



Motoring DIRECTIONS

Our last edition carried our response to the Industry Commission's draft report of its inquiry into the automotive industry. Triple A recognised that the rate of industry adjustment should be commensurate with the maintenance of a viable and internationally competitive vehicle and component manufacturing sector, while emphasising the need for consumers to have access to quality, affordable vehicles which meet high environmental and safety standards.

The Federal Government has responded to the inquiry and in this edition we have that response as a joint press release from the Prime Minister, the Treasurer and the Minister for Industry, Science and Tourism. We understand a more detailed response will be made in July.

This edition also carries the majority and minority recommendations from the Commission released following the Government's response.

An address by the President of the Federated Chamber of Automotive Industries given recently in Canberra is included to give readers a balanced view of the various perspectives on this complex issue.

Our next edition will carry some economic modelling results of industry support arrangements and hopefully the detailed response by the Government to the consumer concerns on environment and safety matters which to date have not been considered.

While all parties have called for significant sales tax reform, the Government has been silent on this issue. Given the extensive input made to the Industry Commission by industry, governments, academics, consumers and others following the draft report, the final report should receive careful analysis and action.

In this edition we also cover other key issues, in particular the call by Dr Ken Michael, Western Australia's Main Roads Commissioner, for a strategic plan for a national road network.

Long-term success for motoring in Australia will only occur if we take long-term views and effectively reform all factors associated with our approach to mobility.

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Cover photograph:

The Kwinana Freeway to the south of Perth with the Mt Henry bridge crossing the Canning River in the background.

*This is the Triple A response to the
Federal Government's Green Paper on -*

The Development of a Sustainable Energy Policy for Australia

It is worth noting at the outset that recent survey work undertaken by ANOP for the Triple A highlighted the very high personal importance of cars to Australian motorists. This fact should be borne in mind when developing alternative energy policies which might impact on private transport.

Another relevant finding of the research was the strong concern over the cost of motoring. The implementation of policies which might increase the cost of motoring and thus restrict personal mobility should therefore be given careful consideration.

Motorists also expressed concern about the environment, but indicated that they need to be given viable mobility alternatives rather than be penalised for their actions.

Explanations needed

Another general point is that there needs to be some explanation of how the various processes which the Government has put in place to deal with greenhouse issues and emissions fit together. These include the *National Greenhouse Response Strategy*, *Intergovernmental Committee on Ecologically Sustainable Development*, *National Greenhouse Advisory Panel*, *National Environment Protection Measure* and urban air pollution inquiry.

The Green Paper provides a useful reminder of the Australian energy situation as we approach the 21st century. However, it largely repeats what has been said many times in the past, namely that if we all use less energy and the Government continues to establish the right policy framework, the market will sort things out and all will be right in the long-run.

The Triple A does not share that sanguine view. While market led strategies are supported in principle, government has a significant role to play because of the existence of externalities in the energy market and the need to provide information about the market.

Government must continue to provide high quality and comprehensive information on current national and international energy reserves as well as likely future supply arrangements and depletion rates because the private sector may not - for valid commercial reasons - provide all of the information necessary for developing

long-term policy prescriptions which would be in the national and international interest.

The development of forecasts and the provision of a comprehensive energy database is a critical role for government, and the information generated should be used to develop a number of scenarios, associated policy responses, a research agenda and priorities for action. In turn, all of this material should form the basis of a White Paper.

Sustainable transport

A recent editorial in *Transport Policy* entitled 'Simple Arithmetic' serves to highlight the fact that, in the absence of government action, the growth in motor vehicle ownership world-wide would lead to an unsustainable outcome. The editorial said:

„.. nobody knows exactly how many cars, or for that matter people, there are in the world. But very approximately the world-wide level of car ownership is something like 80 or 90 cars per 1000 population. In advanced countries the levels are 350-600 cars per 1000, and it is thought that saturation occurs at somewhere around 600-750 cars per 1000, when everyone who can drive has their own car. So if we assume that, as the developing countries develop, they will follow broadly the same track of economic growth and motorisation as the developed countries have already done, then the world car fleet would be able to grow to between five to 10 times its current size. And therefore use five to 10 times the current fuel - or, with some allowance for efficiency improvements, say four to eight times the current consumption.

But fuel for transport already takes around 25-30 per cent of world production of oil. Multiplying that by four to eight is a nonsense.

This is what unsustainability means... Something different will have to happen - though what it is we do not yet know. ☹



The Government needs to make such information available as well as forecasts based on more sophisticated techniques so the public can understand the policy choices which need to be confronted. Faced with such potential outcomes, the Government should announce - via a White Paper - that 'something different will have to happen'.

The Government's role should then be to create the right policy environment to ensure that it happens and allow the private sector to actually make it happen. Removal of impediments to change in areas such as taxation, regulation and resource development may be necessary.

Scenarios similar to that relating to world car use and the depletion of oil reserves need to be developed for other problems such as greenhouse gas emissions, traffic congestion in cities and urban air pollution. To a large extent this is already happening, particularly in so far as greenhouse is concerned, but other scenarios - incorporating time frames - should be identified so that appropriate sustainable transport policies can be developed.

There also needs to be a much greater description of the links between transport and energy policy so that responses in both areas are consistent.

Key themes

The Green Paper identifies a number of key themes - harnessing market forces, driving energy efficiency, investing in the future, working with the international

community, mitigating risk and strengthening institutions. These themes are essential elements for realising the objectives of a sustainable energy policy.

However, the strategies which are outlined as a means of advancing these elements comprise too many generalities; more detail and a greater sense of what needs to happen ought to form part of the proposed strategies.

Following are some of the areas within these themes where the Government's energy policy is deficient in so far as land transport is concerned, and a brief discussion of how some of the deficiencies might be overcome.

Harnessing market forces: While the Triple A supports market led strategies in principle, the use of energy in road transport is hardly subject to market discipline. One of the major reasons for this is that the Government fails to distinguish in fuel excise collections between what is a charge for road use and what is a tax for general revenue purposes; action is needed in this area so that motorists are faced with a real pricing signal which will help guide the efficient use of resources.

The view that markets and prices should reflect full costs is also supported, but again, the externalities associated with car use (eg, emissions, accident costs, congestion) have not been identified as part of an appropriate road user charge because of government's insatiable appetite for revenue from a product which is highly price inelastic.

The Government needs to recognise this shortcoming if market forces are going to be harnessed. It must also



Volvo's 'Bi-Fuel' car, which runs on both natural gas and petrol, is expected to be available in Australia in late 1997. Environmental group, Planet Ark, AGL, NRMA and Volvo Car Australia have formed the Natural Gas Vehicle Alliance to promote the use and availability of natural gas as a cleaner, economical and viable alternative vehicle fuel.

recognise that environmental externalities are not only present in transport and that motorists should not therefore be made to bear an undue burden of any reform agenda.

As far as tax efficiency and equity is concerned, government currently imposes a fuel excise on petroleum products such as petrol and diesel but does not levy any excise on substitute fuels such as LPG. A more appropriate policy would be a revenue neutral shift involving a reduction in excise on petroleum products and the introduction of a tax on LPG.

In contrast to recent reforms in the electricity and gas sectors, federal and state government road authorities do not operate under the same degree of market discipline. In fact, roads stand out as a sector which has not been subject to Hilmer-type reforms.

Privatising or corporatising road authorities and giving them the responsibility for collecting road user charges as well as investing in transport infrastructure would lead to increased energy end-use efficiency and help mitigate environmental impacts. If a road agency had the responsibility for charging for roads and using the funds to construct transport infrastructure, it would invest in roads with the highest benefit-cost ratio; in simple terms, better roads would reduce travel times, fuel use, greenhouse gases and emissions.

The fuel efficiency of vehicles is also an important consideration. Limited progress has been made by manufacturers to improve new car fuel efficiency. The voluntary codes established between local manufacturers and the Government do not go far enough.

Much more could be done in this area to reduce national average fuel consumption targets. The Triple A's policy states that manufacturers should be required to target 6.0 litres/100km by 2003 without compromising vehicle safety standards. The industry's target of 8.2 litres/100km by 2000 will be achieved with virtually no action from local manufacturers.

Action could also be taken to improve the fuel efficiency of the Government's own car fleet.

Investing in the future: The Government must decide what assistance, if any, it is to provide for research and development into alternative fuels. The stop-start approach of offering bounties for ethanol production and then removing them is hardly conducive to productive research into alternative transport fuels.

Attractive as they may seem and essential as they may become later in the next century, alternative fuels are

well known and well researched, but only a few are attractive technically. All suffer from the low pump price of petrol and diesel in a competitive sense and rely for investment on stability of pricing, excise and taxation.

Of the so-called alternatives, compressed natural gas probably provides the most likely energy source even though it has some technical difficulties in compression, storage and energy density. It has attraction for the future in that it is a readily available resource and is indigenous with very considerable reserves.

There is frequent attention to bio-sourced fuels such as ethanol. In the foreseeable future ethanol has little claim as a replacement because it has to be derived from bio-mass, and has energy and land-use implications which prove to be unattractive and costly.

If the real pricing structure of alternative fuels vis-a-vis cost to produce and equivalent excise, etc proves attractive, then the on-vehicle technology is available and well proven both here and overseas.

International action: The Triple A agrees with the Government's view that climate change is a global issue and requires a global response which is equitable

in terms of its impact on individual countries. The Government's response to addressing the climate change issue internationally through its involvement in the *Framework Convention Climate Change* and, in particular, its policy of differentiation is also supported.

Since Australia is responsible for only 1.4 per cent of global emissions of greenhouse gases, and transport in Australia accounts for only 12 per cent of greenhouse gas emissions, policies to tackle greenhouse should not unfairly discriminate against the transport sector.

