

NEWSLETTER No 9/2005



Railway Technical Society of Australasia
SA Chapter
Engineering House, Bagot Street
NORTH ADELAIDE SA 5006

OCTOBER 2005

NEXT MEETING

The next meeting will be held on

THURSDAY 3rd November 2005

At

**The Riviera Motel and Convention Centre,
North Terrace, Adelaide - at 17:30.**

Joint Meeting of RTSA / IRSE

Topic:

New CTC System for TransAdelaide

Introduction by George Erdos

**Technical Presentations by
David Hickson and Nik Dimos
from United Group Infrastructure**

**Including a Site Visit to TransAdelaide's
Operations Control Centre**

George Erdos from TransAdelaide and David Hickson/Nik Dimos from United Group Infrastructure (previously ALSTOM) will be presenting a talk on TransAdelaide's CTC replacement project. This talk is a continuation of that previously presented to the IRSE in March 2003 and the RTSA in July 2003. In those talks we looked at the existing TransAdelaide (TA) rail signalling system with a particular focus on the CTC system. We then examined the need for replacement of the current system and finally the tendering/evaluation processes leading to the awarding of a contract to ALSTOM Australia Pty Ltd.

In this presentation, George will briefly revisit the need for replacement of the CTC system this will be followed by David and Nik who will cover what has transpired between July 2003 and November 2005.

You will then have the opportunity to learn more about this fascinating railway project as TransAdelaide and United provide a full project status report; with a look at areas such as Automatic Route Setting (ARS), alarm systems, fault management and pseudo interlocking and many other features that will be delivered with the new system. The talk will finally conclude with an examination of strategies leading to the commissioning of the new CTC system and how this will be achieved while simultaneously minimising system downtime.

Following the talk, we will take the opportunity to visit TransAdelaide's Control Centre, where we will be able to see first hand some of the new infrastructure, including one of the new high tech "controller workstations" and compare this to the old system before it is finally decommissioned early in January 2006.

Don't miss this opportunity to see some history in the making, as old makes way for new.

At the conclusion of the technical tour we will return to the Adelaide Riviera Motel & Function Centre for a light supper, courtesy United Group Infrastructure, TransAdelaide and the Institution of Railway Signal Engineers.

Please refer to the attached Joint Meeting flyer for a timetable of events.

Continuous Professional Development (CPD)

IEAust members are reminded that attendance at RTSA technical meetings contribute towards CPD requirements. Each RTSA technical meeting generally has a value of 1 CPD point.

LAST MEETING

At the last meeting we had a joint presentation by Dean Lambert and Dean Phillips who each spoke about different aspects of the new Adelaide Trams. A summary of their presentation follows:

New Adelaide Trams – Part 1

Dean Lambert
Director Light Rail Project
DTEI

A contract was signed approximately 12 months ago for the supply of nine new trams for the Glenelg Tram Line. The Trams are being built by Bombardier at their factory near Dresden, Germany. Three trams are complete and are currently being shipped to Adelaide. They are expected to arrive in Adelaide mid-November and be in service just after the new year.

TransAdelaide appointed a local project inspector to monitor the build quality of the trams and their progress according to the agreed schedule. While overseeing the project the inspector is not directly responsible for the final quality, that always remains the responsibility of the manufacturer.

NEWSLETTER No 9/2005



Railway Technical Society of Australasia
SA Chapter
Engineering House, Bagot Street
NORTH ADELAIDE SA 5006

OCTOBER 2005

Due to the small number of trams being purchased, they are an off the shelf design. TransAdelaide had very limited scope for design alterations. The main differences are in the increased air conditioning requirement, an altered mirror arrangement for driving on the left side of the road and improved access for the disabled. The design however is well proven with similar trams having been in service in Hamburg for the past three years with excellent reliability and performance. The trams also have a sophisticated passenger information system that will advise passengers of the next stop.

All nine trams will be delivered by April 2006. The South Australian State Government has since ordered an additional two trams in anticipation of the extension of the tramline to the Adelaide Railway Station and when delivered in early 2007, will bring the total in operation to eleven.

TransAdelaide has conducted a number of visits to the manufacturer to familiarize itself with the maintenance and operational requirements of the new trams including one last August by 4 staff with technical and driver backgrounds. The visit coincided with the completion of the first tram and the group participated in its static and dynamic commissioning including driver familiarization on a tram network at a nearby town.

The trams will be shipped complete to Adelaide on purpose built trailers. The trams are driven onto the trailers. The trailers support the tram during the transportation by road and ship from the factory to Adelaide.

New Adelaide Trams – Part 2

Dean Phillips

Fleet Services Manager
TransAdelaide

The new trams are known as Flexity Trams. Each tram will carry 180 passengers with 70 seated and 110 standing and is intended to replace a double consist of the existing H Class trams. By comparison, each H Class tram carries 64 seated passengers.

The Flexity trams provide improved access for older people and for pram and wheelchair access. The trams are 30 metres long, have a mass of 40 tonnes and a maximum speed of 70 kms/hr.

