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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, TRANSPORT AND THE ARTS

Reference: Managing fatigue in transport

FRIDAY, 10 SEPTEMBER 1999

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HOUSE OF REPRESENTATIVES

STANDING COMMITTEE ON COMMUNICATIONS, TRANSPORT AND THE ARTS

Friday, 10 September 1999

Members: Mr Neville *(Chair)*, Mr Gibbons, Mr Hardgrave, Mr Hollis, Mr Jull, Mr Lindsay, Mr McArthur, Mr Mossfield, Mr Murphy and Mr St Clair

Members in attendance: Mr Hollis, Mr Jull, Mr McArthur, Mr Mossfield, Mr Neville and Mr St Clair

Terms of reference for the inquiry:

. Causes of, and contributing factors to, fatigue.

. Consequences of fatigue in air, sea, road and rail transport.

. Initiatives in transport addressing the causes and effects of fatigue.

. Ways to achieving greater responsibility by individuals, companies, and governments to reduce the problems related to fatigue in transport.

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Committee met at 9.43 a.m.

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Communications, Transport and the Arts in its inquiry into the management of fatigue in transport. I welcome everyone here today—those who are appearing as witnesses, those in the public gallery and members of the press—to these hearings in Melbourne, the third of such hearings in the inquiry's process.

In opening the proceedings I would like to emphasise in addressing the terms of reference that the committee has not prejudged the issues, nor is there any element of witch-hunt in them. There was a bit of concern about that, and I wish to assure everyone that there is no witch-hunt in this. Members want to hear a full range of views and consider initiatives which are being or could be developed to manage fatigue in transport. Managing fatigue is a very important issue in the workplace and it has ramifications for all of us.

Under the terms of reference the committee is asked to inquire into and report to the parliament on managing fatigue in transport by focusing on four areas: firstly, the causes of and contributing factors to fatigue; secondly, the consequences of fatigue in air, sea, road and rail transport; thirdly, initiatives in transport addressing the causes and effects; and, fourthly, ways of achieving greater responsibility by individuals, companies and governments to reduce the problems related to fatigue in the transport industry.

We are privileged today to have with us Professor David Dinges, an international expert on fatigue management. Other witnesses in the program include representatives from the air and road transport industries, namely the Australian Federation of Air Pilots and Finemore Holdings Ltd. In addition, appearing today is Coles Myer Ltd, one of Australia's leading retailers. I would like to thank all of those who have generously given of their time to come and assist the committee with today's inquiry, which promises to be a very informative and engaging day.

[9.45 a.m.]

DINGES, Professor David, University of Pennsylvania School of Medicine

CHAIR—I welcome to the table Professor Dinges, who on a previous occasion gave the committee a very stimulating private briefing and has agreed, in coming back to Australia for this transport forum, which he attended yesterday, to go on the record on some of these matters. Professor Dinges, welcome.

Prof. Dinges—Thank you.

CHAIR—This is a formal hearing but I just wish to advise you that you are not under oath, but these are treated as formal proceedings of the parliament. To open today's proceedings, would you like to tell us about the capacity in which you appear before this inquiry.

Prof. Dinges—Yes. Thank you, Mr Chairman. My name is David F. Dinges. I am a professor in the School of Medicine at the University of Pennsylvania in Philadelphia in the United States. I have worked on the issues of fatigue and countermeasures in virtually every transport industry for more than 23 years for nearly every federal agency in the United States government, primarily doing research. My primary activity is scientific but I have had an opportunity and been privileged to see some of the initiatives and things that have worked and have not worked at least within the American context. I am here to basically offer the committee whatever I can that might be of help in this charge that you have.

CHAIR—Would you like to give us an overview of what you want to talk about and then we will break into an interactive type of arrangement with questions and answers.

Prof. Dinges—Yes. I am going to just briefly mention what you undoubtedly already know, but the issue of fatigue in the workplace in all modes of transportation and even beyond transportation is something that is exploding as a priority issue across the industrialised world. From Europe to North America to Australia we are seeing major pressures in this area to make adjustments to prevent fatigue related accidents and catastrophes, to ensure that industries remain competitive, et cetera.

The reasons for this are many. They come from the fact that society has now recognised that more people have to be at work more of the time to drive these economies. There is also an escalation of the density of activity on roadways, on rail, on the open seas and in the air which brings its own set of demands regarding how humans use time. Then there is the increased desire to use time flexibly, to use the night more often, to use the weekend, to use holidays, to use all time. This has naturally created a situation of concern for managing human alertness in the workplace in a way that represents a responsible response to each of the vested constituents' concerns. The vested constituents' concerns are first the public: they do not want tankers grounding on reefs and spilling oil just after midnight and creating catastrophic events, nor do they want catastrophic events on highways or rail, et cetera. So the public has a right and reasonable concern to expect safety in this area.

Industries have a right and reasonable concern to expect that they can continue to compete effectively, maintain operations in a way that will allow them to move product and goods for their own societies as well as for the other countries they compete with. Workers have a right to expect that they will get reasonable hours and reasonable wages and that they will have access to those incomes they feel are essential for them without costing them catastrophic events in the workplace or an adequate recovery process at home.

Government has a right to expect that they can regulate these things or at least manage them. Of course this creates a situation in which the old way of regulating, the old way of dealing with this—which in the United States stems from 1918 to 1938, hours of service regulations, some of which were statutorily dictated, and Congress itself gave the language that set the limits; others were through regulatory fiat, where given regulatory agencies can set the limits—has basically fallen apart or come under disrepute, because another group entered the forum.

This other group was the scientific community, who basically had now a growing amount of data on what causes fatigue in the workplace. You have heard this from some of the scientists and academics who have sat in front of you, basically saying that the regulations do not match what we know scientifically. In fact, in some cases the regulations can make people more impaired than they would otherwise be. This has led to a kind of crisis where the move is away from prescriptive regulations towards this thing called fatigue management. But what is that and how do governments and countries and industries and unions and the public enact that? It is an exciting time because I do think this is an essential move that we have to make, but it is fraught with challenges. The challenges consist of: how do we prevent the most egregious violations of regulatory standards regarding alertness in the workplace that have come about through years of a kind of unfortunate situation in which—and I use the United States as an example—a given segment of the industry has not been compliant and the government has accepted that? I am talking now, just as a case in point, about American truck drivers who keep double logs and do not drive within the hours of service, because the industry cannot manage to do their business and enforcement cannot manage to enforce that. We want to get away from that kind of problem in industries. We want fatigue to be recognised as an impairing situation across industries.

How do we develop the partnerships between government, industry, unions, and public partnerships to do it? How do we fund and coordinate the research that is most cost-effective for the taxpayers that gets us the countermeasures, the solutions, that we most desperately need? And how do we maintain what are apparently going to be different solutions for different people? In fact, the most common rallying cry now at meetings in this area is, 'One size does not fit all.' There are different solutions for different industries, for different states, for different worker organisations, but what are those solutions and will they be contradictory? What are the standards by which we judge whether one solution is adequate in one area and not in others? At-risk mitigation? Is it the importance of an industry to a government? Is it the mode of work?

Finally, there is an international emphasis now. What we are seeing are more and more meetings in which scientists from Europe, scientists from Canada, North America, Australia come together, and Australia has been a leader in this area. I want to commend the country

for the kinds of activities that are under way in the various states. Australia is very much being watched in the United States. It is mentioned repeatedly in federal meetings, in scientific meetings, about the things that are going on in Queensland, in Western Australia, in Victoria. There is a terrific amount of attention given to the fact that Australia is trying different things in different states. While you may see that as an impediment potentially, the rest of the world sees it as a kind of experiment under way to see what might work for different kinds of environments. So Australia I think plays a key role in this whole issue, well beyond your boundaries. What you do here will influence what happens in the United States and elsewhere—no question about that.

CHAIR—You say that one size does not fit everyone. There have to be, however, some general benchmarks, haven't there, for people to aspire to? How have you gone about that in the States? I suppose there are various aspects to this. There is the matter of hours, there is the matter of lifestyle, there is the matter of sleep disorders and so on. What is the general regime that you have put together there?

Prof. Dinges—Let's take the most contentious issue right up front: prescriptive hours of service. The debate that is under way is—and I want to emphasise that in general it is not an acrimonious debate, it is a rational discussion: should hours of service be eliminated or not? I note in the submissions you have already received, even among—if you take a select group—your academics who have talked to you, and your medical types, there is no agreement on whether it should or should not come or go. I do not have the answer to that question. There may always need to be some hours of service, or it is entirely possible fatigue management will evolve without them. You decide that. That is what people elect you to make a decision on.

I will say, though, that hours of service, even if they are not eliminated, are probably going to have to be revised, and then the question becomes: in what direction should they be revised? Rather than get into all the nitty-gritty of the science, let me give you two broad examples. One emphasis is on work hours; that is, the traditional way they are written. How many hours can you be on the job? Many scientists—not all, and I do not speak for all of them—believe that what is more important is how many hours you have off. I understand government cannot regulate what people do when they are off, and I am fully appreciative of it, but most of the research that has been done emphasises that inadequate hours off results in sleep debts, and sleep debts are one of the major contributors to fatigue on the job.

In other words, for someone who works a day shift, it may be quite safe to go 12 or 14 hours, as long as they have 10 hours off and they understand the importance of reporting to work rested, and they get adequate sleep. But situations in which off-duty time is less than that are potentially hazardous, particularly if workers do not use those times, for whatever reasons—their own fault or the company's or whatever reasons. So getting adequate rest flows into the countermeasure area, as well as the whole issue of do we have adequate rest areas along highways, do we have adequate sleeper berths in aeroplanes, do we have adequate rest facilities on trains, do people on maritime vessels get adequate rest.

I want to stress to the committee: please do not treat this as an issue solely relevant to long-haul truck drivers. The issue of fatigue in transportation is much more important and larger than that. Some of the more severe problems exist in the maritime area where, in

order to compete internationally, demanning of vessels and incredibly long hours at the most dangerous times when these large vessels are moving in and out of port have been historically where we have seen some of the great catastrophes; hazardous material transportation in any modality, and of course any time the public is involved in transportation—long-haul aviation, et cetera. So do think of it as more.

The trucking industry is much more than long-haul trucking. And think about dispatchers as well; people who make those decisions when they are very tired. In America we had the unfortunate situation in which the space shuttle *Challenger* was blown up, and while there was a problem with making a decision regarding launching in cold weather and the O rings that protected it, the bulk of the men who made that decision had been up for far too long before they made the decision. There is an appendix report to that explosion that describes fatigue as a major contributor to the executive decision making in that process.

So we need to understand that this is a much greater issue. It is an issue for the driving public as well. We need education and training right up front. We have to penetrate the consciousness of people. States will find different ways to do that, but it needs to get done. People need to understand that fatigue is impairment, unquestionably; impairment at the level of concern that is given now to drugs and alcohol. But we cannot just raise public awareness without solutions, and that is why we had better be prepared to offer some solutions. Rest stops along roadways are one area where there has been increased attention in the United States. If we build highways where people can drive for very long distances, but we do not put places along those roadways where they can safely sleep, we have created a situation in which we are inevitably going to be victimised by fatigue on the roadway.

CHAIR—I think you said in the private briefing that America was about 30,000 of those rest stops short.

Prof. Dinges—That statement comes really from this report. I have brought along things that the committee may or may not want to have available. They are just illustrative examples of the kinds of studies that have been done. This was commissioned by the US Department of Transportation and Federal Highway Administration. There is a summary of commercial driver rest and parking requirements, marking space for safety. The Trucking Research Institute, which is the trade industry group, participated in this and wrote their own summary of it, 'Is there enough room at the inn?' The bottom line is this: in the United States we are 24,000 truck parking spots short on any given day for drivers to be able to take a nap.

CHAIR—Having seen what you have seen in Australia, and bearing in mind that we are, I suppose, about a tenth of your size, would you think that that would extrapolate out to about 2½ thousand short in Australia? Have you had a look around?

Prof. Dinges—I have not had an adequate look, Mr Chairman. I do not want to speculate on it. I will note only one thing: Mr John Allen of the Transport Workers Union did mention a shortage of rest stops as one of their concerns. So if you are just scanning through the submissions you have already got and are looking at this, you might find some people who know more about that.

Mr St CLAIR—Is there a difference between the rest stop where the driver can just simply pull over to the side of the road and get off the road as against a major network of truck stops, for example, where there is ample not only parking but food, et cetera?

Prof. Dinges—It is the second one where there is a shortage. It is the ability to pull completely off the highway, angle park in a spot where there is food, there is petrol, et cetera, and the driver can sleep there for a while. What happens in the United States is that law enforcement ends up in the unfortunate role of coming by and rousting out trucks to make room for the next truck to come in, limiting the amount of sleep a driver can get at times in these areas.

Mr St CLAIR—So we are looking at major truck stops, shall we say, rather than the little pull-off on the side of the road?

Prof. Dinges—Right. Although in the state of New York in the United States there was a fairly extensive investigation of the issue of fatigue on the roadway, not in industry but in the driving public, and again rest stops came up as a major concern. Many Americans will not stop at a rest stop at night to sleep, or even to take a nap if they are exhausted while driving, because they fear for their safety. Only 16 per cent of American women said that even if they were falling asleep behind the wheel would they stop at a rest stop along a highway at night and sleep. So we have a broader issue here of whether we can create some way in which people will get off the road and have a nap or a sleep.

I keep mentioning naps because naps are one very effective countermeasure. They are not the only one, but they are one of the proven ones. They are used in augmented long-haul aviation where aeroplanes fly beyond the hours of service. You take along an extra crew member or two. They sleep in the bunk. You rotate them through the seats. Naps in the cockpit seats are also quite effective. This was developed out of research in the United States. But opportunities for people to sleep in the workplace, that is the revolutionary step here. You have to start thinking now, if you are going to have 24-hour industries, that people need to be able to sleep in the workplace. The quality of sleeper berths in trucks is markedly improving because of this need, and you can see it at this trade show here.

The rail industry has taken a hard look at this in the United States and is starting to create more appropriate places for people to be able to sleep in the rail industry. So we need to create an environment where if brief periods of sleep are going to be countermeasures, they are used effectively and sleep can be obtained. That is only a countermeasure; that is not a substitute for giving people adequate time off to recover, to make sure that they can get home or get to wherever they need to be and get the sleep they need. That may be among the most difficult issues in revision of the hours of service or fatigue management: how many days off can people have, should they have?

Mr St CLAIR—Have you done any work on the question of transports coming back to their home base, and quick-hitching trucks between capital cities?

Prof. Dinges—We have done only survey type studies looking at what drivers say they are doing. The truth of the matter is, we know remarkably little objectively about the behaviour of people involved in transport modes, 24-hour industries. What are they actually

doing? What matters to them? We assume sometimes when we talk about hours of work that people do two things in life, and that is all: they work, and they sleep. All of us know that is not true. You interact with your family and you eat and you do lots of things. We need a much better understanding of what determines what people do when they are off duty.

