



OCP-IP Releases Survey of Network-on-Chip Architectures

BEAVERTON, Ore. — May 13, 2008 — OCP-IP today announced the availability of a white paper discussing a survey of **Network-on-chip (NoC)** proposals. NoCs replace dedicated, design-specific wires with scalable, general purpose, multi-hop networks. NoCs can provide separation between computation and communications, serve as a platform for test, and support **IP reuse**, increasing engineering productivity and decreasing time to market. This paper gives an overview of the state-of-the-art network-on-chip proposals.

The survey contains sections on **NoC Architecture Comparison, Comparison Criteria, NoC Evaluation Methods, and NoC Router Implementation**. NoC Architecture Comparison discusses **switching policy, topology, routing, quality-of-service**, as well as **testing** and **fault tolerance**. NoC Evaluation Methods covers **evaluation metrics** and example test cases. Router Implementation discusses **router parameters, minimum latency, area and operating frequency**.

This paper cites numerous examples from literature selected to highlight the contemporary approaches and reported implementation results.

A copy of the survey can be downloaded at:

<http://www.ocpip.org/socket/whitepapers/>

Work on the survey of NoCs paper was completed by **Tampere University of Technology and the OCP-IP NoC Benchmarking Group**. For the latest up-to-date information on the work of this group please see the OCP-IP Newsletter at:

<http://www.ocpip.org/pressroom/newsletters/>.

About OCP-IP

The OCP International Partnership Association, Inc. (OCP-IP), formed in 2001, promotes and supports the Open Core Protocol (OCP) as the complete socket standard ensuring rapid creation and integration of interoperable virtual components. OCP-IP's Governing Steering Committee participants include: Nokia [NYSE: NOK], Sonics Inc., Synopsys [SNPS], Texas Instruments [NYSE: TXN], and Toshiba Semiconductor Group (including Toshiba America TAEC). OCP-IP is a non-profit corporation delivering the first fully supported, openly licensed, core-centric protocol comprehensively fulfilling

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system-level integration requirements. The OCP facilitates IP core reusability and reduces design time, risk, and manufacturing costs for SoC designs. For additional background and membership information, visit www.OCPIP.org.

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