NEWSLETTER No 8/2002

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

OCTOBER 2002

End of Year Event

DINNER
with AFTER DINNER SPEAKER MYSORE NAGARAJA of the NEW YORK TRANSIT AUTHORITY

Including, for a short time only, the Annual General Meeting

At CLASSICS RESTAURANT
119 Walkerville Terrace
Walkerville

On Tuesday 19th November 2002

At 19.00 for 19.30

It is annual general meeting time again. This means two things – there are a number of formal matters to be attended to, including selection/election of the incoming committee, and a grand nosh up at a restaurant of distinction at a bargain basement price.

The current committee consists of 11 people of diverse rail backgrounds (and yes Virginia, there is are non engineers among them) who are active in different parts of the industry. Changes of job, location or workload are a fact of life these days, which means that accelerated natural attrition can be a factor in volunteer organisations such as ours. New faces on the committee will always be welcome, both for the extra pair of hands, and the continuity that a reasonably large committee can provide. RTSA is not a 'gentleman's club' with a ruling clique so if you have the time, would be interested in working with an interesting and at times entertaining group of like minded people then give it a go. A nomination form will be sent to e-mail members a day or so after this newsletter, while those who still rely on hardcopy though the post should have the form included in this envelope

We will be at the same venue as for the last two years, a simple choice given the enjoyable evenings that have been held there so far.

The cost to members and partners remains at $27.50 per head, which includes a multi course meal, pre dinner drinks and wine at table. With the valuable support of sponsors, and the SA Chapter of RTSA, it has been possible to keep the cost down to an absurdly low level for an evening such as this. And just in case you are uncertain, this is a night for partners, spouses and friends as well as members. It is in fact our social night

Eminent guest, Mysore Nagaraja of the New York Transit Authority, fresh from the CORE conference the previous week, will be on hand to regale us with tales from his home town.

A booking form will be included with the committee nomination form so that you can ensure your place.

FUTURE MEETINGS

The Dinner / AGM / Eminent Speaker on Tuesday 19th November will be the last event of our 2002 calendar year. Starting again in February 2003 we have a number of quite diverse and interesting activities on the drawing board. The first is on Thursday 6th February at the usual location in Bagot St Nth Adelaide and is planned to be Derek Scrafton presenting on the development of a state Strategic Transport Plan (assuming that the plan has progressed far enough). Derek has a guiding role in the Reference Group for this plan and therefore will be in a good position to let us know some of the detail and thinking behind it. Hopefully it may mean that South Australia will get into 'transport' planning and we will see an end to the 'rail shy' period that followed the hand over of SAR to the Commonwealth in 1975. Derek will hopefully be in a position by then to talk about such issues.

It is not intended to have a March meeting due to close proximity of the prestigious Institution of Railway Signal Engineers (IRSE) conference, which is being held in Adelaide between 14/3 and 16/3 at the Stamford Grand, Glenelg. Although the conference is already well booked daily registration will be available for those who would like to attend.

NEWSLETTER No 8/2002

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

OCTOBER 2002

Malcolm Menadue is the contact point for anyone interested in attending, and he can be reached on mobile 0418 827 126, or e-mail on mmenadue@ozemail.com.au. Malcolm will forward a copy of the program and details of daily registration to the e-mail list when it is available (January 2003) and will forward a copy on request to interested recipients of hardcopy newsletters.

It is planned that there will be regular monthly meetings, on the first Thursday each month, from April through until well into spring at least. Stay tuned for details as they are confirmed.

CHAIRMANS NOTES

As Christmas once again rapidly approaches, this will be my last opportunity to pass on a message through the "RTSA Newsletter", as SA Chapter Chair. My time in office comes to an end at the AGM to be held at the Classics Restaurant, Walkerville on Tuesday 19th November. I look forward to seeing you there in large numbers to vote, and show your support for our new Chairperson.

The last two years have gone quickly indeed. It has been both a challenge and a rewarding experience to bring members an interesting program of seminars, tours and "Newsletters" befitting the great industry in which we all work. The SA Chapter has been very active on your behalf. Over the last two years we have delivered a strong program supplemented by a comprehensive "Newsletter" brought to you by a dedicated author in Max Michell.

At a National level the RTSA provides ongoing support for the industry at a political, educational and professional level and continues to deliver the best value for money "Railway Conference" in Australia and I look forward to seeing you at CORE 2002 to be held in Wollongong, NSW over the period 10th - 13th November 2002.