There is a number of 'no-regrets' actions which motorists can take to protect the environment. The Triple A is implacably opposed to a carbon tax which would have only a modest impact on fuel used by motor vehicles, add to motoring costs (and thus reduce our standard of living), have limited effect on greenhouse gases (because it would not apply to emissions of water vapour, nitrous oxide or ozone), and be regressive and inequitable for those reliant on car use.

Mitigating risk: Risk mitigation is a sensible element of a sustainable energy policy. An issue to be resolved, however, is what degree of risk should be borne by the private sector and what risk should the Government assume? Since pricing of reserves is a key to this, the Government must be careful to ensure that its objectives of risk mitigation and revenue raising do not become confused.

' Australia is responsible for only 1.4 per cent of global emissions of greenhouse gases, and transport in Australia accounts for only 12 per cent of greenhouse gas emissions. '

Following publication in the last issue of Triple A's response to the Industry Commission's draft report on the automotive industry, Motoring DIRECTIONS reports on how the industry sees itself, the Commission's final recommendations and the Federal Government's decision on -

Post-2000 Automotive Industry Policy

The state of the industry - *As outlined in this edited version of a speech given on May 28 at the annual meeting dinner of the Federal Chamber of Automotive Industries by its President, David Morgan:*

The Australian automotive industry is today producing and delivering cars and components of world-class quality, performance and value. Our vehicles, both locally produced and imported, are being delivered to the consumer through a highly professional, competitive and energetic dealer organisation.

My concern is the lack of community appreciation of just how good an automotive industry we have in Australia.

We need to emphatically understand that the variety of brands, products, source countries and value on offer to the Australian consumer is virtually unmatched anywhere in the world. We have one of the most open and competitive markets anywhere.

Just how open is illustrated by the number of new brands arriving in our showrooms. At last count there are 28 different brand names and over 180 models sold here. Just how competitive is illustrated by the number of brands which have scaled back their presence in this market as they have found the level and cost of competition to be too great to be able to sustain an economic volume.

Challenging competition

The competition in this market therefore is global and in this context extremely challenging. The manufacturers and importers represented here are fiercely competitive.

However, at the same time, we have common industry needs. Most importantly, as an industry we seek a fair opportunity to grow not only our domestic industry, but the overall size of our market.

For nearly 20 years, there has been no real growth in the domestic new vehicle market. As a consequence, the

age of the vehicles on our roads has deteriorated to become one of the oldest in the developed world.

More than 50 per cent of our car park is now more than 10 years old. Compare that to Japan where less than 0.5 per cent of the car park is more than 10 years old, and they are primarily collectors' cars.

As our fleet ages, its environmental and safety performance is deteriorating at a time when new vehicles are being required to meet more stringent rules in both areas.

The industry believes there is the opportunity to grow the market, to enhance the affordability of our products

and to make a significant contribution to achieving environmental goals. That's why we believe the Government's review of the post-2000 automotive policy regime is such a critical one.

We have been

participants for many months in various Industry Commission visits, roundtable discussions and public hearings. This is not to mention the endless hours the industry, collectively and individually, has put into submission preparation.

Long-winded process

It's certainly a long-winded process. Many of us may well suggest it's too long and may not add value to the quality of the ultimate decision.

The critical decision-making phase is now with us. Our industry is seeking an outcome which we sincerely believe is fair and:

- Provides for an opportunity to grow our domestic market.
- Allows for the industry's export presence in regional Asian markets to be enhanced.
- Continues to provide consumers with a variety of high quality, good value locally manufactured and imported products.

Innovative policy sought

To this end, we seek a policy outcome which recognises the Australian automotive industry's scale, technologies, export performance and extensive linkages.

' My concern is the lack of community appreciation of just how good an automotive industry we have in Australia. '



In seeking an innovative policy approach to growing our market, we obviously want to address the affordability issue. *That means general taxation reform is a necessity if we are to address what we see as an inequitable taxing of the industry through high wholesale sales tax.*

Why should our new cars carry an average of more than \$4000 of wholesale sales tax a car when the output of so many other industries is untaxed, or at best, lightly taxed?

In raising the tax issue, we don't seek a privileged position – we simply seek equity, fairness and efficiency. I must say we were very heartened by the Prime Minister's recent comments on taxation reform.

We understand the complexity and sensitivity of the issue, and we firmly believe that now is the time to begin the review process to allow general discussion to take place so the Government can be in a position to implement reform as early as possible after the next election.

Environmentally active

On the environment front, the industry has been an active participant, particularly in the very important issue of greenhouse and global warming.

We have entered into a voluntary agreement to reduce the national average fuel consumption of our cars to 8.2 L/100km by 2000. This is an aggressive target. It represents, for example, a lower target than the USA CAFE (corporate average fuel economy) requirement of 27.5 mpg.

The industry will from 1998 be taking over from government the funding of the fuel consumption guide booklet. We will also be introducing labels on new cars referring motorists to the guide, which we intend to complement with a web site. Furthermore, we are negotiating with government a national average fuel consumption target for commercial vehicles.

As an industry, we understand good environmental practice is good business practice. May I say we totally endorse the international stance of differentiation taken by the Federal Government in international greenhouse negotiations. It is a fair, sensible and responsible approach.

Industry's future

The coming weeks will be critical for our industry's future. We seek a policy outcome that incorporates the pursuit of attracting further global investment and the growth of an industry we regard as a prize asset for Australia. A little bit of pragmatism won't go astray.

A look at the industry's dimension and its achievements of recent years shows that:

- ✓ It directly employs more than 45,000 people with up to 250,000 more in supporting component and

service suppliers, and over 300,000 in the retailing, servicing, repairing and buying of motor vehicles.

- ✓ Its annual production of motor vehicles and components is worth more than \$7.5 billion.
- ✓ Its exports of motor vehicles and components were worth more than \$2.15 billion in 1996.
- ✓ Its investments in plant and product improvements over the four years until 1999 will exceed \$2.5 billion or nearly \$2 million every day.

Another way of illustrating the industry's achievements is to look at its export performance. For example:

- ✓ Australian cars are on the roads of the USA, Japan, Thailand, South Africa, New Zealand and the Middle East.
- ✓ Australian engines are powering cars in Korea, Germany and Japan.
- ✓ Australian aluminium and iron castings are being shipped to Japan and Europe.

This export activity is not the sole domain of the car manufacturers. Export success stories abound among component suppliers. There are some pretty exciting programs going on.

For example, instrument cluster mirrors are going to the USA, alloy wheels to Japan, transmissions to Italy and suspension parts to Germany. The list goes on and it's growing, all drawn off a domestic car manufacturing industry, an industry with wide and virtually unparalleled linkages.

The \$2.15 billion represents two-thirds of our wool exports, twice our copper exports, three times our barley exports and five times our fresh fruit exports.

There is no doubt in our minds as to the desirability of the Australian automotive industry. We want to grow it. We want it to make an even better contribution to the community.

What the Industry Commission proposed - *The Commission's final report resulting from its inquiry into the automotive industry contained 10 recommendations:*

1. From 1 January 2001 tariffs on passenger motor vehicles and components (including aftermarket components) be reduced at the rate of 2.5 percentage points per annum until 2004, when the tariff will be at five per cent, the rate currently applying to most Australian



manufacturing industries. A 2.5 percentage points per annum reduction for components should apply even if a slower rate of reductions is set for passenger motor vehicles.

2. Tariffs on micro and light passenger motor vehicles should be reduced to five per cent from 1 January 2001. Micro and light vehicles are defined as those with an engine capacity below 1300 cc, a tare mass below 900 kilograms and dimensions at or below four metres by 1.7 metres.
3. The 15 per cent automatic duty free entitlement should be retained, and reviewed once tariffs have fallen to five per cent. The review should consider the costs and benefits of the duty free entitlement as compared to the Commercial Tariff Concession Scheme.
4. In encouraging APEC members to translate their general resolution to liberalise trade in services into firm commitments, Australia strives to ensure that no preferential treatment be allowed to apply to automotive research and development services.
5. Governments implement broad ranging tax reform to improve the overall economic performance of the Australian economy. The reform options that governments should consider should include the introduction of a broad based consumption tax to replace the current wholesale sales tax system.
6. The Government continues to strive for comprehensive trade and investment liberalisation in the APEC forum, and that it

ensures that removal of barriers to trade in automotive products remains part of its APEC commitment to free and open trade by 2010.

7. Information on state government assistance to automotive firms be made publicly available.
8. The Government conduct a specific public inquiry if it wishes to fully understand the environmental issues facing the automotive industry.
9. Where international safety standards are equivalent to, or more stringent than Australian safety standards, they should be recognised by the Federal Office of Road Safety. If international procedures for vehicle compliance testing are appropriate, they too should be recognised.
10. The Commonwealth Government proceed with the development of an evaluation procedure for its labour market programs, ensuring that such evaluations take account of all costs and benefits of the programs, both direct and indirect, and compare the outcomes of program participants to those of other job seekers with similar labour market characteristics.

In a Minority Report - *Commissioner Ian Webber submitted these four dissenting recommendations:*

1. Tariffs on passenger motor vehicles, original equipment and replacement components be maintained at 15 per cent until 2005, with a review to be held in, say, 2003 to consider post-2005 assistance arrangements for the industry.

