7th August 2015

Review of the Australian Communications & Media Authority

Submission

On behalf of:

Australian Confederation of Motor Clubs

Signed: _____

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INC 9894157

Summary

As a body representing 300,000 Motor Enthusiasts across NSW, comprising every motoring discipline; the Australian Confederation of Motor Clubs Inc. has a keen interest in ensuring the sustainability and safety of the motor enthusiast community and other road users through consensus.

From the beginning of 2000 to the end of 2009 more than 16,200 people lost their lives on Australian roads, which equates to an average fatality rate of 135 persons per month. Thankfully those figures have been in steady decline, 2012 = 108 fatalities pm, 2013 = 99 fatalities pm, 2014 = 96 fatalities pm; however, we are beginning to experience a levelling off. For the first 4 months of 2015 the average monthly fatalities = 97.

In addition to the safety of road users, what can often be overlooked, is the safety of our infrastructure construction and maintenance personnel where we have also experienced a levelling off of accident/fatality incidence. Our 'workzone' personnel work in a dangerous environment which is further exacerbated by their close proximity to traffic flow. A number of high speed 'run-throughs' or perimeter breaches have been experienced in a number of States. Where situations allow, States have closed roads for work to be undertaken, providing a much safer working environment but, of course, this is not always possible due to vehicle access and traffic flow demands.

"If we are not embracing every opportunity to save lives; we are costing lives!"

A target of zero fatalities should be our goal and, in order to make further progress we must look beyond, and build on current technologies and practises. We must embrace concepts and technologies which, whether through human behavioural research, or proven capabilities, demonstrate life-saving attributes.

Owing to a number of Australian innovations, advanced through private enterprise and government grants, the opportunity now exists to substantially, reduce the number of fatalities on our roads. To enhance safety at 'Schoolzones', 'Workzones', level-crossings and black-spots etc. As the technology involves overriding commercial radio signals in a life threatening situation, we consider this scenario to have the potential to be a perfect example of regulatory structure and legislation being overtaken by technological advancement to the detriment of road safety.

[1] Australian Road Deaths Database
(www.bitre.gov.au/statistics/safety/fatal_road_crashdatabase.aspx May2015)

Questions

The Australian communications market

3.   The ACMC Inc. considers that advancement in technologies which address human behavioural factors pertaining to road safety will impact the role of the regulator as 97% of motorists already have the most effective and informative, safety device, that being a radio.

What should a future-focused communications regulator look like?

4.   The ACMC Inc. suggests that the overarching objective and purpose of the communications regulator is to ensure that community benefit outweighs commercial interest; particularly pertaining to safety, emergency and disaster response.

8.   The ACMC Inc. argues that the Minister be able to give direction to the ACMA on all matters pertaining to safety, emergency and disaster response.

9.   The ACMC Inc. argues that any regulatory body must have a model that encourages community participation and therefore a framework for community consultation.

Enhancing the regulatory performance of the ACMA

11.   The ACMC Inc. considers it disappointing that one of the key performance indicators is not 'Community Benefit'

Maximising the ACMC's efficiency

14.   The ACMC Inc. considers that on matters of community safety, disaster management, emergency services and response, responsibility and authority should revert to the individual states and territories.

18.   The ACMC Inc. suggests that the definition of stakeholder engagement be broadened to reflect community driven aspects of the technological media revolution.

The communications regulatory framework

25.   The ACMC Inc. argues that the current understanding of 'safeguards' be broadened to ensure physical safety

Technology Advancement

Known by a number of designations, Radio Interrupt, Radio Break-In, Radio Override Technology, well whatever you know it by most of you will have experienced this technology whilst driving through any number of tunnels. Providing verbal guidance over our radios of an emergency, incidents, change of condition etc. It's the kind of smart highway tool that allows us to make informed decisions. Of course in a tunnel, you are already committed and freedom of action somewhat limited.

