Graduate School of Information Science and Technology, The University of Tokyo

(Ministry of Education, Culture, Sports, Science and Technology-Japan Top Global University Project)

presents:

Invited Talk

A Lightspeed Data Center Network

Speaker: Professor William J. Dally

Stanford University
Chief scientist and SVP of NVIDIA Research

Date: Monday 14th September 2015

Time: 16:00 – 18:00

Venue: Room 213, Engineering Bldg. 2nd 1F, Hongo campus,

　　　　The University of Tokyo

Abstract:

Emerging data center applications demand low latency and high bandwidth networks - similar to those found in high-performance computers. This talk walks through a thought experiment of what a data center network using best practices HPC network design would look like. It shows that a "dragonfly network" using global adaptive routing and speculative reservations for congestion avoidance can offer network latencies that are dominated by the time-of-flight over the network cables. Because of reduced buffering and better channel utilization such a network would have lower component cost than a conventional network with comparable performance.

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