2. The export facilitation scheme be maintained unless and until it is ruled to violate Australia's obligations under the General Agreement on Tariffs and Trade. If untenable, the scheme should be replaced by arrangements with similar assistance effects.
3. There be no concessional tariff treatment for micro/light cars; two-wheel-drive utilities be accorded concessional sales tax exemptions (with the exemption being partial to the extent that

such vehicles are not confined to on-farm/off-road use); and that private buyers of four-wheel-drive (4WD) vehicles prove their eligibility for concessional tariff treatment by demonstrating the proportion of off-road use. The tariff on 4WDs primarily for on-road use be set at the prevailing tariff for passenger motor vehicles.

4. The wholesale sales tax on passenger motor vehicles be reduced in concert with the tariff so as to reach 15 per cent by 2000.

WHAT THE GOVERNMENT DECIDED

Following are the key points from the joint statement issued by the Prime Minister, Mr John Howard, the Treasurer, Mr Peter Costello, and the Minister for Industry, Mr John Moore, on June 5:

- The current schedule for passenger motor vehicle tariff phasing will continue through to 2000. From 1 January 2000 the tariff will be at 15 per cent and will remain at that level for the next five years. There will be no differentiation for micro/light vehicles and 4WD vehicles. Light commercial vehicles will remain at a tariff of five per cent.
- The Government will legislate for the tariff to be reduced to 10 per cent on 1 January 2005. There will be a review in 2005 which will take account of APEC commitments and progress on market access.
- A World Trade Organisation-consistent program will be introduced to replace the Export Facilitation Scheme when it expires in 2000 and will run to 2005.
- The duty free allowance will continue at 15 per cent.
- The Government will introduce a market access strategy including the establishment of a new Automotive Trade Council, the appointment of a specialist trade access negotiator and a market development package worth \$20 million over four years.
- There will also be an environmental strategy, including measures to phase out the use of leaded fuel by 2010 and the development of an industry code of environmental performance.



On-board diagnostics is a key technology for in-use vehicle emissions control. However, this report published by the joint European Bureau of the world motoring bodies, Alliance Internationale de Tourisme (AIT) and Federation Internationale de l'Automobile (FIA), raises -

Consumer Concerns Over Motor Vehicle 'Green Box' Technology

Most cars today have on board computers which control engine performance and other important vehicle systems. These management systems are revolutionising the way in which cars can be maintained, tested and repaired.

In this role, on-board diagnostics (OBD) is a kind of 'green box' technology similar in concept to the safety related 'black box' in modern aircraft. The OBD system monitors the performance of emissions related vehicle systems to ensure that the car is as clean as possible at all times.

OBD is already mandatory for new cars in the USA and will be compulsory for all new, petrol-engined cars in the European Union in the year 2000. However, its introduction is raising fears that access to the crucial diagnostic data required for vehicle inspection and repair will become limited to approved car dealerships.

Unrestricted and standardised access to OBD systems is vital to ensure that consumers have the widest possible choice in maintaining and repairing their cars. A brief explanation of how OBD works highlights the risks of a new monopoly of maintenance and repair by manufacturer approved dealerships.

Emission control failure

OBD is a computer-based system that detects operational malfunctions or failures of the engine and emissions related components. Using sensors and software to compare expected and actual signals from the engine, OBD can trace misfires or other faults that will lead to excessive vehicle emissions.

For example, oxygen sensors upstream and downstream of the catalyst are used to check the air/fuel ratios and detect any emission control failure. If such a failure is found the system automatically illuminates a malfunction indicator in the dashboard display to alert the driver of the problem and the need for repair.

To identify and repair any fault will require access to the engine control computer, the OBD command software and the fault codes which record and store the status of the engine and emission control systems. To achieve this any would-be repairer must have a standardised scan tool that can connect with the vehicle's OBD system, be able to read and erase the relevant fault codes, and have all other relevant repair information.

Without unrestricted, standardised access to OBD systems and the necessary repair information:

' On-board diagnostics is a computer-based system that detects operational malfunctions or failures of the engine and emissions related components... OBD can trace misfires or other faults that will lead to excessive vehicle emissions.. '

- The freedom of choice of consumers will be severely limited.
- Roadside rescue organisations and independent garages will be unable to repair a wide range of relatively simple faults.
- Independent parts makers may be unable to supply the after-market.
- There will be a sharp increase in the cost of vehicle maintenance and repair.
- Emission compliance will be worse and the environment will suffer.

In the USA, where OBD is already a mandatory requirement, unrestricted and standardised access, uniform connectors, and the provision of repair information are all legally guaranteed within the *Clean Air Act* (see page 12). However, in the current European Commission draft Directive there is only a weak reference to standardised access.

Future applications

OBD will in the future extend to non-emission related systems such as safety and comfort components. It could also become an integral part of government roadworthiness testing and enable remote detection of engine/emission malfunction by public authorities.

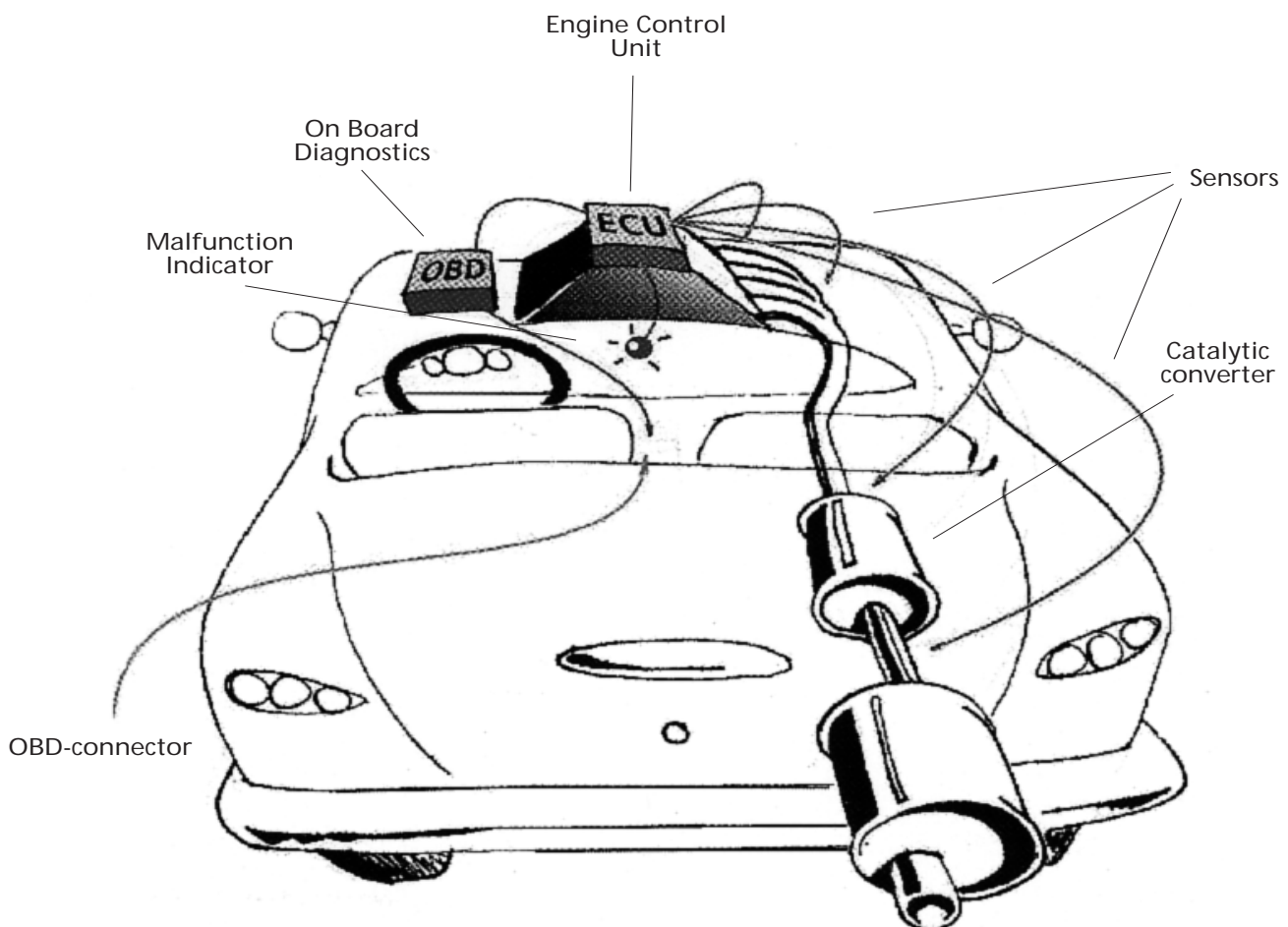
The following requirements are essential to ensure that OBD is friendly to both the environment and the consumer:

- Freedom of choice over vehicle repair and maintenance.
- Unrestricted and standardised access to all data required for diagnosis, maintenance or repair of the vehicle - including all fault codes.
- All repair information that is required for diagnosis or repair of the vehicle that is provided by the manufacturer to its authorised dealers/repairers.
- A uniform connection interface between the vehicle and the diagnostic tester.

LEGAL REQUIREMENTS FOR OBD IN THE USA

The *1990 Clean Air Act* Amendments specify that -

- Any connectors through which the emission control diagnostics system is accessed for inspection, diagnosis, service or repair shall be standard and uniform on all motor vehicles and motor vehicle engines.
- Access to the emission control diagnosis system through such connectors shall be unrestricted and shall not require any access code or any device which is only available from a vehicle manufacturer.
- The output of the data from the emission control diagnostics system through such connectors shall be usable without the need for any unique decoding information or device.
- Subject to the provisions regarding the protection of methods or processes entitled to protection as trade secrets, manufacturers provide promptly to any person engaged in the repairing of motor vehicles or motor vehicle engines any and all information needed to make use of the emission control diagnostics system and such other information, including instructions for making emission related diagnosis and repairs.
- No such information may be withheld if that information is provided by the manufacturer to franchised dealers or other persons engaged in the repair, diagnosing or servicing of motor vehicles or motor vehicle engines.



