

conference reports

International Protection Testing Symposium, 2008

Schattenburg in Feldkirch,
Austria
page 86

IEC 61850 2008

Buenos Aires,
Argentina
page 87

PAC conferences around the world

Protection, Automation and Control conferences around the world provide forums for discussions and exchanges of ideas that help the participants in resolving the challenges that our industry faces today.

South African Protection Conference, 2008

Johannesburg,
South Africa
page 88

Australian Protection Symposium, 2008

Perth,
Australia
page 84/85

Australian Protection Symposium, 2008

Melbourne,
Australia
page 84/85

Australian Protection Symposium, 2008

Adelaide,
Australia
page 84/85

Australian Protection Symposium, 2008

Sidney,
Australia
page 84/85

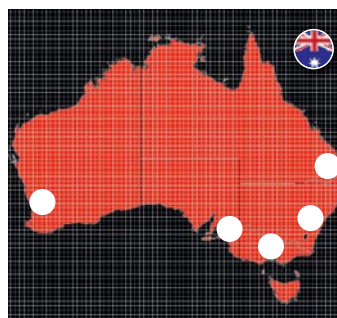
Australian Protection Symposium, 2008

Brisbane,
Australia
page 84/85

Australian Protection Symposium 2008

Sept 25 - Oct 2

The Australian Protection Symposium 2008 was held in Australia, in five different locations.



Brisbane is the state capital of Queensland, Australia.

THE AUSTRALIAN PROTECTION SYMPOSIUM 2008 was an event quite different from typical conferences and symposiums.

While usually people from different parts of a country get together at a single location to discuss a set of issues, in this case the symposium was organized as five one day events that took place in five different locations.

The protection symposium took place from 25 September 2008 to 2 October 2008, in the following cities:

- Sydney
- Melbourne
- Brisbane
- Adelaide
- Perth

A core group of speakers traveled across Australia and was joined by local speakers and participants at each city.

The aim of the Symposium was to support the electrical supply industry by providing a forum highlighting the processes needed to effectively implement a sound protection scheme.

Following the success of the 2007 event, the organizers considered the fact that design and test engineers play complimentary roles in the establishment of effective and reliable protection systems. Often, without having met or on many occasions not having direct communications, they need to have a sound mutual understanding of the principles and application of protection schemes and a clear vision of how a specific application is intended in an area of technology where there are many variables.

The goal was to focus the details and different aspects of a specific protection subject. As a result the theme of the symposium

Downtown Melbourne. was “Protection - The Complete Story: From Design to Testing



Adelaide railway station.



Line differential protection was the focus of the Australian Protection Symposium.

The Perth skyline as viewed from the Swan River.



Perth metropolitan area is located in the south west of the Australian continent between the Indian Ocean and a low coastal escarpment – the Darling Range. The central business district and the suburbs of Perth are situated on the Swan River.

and Assessment with a focus on Differential Protection”.

With this focus the Australian Protection Symposium provided an opportunity for people involved in this process to share knowledge and experience and reinforce the effectiveness of this mutual interaction on all aspects of Differential Protection Schemes.

The different topics discussed at the symposium were:

- Critical Aspects of Designing a Differential Protection System

- Critical Aspects of Testing a Differential Protection System from a Design View

- Reviewing the Approach to Testing Digital Differential Relays

- Practical Steps in Testing Differential Protection Devices

- Using Advanced Testing Techniques of Network Simulation to Support Design Criteria

- Role of Current Transformers in Differential Protection Applications

- Techniques for End to End Testing of Line Differential Applications

- Functional Testing of IEC 61850 Based Protection Relays

- Techniques for Controlling the Creation, Communication,

Application and Storage of Settings and Test Results.

Open forums at the conclusion of the morning and afternoon sessions provided a way for all attendees to clarify issues and share experiences.

Considering the impact of IEC 61850 on protection applications and their testing, the last session of the day included demonstrations of different tools that can help protection specialists understand,

Live demonstrations of IEC

61850 tools and testing

made the theoretical material

understandable.

monitor, configure and test multifunctional protection IEDs with IEC 61850 capabilities. ■



The Sydney Opera House which houses a multi-venue performing arts centre was made a UNESCO World Heritage Site on 28 June 2007.



International IEC 61850 Seminar

International Protection Testing Symposium, Austria

The Symposium was held in

Schattenburg in Feldkirch,

Austria - 23-24 October, 2008

Protection and control specialists from more than thirty countries gathered for the two day protection testing symposium to discuss the challenges resulting from the changing utility environment and the advancements in protection and communications technology.

More than twenty papers covered a wide range of topics, starting from advanced tools for testing of electromechanical protection relays. Several papers presented case studies on testing of generator and power station protection including the dynamic behavior of the excitation system. Many papers focused on testing issues related to the use of IEC

61850 for protection schemes, interoperability between devices from different manufacturers and different protection and control applications. The requirements for testing in modern protection, automation and control systems go beyond the testing of protection relays. Several different topics were discussed:

- Testing of phasor measurement units (PMUs)
- Testing of SCADA
- Testing of underfrequency load-shedding scheme

Dynamic testing, the use of MATLAB/SIMULINK, modeling of relay settings and automatic commissioning of multifunctional protection IEDs were also discussed. The program of the symposium also included live demonstrations of the latest testing technology and an evening networking event. ■

The XXI Century

Communications, Control

and Protection Architecture

Seminar was held in

Buenos Aires, Argentina.