We need to educate workers about the importance of getting sleep at home. If they are night shift workers, how do they get adequate sleep during the daytime when, biologically, it is already difficult? If it is also then difficult environmentally because of telephones and light and other problems, you can pretty much expect that you are going to have people on the night shift experiencing cumulative sleep debts from being unable to recover at home. These problems are all solvable if we can identify in industries where we need to make the interventions.

Mr MOSSFIELD—Professor, we are in a very dramatic period of time relating to fatigue in industry generally. I am talking about manufacturing and maintenance where we are, as you have indicated, moving from prescribed hours of service. In Australia we call it the spread of hours. That is breaking down and now people are being required to work for a longer period of time. What is the appropriate way for individual working people to be represented? Is it important that they be represented by one organisation such as a professional organisation or a trade union? Or do you see a successful arrangement where those two types of bodies do not exist but where the employer negotiates directly with its employees?

Prof. Dinges—I do not have a strong opinion on that. I believe that any of those modes and other models are fine as long as fatigue management involves shared responsibility. The one thing I think everyone wants to get away from is something that developed in the United States—and I do not want to pick on trucking—where the truck driver was left holding the bag and not the shipper or the company. Truck drivers are not bad people. They are going to do what they have to do. If they are pushed to get a load home or if they want to get it home because they do not want to stop when they are at the limit of their hours of service because they are one hour from home, they are liable to do exactly what some of them do, which is to keep double logbooks and just deal with it that way.

We need to get past that point. We need to know that when an officer stops someone or there is a check regarding how much driving was done, it is an honest and fair representation of what was actually done, and we have not created a masqueraded fatigue problem. But I do not have a strong view either way. I do think drivers and others need to be represented. In all of the meetings we have had in the United States—the truck and bus summit and other meetings—in general there is some sort of representation from drivers, although it is not as much as it probably is here since we are not as widely represented on the union side, so who do you call up to get at the table?

But it is a partnership. If there is one thing I would encourage you to do, it is to partner. Partner government and industry, unions, the public part, get your academics involved, and get information. I am going to tell you what I know, which is that data helps you make good decisions. Get good data. You cannot get everything so you have to invest the taxpayers' dollars wisely. Get information on what is happening out there. The role the federal government can play—and has played in the United States—is to stimulate initiatives, get

data on how well they are working and, if they are not working, say, 'They are not working. Stop doing that,' and, if they are working, have the courage to pursue it a bit further. Take it a step at a time, but maintain your quality control.

I say maintain the quality control because you need mechanisms in place of peer review, checks, to make sure you are getting the best types of research, the best kinds of data, and that study will stand up to public scrutiny. The last thing you want is to invest millions of dollars in a protocol, get data on an industry, and then have it torn apart by academics who say the design is fundamentally flawed or there is some other kind of problem. That process has generally been used to benefit the United States. This is the driver fatigue and alertness study between the US and Canada. It was a very expensive study. We learned a great deal—not everything one would like to know—but I do think you need to maintain quality control.

You have communities of academics and medical people who can help with this. One area that you must address, in my view, is apnoea. You must address the sleep apnoea impaired driver and in safety-sensitive occupations, and help industries get that individual identified and treated. That can be expensive. So what you want to do is a study that helps you identify him in the most cost-effective, cheapest possible manner, and get him treated and back in the workplace. You do not have to spend Australian dollars to do it, necessarily, although I think you do need a study here to know what your prevalence is because it may not generalise from the United States. These initiatives are going on in other countries. Learn from those experiences, just as we are learning from yours, and adopt some of those technologies to find out how well they apply here. There are cost-effective ways.

What that means, though, is you need to stay in touch with what is happening in the United States and Canada and Europe, and we need to stay in touch with what is happening here. But there is no question in my mind that you are going to be in trouble in the safety-sensitive industries if you ignore apnoea as the one primary medical cause of fatigue.

CHAIR—How are you doing that in the States? Not every general practitioner in every suburban or country practice is going to have all the equipment to treat apnoea, so what is the management?

Prof. Dinges—The prevalence of apnoea in the United States, from the one really excellent prevalence study that was done, was four per cent of men, two per cent of women, and we believe it could be as high as nine per cent depending on how you define the symptoms. This is sleep disordered breathing where you are sleepy the next day. It was at least four per cent of men. That makes it as prevalent as diabetes, asthma, and many other very common disorders. The problem is, it will make you tired. If a sleep evaluation cost $2,000, that would break the US government. We could not possibly bring in everybody and put them through a sleep evaluation, so the first study that was done was to determine what is the actual prevalence of apnoea in a safety-sensitive industry like that involving truck drivers.

That study is nearly completed. It has shown, despite the stereotype of truck drivers having a lot more apnoea because they are fatter, et cetera, that that is not true at all. What it is showing is that the incidence of apnoea is about the same as it is in Wisconsin state workers. That is important because it is not 80 per cent, it is about one in 20. Now, armed

with that information, we still cannot afford to screen all those people, not with a sleep recording. So what we are doing is developing tools as part of that research that involve a few simple questions and a neck measurement which a family doctor or a country doctor can ascertain which then gives you a curve that tells you what the likelihood is that you have apnoea.

That is a subset, then, that might go for the more expensive screen. Then we are looking at one more interim step: an at-home, inexpensive recording that would further identify the likelihood of apnoea being present. In other words, the object of the research is not just to identify the problem, but to figure out how to most cost-effectively end up studying and treating only those people who are absolutely certain to have it, and have it pretty severely. That is the direction the research is going in, I think. As I said, the only reason for doing additional study here is to find out if the prevalence rates are the same or different in Australia and, because you have somewhat different health care and reimbursement, et cetera, you may have to find your own pathway for the most cost-effective solutions. But that is an example.

CHAIR—The masks?

Prof. Dinges—The masks were invented here in Australia. It is used worldwide. It has been a miracle in treatment.

CHAIR—Who pays for that in the States? Does the health system pay for it or is it the trucking companies or the individuals?

Prof. Dinges—At the moment, we do not know. It is probably all of that. We want to bring down the barriers to getting people treated, making sure they get treated.

CHAIR—There is an emphasis on non-exclusion. These people are not at risk of being tipped out of their jobs?

Prof. Dinges—Absolutely not, at least as far as I know. And we are adamant that that not be the case. In fact, I do not even want physicians informing the Department of Motor Vehicles that someone has apnoea but has refused treatment, yet that is the law in the state of Pennsylvania. I do not believe physicians should be policemen or in enforcement roles in these areas. I think their role is to try to help patients overcome a medical problem in this case, but it is definitely not for eliminating or for screening people out; absolutely not. There is, however, a terrific cost to doing this kind of intensive screening, and we must come up with cost-effective measures. Apnoea is one area.

Hours of service is another. You are going to have to try different things in the hours of service, possibly in different states, with and without hours of service. That is a consensus decision. You need data to find out whether different periods on and off work do or do not work. I would urge you to do some work on countermeasures; what does help to keep people alert. What I am trying to tell you is you are not going to eliminate fatigue in 24-hour industries. You have to manage fatigue in 24-hour industries. You have to help those industries and the public to not become victimised by it in the form of crashes, increased

accident risk, hazardous materials events or, frankly, in the form of productivity or reduced worker retention.

In American trucking, a worker stays with a company less than two years. The turnover is so great and the industry is so concerned about the lack of workers in the future to meet the needs of the industry that worker retention is very important in this area.

Mr HOLLIS—What you are saying—and I am agreeing with you—is a basic contradiction to what society is demanding today. You use the phrase '24-hour society'. We are in a 24-hour society, we are in a very competitive society, so what do we do? We go to the workers and we say, 'Okay, you negotiate.' We're big into negotiating workplace agreements here, so we negotiate. The workers negotiate away some of the very things that give them this period of relaxation you are talking about. I hardly know anyone who does not work a 12-hour shift today. By the time you work a 12-hour shift, you come to work, you go home from work—and it may take an hour to get to work and an hour to get home from work—so there are 14 hours, and when you get home you have a meal. So what you are saying is fine when you talk about this 24-hour society, but also society is demanding that we become more stressed, and we give up.

Prof. Dinges—I do not disagree with you. However, in my experience there is no bogyman here, to use an American phrase, which is to say that it is as common to find workers who elect to work longer hours for the overtime paid in the United States—I do not know the Australian experience—as it is to find workers who are forced to work longer hours by companies. It is both, and it is the nature of the way modern industrialised societies use time and must use time to fuel these economies. That is the reality of it. I wish it were not so. If you asked me 20 years ago what we should do I would say, 'Don't work more than eight hours, everybody gets a couple of days off a week, make sure you get lots of rest and relaxation.'

That is not the direction things are moving in, but there are limits to what people can do. We do want to set some limits and, whether that is through fatigue management or some sort of ultimate hours of service, we need to establish some kind of limits around what people can and should be doing.

Mr JULL—Knowing the work you have done with NASA and the aviation industry in the United States, and in light of some of the comments you made earlier, would you agree that it was probably aviation that was regarded as having this thing licked, that they had the system worked out, but that in actual fact recent events have proven that they might be quite off beam too? I refer particularly to that American Airlines MD80 crash the other day in the United States where it would appear that fatigue was part of the problem. Has anybody perfected it yet?

Prof. Dinges—No, but you raise an extremely important point. Aviation made one critical mistake—once they had it licked, it was licked—and what they did not realise was the number of planes taking off, the length at which planes could fly, the desire to fly at the most popular times of day, et cetera, all conspired to create a fatigue problem that they were not really completely managing with the current procedures. So part of the struggle in all of these modes is not to become complacent and assume that what is happening now is

adequate for what the situation will be like in five years. That is why what we are putting in place, and need to put in place from a government level down through industry and workers, are systems that do not cost a fortune but let us adapt as time goes by, let us re-examine how well what we are doing is working and ask, 'Can we do it better? Are we losing ground here?'

Why, for example, in the United States has the number of fatal truck crashes suddenly started going up again? It is often difficult to know in anticipation. You watch the curve go up and then there is a meeting to try and figure out what is going on. Typically it involves an extensive evaluation of the nature of the accidents, and we realise it was because we shifted the speed limit somewhere or because we have got more rigs out on the road at a certain time and there are more cars on the road. It can be a multitude of factors. But there is no question that we cannot now operate any longer without the data to know what is happening to exposure; how many things are moving at what hours of the day—and what industries—with what consequence?

And with accident and risk, what is going on here? Are things getting worse or better? Frankly, as you know as government officials, you do not make all the bad things go away, you try to help society reach what is a culturally or socially acceptable level of risk, whether it is with vaccines or whether it is with motor vehicle crashes on the road. Nobody wants deaths on the highway, for example, but we know they are going to occur by virtue of the number of people out there. What is an acceptable level? Where should the risk curves be? They should be going down, but exposure is going up. Exposure is going up; there are more cars on the roadway. I am sure that is as certain in Australia as it is in the United States. There are more aeroplanes in the air, more trains on the tracks.

Flexibility is the name of the game. We do not have systems which adjust, which are flexible. If a driver gets to a terminal and then cannot unload because he is in a queue or cannot pick up a load because they are not ready to give it to him, that may throw the rest of his schedule, which was within the hours of service or involving appropriate fatigue management, completely out of whack. What that means to me is this: we have to be able to manage fatigue moment by moment in the cab, in the cockpit. That means we have to use countermeasures in those environments. We have to have clear communication between the operators and the companies as to what they are going to do when they become too tired.

We probably need technology. I know this is a new area, but technologies that monitor the trucks and the drivers are coming, and we need to figure out how to implement them in a way that is not punitive. I do not want these technologies used in a punitive manner. Drivers will not use them if that is what is used.

CHAIR—Could you describe a few of those technologies?

Prof. Dinges—There are system technologies, technologies that monitor the characteristics of the driving itself: the simple tachograph that looks at RPM where you can figure out distance covered and time driven. The trouble is, that was introduced and immediately began being used in an enforcement capacity. That is the reason why it has not penetrated the industry—aside from the cost of it. I think it has to be used in a more flexible

way in which drivers feel they have a stake in that technology being on board. It helps them. It helps them manage their fatigue.

CHAIR—Tools rather than regulations.

Prof. Dinges—Much more so, yes. What we are now seeing with technology are black boxes that come on board which will not just do RPM; they will monitor whether you stayed in lane and how variable your steering was—all kinds of things. Eventually, when they are combined with collision avoidance, they will be able to tell you how many near-miss events you had, how many rapid braking events you had, things that come much closer to actual risk events on the roadway. Those things can be stored. When you talk to enforcement they say, 'Goodie, this will give us the kind of objective evidence we need to know who's violating.' Companies sometimes say, 'This is excellent. Now we can really manage the productivity of our fleet.' Of course, the drivers are thinking, 'Well, this would be good as long as those guys don't get a hold of it, and if I have it I can use it to know, jeez, this last trip I've shown some real signs of wear and tear here.'

The solution as to how to implement these technologies is to make sure everybody who has a stake in it understands precisely what it is on board for, what the limits of it are. I have just given testimony to the National Transportation Safety Board in the United States who had three-day hearings on technology. I appealed to them to not assume that these technologies are there solely for enforcement; that in order to get drivers to use these technologies in a way that lets them manage their fatigue with their company's permission and enforcement's permission is to make sure they have an opportunity to use the technologies with some degree of control over them; not to beat them up, damage them, break them or disconnect them.

The other technologies coming are the driver monitoring technologies. These are a little bit frightening, I know, but the technology is increasingly coming online where we can keep track of a driver's alertness level while they are driving, without it being intrusive. The driver does not even see anything. One of the research areas we are working on for the National Highway Traffic Safety Administration in the United States is not only implementing these technologies but giving feedback to drivers on their alertness level and watching what they do with that information. Does it affect their alertness level? Will they stop driving? What we are finding is they do not stop driving. It is only one study, so it is in the process of being completed right now.

CHAIR—They go on, being more alert.

Prof. Dinges—But they are more alert and they drive a little more safely. We have this problem: the Brits say you are criminally liable if you have a crash when you are tired, but the Americans respond, 'But you don't know when you're going to have a sleep attack.' You can be sleepy for a long time without having a sleep attack or you could be sleepy for 20 minutes and have one where you go unconscious or the eyelids close, the head falls over and the rig runs off the road. Because we do not know when we are going to have a sleep attack, we probably need some defence from technology that will warn us that we are starting to have these lapse episodes on board and that we need to do something about it. Now, what is that something? That is where the challenge comes with companies, drivers and enforcement.

Mr McARTHUR—Could you expand on the issue of quality of sleep at night and during the day. Secondly, in relation to the issue we have been talking about of scheduling the individual driver outside his work time, how are you going to implement processes that make sure he is fit to come to work? Thirdly, would you give the committee the benefit of the comments you made on the *Exxon Valdez* and the role of fatigue in that catastrophic accident.

