Engineers Australia
Sydney Division
Water Engineering Panel

REAL-TIME QUANTITATIVE RAINFALL FORECASTING
WHERE ARE WE AND WHERE ARE WE HEADING

Abstract:

Weather prediction and specifically forecasting rainfall in the near term has made significant strides in the last decade. This has largely been due to advances in science and computer power, with several agencies commanding supercomputers in the top 50 in the world. However, rainfall still remains one of the most difficult parameters to forecast even out to 12 hours. The intrinsic problems with forecasting rainfall over other such parameters such as temperature and winds, is its often very chaotic nature both temporally and geographically. Even with global supercomputers modelling at greater resolutions, few are capable of providing the pinpoint accuracy often required by rainfall sensitive industries and projects.

The aim of this talk is to provide an industry-wide overview on current science and forecasting techniques with regard to rainfall, with a special focus on the very latest techniques for trying to improve and correct forecast data provided by the global computer models. The example of the Chatswood Integrated Flood Control and Stormwater Reuse Scheme shall be used as a case study of how such techniques may be applied to vastly enhance rainfall forecasting accuracy. In addition, the talk will touch on how these forecast techniques can be used across the industry as a whole, as well as a quick look into expected future developments.

Speaker Bio:

Martin Palmer spent nine years in the British Royal Navy as a Warfare Officer, specialising as a Meteorologist, Oceanographer and Hydrographic Surveyor. During this time, Martin became a qualified watchkeeper attaining a Standards of Training, Certification and Watchkeeping (STCW) endorsement. As an officer of the watch Martin was trained to a high standard in ship navigation, pilotage, towing operations, fluid dynamics, stability and marine engineering. Martin served as a watchkeeper on numerous ships, including aircraft carriers, frigates and survey ships. As a marine forecaster Martin provided aviation support to ships and carrier groups operating around the globe, from the North Atlantic and Mediterranean to the Persian Gulf and Indian Ocean. Martin moved to Australia in 2008 and worked at The Weather Company (Weatherzone) initially as a meteorologist. The next two years saw him promoted to Team Leader, in charge of up to eight meteorologists. During this time, Martin was central to the development and optimisation of The Weather Company's Opticast and early warning forecast systems, specifically around the integration of future radar and bias correction. In 2011, Martin moved into the Market Manager role, overseeing the Mining, Maritime, Energy and Engineering/Construction industries.

About Weatherzone

The Weather Company (TWC, trading as Weatherzone), is Australia's largest private meteorological services provider. Founded in 1998 by ex-Bureau of Meteorology meteorologist Mark Hardy in response to a drive for better weather related content on TV, with initial clients including The Weather Channel and Sky News. Over the years, the company moved successfully into online syndication and then quickly into the energy trading, networks industries by the mid-2000s. Over the last few years TWC has expanded rapidly into the aviation, mining, offshore and construction industries as well as making significant in-roads into international markets. TWC has over 18 qualified meteorologists and scientists as well as 20 IT, graphics and support staff based in Sydney, Adelaide, Melbourne and Tokyo.

Date:	**Tuesday August 28th 2012**
Time:	5:30 pm for 6:00pm
	Drinks & nibblies from 5:30pm
Venue:	Engineers Australia Auditorium, Ground Floor
	8 Thomas Street, Chatswood NSW 2067
Enquiries:	Scott Button at scott@lyallandassociates.com.au

Attendance can be credited towards IEAust Continuing Professional Development requirements