OBD is a computer-based system for identifying malfunctions of the engine and emissions related components.

Addressing a land transport research colloquium hosted jointly by the Bureau of Transport and Communications Economics and the Triple A in March, Western Australia's Main Roads Commissioner, Dr Ken Michael, emphasised -

The Need for a Strategic Plan for a National Road Network

I should like to say at the outset that WA can be as parochial as the next state, but in this discussion I have taken a more high level view of the issues.

When WA experiences are mentioned they are merely to provide you with some context.

With the 'Vaile Inquiry' underway we are now presented with an opportunity to take stock, re-appraise and come up with new approaches for managing our road network. I am sure that I will say some things that other states and territories might not necessarily agree with, but generally I would be confident that WA's views and those of the others would be fairly closely aligned.

We are all confronted with a growing problem of increasing needs and greater competition for the road dollar. The solution I believe lies in a strategic and co-operative approach to the issue and a fundamental revamp of old and somewhat tired processes.

I am strongly of the view that we need to take a strategic approach to the development of a national road network founded on meeting the national interests. In my own agency we have introduced the strategic management cycle that underpins and links the processes of:

- Determining customer needs.
- Corporate planning.
- Road strategy development.
- Road programming.
- Delivery management.
- Achievement and performance review.

In summary, a strategic plan for a national road network is in urgent need of development and implementation. It must clearly define levels of service and achievable targets, reflect the nation's road network needs and be founded on a co-operative partnership among the three levels of government.

The owners of the roads, namely the states, territories and local government, are accountable for the roads. This should not detract from the fact that the Commonwealth is accountable for issues of national significance and needs to do all it can to ensure the national interest is best served.

Strategic management

There are many initiatives that they want to drive. The proposed strategic management process would provide them with the mechanism to pursue these initiatives, which include, but are not limited to:

- Road safety.
- Export industry support.
- Tourism and regional development.
- Remote access.
- Intermodal connections.
- Improved freight carriage efficiency.
- Road transport sustainability.
- Industry and mining support.

The best for Australia's roads can only be achieved if some co-operative partnership is formed to develop the national strategic road plan. It must be

based on an agreed vision, agreed objectives, and common goals and strategies.

It needs to be accompanied by a predictable, certain and equitable funding arrangement. Cumbersome procedural mechanisms must be replaced by a performance management framework clearly linked to goals and objectives towards a relevant national road network.

Underpinning the partnership are clearly defined and agreed roles for each level of government.

Shared responsibility

There is a strong roads partnership in WA between local government and state government, which serves WA well. It means that where there are roads that have



Dr Ken Michael



Road Class	Commonwealth	States & Territories	Local Government
National highways	*	*	
State roads of national significance	*	*	
Local roads of national significance	*	*	*
State roads		*	
Local roads of state significance		*	*
Local roads			*

- Developing and implementing funding arrangements.
- Aligning and clarifying responsibilities.
- Clarifying roles and accountabilities and eliminating duplication.

It is the pivotal role in managing the national road network and needs to be founded upon a co-operative partnership arrangement between the Commonwealth, states, territories and local government, which should have collective responsibility for managing the

overlapping roles, state and local, the two levels of government work together to find solutions.

Overlapping roles exist on many roads and we believe that this is best managed with a partnership backed up with financial commitments and in many instances shared funding arrangements. There is little doubt that most roads in Australia serve more than the interests of one level of government.

The above table indicates the primary responsibilities that need to be acknowledged. The first three road classes in the table could comprise the national road network.

There are great benefits to be achieved with a strategic approach to the Commonwealth's involvement in road provision. Taking a strategic approach will:

- Promote the national interest.
- Establish clearer, outcome driven objectives.
- Provide a process for adding and deleting new programs as needs arise or focus changes.
- Provide a platform for improved inter-government relationships.
- Reinforce national cohesion.
- Facilitate interstate and overseas trade, and improve our competitiveness.
- Allow and ensure equitable access to be provided.
- Assist building defence facilities.
- Allow targeted road provision to areas which promote the national interest.

The need for a strategic management framework is overwhelming. As a consequence we have proposed what we believe would be a suitable process to manage the national road network (see diagram opposite).

Strategy is the key element and involves:

- The identification of outcomes.
- Determining needs.
- Defining objectives.

strategy element of the framework.

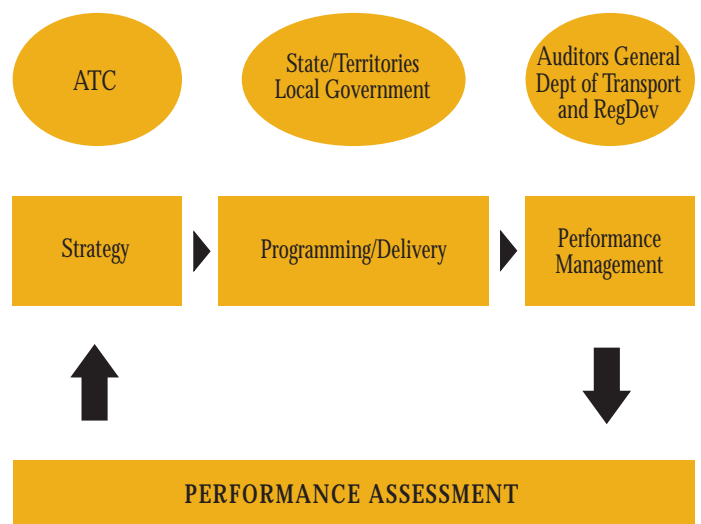
The role of overseeing the strategy formulation should be undertaken by the Australian Transport Council (ATC). It is also supported by other resources, such as the National Road Transport Commission, that would assist in undertaking the strategic role effectively.

Deliverables from the strategy element include:

1. Australia's strategic road plan.
2. Australia's national road network.
3. Defined and agreed objectives for the national road network.
4. Defined and agreed outcomes.
5. Global resource allocations.
6. Road link assessment criteria.
7. Project evaluation criteria

The assessment and evaluation criteria need to be more broadly based to enhance the outcomes in an equitable way.

Programming and delivery involve the implementation of the strategic road plan for the





A section of the Albany Highway at Cannington, WA, recently widened and improved under the state's 10-year road program.

national road network as identified and defined by the strategic road plan. It will see partnerships between all levels of government to develop operational programs to bring about efficient implementation of the strategic plan.

The states, territories and local government would be accountable for the programming and delivery to achieve the outcomes being sought. The objectives of the programming and delivery element are to determine the outputs needed to deliver the outcomes identified and defined by the strategic plan, and to arrange and manage the efficient delivery of those outputs.

Processes involved in the programming and delivery element include:

- ✓ Establishing partnerships and alliances to ensure effective delivery.
- ✓ Identification of outputs needed.
- ✓ Resource sharing and allocation.
- ✓ Customer relations and management.
- ✓ Regional management.
- ✓ Regional goal setting.
- ✓ Project prioritisation.
- ✓ Project costings and management.
- ✓ Competitive and efficient delivery.
- ✓ Delivery outputs to specification.

The deliverables from the programming and delivery element are operational programs for each state and territory, project specifications and plans, project prioritisation and project outputs.

In order to remove duplicated and inefficient administrative and management overheads, performance management would be introduced to measure the achievement of agreed outcomes and service levels. The

work by Austroads on performance indicators in recent times will be of great value here.

Accountability for performance management and measurement will rest with the Commonwealth and State Auditors-General, and the Department of Transport and Regional Development. Each jurisdiction would have its performance, and the performance of the road network, measured and a formal report used as input into the strategy element for review and actions as appropriate.

The objectives of the performance management element would be to conduct unbiased performance reviews, provide a formal report to the ATC, and aid improvement in future strategies and programming and delivery.

Processes would include measurements to ensure value for money, methods for ensuring effectiveness of outputs in meeting outcomes and objectives, and development and publication of performance indicators.

Performance report

Deliverables from the performance management element would include a performance report to the ATC, published performance indicators and an annual report.

We believe we have first to work out what needs to be done by way of a strategic management process and then work out how it can be best funded. All parties need to be prepared to commit themselves to the process and be prepared to be open-minded.

It is quite clear that the overall level of road funding in Australia is inadequate and that it needs to be increased. The November, 1995, meeting of the ATC recognised this, stating:

The Council records that if Australia is to promote its competitive position in the global economy and ensure the economic and social welfare of the nation, there is a need for all levels of government in Australia to ensure the full funding of projects of economic and social significance.

The Commonwealth's level of road funding has been declining steadily in real terms for some time. For the national interest in roads to be met this trend would need to be reversed.

The WA Government has recognised the need for additional road funds and substantially lifted its road funding effort in recent years. Despite this we are still unable to meet the needs of a growing state and a growing nation. All levels of government need to re-examine their levels of funding.

Distribution mechanisms need to be transparent and take into account the needs of all Australians. Economic, social, environmental and other factors must be considered in order to provide equitable distribution.

There are substantial returns from investment in road and transport infrastructure. The USA, Germany, France and other countries have changed from an expenditure to an investment mind-set. To remain competitive and meet the needs of its people, Australia needs to make a similar change.

The WA context

The economic health of Australia is directly dependent upon the provision and maintenance of adequate infrastructure. As economic activity in WA expands and grows, there is an ever increasing burden placed on the state to provide an adequate level of infrastructure.