Prof. Dinges—Yes. Let me say, from the standpoint of quality of sleep, it has been established for a very long time—and it is probably one of the largest areas of scientific data we have—that when you try to sleep during the daytime and work at night you have two problems. One is you are trying to be awake at a time when the brain wants to sleep and the other is you are trying to sleep when the brain wants to be awake. The net result, to go right to the bottom line, is that night shift workers, people who try to sleep during the day, in virtually every industry that has been studied simply sleep less. The brain is more likely to wake up before the individual wants to wake up, so what is commonly seen is people who work day shifts and sleep at night might sleep six to eight hours a night, and people who work night shifts and sleep days typically will sleep four to six hours a day.

We now have evidence that we completed for the National Institute of Health. In the first thoroughly controlled laboratory studies of sustained sleep restriction on four or six hours a day—this was night sleep, but we just limited it to four, six or eight hours—over two weeks, the impairment levels of people escalated to dangerously high levels. So one of the problems we now face is confronting what is probably the most sinister contributor to fatigue in the workplace, and that is the cumulative effects of fatigue. It is not the first day necessarily or the second day, it is many days with inadequate sleep which probably produces the problem. How many days can we go? Then the real question is, how many days off?

In some industries, like aviation, the rules are written in the United States so that if you work your limit of hours of service, you can do that for a week or two, or a month, but over time there are limits set, not just for a week or two; there are limits set for six months and a year. You have to have increasing amounts of time off. But in American trucking there are no such limits for six months or a year or, in maritime, no such limits for six months or a year. So there is this sustained work. I do not believe those industries can stop doing that. So the question becomes then: is it better to work 12-hour shifts for 14 days with only one day off and then get three days off, or is it better to have two two-day periods off every seven days, alternating?

And there the science fails you. There, if you look to us to answer it, we have not done adequate studies to be able to answer it. We can give you our best guesses, but that is an area where there needs to be more work. One of the things you could do is identify an industry which would like to move towards only one day off every seven days and then give more time after 14 days. That would be worthy of a study to try and understand what the effects of that are on people, but only if the unions and workers will participate. I do not believe that the experts can ever force a study on an industry if the workers will not participate in it. They have to see it as a benefit to them, just as the industry does.

These are areas for opportunities: scheduling; fit to come to work. ‘Fit to come to work’ refers to a class of technologies called ‘fitness for duty’. ‘Fitness for duty’ technologies came

out of the desire to detect drug impairment in industries where it has seen more of these technologies come online. I will say the same thing about these technologies as I say about driver monitoring technologies or rail engineer monitoring technologies or pilot monitoring technologies. That is, most of these technologies have not been demonstrated to be scientifically valid yet. They have not actually been tested in independent studies. One role the US government has taken is to fund strategic studies to independently document the validity of these and to develop paradigms for ensuring that these technologies are valid.

There are also mathematical models, where you wear a watch device that records your movement, integrates your sleep time, and tells you whether you have had adequate sleep to go to work. Those also need to be validated. I do not know if we will end up using any of those technologies.

Mr McARTHUR—What about the general culture, though, that people should come to work fit but the scheduling allowed them to have a known rest period?

Prof. Dinges—They should come to work fit; there is no question about it. Fatigue management has to involve companies ensuring that workers come to work fit and it means workers should ensure that they come to work fit. Let me give you an example out of aviation, not trucking: a pilot who lives in Florida on the east coast of the United States. He is a long-haul pilot over the Pacific routes for a commercial carrier but he flies out of Seattle, so he commutes three time zones to get to work and then flies the Pacific. That is irresponsible. That is absolutely irresponsible.

Mr JULL—But it happens.

Prof. Dinges—But it does happen. That is the kind of thing where individual workers must take some responsibility for their alertness level when they come to work.

Mr McARTHUR—What can the airline do about that?

Prof. Dinges—The airlines desperately try to keep them close to where they are flying out of, but there is a limit to where you can demand people live. In general, that is something where, through education and training, you want to try to teach people that it is really not to their benefit or the benefit of the flying public or the company. But, at the same time, a company that does not give somebody who lives close to work adequate time off is irresponsible. The poor guy cannot get adequate sleep and he has to be back on the job or he has not had an adequate recovery period.

CHAIR—He flies back to Florida and compounds the problem.

Prof. Dinges—Right. We have to be sensitive to the fact that we need to understand the importance of people's ability to recover. That is going to mean, in fatigue management, that companies try to help or solve domestic problems. I do not mean that they are going to get into the social welfare business, but if there are problems at home that are preventing sleep, whether it is a poorly designed bedroom in terms of not blocking out the windows, or not turning the phone off, or whether it is something associated with domestic responsibilities where the guy cannot get adequate recovery, then the state maybe, or someone, has to

provide some education that helps them solve it and helps them figure out the importance of that in the equation.

CHAIR—Would you like to comment on the effectiveness of those technologies you talk about.

Prof. Dinges—We are only just learning the effectiveness. We are about to launch a study in the United States for DoT that involves Canada, where we will take four of these technologies out on the road. This is a truck study. We are going to put on drivers one of the devices that records activity and has a mathematical model in it that integrates sleep time and gives you a warning light on whether you have had adequate sleep—green, yellow, red. This is a technology that goes on the steering wheel of the truck, that stops all the motion in wheels—in the old-style work—and stabilises the steering system. This is Perclose technology, infra-red retinal reflectants that will give feedback on how alert you are as you drive, and a black box technology that will record all the driving characteristics of the truck, proximity to other cars and all sorts of things. We are going to allow drivers to drive conventional hours of service and longer hours of service with and without the technologies. It is a nested design.

What we want to know is how they use them. We want to know what they do. What do they think of them? Do they think they are realistic? Did they help? Did they stop when they got red lights? Were they more alert? Did it not matter? Is it going to be part of the solution to manage fatigue or not? What is the nature of the way in which the drivers use it? The drivers are protected as research subjects. Their information is confidential. It cannot be released or used against them. We want an honest activity from the drivers. They have to know that there is nothing punitive here. That is the kind of study that we think needs to get done to begin to understand how they are going to be used in the real world.

Mr JULL—You are doing some work on stay-awake drugs in the United States.

Prof. Dinges—We are. I know there is no more contentious issue in the world than that issue—and you mentioned the word 'drug'—around the workplace, because by and large drugs have been a deficit issue. We do not want people on traditional stimulants. The amphetamines and dopaminergic agonist drugs are dangerous. On the other hand, we cannot rule out the possibility that wake-promoting compounds are going to be developed that will allow people to stay alert in certain safety-sensitive occupations. Certainly, the military is keenly interested in this, and what we know about countermeasures to fatigue historically is that if the military gets them, eventually there is some use in the civilian sector. What I am talking about are two compounds that are currently being looked at. One is a more appropriate use of the old worldwide psycho-stimulant, caffeine. Could we come up with ways to teach people to use caffeine more effectively than it is currently being used? We are currently looking at that issue in the United States for the Air Force.

But the other area, which is really the radically new area, is that a new compound, modafinil, has appeared on the world scene, discovered in France, that has been approved by the US Food and Drug Administration as the first wake-promoting therapeutic. Thus far, the research in animals and humans shows that it has none of the adverse effects of amphetamines. You do not get psychomotor agitation. You do not crave the drug. You do

not get addicted. It does not disturb your sleep if you try to go to sleep after you have taken it, and you do not have rebound hypersomnolence. That sounds too good to be true, if you have the same reaction that most of us have! Yet that seems to be the case with the drug. It is only approved for a very severe sleeping disorder called narcolepsy, but the off-label use is going to be explosive for this compound, we think. We are currently doing some research on this compound to try and understand it. I have no idea if this will be a miracle drug or not, but if there is anything we know about performance-enhancing drugs in the United States, whether it is Prozac or Viagra or phen phen, people will clamour for them. They will do anything to get them once they are legal.

I should mention that, with a legal drug that can be prescribed by a physician, off-label use means a physician can prescribe it for what it is not indicated for. That is where we think we will see people coming to physicians. In fact, I wrote a document, as the chairman of a committee for the National Institute of Health, for *American Family Physician*—the medical journal for all of our standard community doctors—on problem sleepiness, identifying it in your patient and doing something about it. We only had one disagreement with the editor regarding publishing that. They insisted that we put a table in on the drugs doctors should give patients to keep them alert, and we would not do it. We said, 'There are no drugs that are appropriate for that. You have to find the cause and treat the cause for the problem sleepiness.' But it illustrates that even in the medical profession there is a willingness and an eagerness to move in this direction.

I would encourage you to try to get medophenal into a few academic labs in this country and begin to look at it so that you have your own Australian experience with this compound, to try and understand it. I do not believe it is a unique situation. I think we are going to see more of these drugs. As we work out the molecular biology of what keeps people awake and asleep, you are going to see compounds designed for those specific molecules to do what they are needed to do. While it is frightening and I am not advocating it as part of fatigue management, I think a forward-looking view in this area is that your biomedical community should have a look at some of the compounds coming so that even if you do not advocate them, if they become illegal drugs in this country you are prepared to know what these things do, how to detect them in the blood and what you should do about them.

Mr McARTHUR—You were going to say something about your exposure to *Exxon Valdez*.

Prof. Dinges—Yes. The *Exxon Valdez* is a case study in catastrophe. I was the expert witness for the plaintiffs' class action suit in that case—which is not fully resolved, I should tell you. Although the ruling of the jury against Exxon and Exxon Shipping and Captain Hazelwood as codefendants was a $2.25 billion settlement, the largest in the world at the time in a class action suit, they are still under appeal. But in that situation, most of the world knows that is an alcohol accident. That is because we have an obsessional focus on alcohol impairment, and it is probably deserved, but in the United States we have swung too far. Our federal databases on impairment carry alcohol or nothing. They are not monitoring fatigue and other things as fairly as they should.

In fact, the demanned vessel meant there were fewer crew on board to do the work. On the high seas, that worked out well, but when you pulled into the *Valdez* port and had to

load out and were under terrific time pressure, it meant that the first officer was awake 36 hours, could not go any more and finally went to bed. It meant that the second officer had been awake too long, well past the hours of service. He went to bed. And it meant that the man at the helm at the critical time as they left that port through Prince William Sound was a third officer, with limited experience. He had one task: to turn the vessel abeam of the Busby Island light.

Now, abeam is not hard to figure out. You put your back against the wall, you turn your head left and, when you see that light, you turn that vessel out to the high seas. And he did not do it. At nine minutes past midnight, when he should have been off shift, with both officers asleep and the captain down in his cabin, he failed to execute the simplest possible manoeuvre and ran that vessel aground. There were two coastguard officers sitting in a traffic control centre watching it on radar who did nothing. This is the classic kind of fatigue catastrophe we see: good people, supposedly with simple manoeuvres, who are supposed to be watching, and nobody does anything. They do not do anything because that is the way fatigue works. When you get real tired, it is hard to be vigilant. You lose track of time. You do not take actions.

The most common error in a fatigued person is not the error that many people who are drunk make, which is the error of commission—they drive too fast, they take risks, they do not stop at the sign. In a fatigued person it is an error of omission. You do not do the task. You do not take the time to check something. You do not look over in your rear-view mirror. You are tired, so you just sort of shut down, and boom, something happens and you are in trouble. That is characteristic of fatigue catastrophe and we see them over and over again.

The National Transportation Safety Board of the United States has been instrumental in beginning to investigate for fatigue and once they did, once they turned that rock over, everybody was shocked, pretty much. It showed up in many other really severe catastrophic events. In this air-frame crash at Little Rock, which the NTSB has not yet ruled on, the pilots who crashed that aeroplane had what appeared to be all the elements for a fatigue cocktail. They were at the limit of their hours of service, having worked 14 hours that day. They had taken off and landed seven times that day. They were coming in after midnight under time pressure and they were flying into a severe thunderstorm and trying to land in it. That is pretty much a formula for catastrophe.

Somehow we need a way of identifying when those elements are coming together in safety-sensitive occupations, to make sure we do not allow it to progress to that point. Somebody should have pulled the plug on that flight back in Dallas and said, ‘Guys, that’s it. We have bad weather in Little Rock. You’re going to get in there past midnight. You’re at the limit of your hours of service. I know the customers are going to be unhappy, but we’re going to pull the plug on it right here. You stay here. We’ll put them up in a hotel.’

We do not have systems in place for doing that. The company screamed bloody murder, that it is not fair to them to put people up; they cannot pull the plug on it; they were still within the hours of service. But somebody has to step in here and say, ‘That’s enough. That’s far enough.’ Fatigue management I think could do it, but it means everybody has a stake, and we have solved these thorny problems of how to get the public to accept it. That

is the other player: the public. If you are like me, you do not like a flight being cancelled. I do not want to hear about that when I am flying. Yet we may have to confront that.

CHAIR—We have talked about things that affect the individual, but there are external pressures that can, if not induce fatigue, contribute to them. For example, we are here in Melbourne where Professor Wlodarski is doing the work on sensor technology. What is the American experience on gases in the cockpits of aircraft and in the cabins of trucks? He has found some extraordinary results here in Melbourne, or his initial results have been quite extraordinary. What is the American experience of these external contributing factors?

Prof. Dinges—I am not an expert in this area, but in my experience it is extremely limited. There has been remarkably little attention to it. We have seen some attention in trucking to diesel fuel exposure but not very much in aeroplanes or in other work environments. I have a concern in aeroplanes regarding pressurisation. Fuselages are not adequately pressurised and people are becoming hypoxic in some of them when they fly. This is an area where some due diligence would not hurt us to understand what role gas, pressurisation and other factors play in fatigue. But I do not want to detract from the fact that we already know the big sources of fatigue and impairment.

CHAIR—The BA146 has been suspect for gas problems in both cabin and cockpit. Has there been any work done on that in the States?

Prof. Dinges—Not to my knowledge but I am not an expert.

CHAIR—This is a simple thing we all do. If we want to get the car warm on a cold day or cool it down on a hot day, we put the airconditioner on to recirculation and thereby build up the carbon dioxide level in the car. Are there any mechanisms being developed in the States to prevent that sort of thing?

Prof. Dinges—Not to my knowledge but that does not mean there are not. It is just not an area that I have paid attention to. The whole issue of using the environment—the automobile, the truck, the cockpit—as the countermeasure environment to try to optimise alertness is a direction I think we will move in. These technologies are one way in which we will move in that direction but there are other ways. Remember what aviation went through. They went from high workload to low workload with glass cockpits. They went from too much to do to little to do. They sit up there and it is on autopilot, then it is dark at night. Their job is to pay attention to the computers operating the aeroplane.

Mr McARTHUR—Could you just expand on that argument that came up yesterday in the debate about the boredom and long haul in shipping, aviation and rail; that it was not so much the activity or the fatigue, it was the boredom that was now becoming the big difficulty.

Prof. Dinges—I think it is the fatigue. It is just that when you strip away physical activity and leave people to be passive monitors, that is when fatigue impairment becomes very express, very obvious. As a result, making things very comfortable can make fatigue a more apparent contributor in a situation. I am not advocating that we make seats bumpy and difficult to ride in because there is a fatigue component to that as well. Vibration and some

of those things are fatiguing from a standpoint of the nature of the stimulation that humans undergo. We are seeing trucking now move to what aviation did. You only need to go to a show to look at these trucks. They are increasingly comfortable and sophisticated, with more computers operating on board.