Often criticised for being nothing more than 'radio jamming' technology, favoured by the North Koreans and other despotic regimes; radio-interrupt technology has advanced significantly thanks to enterprising companies and Federal Government Research Grants. For tunnel use; the technology actually receives the radio signals across the spectrum from outside the tunnel and then re-broadcasts the signal inside the tunnel. As it is a "re-broadcast", and due to the confines of the tunnel blocking other external signals, it is reasonably straight forward to insert tunnel operator warning messages. So in a tunnel you aren't actually hearing 'live' radio, but "re-broadcast" radio.

Of course, when removed from the radio signal isolating confines of a tunnel the technology has to operate in a more directed fashion. It can no longer rely on "re-broadcast" as other external signals continue to exist. This problem is overcome due to the operation of modern radios which, only focus on the strongest signal received on any frequency, particularly FM.

The key breakthrough has been in the ability to control the signal, directly target the audience, device security and the mitigation of nuisance events and a reduction of signal bleed. One example searches for and finds every radio station operating in an area and their individual signal strength. Comparing these signals to a defined file list of barred/protected stations, it then broadcasts the emergency or warning message in the target zone on all designated interruptible stations.
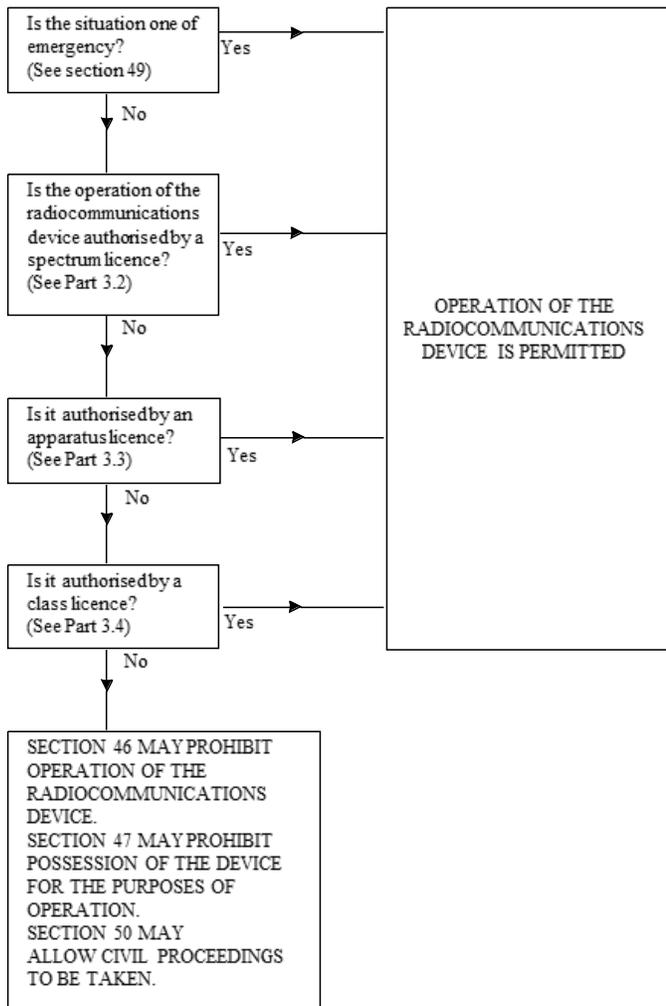
Signal broadcast strength is no longer indiscriminate, the override signal for each individual station is directly proportional to the specific station signal strength sampled (the receiving vehicle radio ignores the weaker signal completely). The technology can also communicate with RDS enabled radios allowing the reception of emergency/warning messages regardless of their listening medium. Other than a functioning radio, no additional equipment is required to be installed in the receiving vehicle. Another example reviewed required an additional in-cab unit.

Legislation & Structure

We understand that the Radiocommunications Act 1992 is the relevant act by which ACMA governs the use of 'Radio-Override' technologies, however the reading of the act for such a technology and for such a purpose is somewhat unclear.

It could be argued that as the 'radio override' device is being used either in an emergency or where life is threatened, use of the technology is permitted. A clearer definition of both is required, however we would strongly argue that a child crossing the road, or personnel working five metres from 80kmh traffic would warrant such consideration.