In the area of road infrastructure, the demands from industry and the community at large are as strong as they are in the other areas of government services. WA's road needs are increasing as it strives to provide:

- The capacity to preserve and improve the already significant road asset.
- Roads as part of an integrated transport system providing efficient links to ports, airports, freight terminals, industry centres and complementing public transport.
- Safer roads that cater for the needs of all road users.
- Roads that support the growing freight task and travel demand.
- Roads that support current and emerging industries.
- Roads that service the diverse needs of the state's regions.

In a world where consumers are demanding quality goods at a good price efficient transport infrastructure will continue to underpin competitiveness and growth.

Main Roads WA continually reassesses the state's requirements for road infrastructure as the factors that influence road needs change. A number of challenges in trying to provide an efficient and effective road network have emerged and include:

- A growing population and an expanding metropolitan area.
- Increasing resource development in remote areas.
- Major increases in industry due to value adding to raw material.
- An increasing freight task compounded by 'just-in-time' delivery.
- The need to minimise environmental impacts of transport.
- Increasing traffic congestion.
- The need for equitable access for all to goods, services and amenities.
- The interaction of roads and public transport.
- The size and diversity of the state.
- Demand for access to WA's unique tourist attractions.

The state's population of 1.8 million is expected to grow to nearly two million by the year 2001 and to 2.5 million by the year 2021. The current road freight task is in the order of 16,600 million tonne kilometres with an average annual growth rate of more than six per cent.

These are some obvious negative impacts that will result if the provision of infrastructure cannot keep pace with the demand generated by such growth:

- Increased traffic congestion in city and urban areas.
- Increased traffic noise and reduced air quality from vehicle emissions.
- Reduced levels of road safety and an increasing cost to the community of road crashes.
- Inability to take advantage of natural resources.
- Reduced ability to attract investment in value adding industries because of inadequate transport.

The issues are not unique to WA. They are replicated throughout the nation, albeit with varying degrees of emphasis on the issues.

WA shortfall

A 10-year road program is developed for WA as part of the budget preparation and resource allocation process. During this time projects across the state are identified for funding consideration from available revenues.

Based on a projected state-based revenue of \$400million per annum over the next 10 years and a continuation of National Highway System funds at a level similar to the previous 10-year average of \$60 million a year without allowance for inflation, WA is faced with a \$2.5 billion dollar shortfall over the next 10 years.

The shortfall for national highways is \$70 million a year. The shortfall on state roads is \$140 million a year. The 10-year shortfall for major projects on local roads is \$400 million.

THE BTCE/AAA COLLOQUIUM

The aim of the inaugural BTCE/AAA land transport research colloquium was to bring together key players in the Australian transport sector to discuss current issues, research in progress and future research needs.

The opportunity provided by the current House of Representatives ('Vaile') inquiry into federal funding of road infrastructure was taken to focus on the road transport sector and, in particular, a national perspective for roads and current research priorities.

The colloquium concluded with an open forum to enable researchers to exchange information on present work, request assistance from other participants, and suggest future research projects and possibilities for co-operation between them.

It was agreed that that colloquium should be held annually in order to reduce duplication in research and improve alliances.

Similar shortfalls are likely to be found throughout Australia. These are significant and require urgent attention if Australia is to continue to provide an appropriate standard of living for its people, be competitive in the world economy and adequately prepare for the future.

There is clearly a need for increased road funding from all levels of government and for a more equitable basis for distributing these funds.

The WA response

WA is dealing with the problem in a number of ways:

- ✓ Streamlining of Main Roads operations including the reduction of plant, vehicle fleet, people and property.
- ✓ Changing its delivery methods by increased contracting out.
- ✓ Innovative use of technology.
- ✓ Term maintenance contracts have been introduced for large parts of the network.
- ✓ Partnering and strategic alliances are being developed.
- ✓ The state fuel levy has been increased to 9.67 cents per litre and an additional \$1 billion program put in place to bring forward previously unfunded projects.
- ✓ State fuel levy and motor vehicle licence fees are hypothecated to roads.
- ✓ Closer working relationships with local government have been put in place and local government roads now share at least 25 per cent of the state fuel levy and motor vehicle licence fees.

- ✓ Partnerships are being developed with the private sector under shared funding agreements to advance infrastructure projects such as mining developments.
- ✓ Road infrastructure investment packages are being identified with support for financing from the private sector.

I am sure that my colleagues in other jurisdictions could bring forward similar actions.

These initiatives are not enough in themselves. Australia needs to take stock, to step back and take a new and fresh look at the issues and needs of roads and land transport.

Conclusion

WA believes urgent action is required. The 'Vaile Inquiry' provides an excellent opportunity to critically review the role of a national road network and the investment needed to progress the road infrastructure for the benefit of the nation. I commend (Federal Minister for Transport and Regional Development) John Sharp for having the inquiry conducted.

Australia's strategic road plan must be forthcoming with a clearly stated and agreed vision, objective, service levels and outcomes. The national road network and associated levels of service need to be clearly defined.

Stronger and more open partnerships among the three levels of government need to be established and strengthened.

More funds are needed from all levels of government. In particular, the Federal Government, as the largest collector of revenue from road users, needs to reassess its responsibilities.

An equitable shared funding arrangement is required with each level of government meeting its share of responsibility. There are any number of ways of distributing funds. Whatever method is chosen for distribution needs to take into account the requirements of all Australians.

The outputs and outcomes achieved with those funds need to be measured and reported. A performance based system of management, removing the archaic and prescriptive and restrictive controls now in place, is needed.

In summary I would say a fundamental revamp of existing arrangements is essential, a strategic approach is required based on a co-operative partnership with realistic levels of funding.

I am sure that you will find this colloquium, and the 'Vaile Inquiry', watershed events for roads. I sincerely hope so.

In a recent report published by ARRB Transport Research and summarised here, Chief Research Scientist, Dr James Luk, and Senior Research Scientist, Dr Edward Chung, provide an initial appraisal of -

Induced Traffic Demand and Road Investment

In recent years, public opinion on new road construction has been divided between two positions.

One, supported mostly by environmentalists and the green movement, is that the addition of road capacity induces extra traffic by releasing latent demand previously suppressed by congestion.

The net benefit, they argue, is at best minimal because congestion levels ultimately remain the same, or even negative because the extra traffic generates more pollution.

The other position is to assume that new road facilities create little or no induced demand and any increase in traffic is due to diversions from alternative routes that will benefit from reduced congestion.

Complex issue

Induced demand is a complex issue and is difficult to define or measure. It has generated considerable public debate in the USA and UK.

Observed increases in road travel on routes that are a new facility or have added capacity could be due to:



Melbourne's new South Eastern Arterial road on which the report's case study was based

- Traffic diversion from alternative routes.
- Changes in trip start times.
- Release of latent demand.
- Mode shift from public transport to car travel.
- Extra travel due to land-use changes as a result of the new road facility.

In this report, demand changes due to route diversion and changes in trip start times are not regarded as induced traffic. Their impact in a network could be very significant but they are different from induced traffic due to the release of latent demand, mode shift and land-use changes.

Major findings

The major findings from theoretical and empirical literature reviews are as follows:

- 1 The release of latent demand due to new road facilities is possible but the level of inducement is dependent on various factors such as the existing congestion level, population density and whether the new facility is a circumferential or radial road.
- 2 Congestion is a stabilising agent because of its inherent negative feedback mechanism - latent demand is suppressed due to increases in delay if that demand is released. The delay values at the end of a four-step transport planning process should be fed back to the first three steps (generation, distribution and mode shift) to consider the effect of elastic demands.
- 3 In a congested city such as London, the travel times to the city centre by public transport and by car are at equilibrium. The addition of road capacity to the city centre in such a situation may be detrimental to the performance of the public transport system and may incur extra car travel time.
- 4 Induced demand may continue to occur over time and should be analysed over a period of time. The 1994 report of the Standing Advisory Committee on Trunk Road Assessment in the UK found that induced demand increased from an average of 10 per cent in the first year to 33 per cent at the end of the fifth year.
- 5 An expanded segment of a road link may induce or generate more traffic on other parts of the road network than it removes, hence, it is critical to select a sufficiently large area or corridor for analysis.

To identify future research directions, an Australian case study was undertaken, based on traffic data from Melbourne's South Eastern Arterial and its adjacent arterial roads.

Radial road link

A radial road linking the south-eastern suburbs to the city centre, the South Eastern Arterial is more than 20 km long and became totally linked in 1988 when it was connected to the Mulgrave Freeway. Traffic volume data in the corridor from 1975 to 1995 was analysed along with rail patronage.

The key finding of this study is that there was no induced demand on the arterial over this period as a result of the linking of the road. The level of unexplained traffic growth was 1.7 per cent per year but the natural growth rate of traffic at nearby control sites was 2.7 per cent.

Mode shift from rail to car travel could not be identified. The loss of rail patronage during the study period could have been affected by the recession in the early 1990s with job losses in the manufacturing sector served by the rail lines in the corridor.

The lack of induced demand could be due to the radial nature of the South Eastern Arterial. A radial route with added capacity could be less likely to generate demand than a circumferential route.

In recent years, the arterial has operated in near-saturated conditions during peak hours. The high level of congestion could also have suppressed demand.

Melbourne case study

The Melbourne case study is an initial assessment of the concept of induced demand in an Australian context. The data employed for analysis came from various sources and was not coherently structured to identify the relationship between induced demand and road investment.

With various freeway construction projects now in progress, it is prudent to institute traffic monitoring schemes if present and future demand changes are needed for road planning. It is also recommended that the traditional four-step transport study in Australia should be an iterative process so that the delay from the final step of traffic assignment can influence the earlier steps of trip generation, distribution and mode shift.