Once we put collision avoidance and other tracking systems in to create intelligent vehicles, we are going to have a situation where truck drivers become closer to what pilots do than to what truck drivers used to do. That is going to require a new way of thinking about work in the cab. It is still a vigilance task, though, and vigilance is fundamentally what fatigue affects. It may mean we need to find ways to stimulate drivers to interact with computers.

Mr HOLLIS—They are talking on the radio all the time. They are not asleep. You go from Sydney to Canberra and they are chatting to each other all the time. It is just buzz, buzz, buzz. Yesterday someone said, 'The problem with truck driving today is the boredom, nothing to do,' but they are talking all the time. They are not asleep. They are talking, chatting to each other, telling each other where the cops are on the road.

Prof. Dinges—Although we do not know how many are talking and we do not know how they are using talking. This may sound ridiculous but it would help us to understand what drivers are doing out there to promote alertness as they go along. We are going to get a lot of useless anecdote but in that there may be some clue as to where we can develop some new initiatives. But, again, you can export some of the things going on in the United States. It is frightening when I talk about technologies, it scares everyone to death, because they do not want to think about it that way. But the technology is changing and there is no question technology is coming on board. Just as there are cameras in the workplace now in many offices and department stores and elsewhere, and on highways, we are going to see this sort of technology come into the work sites.

Mr St CLAIR—What does hypoxic mean?

Prof. Dinges—Loss of oxygen to the brain. Many of the neural behavioural effects of lapses and the things we see with fatigue are downstream in the nervous systems. Other kinds of insults will produce them. If I deprive you of oxygen you will start showing the same kinds of mistakes. In other words, it is not like there is one set of performance things that go wrong with fatigue and it is completely different for everything else. In fact, Professor Drew Dawson showed in the journal *Nature* that from a standpoint of sedation on a simple sustained attention task, alcohol and fatigue look very similar. You can actually equate it. This has had a big public awareness effect. You have to understand that there are probably synergistic effects from the gas issue and some of these other issues across the domain.

Mr St CLAIR—I have often heard an hour's sleep before midnight is worth two after. Any comment?

Prof. Dinges—An hour's sleep is worth slightly less than two hours of sleep and where you get it does not matter very much, although there is a downside even to napping. In fatigue management, if you are going to institute naps you have to understand people have to

get over sleep inertia, the grogginess from coming out of a nap. You have to allow time for that before they drive or fly again. For every countermeasure, everything we do, there is a science to understanding how to apply it. It seems like commonsense but only after the fact it is not so common. If it were commonsense we would know exactly what to do. That is where you usually need to do some good research, to understand how to use it correctly in a given operational environment to maximise its effects.

Mr MOSSFIELD—If you have a nap, as you have said, when you do come out of it immediately you are not feeling very well at all half the time. That certainly could be a dangerous period to be driving.

Prof. Dinges—It could be a dangerous period, so you want to be careful. Sleep inertia dissipates very rapidly.

Mr MOSSFIELD—You really need a nap plus a rest. Then you start to feel better.

CHAIR—On this point, where do pilots nap? Do they nap in their cockpit seat or do they go out somewhere else?

Prof. Dinges—The traditional way in which they sleep and eat is in the bunks on board the aeroplanes for long haul. It is called 'sleep' as though it is like night-time sleep. It is not. They are all naps. In every study we have done on Air New Zealand, on United, on Northwest, the duration of the sleep in the bunk is based on rostering, the number of augmented long-haul pilots on board. The typical duration is two to three hours and anything under four is basically a nap. They are using naps in the bunk but we showed with NASA you can nap in the seat, sitting up with an air pillow while you sleep. The United States still will not use it because of political concerns. They are worried about the public perception. But many European and Asian carriers do use it. I do not know if the Australian carriers do.

CHAIR—Have any airline companies adopted napping as policy?

Prof. Dinges—Yes.

CHAIR—In the cockpit or out of it?

Prof. Dinges—Yes, absolutely—Lufthansa, Swissair—quite a number of companies use it. In fact, they even use it beyond what we said the study showed. They use it in two-man crews, not three-man crews, so one of them is asleep while only one person is awake.

CHAIR—It is a bit different from a truck, isn't it? You cannot get up and walk around outside for a few minutes to get your metabolism going again. How do you stimulate the guy coming out of a nap?

Prof. Dinges—Sleep inertia seems to be reversed by just moving around, stretching your face, drinking something cold or hot. That sort of thing will overcome it. But I do want to say this about it: one of the things that happened with napping in the United States in cockpits is an excellent illustration of what a fatigue management approach should prevent. Before there was fatigue management we showed cockpit napping worked. The unions and

the companies were all in favour of it. It went in to the FAA and then we got into a contentious period between the Allied Pilots Association and the companies. The companies were pushing the pilots for more hours and were emphasising, 'We have countermeasures like cockpit napping.' So the pilots naturally said, 'Wait a minute, napping's a trick to get us to work more hours. Forget it,' and it stalled right there. That was the end of it.

So here we had a perfectly good, taxpayer paid for, researched countermeasure, but it got hung up in this battle to exploit more hours—or the perception of being exploited for more hours—against sleep need. I think it is important to separate countermeasures from whatever the negotiated hours are going to be for work. They are separate things. You use the countermeasures to manage fatigue in the workplace regardless of the hours structure. That is where we need to be.

Mr MOSSFIELD—Would you see any value in national legislation that set guidelines or a safety net as a reference point for fatigue management in particular industries, a general safety net—

Prof. Dinges—Protocol?

Mr MOSSFIELD—Yes.

Prof. Dinges—I think there is an advantage. I cannot dictate to you what that should be but I think you have a lot of good people in this country who have good ideas about what that should be like. You can look at what Canada and the United States are doing to try to define the right net for you. Your great strength may also be your great weakness. The fact that your states are pretty fiercely independent and have different approaches actually is a terrific strength, from an outsider looking in, because we get to see many things being tried to figure out how to make it work. The downside is you have to coordinate your transportation systems, so how do you move from state to state and meet all the needs?

I do not have an answer for you but I would encourage you to encourage your states to pursue a dialogue with each other. One of my recommendations to you is to try to foster an annual communication amongst states, not to battle about why Western Australia does not want regulations and Victoria does but, rather, an honest and open dialogue where they are willing to share knowledge of what they are learning about what works and what does not.

I also think the model that is being created here in Victoria, which I have now had an opportunity to look at closely in my last two visits, between VicRoads, VicRoad Transport Association and the Transport Workers Union, is absolutely terrific. It is the direction that you need to go in where there is a rational, reasonable, appropriate approach to trying to figure out what could and should be done that is right for Victoria and to try to develop the right kind of solutions. That kind of cooperation is worth its weight in gold. I applaud the people here from the union, the companies and the government who have done it. All of them have been spectacular.

What impressed me most was the practical problem-solving way they are going about it, trying to keep out the traditional reflexive postures and saying, 'Okay, what would that mean?' with a lot of hypotheticals about, 'If we did that, what are the implications? How

would we monitor that? What would be the cost of monitoring it? Could we discharge our responsibility that way? What role does enforcement have in it?' That kind of dialogue has to continue. Without dialogue across the domains we are never going to be able to solve this.

Mr McARTHUR—Do you see any difference in the fatigue problem in the long-haul train crews, the long-haul shipping crews, aviation and truckies? Are there different sets of fatigue build-ups in those different modes of transport?

Prof. Dinges—There could be markedly different schedules. In general, one tends to see excessive amounts of overtime, at least in the United States' experience in rail and in maritime relevant to trucking, which is somewhat less. It is very hard to say trucking is one thing. It is such a diverse industry. Do not assume that there is no fatigue in local short-haul trucking. They may be way beyond your hours of service. There may be some terrifically tired people and there may be some people well within the hours of service. It is very diverse, so it is hard to paint it with one brush.

But the issue of fatigue, for me, gets down to something I think Professor Dawson talked about—the risk management model. What is the worst thing that can happen in an industry? I absolutely do not want people who haul hazardous materials to be fatigued. When they have a crash they can not only do bodily harm; they can shut down whole highway systems, they can imperil the environment. So for me that is an area where I want to make sure we have outstanding fatigue management. Should we have outstanding fatigue management for dispatchers? We need some fatigue management. We do not want a tired dispatcher forcing a tired trucker to keep driving. We actually want to mitigate fatigue there. Is it as important as the guy who is hauling sulfuric acid? Maybe not. So we probably should prioritise.

Traditionally the public prioritises, I can assure you. In the United States we have 40,000 to 50,000 deaths on our roadways a year. Last year we did not have a single commercial aviation death; about 400 the year before that. The public gets much more excited about a single commercial aviation death than it does about 40,000 deaths on our highway. In other words, they have a perception that aviation must be 1,000 per cent safe and that we cannot have haul losses, whereas they will tolerate a certain level of accidents on the roadway. Now, the government does not necessarily tolerate high levels of accidents on the roadway but we need to understand that the public's perception of risk will vary with industry and mode, et cetera. To the extent that they express their feelings by voting and through the media, so we have to be sensitive to that. They do not understand relative risk. They understand 'Aeroplane crashes into airport'. That they understand.

Mr McARTHUR—Are you saying in rail haul and aviation, fatigue is just the same symptom?

Prof. Dinges—It is. It is a symptom of the work schedules, of the time of day you work, how much sleep you have had, how many days you have worked, the hours you have worked.

Mr McARTHUR—You do not see any difference in shipping or rail; it is just a physiological problem?

Prof. Dinges—Basically the biology that is driving this is the same biology. The way it is expressed, the likelihood of making a mistake that could be fatal may be higher in a truck driver than in rail, potentially, because the driver has to be ever vigilant. In other words, a lapse of 30 seconds in a truck driver is probably enough to cause the truck to go off the road, whereas with a rail operator you may be able to get away with more of those. I speak without the kind of fingertip knowledge of rail operations to be authoritative here. In general, I think you have to assume you do not want people lapsing on the job any more than is absolutely necessary.

Mr HOLLIS—If you go back to a question that Mr Mossfield was asking earlier and something you just said, that you do not want a fatigued driver carrying sulfuric acid, who do you think is responsible, though? Who should carry the responsibility for, say, the two books we were talking about before? Should it be the actual driver who fiddles his records and his books, or should it be the firm or the dispatcher or whoever it is, who, because of a timetable or a schedule, forces him to do that? Where do we apportion the blame then?

Prof. Dinges—I do not know how to apportion the blame. All I can tell you is that they are both responsible. The dispatcher is responsible, the highway regulatory bodies are responsible, the public that demands the product be there if they want fresh milk the next morning is responsible. There is a responsibility across the system. The manufacturer of the goods that are being shipped bears some responsibility. That is why fatigue management has to have everybody at the table. It is not just one component's problem. And then we need to deal with the thorny issues and we are not going to have perfect solutions to this right away, which is why we have to view it in the long term. It is something we are steadily working on. We gather data on it, we figure out what mitigates the risks, and then it has to be ploughed into the formula of what is a fair wage, what is a fair profit for a company, and what is a fair margin of safety for the public. That is defined by Australia for Australians and that will be defined for America by Americans.

Mr HOLLIS—It is going to cost.

Prof. Dinges—I don't know, because what is it costing us now? In other words, is it true that fatigue management is going to be more expensive than status quo? I am not convinced of it—not at all. In some industries I suspect fatigue management will be cheaper, particularly if it retains workers, increases productivities, improves the quality of life of workers, does not harm and may even benefit the bottom line on a company, and may make the logistics line that services the public and gets product to market more efficient. In the end, there may be a win-win. As far as estimating those costs is concerned, what is traditionally done in the United States is this: when something goes forward in this area, if an industry suddenly decides they are against it, they get a cost-benefit analysis that decides it is too expensive. If there is anything I have learned about cost-benefit analysis it is that you can make it say absolutely anything you want. I know there is an art and a science here to cost-benefit analysis but I think it is very important that we have our criteria in mind.

That is my final message to you: define your goals. Don't just drift out into this thing and throw money at it. Define your goals. What do you want to accomplish? Do you want to reduce accidents in an industry? Maybe that is not the initial goal. Maybe the initial goal is: we want to explore moving away from prescriptive hours of service and determine if it will

work. Maybe another goal is: we want to identify drivers who are medically impaired from fatigue due to, say, apnoea, find out how many there are and get a cost-effective way to get them off the road. There are different kinds of goals. It is important to prioritise those goals. Find out what the goals are you want to pursue, put programs in place that get you the best return for your invested dollar, the quality of the data, help maintain that data and then get everybody to the table and agreeing that the data will help you make the decision, and then make a rational, fair interpretation of it and try to move it forward. You will not be able to solve it all, but that is the best way to go.

Speaking as an academic, you have a community of academics who can be helpful here if you engage them in the various states. They are in all the states. Get them to help, get them to design studies, along with your road transport expertise in this area, your industry expertise. The one thing I will tell you that I think works in the United States is that, when we do a study, the federal regulators are at the table, the industry is at the table, the drivers are at the table, the academics are at the table. We work up a design around the goal of what the government wants to know and then we submit it for peer review. Other people have input into it.

We do not change it for political purposes, we change it for logical and scientific purposes, so that it is out in the open, we know what we are after and then we publish the results. We show the data. We say, 'Here it is. Here's what we think that means,' then we go to the next step. I don't know how to solve this any other way. For me this is not entirely different from the way we go about trying to solve disease and disorders. We try to figure out who has got them, how bad are they, what do they cause, how would we prevent them and how do we treat them, and I think that is where we are at with fatigue management.

CHAIR—Professor, thank you for that. If we require any additional information I trust we can contact you.

Prof. Dinges—Absolutely.

CHAIR—That would be very helpful. And if there are any further questions, if we could put those to you in writing we would be most grateful. We do particularly thank you for coming. We know you have an extraordinarily busy schedule. There is no compulsion on you as an international visitor to attend this. You did this perfectly out of your own goodwill and it is deeply appreciated—not only what you have done here today but what you did for the committee at its private hearing as well. We hope we keep in touch with you and that we will be able to take a lot of your advice on board in putting this report together.

Prof. Dinges—Thank you very much, Mr Chairman. I will leave you these things. You can do with them as you wish. Some of them are made by the industry. This is a training education module just to illustrate how trucking did it. You can get these for aviation and other modes. This is the rest stop issue area, driver fatigue and alertness. So most of this is around the trucking industry but comparable documents exist in rail and other modalities. I do not know how much of this applies to your experience. There is going to be a unique Australian experience. Some of it will overlap with the States, some of it will be different, but I stress again the importance of how North America is watching you. We want to learn from what you are doing. We see you as out at the cutting edge, as visionary in this regard

because of the remarkable initiatives under way in your states. It would be great if your federal government would recognise that and try to keep that going and not falling apart, and try to avoid the natural rivalries that one state has the perfect solution and the other state cannot possibly be right: 'How do we make it fit and form?'