Is the situation one of emergency? (See section 49) — Yes →

No ↓

Is the operation of the radiocommunications device authorised by a spectrum licence? (See Part 3.2) — Yes →

No ↓

Is it authorised by an apparatus licence? (See Part 3.3) — Yes →

No ↓

Is it authorised by a class licence? (See Part 3.4) — Yes →

No ↓

OPERATION OF THE RADIOCOMMUNICATIONS DEVICE IS PERMITTED

SECTION 46 MAY PROHIBIT OPERATION OF THE RADIOCOMMUNICATIONS DEVICE.
SECTION 47 MAY PROHIBIT POSSESSION OF THE DEVICE FOR THE PURPOSES OF OPERATION.
SECTION 50 MAY ALLOW CIVIL PROCEEDINGS TO BE TAKEN.

46 Emergency operation etc. of radiocommunications devices

(1) A person does not contravene section 46 or 47 by operating a radiocommunications device, or having a radiocommunications device in his or her possession, in the reasonable belief that the operation or possession was necessary for the purpose of:

 (a) securing the safety of a vessel, aircraft or space object that was in danger; or

 (b) dealing with an emergency involving a serious threat to the environment; or

 (c) dealing with an emergency involving risk of death of, or injury to, persons; or

 (d) dealing with an emergency involving risk of substantial loss of, or substantial damage to, property.

(2) In proceedings for an offence against section 46 or 47, the burden of proving any of the matters referred to in subsection (1) lies on the defendant.

Nothing in this section limits the scope of the expression "reasonable excuse" in section 46 or 47.

Radiocommunications Act 1992

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Statistics

Statistics obtained from Australian and US sources provide an indication of driver listening.

- 97% of vehicles have a radio
- Commercial radio penetration captures an average of 80.2% of the public in the 10-55 year old age bracket
- Radio is overwhelmingly the device most used in a car – 75% of drivers use AM/FM radio 'almost all or most of the time'.

Workzones are inherently dangerous and space restricted, a verbal reinforcement of speed restrictions across the length of the zone; which as numerous scientists will attest (Wogalter et al), has six times the behavioural effect of signage alone. Schoolzones, where recent testing showed that 78% of drivers were speeding, regardless of signage and flashing lights. Level-crossings, emergency services, disaster management.

The Science

"The voice warning can serve to capture attention, concisely present the most important information, and orient the person to a more detailed visual warning" (Conzola & Wogalter, 1999). "The visual and auditory sensory modalities have somewhat different information processing charachteristics. Although there are similarities between the two, certain features that are charachteristic of one sense are not applicable to the other." (Wogalter MS & Vigilante WJ jnr, Attention Switch and Maintenance, 2006)

To attract attention while other stimuli are being processed, warnings must be adequately conspicuous relative to the particular background context in which they occur (Sanders & McCormick, 1993; Wogalter, Godfrey, et al,1987; Young & Wogalter, 1990). To be effective, warnings must possess characteristics that make them prominent and salient so that they stand out from background clutter and noise (Franz & Miller, 1993; Wogalter, Kalsher, & Racicot, 1993)

The human auditory system is more sensitive to some sounds than others. For example, the human voice is transmitted at frequencies for which our auditory system is most sensitive (Coren & Ward, 1989)

Whilst postulating the importance of 'interference' considerations pertaining to the benefits of audible warnings (Wogalter & Vigilante, 2006) states that "better solutions include decreasing the extraneous noise at the source…..in-vehicle

entertainment systems could be tuned to pick up signals from emergency vehicles and then lower the sound level of the entertainment system." However (Wogalter & Vigilante, 2006) conclude that "Care in the design of auditory warnings is needed. They should be made distinctive from anticipated background noise and not blocked by shielding of hearing protection, and they should not be so annoying and intrusive that they interfere with important safety-related tasks." "Some of the same design features that facilitate the switching of attention also help to maintain attention" (Barlow & Wogalter, 1991; Wogalter, Forbes & Barlow, 1993)