

Submission to Productivity Commission Enquiry Progress in Rail Reform

Introduction

The Productivity Commission draft report “Progress in Rail Reform in the section 8 - Safety Regulation and Standards concluded that “inconsistent operating standards and procedures continue to impede the rail industry’s growth.” In response to the discussion presented it was proposed that three different institutional and legislative arrangements might be considered:

- the establishment of a national safety regulator covering all rail systems in Australia, with responsibility for the development and enforcement of national regulation (CASA model)
- a national safety regulator covering only the interstate network
- a national land transport commission assuming responsibility for the development of national regulation , but with the states and territories retaining responsibility for legislation and enforcement (NRTC model).

The purpose of this submission is to comment further on this issue with particular emphasis on interstate operations.

The Background

The issue of consistency of safety regulations in the rail industry is not new. There have been quite a number of studies and efforts trying to achieve this. In this report the experience of the author at the National Rail Corporation will be related briefly to provide some additional background that the reader may not be aware of.

During 1993 – 94 studies were undertaken to form a view of what National Rail might become. From the operating practices point of view it was considered that communications based train control was the most appropriate model to support the operation. Most of the reasons fall outside the terms of this report which is focussed on regulation but low maintenance cost and the easiest transition from what exists are amongst them. An important consideration was the need to introduce something new free from the baggage of existing systems and able to be widely implemented at comparatively low cost. At this stage it was perceived that it could be applied to most of the interstate standard gauge track from Brisbane to Perth (excluding the Sydney metropolitan area as far as Newcastle), the Adelaide to Alice Springs and Sydney to Adelaide via Broken Hill lines. From this implementation unified and simplified procedures would emerge. It was foreseen at that time that no other change was likely to bring about the rapid cultural change required and the uniformity desired.

Consultants studies showed that the implementation cost was of the order of \$85m¹ for an Australia wide system. In the end the changing role of the NRC and the political climate at that time contrived to turn NRC into an operating company rather than a vertically integrated railway and so this did not proceed. The purpose of this text is to point out the level of investment and other preconditions required to improve the safety and standards regulation issue.

Composition of safety regulations

In order to discuss the safety regulatory regime it will be broken down into the following categories in line with the comments contained in chapter 8 of the Draft Report.

- accreditation of operators and owners of rail networks
- the monitoring, reporting and investigation of safety performance
- certification of equipment to interface with operational systems (such as radios, etc)
- the production of procedures to govern the day to day operations.

The procedures may be further broken down into:

- general rules and procedures related to railway operations such a incident reporting and similar.
- specific rules to be used in the control of train movements which are dependent on the technology in use

Accreditation of operators and owners of rail networks

It is highly desirable to have a one stop shop for rail accreditation. The lack of this is a significant impediment to the rail industry as has been pointed out by National Rail in submission 53 and by others. The key requirements are:

- to establish uniform accreditation of procedures in each jurisdiction
- to provide mutual recognition of approvals and audits
- to avoid duplication of accreditation activities between jurisdictions

The monitoring, reporting and investigation of safety performance

This is a current activity undertaken in each jurisdiction by the safety regulator. It is often aggregated with the monitoring of safety in other transport modes. The main area of improvement to be achieved is the uniformity of investigation procedures which will be discussed further. There has been significant development in recent years so that it is now relatively common place for investigators from outside the particular jurisdiction to be used for major incident investigation. Information related to performance and incident investigation outcomes is freely exchanged between the regulators.

¹Train Operations Control Study – Ken Hinds Engineering Management Pty Ltd 1993

Certification of equipment to interface with operational systems

As has been pointed out in the draft report discussion on pp.176,177 the certification of equipment is increasingly turning towards output (performance) based considerations. There are still some differences in the acceptance of rolling stock on like for like infrastructure (see Draft Report Box 8.5) Major certification differences also exist because of differences in infrastructure. In terms of procedures applied to the certification process, the ideals previously mentioned should be adopted:

- to establish uniform certification procedures in each jurisdiction
- to provide mutual recognition of approvals and audits
- to avoid duplication of certification activities between jurisdictions

Day to day operating procedures - general rules

Most of the rules in use on Australia's railway are derived from the British Board of Trade rule books first published near the end of the nineteenth century. These have two elements, general rules and rules heavily influenced by British signalling practice. The general rules have evolved to reflect the railway culture within the operating jurisdiction. To a large extent the general rules are similar. There have been a number of attempts to standardise the operating rules and these have concentrated on the general rules. The development of AS4292 has had a beneficial effect in documenting the incident investigation process and driving it down the path to uniformity. The outcome of these endeavours is that a similar processes has been adopted for investigations but a model investigation code still does not exist.

Day to day operating procedures - specific rules used in the control of train movements

These rules are technology dependent. They prescribe the meaning of signal indications, signs, movement instructions, manual procedures to be implemented in conjunction with the movement instructions and procedures to be adopted in times of equipment failure. As they are technology dependent, rationalisation of these requires change towards a uniform train control technology. On p181 of the draft report it is suggested by Westrail that harmonised systems rather than more uniform systems will help in this regard. Harmonisation of interfaces alone will not standardise operating rules and procedures. Even if the train and ground radio equipment can talk to each other, the train driver may be required to implement differing procedures depending on the jurisdiction. A major impediment to change is the cost of uniformity of systems.