CHAIR—Yes. Thank you.

Proceedings suspended from 11.06 a.m. to 11.32 a.m.

BROWN, Captain George, AFAP Technical Council Member, Australian Federation of Air Pilots

COX, Mr Laurie, Senior Industrial Officer, Australian Federation of Air Pilots

VAUGHAN, Mr Mike, Technical Adviser, Australian Federation of Air Pilots

CHAIR—Before proceeding, I would just like to advise all witnesses that, although you are not under oath, these proceedings have the same legal import as those of the parliament and should be treated with the same respect. Any false or misleading evidence is considered as a contempt of the parliament. To commence your segment here today, would you like to tell us about the capacities in which you appear before the committee.

Mr Cox—Thank you, Mr Chairman. I am the senior industrial officer for the Australian Federation of Air Pilots. Mr Michael Vaughan is our technical adviser. He has a background in aviation prior to retirement as the flying operations superintendent of the Civil Aviation Authority, Vic-Tas region. Captain George Brown is a Dash 8 captain for a Qantas regional airline, Sunstate Airlines in Queensland.

CHAIR—Thank you. I suppose to kick things off it might be appropriate if you gave us a short overview statement and then we would like to conduct the rest of this part of the inquiry by a question and answer segment, if that is in order.

Mr Cox—I might begin by saying that since 1990 the issue of flight and duty limitations covering pilots has been one that has been under constant review. Our organisation covers regional airlines and below, general aviation, helicopter operations, aerial agricultural and air ambulance type operations. We do not cover the domestic airlines, nor do we cover the long-haul international flying, so our focus is as a domestic operation.

CHAIR—How many members would there be?

Mr Cox—There are approximately 1,500 active members in the federation. We have been persistently concerned with the review that has been conducted by the Civil Aviation Authority and its successor, the Civil Aviation Safety Authority. There are now quite a number of operations in Australia, regarding flight and duty times, that are operating by concession or alternative instrument to the legislation as laid out in the Civil Aviation Order Part 48. Our submission is generally focused on the issue of fatigue in air transport, but of course we rely upon the legislation, coupled with a pilot's personal discipline.

The setting of flight and duty time limitations, in our submission, is an important safety tool. Tiredness and fatigue have contributed to many accidents and individual incidents. We hold countless reports of flight time limitation breaches. Flight time limitations should attract stringent legislation and surveillance by the regulator. In general aviation particularly there is intense competition and an unabated oversupply of pilots. This leads to exploitation by some operators. Actually the exploitation is commonplace, and nothing has changed certainly in the last 10 years of the review. The intense competition in general aviation is leading to breaches of the rules. These were identified in the Morris inquiry in 1995, known as the *Plane safe* inquiry, which we have identified in our submission.

There are two approaches to legislation in this area currently under consideration, being a detailed and prescriptive method or at an operator-determined level subject to some broad guidelines. These of course would be subject to commercial pressures, and obviously we have some concerns about that. We strongly recommend the prescriptive approach, in particular for general aviation, based upon what we need, being properly validated scientific and aeromedical data. The factors of the operation: the permits or exemptions should only be granted under exceptional circumstances and only based on an equivalent safety case and they should attract close supervision and surveillance from the Civil Aviation Safety Authority as a regulator.

The Civil Aviation Safety Authority has avoided serious discovery in these areas and the proposals that presently are before us have simply enshrined the existing long-term exemptions against the Current Civil Aviation Order Part 48. The Civil Aviation Safety Authority is intent on going down an operator formulated path at present, with minimalist legislation to suit commercial requirements rather than a serious attempt to combat fatigue.

Finally, there has been a proliferation of exemptions issued over the years. They lack equivalent safety rationale and credibility. We hold a number of those examples. They suit the commercial pressures and they lack a review process. There is poor standardisation across the industry. We recommend that the committee should speak to individual pilots, in particular in general aviation in your own areas, and to read up on the very short list of attachments we have put with our submission as the basis of material. I might point out, in the material that we have presented, that Mr Vaughan has an oversight of the information that is forthcoming into our office. Captain Brown has actually been involved in the current review and formulation of flight time limitations at I think now the eighth or ninth year of review and we still have nothing formalised. That is our opening submission, Mr Chairman.

CHAIR—We might start on that point. Do I understand you to say that the exemptions are becoming the norm rather than the exception?

Mr Cox—Yes, the exemptions—

CHAIR—Are used on a regular basis to extend hours?

Mr Cox—To go back in history, in 1990 the then representative of the Civil Aviation Authority, Mr Ron Cooper, implemented a trial dispensation that was due to last only for six months. It was to provide for an extension of hours across all operators. Those trials are still today in effect. The instruments of approval all rely upon those trials and it was not a case of whether the operator utilised the trial, it was simply a matter of, 'We granted you the trial. On the basis that you did not use it, that means you must be successful.'

CHAIR—It never came back to the table for ratification?

Mr Cox—No.

CHAIR—What do you say about that, Captain Brown? Is that your experience?

Capt. Brown—My experience in the particular organisation for whom I fly was that this particular trial came upon us, we did not change our rostering techniques to take advantage of the extension to hours, we just simply continued our usual practice for the particular period—I forget the number of months involved—and at the end of the time we did not hear anything more about it. We operate by virtue of our industrial agreement to the current Civil Aviation Order Part 48.

CHAIR—What would be a typical working day for you, and how might that be altered by one of these exemptions to put an unrealistic requirement into your work week or your work month or whatever work period? Just give me an example on a typical Queensland route.

Capt. Brown—Our rostering system as such does not really permit me to give you a typical day. It does vary considerably.

CHAIR—Can you give me a typical circumstance, then.

Capt. Brown—As generalisations go, for example, compared to what we do at the moment the hours could be extended.

CHAIR—What do you normally do in a day?

Capt. Brown—A day might consist of a relatively early start—a departure at 6 o'clock in the morning—with approximately 6½ hours of flight time and about nine hours of duty time. That would be a single day.

CHAIR—And by how much would an exemption extend that? Does it extend both factors—both the actual flying and the hours of duty—or does it just extend the flying time?

Capt. Brown—It may do. The specifics I could not give to you without referring to the exact—

CHAIR—I just want to get a feel for it because you say that it has become the norm rather than the exception, so there must be some patterns where the airlines are doing something that is quite obvious. I just want you to give the committee a feel for a typical example of what would be happening on a particular route or a particular circumstance that might be exploited. Just give us a feel for it. We cannot talk in generalities on a committee like this. We have got to get a feel for it.

Capt. Brown—I understand. For the regional airlines, Qantas, we operate to Civil Aviation Order Part 48. Apart from the trial that was conducted back at that time, we have continued to operate in accordance with that regulation, so, insofar as specific details as to how it would affect me or the pilots in my organisation, I cannot provide that information.

Mr JULL—But if you started off in Brisbane at 6 o'clock in the morning and ended up back in Brisbane at 3 o'clock in the afternoon, what is the procedure? Can you do another run to Bundaberg or something?

Capt. Brown—At the moment we can be worked out to 11 hours of duty time or eight hours of flight time.

CHAIR—How many days a week might that happen?

Capt. Brown—It is very rare to go to the full extent of either flight or duty time by virtue of the restricting regulation and the practicality of actual rostering. On occasions this will occur. A run-out to those times will occur by virtue of aircraft unserviceability or some technical problems or connections problems around the system. We will not ourselves personally run up against the limits on a regular basis.

Mr Cox—I think it is probably important to understand that under Civil Aviation Order Part 48 the current rules provide that you may only roster a maximum of eight hours flying time in the day. There is an ability to schedule beyond that period of time with a maximum of 900 hours flying time in the year. The exemption has generally been aimed to extending that 900-hour limit out to a 1,000-hour limit in the year and also the introduction of split duty type arrangements. They probably do not affect the airline side of the industry as much as they affect a charter operation or a night freight or an aeromedical operation. It is also important to note that the duty time requirements of both the Civil Aviation Order Part 48 and the exemptions do not recognise availability time, that being time on reserve at home.

If you are on reserve at the airport, that is counted as part of your duty time, and your clock is running. If you are at home, you may be at home for a period of 10 or 11 hours. You may then be called in to conduct duty which can be extended out to, on the current rules, a maximum of 23 total, mixed. I would have to stress that the majority of the complaints we are dealing with relate to the night air freight operations, aeromedical type operations, general aviation, charter type flying, flight instruction areas, rather than the scheduled airlines who, because of the very nature of the schedules and the rosters—

CHAIR—But you said 900 hours a year, which would be what, 18 hours a week, leaving holidays out of it for the time being.

Mr Cox—Yes. It is very easy to divide the number of hours by a number of days in the year or number of weeks in the year. Unfortunately, the fatigue factors are a cumulative arrangement and the nature of the duty periods back to back are where we have the major problems with fatigue.

Mr Vaughan—The rostering practices would have an impact on fatigue. Also, if I may say, the problem really does not lie so much in the airline sector, it is in the general aviation area where it is quite critical.

CHAIR—I was going to come to that. But I would like to get this pilot thing nailed down first. If you said you can only extend from 6½ hours to 8½ hours a day, is it the flying time?

Capt. Brown—The flight time limit is eight hours at the moment, but that may be extended.

CHAIR—All right. We will say eight hours. How many days per week do you fly?

Capt. Brown—In theory, it will be five days.

CHAIR—Let us say it is even six. You could not get above 12 hours excess of flying, could you—six days, two hours a day? How do you get it up to 18 hours a week?

Capt. Brown—There are cascading limits, as it were. For example, there are 30 hours in a seven-day limit, then 100 in 30 days.

CHAIR—Do you say at the end of a typical pilot's year he is up somewhere between 900 and 1,000 over the limit?

Capt. Brown—No, the limit as it stands for us regional operators is 900 hours and some of our pilots, depending on their base, the type of equipment and their rostering, would be nearing that limit; others, again, by virtue of the rostering and base would be much less.

CHAIR—Those 900 hours would be over and above their 6½ hours of flying time for their five-day rostered week. Do I understand you correctly?

Mr St CLAIR—No, it is the total hours.

Mr JULL—That is the total hours you can fly in a year.

Capt. Brown—That is the maximum number of hours you are able to fly during that year under the present rules. In the dispensation trial, one of the original proposals came out with a 1,200-hour limit and currently I think in one of the domestic airlines they are on a thousand hour limit.

CHAIR—I will defer to my colleagues now.

Mr St CLAIR—I want to check these hours. If he did five days of six hours, that is all he could do in a hundred—

Capt. Brown—In a period of seven days, in any one seven-day standing alone, yes, 30 hours.

Mr St CLAIR—So he could do five days out of the seven days at six. Yes, all right.

Mr Vaughan—Could I emphasise that we are talking about flying hours. It is flying hours within a duty day.

CHAIR—Yes, I understand. We are aware of that.

Mr Vaughan—A duty day can be quite extensive.

CHAIR—Yes, I understand.

Mr Vaughan—Could I also make the point that Mr Cox was talking about the trial. We have had the trial. There is no end point to the trial, there is no proper public analysis, comments from pilots, how people feel, et cetera. It has just been placed upon us. We just continue on. This organisation would be prepared to contribute to any such analysis constructively, but we have not had the opportunity.

CHAIR—How many years has it been running?

Mr Cox—Nine years.

Mr JULL—Have official approaches been made to CASA?

Mr Cox—Yes—constantly.

CHAIR—And what has the response been from CASA?

Mr Cox—Basically, 'We'll defer to the individual pilots and we'll defer to the individual operator on the granting of the exemption.'

Mr Vaughan—I have had a couple of responses to the trial—'Oh, there's a review going on at the moment, so we'll leave it to the review team'—but it should be under public scrutiny. We should have a proper analysis of how the thing turned out and how people feel about it.

Mr MOSSFIELD—How many pilots are in the organisation you work for?

Capt. Brown—At the moment I think we stand at about 91. We have been up to 100. I believe they are short at the moment and they are looking at employing—

Mr MOSSFIELD—Have you had any collective discussion amongst yourselves as to the impact that fatigue has on your industry?

Capt. Brown—Not a specific general pilot meeting to talk about that particular facet. This would come up in general conversation.

Mr MOSSFIELD—But as a group of pilots, you do not have any input into your company as to the effect that fatigue is having.

Capt. Brown—Not directly, no. It would only occur indirectly as the result of, for example, pilots declining duty on the basis of being fatigued or indicating that they had been worked to an extent where they felt fatigued.

Mr MOSSFIELD—Are you saying the maximum period that you might be flying in any one flight would be six hours? Is that what you told us?

Capt. Brown—The way our rules work at the moment, one of our particular rostering days might result in about an eight-hour flight hour.

Mr MOSSFIELD—Continuous flight or intermittent?

Capt. Brown—That would involve four sectors, each of about two hours in length, with approximately 30 minutes break in between those sectors.

Mr MOSSFIELD—The point I am trying to get at is—certainly listening to other people speak in the airline industry—there would be peaks and troughs as far as the pressure is concerned. It would appear to me that obviously taking off and landing would be the periods of time when there would be a lot of pressure. At the end of a flight when there would be a fair amount of pressure in landing because of various issues, would this be a time when fatigue would have any impact, do you feel?

Capt. Brown—Very much so. If you have been awake for 14, 16, perhaps even 18-odd hours, it is pouring rain, it is low cloud, night time, occasional lightning flashes, hills around, flying a non-precision approach to make a circling approach to an aerodrome is not a pleasant experience. It is very demanding and, after getting an aeroplane on the ground, you really feel it.

Mr MOSSFIELD—I am interested in that period of time after you have landed and you may be travelling home. Is that a period of fatigue, when you might be driving your car away from the aerodrome?

Capt. Brown—I am fortunate. I have got about a 20-minute drive. There are other pilots who may have an hour, an hour and a half.

Mr MOSSFIELD—Of course that is adding obviously to the length of the period of time.

Capt. Brown—Yes.

Mr JULL—Can I just get something right. The same system applies in eastern Australia and southern. Are the Ansett regionals involved, too?

Capt. Brown—I am unsure of the Ansett regionals, but to my knowledge they are working to the general exemption. So they would be running to the higher limits.

CHAIR—Just going back to Mr Mossfield's question: the traditional Queensland milk run where you go up the coast and back down the coast, does one pilot do both trips—up and back—or do you have two different crews? Are those short hauls along the Queensland coast considered stressful, or are they stressful? That would be the most intensive area, wouldn't it, in terms of that type of flying—Brisbane to Cairns?

