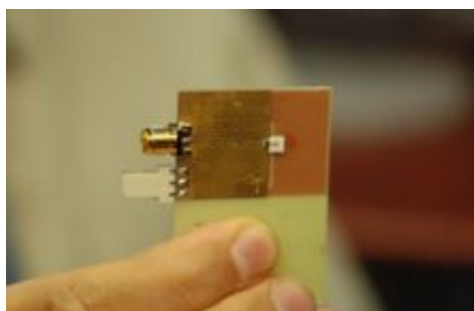


Taiwanese Researchers Introduce Blink of the Eye Transmission Speed System On A Chip

11 November 2008, by Mary Anne Simpson



System On A Chip (SOC) - Credit: Central News Agency

(PhysOrg.com) -- A world-wide expert on wireless communications, Professor Jri Lee of the National Taiwan University (NTU) and UCLA PhD conferred has created a system on a chip (SOC) with transmission speeds 100 times faster than WiFi and 350 times faster than 3.5G cell phones. Professor Jri Lee's team broke the speed record with the SoC design which is about 1/10th the size and cost of existing chips. Preliminary figures indicate the SoC chip can be mass-produced for less than \$1 per unit.

A demonstration of Professor Lee's SoC chip was conducted recently at NTU. The system on a chip combines Front-End Circuits and an antenna array to reach the ultimate transmission speed. In practice the SoC chip can download a 4-GB video in about 10 seconds. The same video would take up to 2-hours using WiFi, 1.5-hours using ADSL and 4.5-hours using Bluetooth to complete the download.

According to Professor Lee, as reported by Taiwan News, the new chip can be used to connect to all domestic audio-visual components like television, stereo, video recorder and transmit to TV screens anywhere in the home instantaneously. In airports

and train stations, the SOC could download an entire movie to a cell phone in a couple of seconds and upload thousands of pictures from a digital camera to a computer in a blink of the eye.

Professor Jri Lee's team at the National Taiwan University Graduate Institute of Electrical Engineering introduction of the SoC chip edges out U.C. Berkeley and IBM's researchers who are working on a similar solution. The SoC can be used by cell phones and digital cameras as long as the corresponding hardware is developed.

NTU and Professor Lee's team is in the process of applying for a patent. Professor Lee's academic career began at NTU. He achieved a combined Master's degree and PhD in electrical engineering from the University of California, Los Angeles in 2003. His work experience includes Cognet Microsystems in Los Angeles and Intel Corporation where his work included the SONET OC-192 and OC-48 transceivers. Since 2004, he has been Assistant Professor of electrical engineering at NTU and serves on various committees pertaining to broadband data communication, solid state circuits and other interest areas.

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