Copies of the report (ARR 299) are available from ARRB Transport Research, phone (03) 9881 1547, fax (03) 9887 8144

In a presentation to the 3rd International Conference of Intelligent Transport Systems Australia held in Brisbane in March, Director of Business Strategy for Ford Motor Company of Australia Limited, Don Pearce, spoke on -

ITS for Vehicles: A Local Manufacturer's Perspective

ITS is such a broad ranging and vast subject. It can range from intelligent vehicle cruise control through navigational assistance and toll collection to automated highways and beyond.

I am not going to give you any great technical insight into any of these new developments, although I will touch on some areas of research that Ford is involved in on a global basis. Importantly, though, I want to try to provide a perspective to the overall development challenge of finding a way through this maze of technology from a car and truck manufacturer's perspective.

It is undoubtedly a very exciting field with plenty of opportunities but with general expectations of relief in traffic congestion, quantum safety improvement, reduced emissions and energy conservation that will perhaps be hard to deliver.

Total systems challenge

In striving to meet these expectations, we have come to the realisation that ITS is a total systems challenge with many interacting parts and organisations. The vehicle manufacturer is the system's integrator but governments, infrastructure providers and vehicle component suppliers have equally important roles, so the development challenge is complex. I will come back to this point later.

The industry has been wrestling with these challenges for some time. ITS is not a new field. In thinking about what I might say, I was reminded of an inventor from Coffs Harbour, NSW, who visited me at Ford in Geelong, Victoria about 10 years ago.

He drove all the way down in his four-wheel-drive to demonstrate what turned out to be an unreliable device which used a photocell to sense road line markings and so warn the driver that he or she was straying from the road. It sounds just like more recent developments, doesn't it?

Similarly, radar controlled braking sounds like something new, but researchers were working on such systems in the late 1960s - nearly 30 years ago.

Regardless of what our expectations of ITS might be, the first challenge that must be met is ensuring that the customer sees value in what is being offered. Value is determined in part by the benefits offered.

Navigation aid

Customers have a perfect right to expect that convenience appliances in their lives, like cars, will continue to become more convenient and easy to use. For example, when you're lost in an unfamiliar city, your car can solve your dilemma with a navigational aid.

Value, of course, is also determined on what one has to pay, and overall affordability will be vitally important. Not everyone will pay top dollar to obtain the maximum feature value.

So unquestionably, we will need to target different ITS features for different car or truck segments. For instance, simple low-cost technology for the small car buyer at one end and,

at the other end, more elaborate fully featured systems for the luxury car buyer - maybe including Global Positional Systems for car location, traffic information on a map display and re-routing alternatives developed by either an on-board computer or central computer facility.

The car has provided great user freedom. It is the customers who will decide which aspects of ITS genuinely improve their lives and conclude they are willing to give up a degree of freedom or control to gain other benefits, at least in some areas of ITS.

From a driver's standpoint, there is a very important need for any system to be simple, unambiguous and intuitive. Given this supposition, an interesting question to dwell on is to where navigational aid developments might pan out.



Don Pearce



Ford is about to launch a route guidance system in Europe on our Mondeo car which relies primarily on audio messages with simple diagrams as a visual aid. Of course, in spite of the simple display, the detailed map data stored on a CD ROM is still required.

While the technophiles may initially demand more, we think that most users will demand simplicity and ease of understanding, and we have chosen the simple, easy-to-follow approach.

As well as convenience features such as navigational aids, ITS can help the driver in the operation of the vehicle. As an illustration of this, Ford with its Jaguar car division in Europe has been working on intelligent cruise control and collision avoidance systems under the pan-European PROMETHEUS research program.

These systems use microwave technology to gauge the proximity of traffic in front of the car and slow the car down to keep a pre-set distance behind those vehicles until the driver changes lanes, at which point the system returns to its set speed. This can be a major stress reliever for a driver in heavy freeway traffic where his alternative to date has been to either drive manually or keep adjusting or resetting the cruise control.

Collision avoidance

Ways of extending this system to include collision avoidance are being pursued but development is at an early stage. Collision avoidance could operate whether or not the cruise control is switched on, but currently has issues with things such as braking for stationary roadside objects like buildings or trees that are in line with the car's direction of travel, but beyond a bend in the road or, worse, not recognising stationary traffic just around a bend.

The solution to such situations probably lies in combining sensor technologies such as video and microwave, where video sensing has good object and angle of approach recognition, and microwave has good ranging ability. Feedback to the driver could be in the form of increasing accelerator pedal effort, or if in cruise control mode, an audio warning and applying the brakes if he or she doesn't respond.

One take-out from this research that I find particularly intriguing as someone who used to be in charge of vehicle development and testing is the degree to which the driver will be prepared to give up control. Just how is the driver kept in the control loop?

Any system that is not fully automated and requires driver control and input needs to walk a careful line between being too authoritarian on the one hand and not providing any real convenience and improved ease of use on the other.

In the case of intelligent cruise control, should speed reduction include full-authority braking or will an

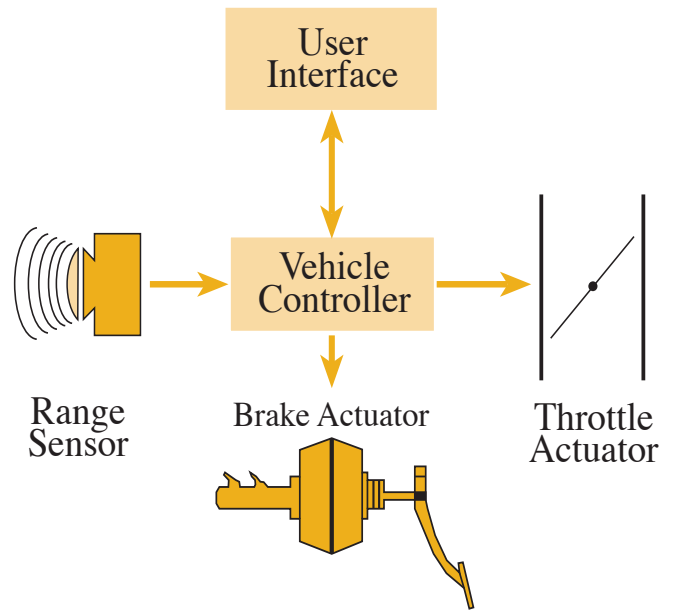


Figure 1: A typical intelligent cruise control configuration.

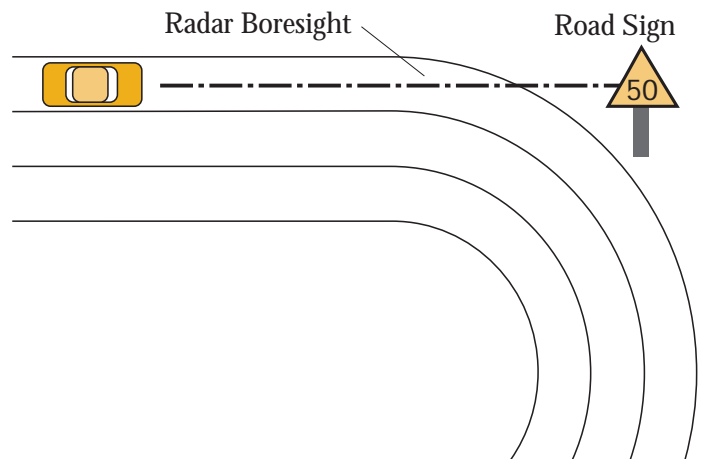


Figure 2: The effect of roadside clutter. With a simple system the road sign will be identified as a threat even though it is not.