Capt. Brown—It can be a problem. It depends. On a nice clear day, we would start at 8 o'clock in the morning and there would be approximately 6½ hours of duty time, perhaps seven, with about four and a bit flight hours, and it is a reasonably pleasant flight up the coast. That can change. If the weather has fallen on the ground all the way up the coast, there are instrument approaches everywhere and heavy traffic situations at various aerodromes, that can be fairly fatiguing. Generally speaking, our rostering system is such

that we would stop in Cairns and another crew would take over to bring the aircraft back to Brisbane. It would be unusual to have us continue on. Going back to Brisbane would in fact exceed our flight and I think the duty limit, so we would not be able to do that. But we have in some instances, with aircraft unserviceability, continued on further back down to another port where another crew has taken over.

Mr Cox—I could also say that the competitor to Captain Brown's airline in fact does operate to an exemption on that operation, doing the milk run up to Cairns and back, with one crew.

CHAIR—Up and back with one crew?

Mr Cox—Yes, and it has caused problems in terms of the views of the pilots in relation to the nature and the length of that duty and the duties leading up to that day and after that day.

Mr McARTHUR—I would like to raise three issues. I note your organisation has not got pilots from the military, Ansett and Qantas. I am interested to know why that has taken place. Could you comment on the pilots' strike, where the impression was that the safety issue was used as an industrial issue with all kinds of ramifications, and would you make an observation on the fatigue involved in general aviation compared to the long-haul international flights? Do you see any difference in fatigue build-up or impact where there are breaks in the Australian general aviation run?

Capt. Brown—As to comparisons between general aviation and long haul, I can only speak from the fact that I have been in general aviation and I have only been a passenger on long-haul operations. Speaking from my experience as a pilot in general aviation, that also is very much the peak and the trough situation. I can recall days of sitting around and flying instructing days of weather being bad and unable to do anything, other than read magazines and then go home in the afternoon. I can recall an instance back, I think, in the seventies during an air traffic control dispute where I operated a flight out to Mount Isa and then back and then down to Glen Innes. After the event I realised I was so fatigued that I was quite unsafe. But I would like to make the point that in my observations, both of myself and from other people that I fly with, pilots are the ones who are least able to judge when they are fatigued to a point where they are not safe to continue operation. In respect of the first question you asked, I did not quite catch that.

Mr Cox—It might be easier if I answer it. I was the one who was around. I will also add, to help Captain Brown's submission there on the general aviation to long haul, the Australian International Pilots Association actually conducted an investigation, using Worksafe New South Wales, as to the effects of long-haul flying. They have produced a report which has been submitted as part of the overall review process. General aviation, by its very nature—smaller aircraft, more demanding flying in certain circumstances—can be far more fatiguing than long-haul flying but, equally, sitting at the controls for a 12- or 14-hour period can also be extremely fatiguing. So it is a matter of there being equivalent safety as a result of the flight duty limitations that are being applied. It is not easy to do a direct comparison.

In respect of what I think you called the airline strike of 1989—I might point out it was a dispute; we were locked out and there were resignations directly thereafter once legal action was initiated—as a result of that dispute the Qantas and Ansett coverage was removed from the federation by way of section 118A of the then Industrial Relations Act and we cover the regional airlines, being Kendell, Southern, Sunstate, which have direct connections to both Qantas and Ansett.

In terms of using safety as an industrial tool, we have not, will not. We were unfortunately accused during that period of time of being the eight-hour bus drivers, I think was the terminology of the then Prime Minister. We rejected that entirely. We were concerned about safety ramifications as a result of that and certainly some of those things came to pass when you had the introduction of a number of pilots who had no idea of the airspace that they were flying in, the duty periods were very extensive. There was also the process of paying pilots per hour. That encouragement to use the overtime formula to pay pilots was, in our view, a direct risk to safety and we have been very clear about that.

Mr McARTHUR—Do you think it was unfortunate that whole period coloured the attitudes towards safety and safety procedures and the flight schedules of pilots?

Mr Cox—Certainly. I think the introduction of the 1990 review in fact was an opportunity that was taken by certain interests at that time, on the basis that the federation was a weakened body. We would have been far more active and far more vocal in that 1990 period if the 1989 dispute had not occurred. We certainly have views and, as I said, recommendations to make and concerns to express about flight time limitations and the factors of fatigue, covering the whole range of operations. But our voice was weakened in that period and the advantage was taken. At the moment change is occurring through the exemption process rather than an outer parameter.

The description we were given in 1990 is that we wanted to expand the hours to provide an outer limit of safety. The current Civil Aviation Order Part 48 provides that outer limit. The problem that we have had since 1990 is it has been very elastic, depending upon who the operator is and where they have been able to gain the exemption or concession.

Mr JULL—How difficult is it to talk to the regional operators about things like fatigue? Is there any discussion with the companies?

CHAIR—Yes, are there fatigue programs with, like, Western, Sunstate and Kendell?

Mr Cox—Certainly in the regional airlines area, the Regional Airlines Association have been open in their discussions on a company by company basis.

CHAIR—There is nothing wrong with that—on a company by company basis—if it is managed properly, is there? Does it need to be prescriptive across companies? If Sunstate want to sit down with their pilots or Kendell with theirs and do a four-day week of nine hours flying time, what would you—

Mr Cox—Within an outer parameter that has an appropriate methodology applied and a scientific evaluation—one thing that we have said in the submission, at no stage in Australia

have we done a scientific analysis of how fatigue affects pilots. The only country in the world, up until recent times, that had done that was the former Soviet Union. That was a discussion when the joint aviation authorities in Europe were considering what they were proposing to be the outer limit of hours. They were proposing 800 hours as a maximum limit. We in Australia were proposing to go out to 1,200 hours.

Mr JULL—In your submission on page 230 you are critical of the proposed operator formulated flight schemes being developed by CASA. What exactly is the problem with the approach? Have you been involved in the development of the operator formulated flight schemes that have been proposed by CASA?

Mr Cox—That is the committee that Captain Brown has been involved in in terms of the overall review.

Capt. Brown—I should comment generally on the problem of operator formulated schemes. From commercial pressure alone, no operator will ever accept a scheme which is more restrictive than their competitor. For example, my company limits us at the moment to 900 hours. The opposition runs to 1,000 hours. I cannot see how my company is going to sit down with its pilots and be quite happy with a 900-hour limit. It just does not work that way. I should re-emphasise it is commercial pressure which will really determine the final outcome to the negotiation process. Where a fairly strong and cohesive pilot body exists, there is some balance against exploitation, for want of a better word. Where you are dealing with a smaller group, a transient group of pilots that you might have in general aviation or in a regional operation where the group is not cohesive, there will be no effective balance to the negotiation processes.

Another complication is the so-called overtime payments for pilots where, after a certain number of hours per month, you will then be paid a bonus. Unfortunately with pilots, like anybody else, the hip pocket nerve is fairly sensitive. If they think they can get a few more dollars by flying a few more hours, they will suddenly start feeling a lot less fatigued than they actually are.

Mr Cox—We do not have a problem negotiating with operators about spreads of duty periods or the numbers of days or how the roster is constructed but there must be an outer limit. Our problem at the moment is that the outer limit has become very elastic. Every time that there has been a further stretching of that elastic, the operator that competes with that operator says, 'Bloggs down the road is doing it. Why can't we?' What we ask is where does the limit stop? What does it take? At the end of the day, does it take an incident or an accident to occur before someone actually looks at where that elastic should be stopped? You can deal with it from time to time.

In a more specific instance, a pattern of flying in a regional airline may involve a series of overnights. The quality of rest on those overnights is something that we try and deal with within the industrial terms, that is the standard of accommodation; a room quiet and free of noise, at least a bed you can sleep in without a—

CHAIR—I know on the Queensland coast you generally stay at the very best motels.

Mr Cox—Depending on which part of the aviation industry you are talking about. If you are talking about a regional airline structure, yes, I can say in one or two cases they stay at reasonable motels or hotels. I also can give you examples of a regional airline operation that used a house for many years at Mount Isa. It was a house with three bedrooms and one bathroom, where the three crew members were all given a bedroom. The consequences of that were people round the back banging on the windows halfway through the night—not quality rest. They are the sorts of problems that also add to fatigue, not just the actual flying duty. It is the actual quality of rest leading up to that.

In the night freight industry—and again I will go back to Queensland—there were complaints recently regarding the split duty; actually getting access to a horizontal place to have a sleep during that split duty is next to impossible. The operator says, 'It's three hours and 59 minutes in that split duty. You don't get an accommodation. There's a comfortable chair in the operations; sit in it.'

Mr JULL—Has deregulation brought this all on? And even if it has, deregulation is here to stay. How are you going to make the system work?

Mr Cox—The system I suppose we are asking for is that there obviously have to be some prescriptive rules. There obviously has to be an outer limit. Working within those limits, certainly between the operator and the pilot groups and the individual pilots, is something that can be dealt with. But working beyond those periods is where the risks occur and that is where the commercial competition comes into play.

CHAIR—Is your support of prescriptive hours more about just setting outer limits so it cannot be manipulated in future? Or is it because perhaps the airlines have just kept pushing the envelope that you want a line in the sand? What is your rationale for that?

Mr Vaughan—The focus so far has been on the regional airline sector and airlines generally, which by and large we would have to concede—given a few problems—work within fairly stringent regulation and the safety issues are not really there. But underlying that we have a vibrant general aviation industry. That is where the problems are and that is where the high demand is for a prescriptive regulation to level the playing field.

CHAIR—In the maintenance area?

Mr Vaughan—Certainly in maintenance. There are arguments being used overseas about having regulations about duty time for maintenance personnel, flight attendants, et cetera. It is a challenge around the world at the moment, as you gentlemen would know. Prescriptive regulation, we believe, is absolutely essential for general aviation.

Mr Cox—And it is the enforcement of that also. The present Civil Aviation Safety Authority is really only carrying out surveillance where it is being seen. It is not carrying out surveillance in the areas like the remote areas of outback Northern Territory and the top end of Western Australia or Far North Queensland. It is only operating in the areas around Sydney airport. Most of those operators have a good record because they are operating to scheduled operations but they are also in the public light. They are not really the problem areas. The problem areas are outside that.

Mr MOSSFIELD—Certainly there was a high fatality rate with crop-dusters but then maybe that was a straight-out safety issue rather than because of fatigue. Do you have any views about that? Do you cover those people?

Mr Vaughan—It is a high risk sector of aviation. I think the statistics reflect that. With respect to impact of flight time regulation, there may be a connection there which might demand, in a review, special flight time limitations for crop-duster pilots. But generally I think it reflects the fact that it is a high risk endeavour but people go into it. There is low flying and it is often at a bad time of the day. I think the statistics reflect that.

CHAIR—Mr Vaughan, I do not want to cut you short. I think this pilot thing is so important because it is central to what we have been looking at in other parts of the inquiry. Would you be prepared to come back to Canberra to discuss the other sectors of the industry separately?

Mr Vaughan—Most certainly.

CHAIR—We have about seven or eight minutes left and I do not want to confine you to that. We have had verbal evidence and concerns about this maintenance problem and we do want to flush it out.

Mr MOSSFIELD—Coming back to Captain Brown again, on the point you made earlier about pilots being the least able to judge being affected by fatigue, in view of that what regulation should there be? Or how can judgment be made by somebody that due to fatigue a pilot is unsafe to fly?

Capt. Brown—At the moment the regulation is something along the lines that both the pilot and the operator are responsible to ensure that the pilot is in a fit state to fly. It is the actual judgment of the point where a person becomes fatigued and becomes unsafe which is really subjective. From a pilot's viewpoint, I have never met a pilot yet who took off, knowing that he was going to crash because he was fatigued. We just do not think like that. We will get through; we can do.

There is also an enormous amount of pressure on the airline operations control people who are actually running the service. They unwittingly, in a lot of instances, put the pressure back on the pilot. If a pilot walks into the operations room and says, 'I'm sorry, I'm tired, I just can't go on,' suddenly there are 36 people stranded here and another 36 stranded somewhere around the countryside. It is a subjective area. It is a very difficult area because of the fact that pilots generally do not receive any specific training in this area; to my knowledge anyway, in the regional airline network none of the operations controllers receive any specific training on identification and management of fatigue problems. I would also simply like to reiterate that we would see that prescriptive regulation is the best and most vital means to achieve this particular end.

Mr Cox—Just to add to that also, pilots will not report that, on the basis that they will jeopardise their career. If they report fatigue factors or walk away from an aircraft, they are accused of doing it deliberately. They know that they are under pressure, that they jeopardise their career. That is one of the major problems we have in aviation. Pilots will not provide

reasonable reporting because there is a surplus of pilots out there who will take the job. We made that point clear in general aviation but it does occur also in regional; those reports do not go in.

CHAIR—I imagine there would be specific regulation as to the consumption of alcohol when you are on stand-by.

Capt. Brown—Yes, there is.

CHAIR—What about rest? Is there a protocol or a regulation regarding you taking rest? If you are on stand-by, what sort of things are you supposed to do? Can you be out painting the house?

Capt. Brown—It would be understood that a pilot can be called at any time during that reserve period. In our particular type of operation, for example, reserves generally start at 6 o'clock in the morning or 5 o'clock in the morning and run through for 11 hours from wherever they start.

CHAIR—Do you get paid for that, by the way?

Capt. Brown—No. Well, we work to a salary. It is generally understood, however, that regardless of when a pilot is called out, even at the last few minutes of that reserve period, he would present himself in a state fit for duty, so he cannot have been out running a marathon or consuming alcohol.

Mr JULL—Eight hours, bottle to throttle.

Capt. Brown—That is the law at the moment, yes.

Mr JULL—But there is no rule that you have eight hours of rest before you—

Mr Cox—Yes, there is. There is a minimum rest break and, again, this is an area that the exemption certainly has been impacting on. I will give you an example of air ambulance operations, where pilots on reserve at home will be called out. They may conduct a duty for, say, a two-hour period. They will then sign off effectively, under the law, go home again but can be called out. The duty period will only be calculated if they are recalled to the airport. They are still available for the employer. There is no reference to that in the legislation, there is no protection for the pilot, but it will be calculated if you are recalled to a further duty or duties. The previous rule that was in place said that from the commencement of a flight to the end of a flight or series of flights was the duty period. That is no longer the case under these exemptions. That is the area where we have a really major concern about fatigue impacting upon that level of operation, which is a demanding operation in itself.

Mr Vaughan—And the fellow at home or the pilot at home, man or woman, can continue to run their 40-bedroom motel.

CHAIR—I was just going to ask that question. If the pilot's wife had a florist's shop, you would not be expecting him to be running around in the van for the 11 hours delivering all the flowers, et cetera. He would be expected to be taking some form of rest, wouldn't he?

Capt. Brown—He would be expected to present himself in a fit state for duty.

CHAIR—Let me come back to this point of why you find self-regulation unsuitable. We will take that Queensland coast example again and what your opposition are doing. Let us say, for example, you flew from Bundaberg to Cairns on the milk run, 4½ hours up and 4½ hours back, nine hours a day, and you did that four times a week, four days a week, and had three days off. That would be 36 hours flying, 144 hours a month, and say you did that for 10 months a year. That could go up to 1,400 hours and not be in any way very stressful, couldn't it? That would be a fairly unstressful roster.