Two years ago when I took on the position of Chapter Chair, I clearly remember a desire to build on the good work done by John Adams. At that time, I looked forward to the support and assistance of the new committee. From a personal point of view, I could not have hoped for better support and must personally thank members of the SA Committee for their ongoing hard work and dedication, without which the job of Chair would be impossible to effectively fulfil.

Over the last two years we have seen a significant growth in membership, in part through the absorption of Rail2000 Members. I am sure the Rail2000 Members who have actively participated in the RTSA will have come to appreciate the merger.

One of the greatest rewards in doing this job is the personal learning experience both in terms of the people you meet and the knowledge acquired from colleagues within the industry who unselfishly give up their time, knowledge and expertise. This type of dedication all speaks well for the future health or our industry.

The Chairman's position will continue to be very challenging in trying to grow membership, provide an ongoing program that stimulates the imagination of members and non-members alike. I am convinced that through the ongoing support of the membership these challenges will be met.

In conclusion, I wish the incoming Chair and Committee all the best and look forward to supporting our new Chairperson as the immediate past Chair of the SA Chapter of the RTSA.

RAIL MUSE

Not all that long ago a compatriot was out in the wee small hours assisting collection of acoustic data for a project we were engaged in at the time. The particular train they were waiting for, which they knew was on its way, did not arrive at the site, and subsequent enquiries revealed that the train concerned had been stabled following passing a red signal and the crew then being relieved from

NEWSLETTER No 8/2002

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

OCTOBER 2002

duty. Nothing untoward actually happened, but railway safety is taken very seriously and a 'spad' (signal passed at danger) is regarded as a situation that quite definitely compromises safety. Whenever such a situation arises the train crew is relieved from duty on the spot pending resolution of the circumstances and any follow up action. Trains are generally delayed as a result, but that is infinitely preferable to allowing a possible unsafe situation to develop into something much worse. This particular event was not serious but it did set me thinking that here is yet another area where rail and road head in opposite directions. In the rail case we err on the side of caution. In the road case nothing is done to debar drivers from continuing to drive until (if ever) they are convicted of an offence months or even years later.

Heavy trucks are over represented in crashes, and death and serious injury are over represented in truck related crashes, yet truck drivers are never taken off driving during the time that the circumstances being investigated following a 'safety incident'. It is entirely reasonable that a truck driver, who is in total charge of a vehicle of up to 25 metres (82 ft) long and up to 68 tonnes gross should not only be required to have a much higher degree of competence at both a technical and social level, but that they are subject to similar safety practices to train drivers and for that matter air and sea safety operators. Similar rules apply non driving rail operatives, but not to road.

This was all brought into very sharp focus last weekend when a B-Double crossed in front of a chartered steam train near Benalla (Victoria) which resulted in a catastrophic derailment of the locomotive and the death of three crew men. The train was running at moderate speed (50 to 60 km/h) on straight track in clear weather in flat country with good visibility at a level crossing with Give Way signs, yet this particular truck driver still managed to drive in front of the train. A comparable 'error of judgment' by a railway man would most certainly have resulted in him being taken off active driving at least until the circumstances were investigated, but in this case the driver concerned will be free to continue driving until (or if) he is ever taken before a court on driving or criminal charges. So if he lacks the skill or maturity to properly handle a very sizable truck (and note that I am saying IF; no one knows at this stage) he will still be free to drive on public highways and byways in his unskilled and potentially dangerous state for an indeterminate time into the future. The people most at risk from this potentially unsafe policy are in fact everyday motorists, who in their four metre one tonne vehicles have little protection from trucks that are many times larger and heavier. Australia will continue to have truck related fatalities in excess of other developed countries as long as we take a laissez faire approach to the issue of safety on the roads. It matters not if the truck driver is at fault or otherwise in a 'road safety event', the fact is that the truck itself is a very destructive and dangerous piece of equipment when mixed with much smaller vehicles. With the best driving skills in the world there will still be crashes involving trucks, and because of the disparity between the vehicle sizes these crashes will be over represented in the fatality and serious injury statistics. Safety rules and practices that are common across all heavy transport operatives are long overdue. Rail, air and sea are more or less on common ground in safety management but road, as is so often the case, is the stand out failure to deal with commercial safety in a substantial and consistent way. No doubt there will be all the reasons in the world why truck drivers cannot be governed by the same set of safety practices as other transport, ranging from administrative difficulties to increased costs to penalizing families, but that is simply ducking the issue. Road safety has responded to bold moves in the past (remember the ruckus when compulsory seat belts were proposed?) and not to weak kneed and populist nonsense that so often categorises responses to road safety these days. I will be convinced when I see some action in this regard. In the mean time I remain angry about the completely avoidable loss of three good members of the rail family, as I do about the 200 or so road users each year who die in heavy truck related crashes in this country. (Max Michell)

