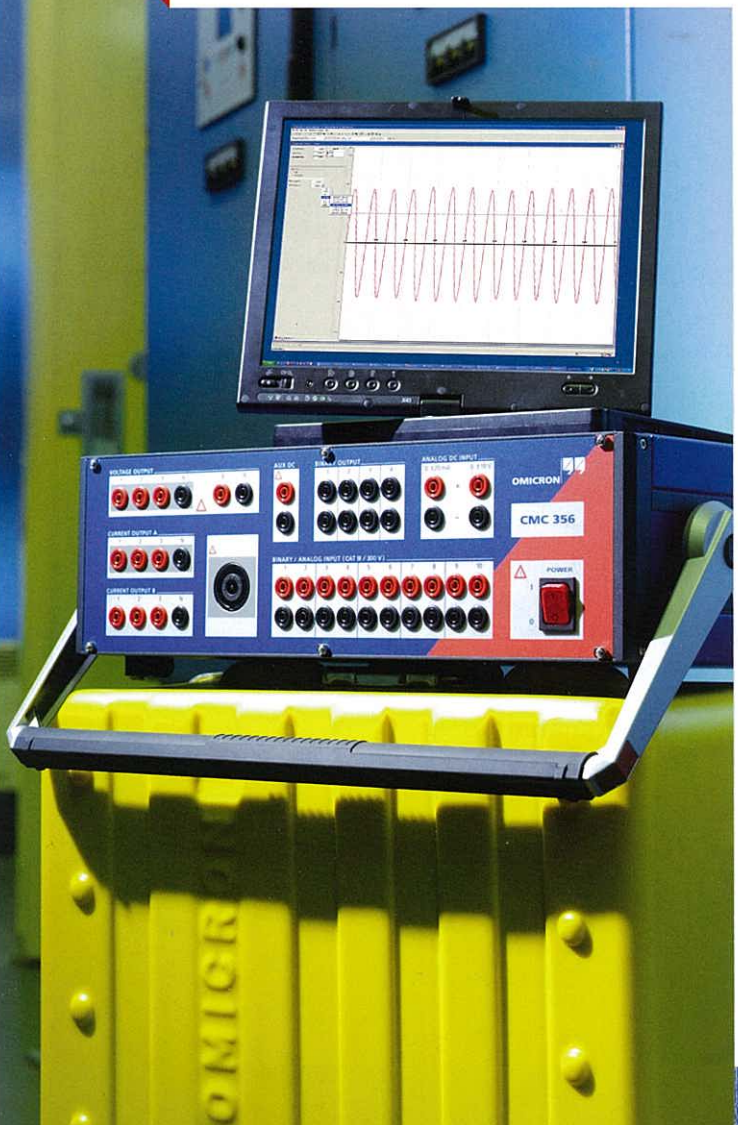
OMICRON

Australian Protection Symposium

A Closer Look at Line Protection

Melbourne, Perth, Adelaide, Brisbane, Sydney

September 11 -18, 2009



Key Speakers

Cord Mempel, has been working for OMICRON since 2005 and is currently in Product Management for secondary testing products. His domain is: next generation software for the OMICRON secondary test sets and database applications for test management (TestBase).Prior to joining OMICRON, Cord worked for SIEMENS Germany for 16 years (in development, type test and sales of numerical protection relays).

Ian Young, Applications Manager for AREVA Automation in the Pacific region, has been working for AREVA since 1990. Prior to joining AREVA, Ian worked for 5 years for Sydney Electricity (now Energy Australia). Ian is a member of CIGRE Australian panel B5 and holds a Bachelor of Electrical Engineering with first class honours from the University of Technology in Sydney. He has presented papers at various industry conferences including SEAPAC, Machines and ESAA.

Gawie Pretorius, Application Engineer of OMICRON Australia, received a Higher Diploma in Heavy Current Electrical Engineering from the Tswane University of Technology (formerly known as Pretoria Technicon) in Pretoria, South Africa. He worked for 9 years in the protection sections of Eskom (South Africa's Power Utility) and 6 years at Alectrix (Pty) Ltd, the sole supplier of OMICRON Test Equipment in Southern Africa. Gawie also presented numerous OMICRON courses and technical papers.

Ian Stevens, is the Principal Consultant Protection and Metering at Powerlink Queensland where he has worked for 28 years in all facets of protection from specifying and purchasing relays to performing complex investigations. He has seen the evolution of relays from electromechanical to numerical technology and is participating in establishing the design principles for IEC 61850. Ian was awarded gold and silver Innovation and Excellence Awards at Powerlink, has presented at Omicron APS and WPRC, and published in PAC magazine.

About the Symposium

This year´s APS will continue its success in building an important platform for a useful exchange of experiences within the world of protection testing. Besides discussing future trends in general, the Symposium goes deeper into topics such as communication-based protection schemes, use of transient voltage and current signals and transferring of protection settings to test files. A topic that will also be covered is IEC61850, especially the simulation of "SV" (sampled values) and subscription and/or simulation of GOOSE messages.

During the symposium there will also be demonstrations of IEC61850 devices by simulating "SV" and assigning of GOOSE messaging as well as transferring of protection settings to relay test templates from the relay's software or a Microsoft Excel® Add-In.

Topics

- **New ways of testing line protection schemes**
  - Advances for testing line differential protection schemes utilising synchronised test set via GPS or IRIG-B devices.
  - Performing system testing on distance protection schemes incorporating signalling which utilises multiple test sets synchronised via GPS or IRIG-B.

- **Testing line protection relays using Network Simulation tools**
  - Testing the behaviour relay of line protection relays by playing back transient voltage and current signals generated from network simulation programs or fault recording devices, i.e. PSD (power swing detection) and high resistive earth faults.

- **IEC 61850**
  - Subscription and simulation of GOOSE message via the OMICRON test set for testing the configuration of an IEC 61850 substation.
  - Testing scenarios for CT and VT signals transmitted over substation networks as "SV" (sampled values) according to IEC 61850-9-2 LE.

- **Protection setting management**
  - A discussion on different techniques for transferring protection settings to test files.

- **Impedance protection characteristic**
  - Examine critical aspects for choosing the correct impedance characteristic in your power system.
  - In depth look into different earth return impedance compensation methods.