Capt. Brown—I would not like to do nine hours of flight. I think I would not like to be sitting down the back with me landing the aeroplane after nine hours of flight.

CHAIR—Is that right? You don't like that? You really think there is a limit. What I am trying to get is the balance. We have talked about this with the various local and international experts: that it is not just a matter of the number of hours a week but how they are worked.

Capt. Brown—That is quite so.

CHAIR—And how much rest you get afterwards and whether you are flying after midnight and all those sorts of things. But a daylight flight up the Queensland coast and back down the Queensland coast, four days a week with three days off, would still be considered stressful, would it?

Capt. Brown—For the type of operation that we are doing I would say yes. You would be getting very tired by the time you got back to Brisbane. As I said previously, there would be some nice days with no problems, you would get back and you would be a little bit tired but it would not be a great problem. But if you have done instrument approaches all the way up and all the way back and toyed with the traffic in the areas that we do have to operate, you will really start to feel it. Another point that I would like to make when we talk about general aviation aircraft is that we share the airspace with these people, too, so if they are worse off than we are, it is not a good combination to be in a holding pattern, in cloud, at night, at that particular place.

CHAIR—Thank you for coming. It has been very enlightening. We may need to come back to you for some more evidence—particularly you, Mr Vaughan. I sidelined you. I misunderstood what sector you were representing and I apologise for that. You are looking after the GA area as well. Is that the idea?

Mr Vaughan—I am acting as a technical adviser for the federation, but I have an airline and general aviation background in the regulatory area, up until 1992, so I do not profess to be a pilot these days.

CHAIR—But there were obviously some areas you wanted to inform the committee on and I cut you short a couple of times. Would you be prepared to come back to Canberra for a half-hour session one day?

Mr Vaughan—Certainly.

CHAIR—That would be good. Thanks very much for coming. You will receive a copy of the *Hansard* transcript and, as I said, we will probably have to come back to you for some other information. We thank you for your evidence today.

Proceedings suspended from 12.22 p.m. to 1.19 p.m.

BROTHERS, Mr Laurence Charles, Group General Manager, Operating Divisions, Finemore Holdings Ltd

NATION, Ms Michelle Peta, National Compliance Officer, Finemore Holdings Ltd

PULVER, Mr Paul Frederick, National Operations Manager, Finemore Holdings Ltd

CHAIR—I welcome to the table the executives of Finemore Holdings Ltd. Thank you for the time you have given us. Finemores is a well-respected company in the transport industry and we value your evidence. Before proceeding to that I have to advise you and all other witnesses that although the committee does not require you to take an oath for the evidence you are giving, these are legal proceedings of the parliament and should be treated with the same respect. You would recognise, of course, that any false or misleading evidence is a serious matter and is regarded as a contempt of the parliament. You are going to lead, Mr Brothers. Could you give us a short overview statement and then we might get into an interactive mode.

Mr Brothers—Thank you very much. Today I would like to discuss in this forum Finemore's perspective on managing fatigue. The three areas I will be speaking to you about are: Finemore's initiatives; Finemores—where are we now; and the limitations.

With respect to Finemore's initiatives, to combat driver fatigue Finemores have developed a platform over many years to introduce initiatives. Finemores identified early in its 32-year history the relationship between the given and expected work practices within the road transport industry, and driver fatigue. Finemores recognises its driver work force as being an important asset to our company and the need to provide them with, to the best of our abilities, a safe working environment.

We have introduced an in-depth recruitment and induction program to secure the right applicants for our industry, with the emphasis on employment in regional centres throughout Australia and a training agenda, both internal and external, which adapts to our continual environment of change. Monitoring devices since 1976, such as tachographs and, today, onboard computer systems which analyse driver performance enable our management to establish safe, efficient route scheduling and the audit of drivers' adherence to regulatory standards.

There was the establishment of an 1800 safety line which invites the general public, along with the industry, to comment on driver performance and professionalism, and an accident free driver incentive scheme to encourage safety performance at all times and eliminate complacency. The establishment of an internal quality management system ensures procedures are in place to improve our ability to get things right first up. This has produced a platform to embark upon self-accreditation programs such as Truck Safe, mass and fatigue management. Underpinning all these initiatives there is the company-wide continuous improvement process named Finemores 2000. The aim is to be the best at what we do. We provide this by involving and educating our front-line people and instilling a greater sense of individual accountability.

Where are we now? Finemores are participating in the fatigue management program, a Queensland Transport pilot program which, from our understanding, from an operational perspective, is more flexible compared to alternative schemes currently on offer. Some segments of our group are operating under the National Transitional Fatigue Management Scheme due to restrictions related to the cartage of bulk dangerous goods. The balance of our driver work force operates under standard legislative driving hours. This approach offers the least flexibility to both drivers and operational staff.

Because of the diversity of the transport industry not one single program gives the driver and transport management the flexibility to totally control the risk of fatigue. None of the three schemes offer the driver the flexibility to manage their own fatigue. Drivers have individual demands, such as task capabilities and social needs, which the drivers can best understand and manage. Management also require the flexibility involved in scheduling the work task. The demands are varied due to the type of work tasks being seasonal, complexity, and understanding the drivers' individual abilities.

With respect to limitations involved, because of inconsistency related to the acceptance of fatigue management programs amongst some state regulatory bodies the three programs on offer provide minimal flexibility. Granted this is a step forward, but until we gain greater flexibility to meet our duty of care we are bound by government restrictions. It seems that health and safety regulatory bodies have recognised the benefits of performance based legislation, yet this is one area which still remains prescriptive.

Finally, on the last link of the freight supply chain, customers now are starting to respond to their obligations under the various acts in participating in the fatigue management process. Unfortunately, there is still a long road ahead as the education and understanding of fatigue, from a customer perspective, is still very limited. Innovation towards partnership with service provider and customer now enables a forum for compliance.

In conclusion, the key to managing fatigue is providing more flexibility to drivers and transport management. To achieve this, a dramatic culture change within our industry is mandatory. This change must include all members of the freight supply chain, government and regulatory bodies. All these parties must commit to cultural reform and building the best possible fatigue management techniques to ensure safety on our roads. Thank you.

CHAIR—Thanks, Mr Brothers. Let me go right to the heart of it. You say that you use vehicle monitoring devices. Are you talking about tachometers there?

Mr Brothers—In 1976 we embarked on tachographs in the first instance. In 1983 we embarked upon onboard computers that have up to two weeks storage of data, which is compiled and monitors the driver's performance, his speed, his rest breaks and so forth. We debrief those computers at least once a week to monitor the performance of the driver.

CHAIR—Do you have a database on each of them?

Mr Brothers—Yes, we have a database.

CHAIR—On each driver?

Mr Brothers—That is correct.

Mr McARTHUR—What do the drivers think about that monitoring?

Mr Brothers—At first they felt it was restrictive and had privacy concerns—the Big Brother approach—but it is a way of life at Finemores now. We have had it probably the best part of 13 or 14 years in our company, and they actually see it as a bit of a challenge in driver performance because it categorises them—one to 100 or whatever it may be—on performance.

CHAIR—Do you use it solely as a management tool, or do you use it as a discipline tool as well?

Mr Brothers—Both.

CHAIR—Would you dismiss a driver if he had a bad performance?

Mr Brothers—No, we cancel the drivers. To be perfectly honest, they are given a tolerance which they work within. Given the fact there is some tyre wear, as far as speed is concerned, from that point of view you work in a tolerance of about two to three per cent and we actually operate on that basis. We cancel the driver each time he exceeds that tolerance. We work on the principle that we have in our EBAs, working with the Transport Workers Union, a three-cancelling process before we contemplate dismissal.

CHAIR—Cancelling is a suspension, is it?

Mr Brothers—Yes, cancelling is an investigation. The driver of the truck sits down with his supervisor and his immediate manager and they talk about the experience.

Mr JULL—I guess the great advantage of that is that you own all your own trucks. The drivers are employees, are they?

Mr Brothers—Yes, the majority.

Mr JULL—Have you had much reaction from the independents to it? Do any of them take any notice of it, or ask you about it?

Mr Brothers—Paul may have to correct me, but I think they have been happy to be divorced from it because it is not regulatory in our company that the subcontractor or tow operator have to comply as far as the monitoring device is concerned. But they are looking over the fence and seeing the benefits of these monitoring devices as they get close to fatigue management programs—Truck Safe and the like.

Mr JULL—And you have established you can still make a quid.

Mr Brothers—Yes, most definitely.

Mr Pulver—One thing about monitoring devices is that in the early part we had trucks that would go over 100 kilometres an hour and now we do not have a truck that goes over 100 kilometres an hour. They are all 100 kilometres an hour speed limited. What we have found over the years, since all that has settled down, is that the monitoring device is on the side of the driver more times than it is on somebody else's side. If they are driving down the road and they are involved in a small accident we just pull the record out and it confirms exactly what the driver says. That has been a huge benefit. There have been court cases where we have had the device to prove that the driver was correct and it may be that another party, or a police officer, was in the wrong. With that acceptance, it is not the big, bad black box. It has been a helping hand for them.

Mr JULL—I suppose the same thing applies with the 1800 number. I guess you have some sign on the back saying, 'Our drivers are courteous. If we are upsetting you phone this number' and you would have the same check on them.

Mr Pulver—It has been one of the most positive things we have ever done. When it started it was 'dob in a truck driver,' but what has happened now is that we get the feedback, which is all recorded, and that is all followed up and we have sessions with the driver. If a truck comes up we get the driver in and say, 'What happened on this day?' He would go through it and if he is perfectly honest he will say straight out, 'This is what happened, bang, bang, bang.' What we have found is that if there are two or three serious allegations against a driver you have to do something in a big hurry about that driver because you have a problem. It has been a tremendous tool for us to monitor the on-road performance of drivers.

Mr JULL—Have you lost any business because of this? If a client rings up, a supermarket in the back of Woop Woop and they have run out of Zippo lighters or something and they need a supply by lunchtime tomorrow, and it would be physically impossible under your operations to get the load there, would they go somewhere else? Or is there a greater acceptance now?

Mr Brothers—It is quite a quandary. What appears to happen is that some customers do not believe that they have inefficiencies. We have proved, with the onboard computer, that they do have demurrage problems. What we do with our customers is to work with them in partnership and it is a check of when the vehicle arrives on their premises and when it leaves. You take out the generalisation of what is really, 'You are taking too long to unload,' or 'You've given me a time slot and you're not committed to it' so it is helpful to the driver, plus the company. Yes, we may be able, if we have demurrage clauses in our contracts, to give the company an invoice, but more to the point we talk with our customers, saying, 'You have got some real problems there.' It has been a great tool.

CHAIR—Notwithstanding the answer, the point Mr Jull was making was: what is your management of the clients who try to put you on unrealistic time lines?

Mr Brothers—I think there have been cases and I would be lying—and I am not going to lie—if I said there was not. What we do is use that in the driver's defence, because the driver is our salesman. He is the front-line troop. He deals with the customer direct. The supervisor will normally get a telephone call from the driver saying there is some unrealistic

practice the customer wants us to perform. The culture of the industry is that we will fix it somehow or other and it will be done. But today I am pleased to say that we have a policy that we will not break those boundaries. It was not too long ago that our culture instilled in us that no matter what happens the job will be done.

Mr MOSSFIELD—Do all drivers take part in the fatigue management program? Is it compulsory?

Mr Brothers—What I have stated earlier is that we have got three groups of drivers at the moment. We have got a small group of drivers in the Queensland fatigue management program. We have a smaller group which is mainly our liquids and bulk packaging of dangerous goods drivers that are in the transitional program. But the bulk of our people are still working under the logbook laws. Really because of that the tasks are very different within the industry. We have the long-haul tasks and obviously these programs are very helpful to us. But more so there is an intrastate task which still has a lot of fatigue related activities within it that do not get deemed under the umbrella of fatigue.

CHAIR—You have got drivers pretty well monitored in the sense of what they are doing at a particular time and what speed they are doing, but what is your policy regarding a driver who has the flu coming on or who has been up the night before with a sick child or whatever, who is out on the highway and really feels quite a heavy episode of fatigue and pulls over? Do you expect him to stop for a nap or a couple of hours?

Mr Brothers—Yes, we encourage the driver at all times that safety is first.

Ms Nation—I think within our industry as well, especially within Finemores, if you have had a night of no sleep or a reason why you would not be 100 per cent for work, it is acceptable that they can approach the supervisor and say, 'Look, I'm not fit for work today' or, 'I was up the night before.' There is quite a high tolerance within the organisation because management has pushed forward so strongly this fitness for work regime. I was in Wagga last week and one of the drivers rang up and said, 'I feel the flu coming on, I don't think I can come in.' The supervisor said, 'Don't come in then.' That's great; they rang them the night before to give them the notice to get somebody else in. But it is pretty widely accepted now within Finemores that if you are not fit for work, ring, give us notice.

CHAIR—What is the practice if he is actually out on the road when this happens? Some of us go to work in the morning and by early afternoon you are feeling rotten. So it is half past two, 3 o'clock in the afternoon when he really starts to feel heavy-headed.

Ms Nation—I think we are lucky in that we have got the flexibility of having quite a large work force and we have the flexibility of bringing in other drivers to take over in conditions like that.

CHAIR—Would you tell him to have a rest first and then ring in and see how he feels?

Ms Nation—Yes. Our drivers are in pretty much constant communication with their supervisors. They contact them even when they are held up at jobs. For example, at time

siting and things like that, occasionally incidents do happen. They will call back into the office and let them know that something has happened.

Mr Brothers—I think if there is a weakness in the system, where we are identifying the biggest cultural change to adapt to fatigue management programs, it has been the supervisor. The supervisor is a customer service officer, he is a scheduler and planner, and he is also the driver manager, and he is compromised by those three distinct activities within his work task. It would not be so long ago when it was not unusual that those blokes operated under a book of lies to make sure that he complied with his customers' needs, and perhaps there was some pressuring there for the driver to take up the slack of the customers' needs.

What we have tried to do over the last 10 years at least is throw those books out the door, and we have—with the help of monitoring devices and the involvement of the driver in giving him autonomy in how we operate—schedules that now allow us to take some of that risk out and allow us some flexibility. We have the relationship with most of our customers these days—because they are buying in under their due diligence under the acts—where they understand that these occasions, even though they are rare, will occur. We have some recovery built into our systems. That is what we have diligently done with dedicated operations.

Mr McARTHUR—Regarding this 'fit for work' we are talking about, could you just give us a feel for how you as a company deal with the family arrangements and how you define a truck driver who is fit for work or not fit for work, or is encouraged not to engage in fatigue-inducing activities before he signs on. Could you also make a comment on the training of your drivers—I notice you refer to it in your submission—and what sort of turnover you have because you have adopted that attitude? You might just give us some comments on the daytime driving versus night-time driving and your assessment of the fatigue involved in that.