NEWSLETTER No 8/2002

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

OCTOBER 2002

THE GLASS

An accountant will look at a glass and see it is half full. An economist will look at the glass and see it is half empty, and an engineer will look at the glass and see that it is twice as big as it needs to be. Which all goes to show that it depends on where and who you are when you view things around you. This is quite germane to the recent Rail Muse article about loss of corporate knowledge. Some readers thought that the article might be seen as 'offensive' by some of the younger engineers in the rail industry, particularly the reference to 'show ponies'. The article noted that in 'some cases' young graduates were brought in / 'a number' were little more than commercial show ponies. So we have a case of some, of whom a number were show ponies, and in no case were engineers mentioned. Which highlight the fact that engineers will think of graduates in terms of their own disciplines, much as accountants, geographers and other professions will think in their own terms. The 'show ponies' referred to were not in South Australia, were not engineers, and have never worked in AN, NR, ARTC, ARG or any other South Australia railway, which may put the response referred to above in an explicable context. Interestingly the response I got from Victoria and NSW was quite the opposite to the local reaction with a very clear and sympathetic recognition of the sort of persons referred to. So just remember that if you read something in this section of Newsletter and think you recognise yourself you are almost certainly wrong. Re-read the words carefully and you may pick up the intended meaning, even if the situation being described is not one that is familiar. On the up side the article in question got the most responses yet from any of the Rail Muse editorials, which in a perverse way is quite gratifying. Just keep on reading!

LAST MEETING - THE DARWIN RAILWAY

Charles Duncan, Project Manager with Adrail, gave an excellent illustrated presentation on the construction of the Alice-Darwin railway at the October joint RTSA and PWI meeting. A crowd of over 50 attendees highlighted the interest that there is in the construction of this remote railway. The notes below are taken from Charles' notes, hence the periodic use of first person context.

This is a very condensed version of the history of the north – south transcontinental railway.

- 1886 Work begins on the North Australia Railway – pushing south from Darwin to the gold fields at Pine Creek;
- 1911 The Commonwealth Government promises to complete the north – south transcontinental railway link, only reaching Alice Springs by 1929.
- A long period of dormancy extending up till the late 1970s when the new Tarcoola – Alice Springs section was constructed
- Another period of dormancy, coming back to life in 1997 with the formation of the AustralAsia Railway Corporation
- Leading in 1999 to the appointment of Asia Pacific Transport as the consortium to develop the railway as a BOOT scheme.
- October 2000 - two years ago I spoke to this group about the project, at that stage still in the proposal stage but poised to go.
- And the contract was finally signed on the 20 April 2001

Responsibility for construction of the new railway then transferred to ADrail as the Design and Construction Contractor. ADrail's task is quite simply expressed in this way:
"To design and construct the new railway from Alice Springs to Darwin within a time period of 3 years and within a cost limit of $1,000 million"

NEWSLETTER No 8/2002

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

OCTOBER 2002

The key design criteria are:

- Axle load 23 tonne
- Design speed 115 km/h
- Rail: 50 kg AS
- Sleeper: Prestressed concrete
- Sleeper spacing: 720 mm
- Ruling gradient: 0.8 percent

You can see that many of the important decisions about the railway were in fact made during the contract negotiations and were fixed prior to ADrail commencing its detail design and construction.

The route distances are:

- Alice Springs – Tennant Creek 468 km
- Tennant Creek – Katherine 640 km
- Katherine – Darwin 312 km
- Total route length 1420 km

Selection of the route and acquisition of the corridor was a long and arduous task, falling mainly on the shoulders of the NT Government and culminating last year in the provision of a continuous corridor from Alice Springs to Darwin, together with the environmental, archaeological and heritage clearances necessary to allow construction of the railway.

Now you might ask what sort of country do we travel through on our railway from Alice Springs to Darwin? Or there again you might not ask for of course we all know that central Australia consists entirely of flat sandy desert. That is, until you look more closely, whereupon you find that indeed much of it is flat sandy desert but a great deal of it is not and in fact we experience quite a variety of land forms along the 1400 km of the route.

