



New 2008 Low-Power RF Guide

Click to download



[SAVE THIS](#) [EMAIL THIS](#) [PRINT THIS](#) [MOST POPULAR](#)

[RSS](#) [Comment \(0\)](#) [Trackback \(0\)](#) [Save to Del.icio.us](#) [Digg This](#)

Chip-to-Chip 60 GHz wireless link wins design competition sponsored by SRC, SIA

Mar 20, 2008 5:11 PM

Semiconductor Research Corporation (SRC) has named a team of graduate students from Purdue University as winners in the SRC/SIA IC Design Challenge. The Purdue team's winning design was for a chip-to-chip wireless data link using a 60 GHz transceiver. More than 40 universities and 120 engineering students competed to design circuits with potential future electronic applications.

"This is a once-in-a-lifetime experience for the students and certainly affects their futures in a very positive way," said professor Byunghoo Jung, faculty advisor of the winning Purdue team. Professor Jung is no stranger to these contests. Four contests ago, SRC held the Copper Design Challenge, its first design contest. Professor Jung was then a graduate student and was on the winning team from University of Minnesota. "This also is a great opportunity for the industry as SRC and SIA member companies cultivate future designers for the semiconductor business," said SRC's Dale Edwards, an AMD assignee and contest organizer.

The Design Challenge theme is "Performance at the Limits" and the winning design exemplifies this theme, pushing the chip-to-chip data link to 7.5 Gbps using 60 GHz wireless technology. Wireless data links show many advantages compared to existing techniques such as wired or optical data links. Wired data link paths exhibit severe signal attenuation requiring complex and power hungry circuitry to overcome while optical techniques usually require difficult and costly IC fabrication technologies. Several unique circuit techniques were used in the winning design, according to the organizers.

The Purdue team consisted of five students and one co-lead. Teams from University of Minnesota with their entry, "Ultra-low Power, Battery-less RFID Blood Monitoring System," led by professor Ramesh Harjani, and Carnegie Mellon University with their entry, "A Tunable Multiband RF MEMs Transceiver Front-End," led by professor Tamal Mukherjee, took second and third places in the competition, each having three students per team.

In addition to receiving cash awards that total \$18,000, the three winning university teams along with five other finalists have qualified to compete in the final phase of the Design Challenge where they will fabricate these designs in Jazz Semiconductor's SBC18 180 nm SiGe technology. All eight teams will present posters at SRC's TECHCON 2008. The eight finalists will vie for \$50,000 in cash prizes, to be announced in December.



Resources

[Glossary of Terms](#)
[RF Engineer Jobs](#)
[Wireless ICs Spotlight](#)
[OFDM Spotlight](#)

[RSS Feeds](#)
[Subscribe to RF Design](#)
[ZibBee Spotlight](#)

Spotlight on Automotive Wireless Connectivity

- [Reducing Driver Workload with Human-Machine Interface](#)
- [Infotainment the dashboard dilemma](#)
- [Telematics - It Can Save Lives, But Can It Sell Cars?](#)
- [Tapping Radar Technology For Automotive Safety](#)
- [Under the Hood of the 2007 BMW 525i](#)










[READ MORE](#)

February Defense



Design Challenge sponsors include Advanced Micro Devices, Inc., Analog Devices, Inc., Cadence Design Systems, Freescale Semiconductor, Inc., IBM Corporation, Intel Corporation, Intersil Corporation, Jazz Semiconductor, LSI Corporation, Mentor Graphics Corporation, National Semiconductor Corporation, NVIDIA Corporation, Quik-Pak Division of Delphon Industries, Texas Instruments Incorporated, SRC and SIA.

www.src.org
www.sia-online.org

 [SAVE THIS](#)  [EMAIL THIS](#)  [PRINT THIS](#)  [MOST POPULAR](#)
 [RSS](#)  [Comment \(0\)](#)  [Trackback \(0\)](#)  [Save to Del.icio.us](#)  [Digg This](#)

Ads by Google

[Analog Devices RF Product](#)

Explore top RF/IF products & info. Application notes & pricing avail.
www.AnalogDevices.com

[Clean Room Equipment](#)

Cleaning, Plating and Etch Systems Today's Tech News and more.
www.FabNewsUSA.com

[High Performance Mixers](#)

Active Mixers, Mod/Demod and More From Linear Technology - Learn More
www.linear.com

Support
Across
The
Board.™

Receive
a FREE \$49
TI evaluation
module



 **TEXAS
INSTRUMENTS**

 **AVNET™**
electronics marketing

RF Design News

New instrument offers 12 GHz wireless test solution

RTSA aids in fight against corporate espionage

Online subleasing for efficient use of the spectrum

Defense Electronics News

RF Design - Events

SAS expander lays the foundation for SAS-2 infrastructure

Fast probe enhances advanced four-channel oscilloscopes

Wireless Technology News

Certified wireless USB development kit reduces design complexity

New software option for

[Back to Top](#)

http://rfdesign.com/next_generation_wireless/news/60-ghz-wireless-src-sia-0320/

5/22/2008