

Title: 3D Spatial Environment and Precision GNSS Navigation For Machines

12.00 noon – 1.00 pm, Monday, 4 May 2015

Room NA 1.418, GTP building (ground Floor), Centre for Intelligent Systems Research,
Deakin University, Waurin Ponds, Geelong, Australia

RSVP – <http://www.deakin.edu.au/research/cisr/workshops/ieee-smc-vic.php>

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3D Spatial Environment and Precision GNSS Navigation For Machines

Graeme Hooper

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Abstract:

A background journey into the industrial 3D spatial environment and the associated use of precision GNSS navigation for mining machines will be presented. Examples associated with applications as diverse as truckless mining (e.g. the Vale S11D in South America), precision rail mounted stockpile machines subjected to mechanical skew distortion and rail ground subsidence problems, and automated remote bulk ship loading of ore will be presented. A look at the present and the future of machine 3D spatial navigation for efficient, safe automation and control of machines.

Biography

Graeme Hooper graduated Electrical Engineering from Monash University in 1980. Starting as a RF Design Engineer 1981-86 for Andrew Antennas, he then joined Rockwell International from 1987 to 1992 working in the USA on military GPS systems and equipment development. Since founding GPSat Systems Aust 1993, the company has continuously delivered innovative satellite navigation (GNSS/GPS) equipment, system solutions and technical expertise to Australian regional markets. The company's dedicated team of professional engineers with broad multidisciplinary skills in electronics, software, geomatics and information technologies, continue to deliver "frontier GNSS navigation projects", to advance 3D machine automation, air navigation infrastructure, thoroughbred race horse training, and defence navigation warfare systems to mention a few.