If we attempt to classify these conditions geologically we come up with something like this:

- Granite hills near Alice Springs
- Changing quickly to wind-blown sands and alluvial sands
- Then limestone country up around Katherine
- And north of Katherine a range of sedimentary and residual soils
- Changing to mangrove mud in the coastal fringes near Darwin.

Expressing these soil types in geotechnical engineering terms results broadly in this:

- Sand
- More sand
- Silty sand
- Silty clayey sand
- Clayey sand

However we also have what we might call problem soils:

- There is gilgai – bulldust in the dry and quicksand in the wet
- Black soil – not good stuff for building embankments on
- Karstic sinkholes and dolines – the net effect is potentially a collapsing hole in the ground underneath the railway so its not good news
- And the mangrove muds – with potential for release of acid sulphates and their unpleasant environmental consequences. Not nice.

Now the details of how we have gone about building the railway through this country

Tracklaying Across the Katherine River Bridge – Sept 2002

NEWSLETTER No 8/2002

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

OCTOBER 2002

EARTHWORKS

The railway formation typically comprises a low embankment.
The height is determined by drainage and vertical alignment constraints but is typically around 1.0 m.
Formation width is 6.0 m
Batters are typically 1 in 3
The embankment is constructed from natural soil excavated from borrow pits along the corridor. This general fill is placed in layers, watered and compacted to provide a foundation of the strength required to support the trackwork. The formation is topped with a capping layer 150 mm thick of better quality natural gravel, compacted to a higher standard than the general fill. The surface of the formation is graded toward the edges to facilitate drainage. A very simple but adequate foundation for the railway track.

To deal with the variable soil conditions the route was classified into terrain units. The terrain units are selected according to soil type, topography, vegetation, and climatic conditions and range from less than 0.5 km to more than 200 km.
Construction trials are undertaken in each terrain unit to determine the method of construction and the appropriate compaction standards for the formation.

Coomalie Creek, north of Adelaide River

Construction of formation in flat country is mostly done by our scraper fleet.

We have two scraper fleets, typically working double shift, doing rough general fill by night and finishing work by day. In addition we have a truck excavation fleet and a rock crew plus a couple of special purpose crews so earthworks are typically progressing on five or six fronts simultaneously. We construct about 5 km of formation every day, moving more than 50 000 cubic metres per day. Construction of the formation began in June 2001, and we have now completed almost 900 km out of the total 1400 km required, having placed almost 10 million cubic metres of earthworks. The total earthworks volume to be moved for the project is 15 million cubic metres.

Rock is encountered on less than 5 percent of the route but nonetheless constitutes a significant construction challenge.

CULVERTS

The railway crosses about 1500 watercourses along the route, and the hydrological assessment and hydraulic design constituted a major design task. The hydrological assessment made use of stream flow records to the extent that they were available and used them to calibrate other methods of flood assessment. The design process was automated to a large extent by development of a comprehensive spreadsheet-based design tool which enabled culvert sizes to be calculated very quickly for a range of conditions and the optimum combination of culverts to be determined.

From a construction point of view, because of the large number of culverts, it was clearly necessary to come up with a culvert design which was quick and efficient to construct. We developed a standard design based on the use of helical galvanised pipe embedded in cement stabilised soil. The pipes are manufactured on site by our subcontractor Ingal and the backfill material is mixed and placed by specially built machines. We are currently constructing on average five culverts like this every day and we have already completed almost 800. Some of the culverts have already experience one wet season and they performed very adequately.

NEWSLETTER No 8/2002

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

OCTOBER 2002

BRIDGES

We have 92 bridges along the route and to deal with the majority of the bridge sites we have developed a standard bridge design which is adaptable to a wide range of site configurations. The standard bridge consists of tubular steel piles extended up above ground level, supporting a fabricated steel headstock which is site welded to the piles. The bridge deck consists of precast concrete beams placed on top of the headstocks. Span is typically 12 m. So far we have constructed over 40 of these bridges and we are currently completing one every five days.

For the larger rivers along the route we have developed a major bridge option. It utilises 30 m span precast concrete beams supported on precast concrete headstocks fixed to fabricated tubular steel piers mounted on a footing system configured to suit the site conditions.

Katherine River Bridge

One bridge which should be mentioned is the one across the estuary of the Elizabeth River, near Darwin. It uses the same superstructure as the other major bridges but has a very different substructure, comprising large diameter tubular steel piles driven through the river mud into the underlying rock. The clever trick here is that the railway bridge is connected to the adjacent road bridge and relies upon it for lateral support. By way of contrast at Ferguson River, 60 km north of Katherine, we are re-using a bridge from the old North Australia Railway. This bridge was designed by South Australian Railways and built in 1915. It is still in good condition and quite adaptable to use on our new railway.

