Vehicle Design & Research

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SAFETY FEATURE INFORMATION FOR CONSUMERS

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Background

On 31 July 2003 Prof Brian Fildes met with several ANCAP representatives to discuss MURAC's Safecar II project and the potential to provide information to consumers about safety features fitted to vehicles.

The Safecar II project reviewed the potential benefits from a large number of safety features that are either available or under development. A methodology for rating these benefits was developed. One of the outcomes was a recommendation that the safety information be made available on the Internet for access by researchers, regulators and consumers.

Vehicle Design and Research (VDR) was asked to review the MUARC project and to advise how the information might be best utilised by ANCAP.

During the past two years VDR has been involved in related projects:

- Assisting TAC with the creation of the howsafeisyourcar.com website
- A review of the benefits of safety features and the impediments to their uptake on new vehicles for the West Australian government (Dept of Planning and Infrastructure).

Relevant findings from these two projects are described below.

TAC website

TAC was keen to provide a website with a wide range of safety information about vehicles. In scoping the project I identified that only a limited number of models (albeit popular ones) were covered by ANCAP new car crash test ratings and the ratings of the Used Car Safety Ratings (UCSR). Also these systems did not usually indicate a difference in performance between variants of the same model. I therefore recommended that the project be developed so that safety feature information for variants could be incorporated in the website. However, the collection and management of this information has proved elusive. As reasonable trial was conducted with electronic data from Glass's Guide but some of the safety feature data was found to be out-of-date.

WA Project

The WA project had the theme "encouraging the purchase of safer vehicles". Four project reports covered:

- A benefit/cost analysis of more than 60 safety features. Methodology was based on RTA NSW practices.
- Impediments to greater uptake of safety feature – this included interviews with dealers, consumers and fleet managers and a review of advertisements.
- Analysis of the safety characteristics of the WA light vehicle fleet – registration data was (laboriously) matched with models safety feature information to estimate the proportion of the fleet fitted with key safety features. An analysis of trends, by year of manufacture, was also conducted. This included ANCAP scores and UCSR scores.
- Summary of the above three reports, identification of stakeholders and strategies to improve the uptake of safety features.

These reports have not yet been published by the WA government. Key findings were:

- Priority (high effectiveness) safety features that are readily available are: driver airbag, side airbag with head protection, ABS brakes, cargo barrier in wagons and vans and front passenger airbag
- Priority safety features that are not generally available as optional equipment are: headlights “on” alarm or automatic headlights or daytime running lights, seat belt load limiters for front seats, side airbags for the rear outboard seats, speed alarm (set by driver), seat belt pretensioner for front seats, anti-submarining seat design and hazard lights activating in a severe crash.
- Priority safety features that are rarely available in Australia are: top speed limiter (set at 120km/h), seat belt interlock (smart alarm), high transmittance glazing, knee bolster/padding and laminated or shatter-proof glazing for all windows.
- A lack of awareness of vehicle safety and the significant differences in crashworthiness between vehicles. This may be associated with the perception that all vehicles are "safe".
- A lack of understanding of the extra protection that some safety features can be expected to produce. In particular, there is very little to guide consumers about the safety benefits of a better equipped variant.
- Impediments to ordering vehicles with non-standard safety features - price, long delivery times, pressure from salespeople.
- Senior managers in corporations are often not aware of the hidden costs of accidents and the benefits of specifying safer vehicles. Budgets for new vehicle purchases are closely controlled but the costs of accidents are rarely monitored.
- Fleet managers are unable to get away from day to day problems and so do not usually have time for implementing safety initiatives.
- Occupational health and safety personnel could give much greater attention to work-related road crashes.

- Fringe Benefit Tax provisions encourage the purchase of commercial vehicles that generally offer inferior occupant protection to that of large cars.
- There are encouraging trends with the uptake of driver airbags, front passenger airbags and ABS brakes. By 2001 the uptake of these features in WA was similar to that in Europe. Uptake of side airbags was, however, well behind Europe.
- An analysis of crashworthiness ratings, derived from real-world crashes in Victoria, New South Wales and Queensland (the "Used Car Safety Ratings"), revealed a general improvement for the West Australian fleet during the 1990s, with the notable exception of small cars. Some small cars that became very popular in the mid 1990s have a serious injury rate (proportion of drivers killed or hospitalised) at least twice that of the fleet average. It is a concern that these cheap cars are now coming onto the second hand market and are likely to be purchased by high-risk driver groups

An action list was developed that identified stakeholder responsibilities and potential action. Several items involved ANCAP initiatives. These included:

- Producing lists of safety features fitted to vehicles
- Preparing explanations of the safety benefits of these features, for guidance of consumers
- Testing better-equipped variants of some models to show improved crashworthiness
- Encouraging the uptake of head-protecting side airbags (eg introduce a pole test)
- Participate in OH&S programs designed to improve fleet safety
- Provide dealers with safety information packs for consumers

MUARC Safecar II Project

It is evident that the MUARC project reached similar conclusions about priority safety features (except that highly cost-effective top speed limiting was not considered) and the need for consumers to be informed about the benefits and available of safety features on vehicles. The Internet website described under “Project Future” is similar to that proposed in the TAC scoping paper – it needs to be simple and not over-whelming at the front end but users need to be able to drill down to increasing levels of technical detail if they wish.

The project report proposes a rating system for safety features on vehicles. There are, however, several impediments to implementing a rating system at this stage. The main ones are the uncertainty that exists about the effectiveness of many of the safety features and the difficulty of weighting the features for a wide range of vehicle uses (eg a front passenger airbag is only cost-effective if the vehicle regularly carries a passenger).

Subject to these concerns there is merit in the proposal to provide a safety features website. The MUARC report identifies several tasks to set up the website:

- Decide which organisation is to publish the results (safety feature ratings) and manage the website
- Identify data collection persons
- Identify web developer
- Regular update of the literature review and ratings
- Development/refinement of the user interface (web pages)
- Collection of data for the database

The possible involvement of ANCAP in these tasks is discussed in the next section.

Conclusions and recommendations

The MUARC project has gathered a great deal of useful information about safety features on vehicles. The proposed rating system (Potential Effect Point System) has merit but is not sufficiently developed to “go public” at this stage. In the meantime, however, there is the potential to provide consumers with information about the effectiveness and availability of various safety features on vehicles. TAC has been considering this for its website and the WA project conducted by VDR identified the need to make consumers more aware of safety feature benefits.

MUARC appears to be well-placed to refine and maintain its database of vehicle safety features and to provide consumers with advice about the effectiveness of these features. Prof Fildes also indicated that MUARC has access to the considerable computing resources of the Swinbourne Institute.

A possible line of action is for MUARC to be asked to quote on developing and maintaining a safety features database that could be accessed by ANCAP stakeholder websites (such as the TAC Howsafeisyourcar website). In other words, a consumer who was browsing the ANCAP stakeholder website could click on a link that provides information about the availability and effectiveness of various safety features for a particular model (or range) of vehicles.

In this way some of the shortcomings of current ANCAP websites (lack of information about less popular models and better equipped variants) would be addressed.

Michael Paine

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