The Montana Moose Call
Montana Section of the Institute of Electrical and Electronics Engineers

IEEE Montana Section
September 29, 2010 Meeting Announcement

Smart antennas for wireless communications

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Smart antennas for fixed and mobile wireless communications have received enormous interest worldwide. Unlike a conventional omni-directional antenna that wastes most of its energy in directions devoid of users, a smart antenna can form one or more beams in desired directions and create nulls toward interferences, thus greatly improving system performance. In addition, a smart antenna - equipped radio system will have a much larger range than one with a conventional omni-directional antenna. The talk will focus on several recent designs made by the smart antenna group at MSU. The prototype operates at 5.8GHz, can cover a 360° field of view and beamform toward multiple users. A FPGA is used to control the beam former and to execute search, lock and track procedures. Test results show that the smart antenna is capable of high resolution direction of arrival (DOA) estimation, adaptive beamforming, target tracking, interference suppression, and enables extended range with high throughput and reliable connection.

Wednesday, September 29
General Meeting: 6:00 p.m.
Montana State University, 108 EPS
(Near 7th and Grant, South of Cobleigh Hall)
Free pizza!

Please call Richard Wolff at 994-7172 (or e-mail: rwolff@montana.edu) or sign up via the Section website, **http://ewh.ieee.org/r6/montana**, to make reservations by 6 p.m., September 28, 2010.

Life Members Meeting: 5:30 PM (EPS Lobby)