event, Portable Design for promoting the event and playing a crucial role in the judging process, and most importantly to the numerous teams that demonstrated incredible ingenuity in designing new Springboard module concepts for the Handspring Visor.”

Conclusion

Creating low power Springboard designs for the Visor PDA is easy with the Insight Springboard development kit and Xilinx CoolRunner CPLDs. Visit the Cool Module Design Contest home page and read all about it at: www.xilinx.com/contest/index.htm.