CIGRE AND IEC ARGENTINA HAVE jointly organized for the first time in this country an International Seminar, with experts of recognized international status of the two organizations lecturing on the Standard IEC 61850, describing implementation experiences in substations and power plants, the state-of-the-art, on-going works and trends on technology of protection, automation and communications, as well as on challenges and solutions forecasted for the 21st century, both in the engineering of substations and in the different levels of SCADA systems, especially in Control Centers.

The speakers were chairmen and experts from working groups of both CIGRE and IEC. During the first day, the ongoing work in selected working groups was presented. Carlos Samitier from Spain reported as convener about the work done in CIGRE WG

More than 100 attendants

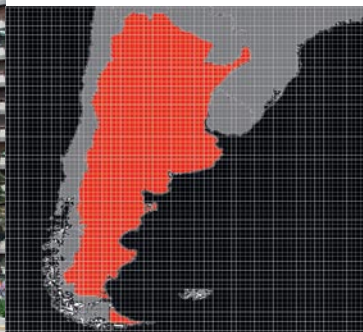
mainly from South America

participated in the event.

The symposium venue - Schattenburg in Feldkirch.



The CIGRE / IEC Seminar in Buenos Aires was held from 12 – 14, November, 2008.



Buenos Aires is the capital and largest city of Argentina. It is located on the southern shore of the Rio de la Plata.

D2.23 - “The use of Ethernet technology in the Power Utility environment”. That working group is addressing different aspects of Ethernet networks including new trends in the implementation of Ethernet networks and the use of Ethernet IP networks for Wide Area Networks. The CIGRE WG D2.24 - “EMS Architectures for the 21st Century” has been created in cooperation with an International Group of Very Large Power Grid Operators (VLPGO). The convener of that group, Alain Steven from the U.S. reported about the status.

With regard to the activities related to IEC 61850, Christoph Brunner, Switzerland, convener of IEC WG10 and Claes Malcolm,

The event closed with an open discussion session.

Sweden, convener of IEC WG18 reported on the status of IEC 61850 activities. John Newbury, U.K., convener of WG20, reported on on-going works on the Standard IEC 62488 Ed. 1.0 that will replace Standards IEC 60495 -Single sideband power-line carrier terminals- and IEC 60663.

The speakers reported about topics associated with the different working groups. With regard to IEC 61850, the status of IEC 61850 as process bus, the use of IEC 61850 for communication between substations and from

substation to control centers was discussed. Experience from users implementing IEC 61850 was shared. Clemens Hoga from Germany, member of WG10, reported on IEC 61850 and industrial Ethernet. Finally Ludovic Piètre-Cambacédès of France, reported on cyber security for electric power utilities and related standards.

The active participation in the open discussion session, clearly showed the interest in the topics that had been presented. ■



Session at the IEC 61850 Seminar.



Hotel Conquistador, the conference venue.



by Graeme Topham, Eskom, South Africa

2008 Southern African Power System Protection Conference



The conference provides a unique forum for delegates and exhibitors.

ESKOM, THE SOUTH AFRICAN electricity utility, once again hosted the biennial Southern African Power System Protection Conference in Johannesburg, South Africa from the 12th to 14th November 2008.

The conference was yet again fully subscribed with 350 delegates attending the two and a half days. An exhibition ran concurrently with the conference with 17 suppliers exhibiting electrical protection and related equipment. Both the conference and exhibition provided a valuable opportunity for attendees to see new equipment and hold discussions with technical experts from international and local companies.

The 350 registered delegates included 225 from Eskom, 30 from twelve different overseas companies and the remainder from local suppliers, industry, municipalities, consultants and academia.

The keynote address titled “Overview of asset management in Transmission” was given by Mr Willy Majola, General Manager in the Transmission Services Division of Eskom. The keynote address focused on the rationale behind asset management, the various stages in the asset management process, and an overview of the current status and future direction of Eskom Transmission in terms of the overall asset management process. Mr Majola indicated that effective asset management is an optimum balance between cost, performance and risk and a 10 to 20 year view of operating and capital expenditure plans are needed in order to make optimized

The conference was fully subscribed.

decisions. Customers, the regulator and other stakeholders must also be convinced that investment decisions are based on sound, scientific and repeatable evidence. Following the keynote address, thirty one technical papers were presented over the two and a half days. The papers covered:

- Generator, transformer and feeder protection
- IEC 61850
- Cyber security
- Testing & relay modeling
- System stability mitigation techniques, fault recording and data management
- Series compensated line protection
- Current transformers
- Arc flash protection
- Single battery applications

The ‘Best Presentation’ Award, the criteria of which are technical content, quality and audience interest, was won by Professor Michael Fette of System & Dynamik for his presentation of the paper entitled “Collapse protection relay CPR-D - Theory and Applications - Implementation into SCADA systems to support security stability assessment”.

The next Southern African Power Systems Protection Conference will be held in November 2010. ■



Exskom's Training Center, the venue of the conference.