The trams are manufactured in modules. Most of the operating equipment of the tram is mounted on the roof. This has required the redesign of the maintenance

facility at Glengowrie in order to allow access to the roof area of the new trams. The trams have resilient wheels and anti-squeal spats to reduce noise and produce a smooth ride.

To ensure good reliability, the trams are provided with three power inverters for the air conditioning and two computers of which only one is required at any one time, thus providing a high degree of redundancy. After 3 years of use at Hamburg, the Flexity trams have provided a reliability of 99%. No total failures have occurred in service.

Hydraulic, electric and magnetic braking is fitted to the trams. Fifty percent of the axles are powered and the non-powered axles are stub axles to allow the low floor design.

The body is manufactured from stainless steel and has a 30 year warranty.

The emergency stop and exit controls are interlinked to the power system. Audible and visual door closing warnings are provided.

As each tram is delivered, they will be tested to ensure that all operational systems are operating correctly.

The meeting was attended by 27 members and visitors with the Vote of Thanks being given by Bill Edmonds.

RTSA - SA CHAPTER AGM / DINNER MEETING

The RTSA SA Chapter AGM will be held at its annual dinner on Tuesday 29th November at Zak's Restaurant, 149 Brebner Drive, West Lakes SA 5021.

The highlight of the evening will be our guest speaker, Mr Bill Watson, General Manager TransAdelaide, who will talk about his vision for the future of rail public transport in Adelaide.

Members and their partners are invited to the AGM. It is sure to be the highlight of the year and as the capacity of the restaurant is limited, please respond early to avoid disappointment.

Attendance application forms are attached to the Newsletter.

RTSA COMMITTEE NOMINATION FORM

Nominations for the 2006 RTSA South Australian Committee are now being collected. A nomination form is attached for your use.

NEWSLETTER No 9/2005



Railway Technical Society of Australasia
SA Chapter
Engineering House, Bagot Street
NORTH ADELAIDE SA 5006

OCTOBER 2005

MEETINGS FOR 2005/2006

| Future Speakers/Dates/Topics | | | | |
|------------------------------|---|---------------------------------------|--|--|
| Date | Speaker | Organisation | Topic | Venue |
| 03/11/05 | George Erdos | TransAdelaide (Introduction) | Joint Meeting IRSE & RTSA | Riviera Motel and Function Centre |
| | David Hickson / Nik Dimos | United Group (Technical Presentation) | New CTC System for TransAdelaide | Site Visit to TransAdelaide Control Centre |
| 29/11/05 | Annual General Meeting of RTSA - SA Chapter Dinner Meeting Guest Speaker – Mr Bill Watson, General Manager TransAdelaide | | | |
| 2/2/2006 | TBA | | | Joint with PWI |
| 2/3/2006 | TBA | | | |
| 6/4/2006 | Site Visit | Intercast & Forge | Tour of foundry including new facilities | Intercast & Forge - Joint with PWI |
| 1-3/5/06 | Core 2006 | | | Melbourne |
| 1/6/2006 | | ARTC | Wayside Detection and Wheel Profile Measurement | Joint with PWI |
| 20/7/2006 | TBA | | | |
| 3/8/2006 | R Nancarrow | | History of Ultrasonic Rail Flaw Detection/ Current Practices | Riviera Motel and Function Centre – Joint with PWI |
| 7/9/2006 | TBA | | | Joint with IRSE |
| 5/10/2006 | | ARTC | Structural Clearance Management | Joint with PWI |
| 28/11/2006 | | | | RTSA AGM |

KEY RTSA CHAPTER COMMITTEE CONTACTS

| | | |
|--------------|------------------|--------------|
| Chairman | Rob Schweiger | 8238 3412 |
| Treasurer | Duncan McLeod | 8338 1081 |
| Secretary | Vacant | |
| N/L Despatch | Malcolm Menadue | 8270 2873 |
| N/L Editor | Stephen Townsend | 0400 135 481 |

Articles or editorial comment for Newsletter are very welcome. We have over 100 members locally some of whom will have stories, events or developments of interest that could be reported in Newsletter.

Part of the function of RTSA is to keep members in touch with what is going on in the industry and with each other and to that end we are only too happy to publish items of interest.

Send copy to the Editor, Stephen Townsend at st771048@bigpond.net.au or fax to 08 8218 4327.

Electronic despatch of Newsletter is undertaken by Malcolm Menadue – contact Malcolm on mmenadue@ozemail.com.au if you have any problems receiving Newsletter electronically or in hard copy. Note that electronic subscribers will get their Newsletters and flyers as soon as the editorial stuff is done, while the hard copy mail will of course be some days slower.

For all other matters relating to RTSA SA Chapter contact Robert Schweiger (Chairman) at e-mail robert.schweiger@jhg.com.au, or by phone on 0413 128 775.

Disclaimer

This Newsletter is a publication of the South Australian Chapter of the RTSA. The opinions expressed within are not necessarily those of the Chapter, Society or Editor.