Ferguson River Bridge

TRACKWORK

Rail is Australian standard 50 kg plain carbon steel rail.
Sleepers are prestressed concrete, designed to the Australian Standard.
Ballast depth under the sleeper is 150 mm.
Ballast shoulder width is 200 mm.
Ballast quantity is 1100 cubic metres or 1800 tonnes per kilometre.
The sleeper design has been developed in association with our subcontractor Austrak to specifically suit the needs of our railway. It is 2400 mm long and 180 mm deep with a base width of 280 mm, tapering to 180 mm on the top surface. Mass of the sleeper is 270 kg. The fastenings are Pandrol fastclips, four per sleeper, with a hard polyethylene pad. Sleeper spacing is 720 mm centre to centre. The sleepers are manufactured in two especially built factories, one at Katherine and one at Tennant Creek. The combined production capacity is about 4500 sleepers per day, which falls somewhat short of our tracklaying requirement of 6000 sleepers per day, so we have quite large stockpiles of sleepers at both factory sites. We require 2.0 million sleepers for the railway and we have already produced 800,000, of which 500,000 are already laid in track.

NEWSLETTER No 8/2002

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

OCTOBER 2002

Rail for the project is manufactured by Onesteel at Whyalla and transported by rail to Alice Springs and then by special road trains to our depots at Tennant Creek and Katherine in 27.5 metre lengths. The rail is then welded into long lengths by flash-butt welding into 357.5 metre lengths. A total of 145 000 tonnes of rail is required for the project. To date over 80 000 tonnes has been manufactured and almost 70 000 tonnes of that has been welded up ready for tracklaying.

Ballast is produced at two quarries that have been especially developed for the project, one near Tennant Creek and one near Katherine.
We require a total of 2.6 million tonnes of ballast and have already produced about 1.5 million tonnes.

Katherine Depot and Sleeper Plant

Two tracklaying machines are in operation, one working out of Katherine and one out of Tennant Creek. Materials are supplied to the tracklaying machines by work trains. Normally, the rail, sleepers and ballast are loaded onto the work train during the night for transport to the workface in the early hours of the morning; sleepers on top of the wagons, rail supported outboard on rollers and ballast in two rakes trailing along at the rear. The field welding gangs follow behind the tracklayer and make the rail continuous by aluminothermic welding. The ballast train then spreads its load – 3800 tonnes per day on each front.

Rail and Sleeper Work Train

Tracklaying is progressing on each of the two fronts at a rate of 2.1 km per day – total 4.2 km per day. To date we have laid just over 400 km of track, which means we still have 1000 km to go. Overall, construction work on the railway is approximately 50 percent complete and at this stage we are reasonably confident that the railway will be completed by the due date of 31 March 2004.

CORE2002

The CORE2002 conference is doing its usual thing and attracting a large number of registrations – at last count over 300. There are still registrations available, but if you intend going and haven't yet booked now might be the time to do so. The program is more or less set (there are a few minor details to confirm) and the list of topics, papers and events looks to have something for everyone. Unusually this conference will have conference dinners on two nights (both included in registration) so the opportunities for networking and interacting with exhibitors will be optimized. Registration and accommodation can be arranged on line at www.core2002.on.net or by post or fax using the form in the conference brochure. Brochures were distributed with the recent RTSA National Newsletter, but if for any reason you need another contact Mark Carter at 08 8261 2292, fax 08 8261 2219 or email techrev@core2002.on.net Just as an aside this little Vegemite is travelling to Sydney on the Ghan ex Adelaide on Saturday morning and

would be pleased to find that there are other passengers similarly headed. GSR are offering 25% normal fares for CORE attendees which makes to train option really most attractive. I can guarantee that GSR will NOT serve cold food in cardboard boxes either – they do such things as meals with a bit of style.

ARA LEVEL CROSSING CAMPAIGN

ARA have started a 'safety at level crossings' campaign, with a media release being the first public pronouncement. It in fact is focussed around the same issue as the Rail Muse item earlier and is reproduced in full below.