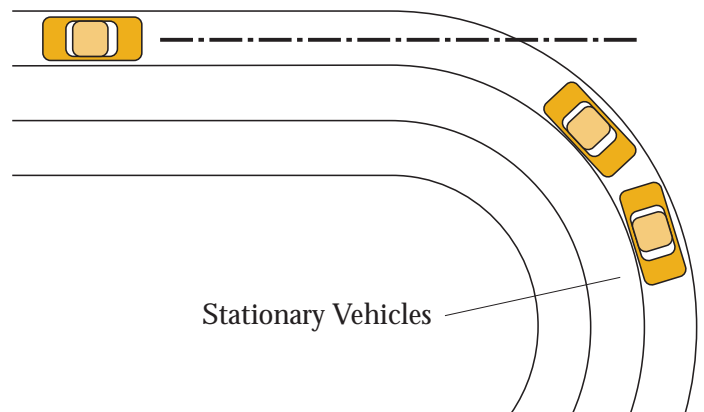
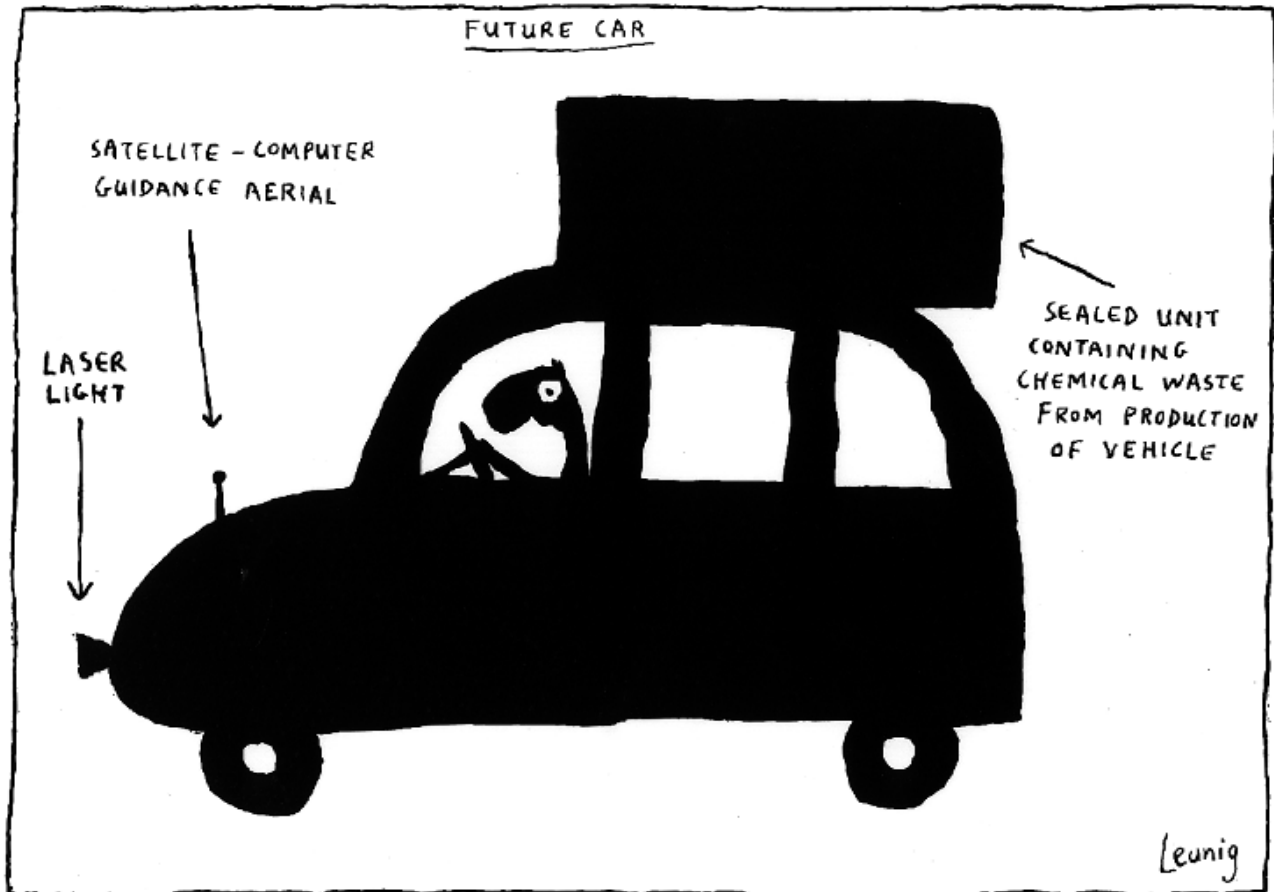


Figure 3: Missed detection due to road geometry. The stationary vehicles are a potential threat but will not be detected until the car enters the bend.



Michael Leunig/The Age.

automatic 'panic stop' in fact panic the driver into doing something unsafe? What is the 'safe following distance' - should we build in a fixed following time or let the driver set one to his or her comfort and driving skill level? Are we taking too much responsibility away from the driver and causing him or her to become too complacent and not pay enough attention to the road?

As a business strategist, I don't have the answer to these questions, but they are ones Ford is working on developing solutions.

Australia is in a somewhat unique situation of having a small population with a large network of relatively unsophisticated roads traversing large distances. Infrastructure costs per capita can be enormous. Given these factors, it's unlikely that Australia will lead in areas where infrastructure and development costs are a high proportion of the overall costs.

However, I think this is an area of opportunity for Australia. We have been successful in the past in the automotive arena of innovatively adapting overseas developments to suit our own unique requirements. There is no reason why we cannot do the same in the ITS field, although the challenge is to do it in an internationally harmonised way with standardised protocols and regulation.

A simple example, we in Australia have experienced, of the lack of uniformity of approach is with mobile car phone installations - at least three different mounts and connectors exist which makes it impossible for the car manufacturer to provide a universal phone installation.

This brings me back to the roles that different parties have in developing ITS. We see that a very important role for government is to work out ways to harmonise regulations worldwide. Alternatively, if they can't be identical, at least make them complementary.

With regard to providing infrastructure, the car manufacturers are largely by-standers, particularly in the key area of communications. The infrastructure providers are in the lead here with national or federal governments determining policy. Maybe Australia has an advantage for historical reasons in that the Government has operated a national telecommunications company.

An example of differing standards where internationally Ford is experiencing difficulties is in Europe with varying digital map standards and differing quality and quantity of 'real time road and traffic information'. Let's make sure we in Australia are learning from others' mistakes. If we cannot have common phone connection, let's make sure we do so for new features, for example, on-board fax machines.



Component suppliers

The fourth party involved in ITS development comprises the component suppliers to the car and truck industry. As I said earlier, the car manufacturer is the systems integrator. We are increasingly enlisting the support of specialist manufacturers for, not just the components, but the developed sub-systems going into the vehicle system.

Part of the manufacturers' systems integrator role is to define the package space available either in the visible dash or instrument panel surface, or underneath it - no mean feat these days but obviously helped with component miniaturisation. In the jargon of the day, the car manufacturers are responsible for the critical area of the MMI - that is, the man (or woman) machine interface.

In summary, to realise the optimum benefits from ITS will require real teamwork with governments, the infrastructure providers, component and sub-system auto suppliers, and the car manufacturers as major partners. While the possible pitfalls are many, the opportunities could be never-ending and our customers should soon have a new array of products to choose from, offering features of real value.

Defining ITS

Intelligent transport systems cover all modes of transport - air, sea, road and rail - and interaction between transport modes (intermodality), which has frequently been identified as the cause of inefficiencies. ITS is often seen as comprising six main segments:

- Advanced traffic management systems.
- Electronic commerce.
- Advanced traveller information systems.
- Commercial vehicle operations.
- Advanced public transport systems.
- Vehicle control systems.

ITS represents a marriage of computer, communications and transport systems engineering with the objective of maximising the returns from investment in transportation. The potential benefits lie in enhanced safety, improved efficiency and, through these, better environmental performance.

Conference Highlights Progress in ITS

Held over three days, ITS Australia's 3rd International Conference, *Managing Transportation to Benefit Society*, attracted some 260 delegates from 17 countries. More than 70 papers were delivered by Australian and overseas experts, and 19 companies exhibited products.

One of the important outcomes of the conference was an increased awareness that ITS is already making a significant contribution to transport safety and efficiency in Australia.

Applications currently in use locally range from variable message signs on freeways advising motorists of traffic conditions, bar-coded freight tracking systems and interactive control of traffic signals to electronic toll collection and dynamically updated information systems for public transport travellers.

A meeting of the ITS Asia-Pacific Committee was held prior to the conference to plan future co-operation in the region, while the International Standards Organisation technical committee on transport information and control systems met afterwards to continue the development of standards for ITS systems to promote international inter-operability.

The conference noted the substantial amounts being spent on ITS systems internationally, including almost \$1 billion in the USA over the last five years. ITS America estimates the worldwide market will be worth \$400 billion by 2010, with the Asia-Pacific region accounting for \$100 billion of that.

1997 Fuel Challenge

Schools, colleges, universities, private companies and individuals are again being invited to test their ingenuity in extracting the maximum fuel economy from a petrol-engined vehicle by entering the *Triple A Fuel Challenge*.

Australia's annual petrol miser contest will this year be held from October 23 to 26 in Canberra. More than 50 teams from around the country are expected to pit their vehicle design, construction and driving skills in the 1997 event.

As in previous years, the competition will be conducted in two divisions, open and schools, each with single and two-seater classes, while there is also an open street commuter class for cars that with minor modifications are capable of being road registered. Competitors in all categories must complete a required number of laps of the one-kilometre circuit at a minimum average speed of 25 km/h.

For further information about the event, contact the organisers, fax (06) 295 2923, email AAAFC@spirit.com.au.

News Briefs

NATIONAL LAND TRANSPORT VISION NEEDED

There is a need for a national vision for land transport to provide long-term direction, purpose and coherence across Australia to strategic planning of these systems. This is the conclusion of a report, *Australia at the Crossroads*, launched by Austroads in April.

The report is a distillation of information and ideas from a two-part, independent review of how well the road system and road agencies are serving the community. It shows that, while different communities of interest place different emphases on the goals of economic growth, social equity and environmental sustainability, these concerns are remarkably consistent across Australia.

For further information contact Austroads, phone (02) 9264 7088, fax (02) 9264 1657, email austroad@ozemail.com.au.

ROAD TRANSPORT REFORM BENEFITS

National reforms to the road transport industry could ultimately deliver annual benefits of \$1 billion to Australia's economy including transport savings of approximately \$500 million, according to a report released in April by the National Road Transport Commission (NRTC). The report, *Benefits of National Road Transport Regulatory Reforms*, is based on surveys of transport operators from 33 companies operating nearly 3000 vehicles, an analysis of NRTC estimates, economic modelling and other work.

It found that almost all industries would benefit from cheaper transport, which would enhance Australia's economic performance, create jobs and assist in the export drive into Asia and other markets. Implementation of the entire reform package could lift the productivity of articulated and B-double vehicles by 13 per cent and contribute nearly 0.3 per cent to national GDP.

The report claims that increasing the payload of the transport fleet under the Mass Limits Review proposals is the biggest, single reform and would result in a direct reduction in transport costs of about \$316 million a year, while other gains would come from the introduction of uniform road transport laws. National truck and bus driving hours, reforms to dangerous goods transport and more effective methods of compliance with transport laws would provide efficiency and safety benefits over a broad segment of the transport industry.

For further information contact the NRTC, phone (03) 9321 8444, fax (03) 9326 8964, email nrtc@ozonline.com.au.

