



The Advanced Networks Colloquium Series

*Presented by the Center for Satellite and Hybrid Communication Networks, the
Electrical and Computer Engineering Department, and the Institute for Systems Research*

LLOYD WOOD
CISCO

“Topics in Satellite Networking”

Abstract: Satellite networking has been through volatile times - commercial satellite constellations were built, went bankrupt, get bought out, while IP networking has become increasingly prevalent. Lloyd Wood presents a personal view on how all his broadband satellite research went to waste, while pointing out interesting things happening now in satellite networking.

Multi-satellite constellation networks were, briefly, a vogueish research area, as the commercial satellite industry embraced the idea of large satellite constellations such as Iridium and Teledesic wholeheartedly. We will briefly overview these describing geometries, uses of inter-satellite links and handover issues before taking a more realistic look at the current satellite industry and areas of interest including:

- DVB: IP over DVB and recent work to improve/simplify multi-protocol encapsulation;
- TCP performance enhancements: In particular issues related to TCP in IPsec encrypted VPNs across GEO links;
- IP multicast: Improving mapping of multicast onto satellite broadcast and recent ETSI activities in IGMP interaction in this environment;
- Challenges in routing in space, the Internet Society's Interplanetary Internet effort and CISCO's modified Mobile Access Router.

Biography: Lloyd Wood (<http://www.ee.surrey.ac.uk/Personal/L.Wood/>) is a space initiatives manager for Cisco Systems' Global Defense and Space Group. Prior to that, he spent some years hacking on IOS, Cisco's router software, and contributing to the IETF. Lloyd gained his PhD from the Centre for Communication Systems Research at the University of Surrey, where he focused on internetworking and satellite constellations. He's currently secretary of the Internet Society's Interplanetary Internet effort.

**11 a.m. - Friday, February 28, 2003
Room 2460 of the A.V. Williams Building
University of Maryland, College Park**

Refreshments Provided

Faculty Host: Dr. M. Hadjithodosiou

*The Center for Satellite and Hybrid Communication Networks is a
NASA Commercial Space Center and part of the Institute for Systems Research
For more information on the colloquium series, see <http://www.isr.umd.edu/CSHCN/seminar/seminar.html>*