The Australasian Railway Association (ARA), the political voice for rail in Australia, today expressed its great sorrow at the loss of life and injuries caused by the level crossing collision near Benalla on Sunday 13 October.
ARA Executive Director John Kirk said "Our deepest sympathies go to the families of the three people killed in the tragic crash. We also wish a speedy recovery for those who were injured in the collision between the train and a b-double truck."
While not pre-empting the outcome of the inquiry into the crash, Mr Kirk said that the tragic consequences of several recent level crossing crashes around Australia highlighted the need for greater public education about the dangers of railway crossings and greater penalties for those road users who break the road laws.
"One life lost through level crossing collisions is one life too many," said Mr Kirk. "Unfortunately we have seen a spate of serious collisions at rail crossings in recent months and it is time that road users took responsibility for their safety when using these crossings," Mr Kirk added.

Mr Kirk has recently returned from a fact-finding visit to the USA and Canada where he discussed the success of the Operation Lifesaver programs that have helped reduce the number of collisions and deaths at railway crossings in those two countries.

"The Australasian Railway Association has recently decided to establish Operation Lifesaver in Australia. We are now looking for each of the states and the Commonwealth to join with us to improve public awareness about safety at rail crossings and for greater enforcement by police and road authorities," said Mr Kirk.

"Road users, especially professional drivers, need to be aware that unlike motor vehicles, a train takes several hundred metres to stop. Typically a freight train travelling at 50km per hour requires about a kilometre to stop. At 100km per hour it will take around 2 kilometres to stop. A six-car passenger train travelling at 100km per hour will also take around 1,000 metres to stop."
"However, research shows that an alarming number of road users inaccurately judge the speed of a train and therefore put their lives at risk when approaching rail crossings," Mr Kirk added.
"As most trains in country regions do not travel on a regular schedule, care must be taken at all times, day and night. Road users should always expect a train at a level crossing whether it is equipped with flashing lights, automatic barriers or the traditional 'crossbuck' sign," said Mr Kirk.
"Rail is the safest form of land transport and we want to keep it that way."

"Road users are reminded that a 'crossbuck' sign means give way and in order to avoid further tragedies, all motorists must heed the warnings: look, listen and give way to trains at all rail crossings."

NEWSLETTER No 8/2002

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

OCTOBER 2002

COMMITTEE NOTES (from 3/10/02)

Chairman George Erdos chaired the meeting.

Arrangements are in place for the AGM/Dinner meeting on 19th November. A newsletter including AGM/Dinner payment forms will be sent out during next week.

Bill Edmonds reported on program plans for the coming year. The speaker at the February 6 meeting is expected to be Derek Scrafton. Bookings will also be made for meetings at Bagot Street on April 3 and May 1.

Mark Carter has been asked to undertake website updating. Currently his commitments to CORE2002 have higher priority.

RTSA CHAPTER COMMITTEE

George Erdos	8218 2209	Chairman
John Adams	8276 9658	IPC
Roger Wyatt	8344 6939	Secretary
Rob Schweiger	8238 3412	Treasurer
Duncan McLeod	8366 5212	
Malcolm Menadue	8270 2873	
Bill Edmonds	8356 0488	
John Dring	8294 0384	
Ian Milroy	8361 8333	
Max Michell	8390 3300	

Articles or editorial comment for Newsletter is always welcome.
Send copy to the Editor, Max Michell at samrom@bigpond.com or fax to 08 8390 3772

CONTINUING PROFESSIONAL DEVELOPMENT

Those of you who are members of I of E (i.e. are professional engineers) should be aware that attendance at RTSA meetings can be counted toward your CPD requirements. The most convenient way to record this will be in your professional dairy or similar form. A short paper covering CPD in some detail is available from Malcolm Menadue or Max Michell.

NEWSLETTER DESPATCH

The majority of SA RTSA Chapter members receive their newsletter by e-mail. Every so often the e-mail will bounce (in effect the electronic equivalent of 'address unknown'). In these cases the member will automatically revert to hard copy mailing until a new e-mail address is advised. The main issue here is to let Malcolm Menadue know IN ADVANCE of any e-mail address change so that you don't fall on hard (copy) times. Please also advise if you would rather receive via e-mail instead of hardcopy post.

In all cases let Malcolm Menadue know at mmenadue@ozemail.com.au

ACROBAT READER

The Newsletter is distributed in Adobe Acrobat "PDF" (Portable Document Format). Adobe Acrobat Reader is required to view and print the document. You can get a free download of the latest version of Acrobat Reader, or update your older version from
www.adobesystems.co.nz/products/acrobat

Note that the download file size is 8.6 Mb, so be prepared to chuck the kids off the computer for a while when you intend upgrading to the new version.