Key Motoring Facts

1997-98 FEDERAL BUDGET

Road Transport Outlays:

		1996-97	1997-98	1998-99	1999-00	2000-01
		Estimate	Budget	Estimate	Estimate	Estimate
Road Grants	\$m	803.5	808.7	806.6	773.2	791.6
	%		0.6	-0.3	-4.1	2.4
Interstate Road Transport Charge	\$m	20.3	15.3	10.3	-	-
	%		-24.6	-32.7	-100.0	na
Road Safety and Land Transport Research	\$m	42.1	40.4	37.4	38.1	38.9
	%		-4.0	-7.4	1.9	2.1
Other	\$m	1.6	2.9	1.2	1.2	1.2
	%		81.3	-58.6	-	-
TOTAL	\$m	867.4	867.2	855.4	812.5	831.7
	%		-	-1.4	-5.0	2.4

na not applicable

- nil

Source: Budget Paper No.1, "Budget Strategy and Outlook 1997-98"

The Commonwealth funds the National Highway System and contributes to the capital cost of some other roads of national importance. For roads more generally, the Commonwealth provides general revenue assistance to the States and to local government.

The major component of Road Safety and Land Transport Research is contribution for the remediation of road safety black spots through assistance to State and local governments.

General Revenue Assistance to States

	1995-96	1996-97	1997-98a
	\$m	\$m	Estimate
NSW	110	113	115.9
VIC	99	93	84.8
QLD	68	72	75.2
WA	43	41	37.8
SA	28	33	37.2
TAS	11	13	15.4
ACT	3	4	5.8
NT	9	14	18.9
TOTAL	371	384	391.0

Source: Budget Paper No.3, "Federal Financial Relations 1997-98"

From 1995-96, the distribution of identified road grants (IRGs) was progressively moved to a distribution based on financial assistance grants (FAGs). In 1997-98 these payments will be absorbed into FAGs.

(a) The amount of each State's FAGs which are notionally attributed to the IRGs which will be absorbed in 1997-98.

General Revenue Assistance to Local Government

	1996-97	1997-98
	Estimate	Estimate
Identified Road Grants		
	\$m	\$m
NSW	108.5	107.5
VIC	77.1	76.4
QLD	70.0	69.4
WA	57.2	56.6
SA	20.5	20.4
TAS	19.8	19.6
ACT	12.0	11.9
NT	8.8	8.7
TOTAL	373.9	370.4

Source: Budget Paper No.3, "Federal Financial Relations 1997-98"



Key Motoring Facts

PETROL

Estimated Revenue from Excise Duty on Petroleum Products

	1996-97 Revised Estimate	1997-98 Estimate	Change on 1997-98
	\$m	\$m	%
Leaded Petrol	2328	2081	-10.6
Unleaded Petrol	4047	4404	8.8
Diesel	3970	4131	4.1
Other (a)	145	147	1.0
Total Petroleum Products	10490	10764	2.6
Crude Oil and LPG	10	76	660.0

Source: Budget Paper No.1, "Budget Strategy and Outlook 1997-98"

(a) Includes aviation gasoline, aviation turbine fuel, fuel oil, heating oil and kerosene and refunds/drawbacks relating to petroleum products excise.

Commonwealth Excise On Petrol:

The excise on petrol is adjusted in February and August in line with half-yearly movements in the Consumer Price Index (CPI).

As at 1 February 1997

	cents per litre
Leaded petrol	36.872
Unleaded petrol	34.697
Diesel	34.697

State Petroleum Franchise Fees:

As at 1 February 1997 on unleaded regular petrol

	cents per litre
Sydney	7.5
Melbourne	9.3
Brisbane	0.0
Perth	9.7
Adelaide	9.8
Hobart	6.2
Darwin	7.0
Canberra	7.5

State and Territory Government Revenue from Franchise Fees on Petroleum Products 1995-96:

	\$ million
New South Wales	539
Victoria	505
Queensland	0
Western Australia	221
South Australia	155
Tasmania	48
Northern Territory	34
Australian Capital Territory	27
Total	1,531

SOURCE: ABS Cat No. 5506.0, "Taxation Revenue Australia 1995-96"

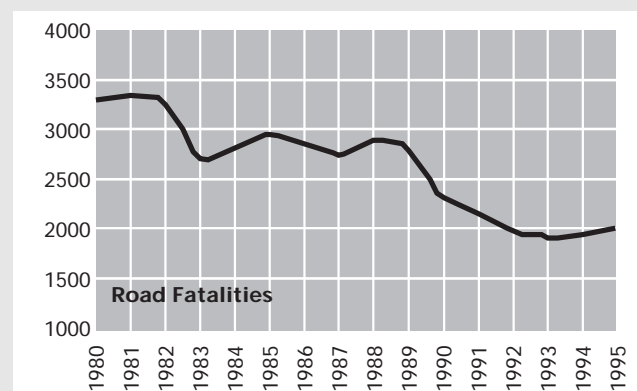
STATE AND TERRITORY REVENUE 1995-96

	\$ million
Vehicle registration, fees and taxes	2,022
Stamp duty on vehicle registration	1,050
Drivers' licences	281
Road transport and maintenance taxes	101
Total	3,454

SOURCE: ABS Cat No. 5506.0, "Taxation Revenue Australia 1995-96"

ROAD FATALITIES

Road Fatalities 1980 to 1996:



Road Fatalities:

1980	3,272
1985	2,941
1990	2,331
1995	2,017
1996	1,973
Road fatalities year to April 1997	580
Road fatalities year to April 1996	642

Road Fatalities by Road User Group 1996:

Drivers	871
Passengers	501
Pedestrians	349
Motorcycle riders and passengers	193
Bicyclists	58
All road users	1,973

Road Fatalities by State/ Territory 1996:

New South Wales	585
Victoria	417
Queensland	383
South Australia	181
Western Australia	248
Tasmania	64
Northern Territory	72
Australian Capital Territory	23

SOURCE: Federal Office of Road Safety.

Conferences and Events 1997

July 21-22:

Intelligent Transport Systems 2nd Asia-Pacific Seminar, Cairns, contact Colin Jensen (Main Roads Queensland), phone (07) 3404 3857, email cdjense@mr.qld.gov.au

August 3-8:

International Association of Auto Theft Investigation 45th Annual Training Seminar, Brisbane, contact Susan Maxwell (Queensland Police), phone (07) 3888 3411

September 21-25:

8th Meeting of the International Association of Travel Behaviour Research, Texas (USA), contact Dr Hani S. Mahmassani (University of Texas), fax + 1 (512) 475-6361, email ATBR97@mail.utexas.edu, internet <http://www.utexas/iatbr>

September 23-25:

3rd International Conference on Urban Transport and the Environment for the 21st Century, Terni (Italy), contact Dr Torben Holvad (University of North London), fax + 44 (171) 753-5151, email t.holvad@uni.ac.uk

September 25-28:

4th International Exhibition and Conference on City Planning, Transportation and Traffic Engineering: *CityTrans/InterTraffic Asia '97*, Singapore, contact William Lim (CityTrans), fax + (65) 292-7577

October 2-3:

Society of Automotive Engineers Australasia *Innovation and Emerging Technologies* conference, Melbourne, contact Angela Mercorella (SAE), phone (03) 9326 7166

October 21-24:

Intelligent Transport Systems 4th Annual World Congress: *Mobility for Everybody*, Berlin (Germany), contact Eef de Ferrante (Exhibition Management), fax + 31 (30) 662-2321, email ferrante@worldaccess.nl

October 22:

Society of Automotive Engineers Australasia *Industry Outlook* conference, Melbourne, contact Angela Mercorella (SAE), phone (03) 9326 7166

October 23-23:

Triple A Fuel Challenge, Canberra, contact Mike Wilson (Triple A), phone (06) 247 7311

November 17:

Australian Automobile Association Annual Conference public policy forum, Melbourne, contact Julie Anderson (Triple A), phone (06) 247 7311

Conferences and Events 1998

February 27-March 8:

Melbourne Motor Show, contact Victorian Automobile Chamber of Commerce, phone (03) 9829 1111

May 4-7:

9th Road Engineering Association of Asia and Australasia Conference, Wellington (New Zealand), contact Fiona Knight (Transit New Zealand), fax + 64 (4) 496-6666

November 7:

Society of Automotive Engineers Australasia *Annual Automotive Engineering Excellence Awards*, Melbourne, contact Angela Mercorella (SAE), phone (03) 9326 7166

November 8-12:

Intelligent Transport Systems 5th Annual World Congress, Seoul (Korea), contact Sandra Fitzgerald (ITS America), fax + 1 (202) 484-2902

November 14:

9th International Pacific Conference on Automotive Engineering, contact Angela Mercorella (SAE), phone (03) 9326 7166

To include your event in the calendar, please forward the date/s, title/topic, location and contact details to the editor (see page 2 for fax number, postal and e-mail addresses).

THE TRIPLE A ROLE

The Australian Automobile Association was established in 1924 to enable the various motoring clubs and associations to speak with a united voice on issues affecting their members. As the Federal Secretariat of the state and territory motoring organisations, the Triple A co-ordinates their activities in areas of mutual interest. It provides national and international representation for their members and, indirectly, all Australian motorists.

THE TRIPLE A VISION

To maintain world best standards of motoring services.

THE TRIPLE A MISSION

To promote the interests of Australian motorists by influencing public policy and by the efficient use of member organisation services.

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The Royal Automobile Club of W.A., (Incorporated)

The Royal Automobile Club of Tasmania Limited

Royal Automobile Club of Australia

Automobile Association of Northern Territory Inc.