Large sections of the rail network are in urban areas where a large capital investment would be required if a uniform train control technological solution were to be adopted. There is also little evidence to suggest that the regulation or accreditation of operators on intrastate networks would be effected beneficially by the transfer of this function to another regulatory body. There may be a small saving for operators doing business in more than one jurisdiction, but the remainder of intrastate operators would be unaffected.

If the same scenario were played out in the interstate road transport industry as has prevailed in rail there would be different road laws, signs and colours used in traffic lights in each jurisdiction. To carry the analogy further, the cost of change Australia wide would be prohibitive and of no benefit to local traffic. The only option would be to confine change to specific routes.

The national safety organisation model

From the previous discussion it can be seen that the continued differing operating practices are not the result of pig headedness on the part of state authorities. They are culturally and technologically based. CASA has been cited as a potential model for a national rail safety regulator. The environment in which CASA operates is different to the rail industry in important key respects.

- aeronautical systems functionality is agreed at international level
- radio channel allocations are standardised throughout the world
- mutual co-operation and recognition have long prevailed
- procedures are standardised by international agreement
- the most efficient entry to the industry is to do more of the same
- there are no areas of the industry operating outside the uniform regulatory framework
- the traffic is predominantly interstate or international

for its part the rail industry has the following:

- train control and signalling systems differ widely
- radio communication channels are not standardised
- there is some mutual co-operation but not accreditation at this stage
- the operating rules and procedures vary widely to suit the local culture and infrastructure technology
- the most efficient entry to the industry is to do more of the same in that jurisdiction
- most of the rail industry is intrastate based
- the major regulation problems facing rail are in respect of interstate traffic

CASA operates in an environment where a high degree of standardisation is a fact of life. Its role is to monitor safety and to fine tune procedures in a well structured regulatory environment where most traffic is interstate. In the case of rail, it is clear that for intrastate traffic the current regulatory regime is generally satisfactory. The overwhelming majority of rail traffic is intrastate. Taking into account the differences presented for the aeronautical and rail environments the most efficient outcome is to separately address the problems faced by interstate freight trains. There is no convincing reason why all rail regulation should be moved to a national safety regulation and standards authority.

A national safety regulator covering the interstate network

The second model presented is to restrict the central control of safety regulation to the interstate corridors. Some of the incentives and disincentives of the proposal follow.

The incentives are:

- provides a one stop shop for accreditation on interstate networks
- charging for accreditation could be at a single point
- the problem of access predominates on the interstate network
- a body like this can concentrate on interstate operations
- some ability to unify operating rules and procedures

The disincentives are:

- a demonstrated reluctance by some states to cede control to other parties (Draft Report p158)
- inappropriate organisational structure to take a wider perspective and recommend further reform
- limited ability to bring about investments targeted towards unification of train control infrastructure
- an additional regulator

The attractiveness of this proposal is the potential to provide the one stop accreditation shop that is sought by most interstate operators. A safety regulator is however, usually, ill equipped to drive reform to the extent required on Australia's interstate rail network.. The role of a safety regulator is seen to have a monitoring and fine tuning role only in the safety and regulatory regime. Separation of reform from independent review and regulation is an important element in ensuring the best outcome.

The NRTC model – with a slight variation

The attractiveness of the NRTC model is that it seems to get things done. The project (module) based agenda developing national standards is particularly appropriate to the requirements of the rail industry.

The incentives are:

- provides a project climate be able to draw on a wide range of inputs
- stands alone from regulators or potential regulators
- could determine the strategic framework for ongoing regulatory reform
- all Governments are represented
- does not imposed a predetermined regulatory outcome
- will have the resources to tackle policies, laws and standards
- capable of taking over existing reform initiatives

The disincentives are:

- does not guarantee the one stop shop
- progress is still dependent upon the good will of Governments

- an additional organisation to be funded

The strength of this model is that it provides a formal project group focussed on reform operating with a high degree of independence and drawing in the resources required to complete its task. The fact that there are no specifically predetermined outcomes on any issue provides the ability of the model to determine the most appropriate arrangements to tackle the issues outlined in the Draft report. A key benefit is the independence from all track owners and operators thereby allowing independent consideration of all issues related to safety regulation. As well as the development of uniform operating codes it also provides an independent capability to advise the ATC from a strategic point of view. Finally, it disappears as an organisation at the time determined by the ATC

In regard to the safety regulatory model key issues requiring consideration are:

- should safety regulation remain with the states or be vested in another body.
- should an independent body takeover all interstate safety regulation including that currently provided by the ARTC
- what is the extent of lines to be regulated as interstate lines
- should this body also regulate other than interstate lines when requested to by states with small intrastate networks
- should any investments be made by Governments to reduce the variation of infrastructure.

Conclusion

The proposed model for further consideration of safety regulation is based on the NRTC model. That is a project based organisation with limited life designed to pursue rail reform under the auspices of the Australian Transport Council. It should commence on the production of a uniform set of operating codes as well as determine the future course of safety regulation on interstate tracks. This may include the establishment of an independent interstate safety regulator.