Ms Nation—I will focus on training to begin with. As far as our training is concerned, this is one of the reasons why it has taken a little bit of time. We would like to get all our drivers into the program eventually but obviously—having a large work force—that is difficult. What we have tried to do is produce a training program that is flexible for the type of industry we are in. It is very difficult to get all our drivers together in one room at one time and train them because it is just not practical in the industry. So what we have actually got is a CD-ROM based program that can be transported around to all our sites, to our rural locations, where we do have drivers based. That training program is covering two areas. It is covering this area for fitness for work and understanding your own body requirements and your own needs and signals of when fatigue is coming on—

Mr McARTHUR—Are they accepting this argument as being reasonable or do they say it is all theory from head office?

Ms Nation—I think to a degree a lot of the drivers have said, 'Look, commonsense'—and I think we hear that a bit—'we know when we're not right to work' and things like that, but the program has been targeted specifically at drivers, so it is at their perspective. We have actually got a separate CD which is focusing predominantly on the company's ideals and the company's direction as far as fatigue management is concerned. They have accepted

the program quite well. It was quite daunting at first. Obviously, being a computer based package it was a case of a bit of fear, if you like. A lot of the truck drivers had not seen things like that before but then they figured, 'Well, it's quite a good way of reaching all of us and you can run through the program at your own pace in your own time,' so it has been accepted quite well.

Mr McARTHUR—The driver turnover was the other bit of that question.

Mr Brothers—Driver turnover in our industry in Australia is somewhere between 25 and 28 per cent. Finemores run currently at 18 per cent and some of our divisions are less than five per cent.

CHAIR—What is the average length of time? We had evidence this morning that in America it was two to 2½ years, wasn't it?

Mr Brothers—I am not quite sure of the statistic but I am sure it would be a lot greater than that.

Mr McARTHUR—Where is the two per cent area?

Mr Brothers—I said less than five per cent.

Mr McARTHUR—Less than five. In what segment of the outfit is that?

Mr Brothers—Finemores has concentrated its business in niche business, probably in business where we do not compete in the mundane, easy-to-get end of business. Our largest division is in car carrying. Because it is niche, and because of the training that goes with the techniques, we have a very low turnover of drivers. In that division there are 480 drivers.

CHAIR—Does the fatigue management program consider employees' off-duty activities? Does the CD-ROM talk about that?

Ms Nation—Yes. It actually looks at the fact that our drivers play a role in the community and they have social requirements, so it is looking at quality of sleep in home life as well. One of the other ways that we are actually trying to get into their home lives is we produce an educational brochure on health and general health requirements. I believe it comes out quarterly. That is actually designed so that the drivers can take that home to their families and it covers not only driving issues but general health issues, nutrition—issues that are around in the community at the moment.

CHAIR—Can we have a copy of that CD-ROM to have a look at, please.

Ms Nation—Certainly. It is actually four CD-ROMS. We have a company focused CD-ROM, then we have units 1 and 2, and we actually have one that is specifically designed for supervisors that is outlining supervisors' responsibilities and their duty of care in assisting them in rostering and things like that. It is a package that was put together for us.

Mr McARTHUR—We have had a lot of discussion about the impact of fatigue at night-time versus daytime. Could you give us a comment on how the company views that?

Mr Pulver—We have found that there are certain drivers—and all the scientific evidence goes against what I am about to say—who prefer to drive at night and they only want to work on night shift, and for various reasons they find that better. But then when you probe in to how they do it, you get to a situation where they have got their thick curtains on their houses during the daytime and blokes even wearing earmuffs and earplugs and all that sort of stuff. One of the drivers in Perth said, 'All I ever want to do is night shift.' I said, 'Well, you must have a very quiet house' and he said, 'My wife minds children, that's her living.' I said, 'How do you do it?' He said, 'With earplugs and shut the curtains.' He sleeps very well. If the driver can get good quality sleep during the day there is no difference.

But the scientific evidence is going to tell you that your body clock will say there is a huge difference. We have certain drivers who cannot handle the night shift, so we try to keep them on day shift. We have tried to have two weeks on and two weeks off rather than a week on and a week off in most areas because we find that to be a little bit better because once your body starts to react to the change from the day to the night, it is probably better to keep them in that shift for a longer period.

Mr McARTHUR—Apart from that observation that some like it and some do not, have you got any particular view about putting people on night shift and giving them fewer hours of work because it is more difficult, or do you say, 'Look, the hours of work are about the same on day and night?'

Mr Pulver—In most of our operations the hours of work on day shift and night shift are the same. The only thing that happens is when they go through metropolitan areas, because the traffic flows have dropped off, sometimes their shifts can be cut by one to two hours.

Mr McARTHUR—The night shift?

Mr Pulver—The night one, yes. For instance if a truck is on a line haul and it runs out of Melbourne to Sydney, it will go Melbourne to Wagga and then change drivers and go on. That can vary. It is the same job, five to six hours each way for both shifts. If they are on metropolitan fuel distribution for instance, they will have three to four deliveries to do on that day or three to four deliveries at night. So the traffic is really the main thing that determines the length of time.

CHAIR—Just while you are on that point, you change over at Albury, do you?

Mr Pulver—No, Wagga.

CHAIR—You change them over, do you?

Mr Pulver—In most cases, yes.

CHAIR—I suppose you try to schedule trucks to arrive at a certain time but what happens if one truck arrives and there is no truck for him to bring back? Do you have a rest facility there?

Mr Pulver—In most cases we have a situation where the bulk of our drivers, other than metropolitan drivers, are based in country towns. We have got drivers at Nhill—

Mr Brothers—Horsham, Nhill, Mildura, Euston, Goondiwindi, Gilgandra.

Mr Pulver—Dubbo.

Mr Brothers—Toowoomba.

Ms Nation—What we are saying is we have tried to take away from the traditional area of having your employees located and their starting and finishing times at head offices. What we have done is use our changeover points as their base location and employ drivers specifically at our changeover points, so that it encourages them to have their home starts and home finishes. It is no secret that the quality of sleep is a lot higher when they are in their home environment and giving them that 14-day leeway gives them time to plan. So whether it be day shift or night shift, it gives them the time to plan their sleeps and they know they can have their home start and home finishes.

Mr McARTHUR—Can we just be clear on this changeover? If you are going from Melbourne to Sydney through Wagga, one drives to Wagga, he changes over with his mate and he drives back to Melbourne.

Mr Pulver—No, what normally happens is the driver from Wagga normally goes out of Wagga to Melbourne and then goes back to Wagga, so they are home again.

Mr McARTHUR—Right, I see.

Mr Pulver—So if the truck is delayed at one end, it does not matter because the driver is still at home.

Mr McARTHUR—All these bases you mentioned are the home bases where the truck operates from?

Mr Pulver—Yes, that is right.

Mr Brothers—In the majority of cases they are rural based, regional based.

Ms Nation—One other thing that we are trying to utilise as well is our customer's base. So rather than having a depot base or a rural base we are using the customer's base as our starting and finishing points. So if an abattoir—for example, Yanco—is our primary employment, then we try and base our drivers there, so their starting and finishing points is obviously where our customers' demands are. The good thing about having the customers on board with this is we can leave equipment there and things like that, so they do not have to take that extra hour to get back to the nearest depot.

Mr McARTHUR—So you are not changing vehicles and drivers at midpoint, though?

Mr Pulver—We do.

Mr McARTHUR—You do a bit of that?

Mr Pulver—We do a bit of that, yes, and we were doing that.

Mr McARTHUR—Is that working?

Mr Pulver—We were doing that at Tarcutta each night, like most people do, but now we run those shuttles in through Wagga because there are facilities there. In the case that you just spoke about, if one is late, that gives the driver facilities there.

Mr Brothers—The reason we did that is we have these drivers in $300,000 rigs and have probably got as much freight on the back of them, and all this responsibility unsupervised. What we are very keen to have, if we do change over in our rural bases, is supervision when they change over. That is another check to us to analyse the driver's capabilities or abilities and if he is looking a little bit fatigued or whatever we can then make that decision as to whether something has to happen.

Mr MOSSFIELD—You are saying that people are working out of their own places, where they live, but you do have facilities for people to sleep. What are the facilities? What are they like?

Ms Nation—There are units, aren't there?

Mr Brothers—We have as close as we can have to a motel unit. It is bed and showering facilities.

Mr MOSSFIELD—What is the feedback from the drivers relating to those facilities?

Mr Brothers—It is a matter of how you upkeep them. Obviously it is not the same driver using those facilities, so there is a big emphasis on hygiene. The driver likes to feel he is at home and he likes to make sure there is some sort of recreation facility there too. We are just endorsing and looking at televisions. Perhaps the company wants to have its little way too but we want to have a video type of system where training programs could be played, as well as watching the soapies.

Mr McARTHUR—I commend you on the quality of your submission. In the last bit you talk about the pilot scheme. As I read it, you were saying the pilot scheme did not quite come to finality because of one of the states. Could you just expand on that? I did not quite understand what you were saying in the submission.

Mr Pulver—This is a submission we put in to Queensland Transport. It is a book which tells all about Finemore. We interviewed drivers and operations people and wrote exactly what we did. We have Finemores vehicle transport operations in Wagga, vehicle transport in Melbourne, bulk grain in Queensland, livestock in Wagga, raw sugar in Bundaberg. We have

had Bundaberg cane sugar, Wagga refrigeration, Cowra refrigeration, Albury logging. We went through and said to everyone, 'What exactly do you do?' and detailed the freight tasks. That is most of what this particular submission was. There were a few instances in there where we said, 'Hang on, that's not really the right thing to continue to do.' One of the things it was not right to continue was livestock, so we no longer have that business.

Mr McARTHUR—From a commercial point of view or from a driver or niche market? Why didn't you want to pursue livestock?

Mr Pulver—The problem we had was we could not control driving hours. Even though we had a lot of spare drivers and the drivers only normally went away for four or five days, then came home and got out of the truck, we could not control the driving hours. Workers compensation was another problem that we had, with drivers loading and unloading livestock unattended on their own at night. We were very comfortable with most of the things we did.

What we did then was draw up five different schedules to cater for that business. At that stage there were 1,200 drivers that our fatigue management program was going to cater for in five different things. We put that to Queensland Transport and the committee up there. Most of the committee members were very positive about our submission and that is exactly what we have been doing. In most cases we have been doing these things for 20 years. We have not put something up which is a wish list of what we would like to do.

For instance, there was the Australia Post job we did from Sydney to Perth. We did that for eight years incident free. That operation ran two-up—two drivers in the truck at one time—and the way they did it was slightly outside the law. The first driver drove 14 hours the first day, the second driver drove 10 hours. The next day they swapped around. The law for two-up driving is 12 hours a day, so we put in a submission to have that changed, even though we had 14/10 and 14/10; that is how they actually worked. All the submissions we put in were on things we currently did and that we believed were safe practices to continue with.

Mr McARTHUR—That was rejected by one of the state governments, you say?

Mr Pulver—But the problem was that after that submission went in, one of the state governments said they did not like it. Two years down the track, instead of having five of those schedules, we have ended up with three of the schedules. The two schedules that were taken out were the ones with the most flexibility.

Mr St CLAIR—Which state?

CHAIR—It was New South Wales, wasn't it?

Mr Pulver—It was, yes.

CHAIR—Why is New South Wales ambivalent about this FMP program? It is not just you, it is a whole range of things, isn't it?

Ms Nation—Dangerous goods is another example. We are trying to get consistency and get our supervisors to understand one program. At the moment we have three running within our one company. We have our drivers who are doing the fatigue management program on, for example, a chemical contract. Half the drivers could carry package and half could carry bulk. As soon as they start carrying bulk, those drivers have to be on a different scheme. They have to be in transitional fatigue management because the dangerous goods would not be accepted by New South Wales. A supervisor could have staff running under three different programs, all with the same goal in mind, which is to manage their fatigue. It makes it fairly difficult.

Mr McARTHUR—Let us be clear about the legal implications. New South Wales has rejected the 14-hour/10-hour type program although it is practically better on legalistic award grounds.

Mr Pulver—Now we have the two-up in for the 14 hours. They have accepted that but it has taken two years to get to that situation. What they originally had was a lot of flexibility in each of our schedules but New South Wales has given us 14 hours maximum with one hour of additional flexibility. They have put a restriction on us using fatigue management on the Pacific Highway between Hexham and the Queensland border. They have also stopped bulk dangerous goods. If you are in a scheme, whether it be mass management or fatigue management, you are either in or you are out. We cannot ask our drivers to get to the Victorian or South Australian border and then go into a different scheme. We want one scheme, which is one positive we do have with the national regulation which has given an overall law around Australia. We want one law.

We cannot say that our drivers will not come through New South Wales because with most of our drivers, even metropolitan drivers, we will say, 'Can you run a load up to Wagga tonight from Melbourne?' It has really restricted us and the biggest restriction we have is the one that has been put on within New South Wales.

CHAIR—Why doesn't New South Wales view the FMP in the same way as Queensland? These are the seminal questions we need to address.

Mr Brothers—As a company we were very chuffed that we have the foresight of our chairman-elect, Ron Finemore, being the chairman of the ATA. Our current managing director, Tom O'Brien, is president of the RTA. We have been trying to lobby wherever we can to show some sanity towards fatigue management in New South Wales but I think the minister and the regulatory body have a narrow focus and are too rigid. Their state has the greatest transport need of all and it is the road network that we need to travel between Victoria and Queensland, if our destination is not New South Wales. All the advantages that our customers would get from efficiencies and doing it in a safe manner seem to be restricted by an impasse, being New South Wales.

Mr St CLAIR—Finemores and Nolans and a few of the others have been at the leading edge of the change to professional drivers for the last 20-odd years. Why is this sticking thing happening here with New South Wales? We are finding it on mass limits, on roads, on B-double access to local government roads and on a whole host of innovative projects your company and the industry have been involved in through the ATA—or the RTF, as it was.

Mr Pulver—The federal government has pushed the mass limits through and New South Wales has put a block at Coolac, which is just north of Gundagai on the Hume Highway, so you cannot get from Melbourne to Sydney. They have put a block at Coonabarabran on the Newell Highway, so you cannot get from Melbourne to Brisbane. You virtually cannot use mass increased in New South Wales. That flows on to everything that happens within New South Wales. They are very slow to move forward.

Mr JULL—Is it the bureaucrats or politicians or both?

Mr Brothers—There are a number of initiatives through federal or state bodies that have been involved with programs. Perhaps it is many programs in a short period of time—and when I say a short period of time, I suppose over the last four to five years. Secondly, depending on who you talk to and their regulatory bodies, whether they be engineers or the enforcement officers, they all have a different opinion. They are not united on any one subject in any of the schemes.

Mr St CLAIR—But isn't it also the attitude of the bureaucrats and people who regulate the system? When I was driving into Queensland, when I was checked for logbooks or whatever, the attitude by the people doing the checking in Queensland was vastly different from those who used to check me in New South Wales. Is that a culture thing? Where does that come from? We have heard in this inquiry about the absolute importance of managing fatigue in your industry, the shipping industry, airlines and all the rest of it, and it is rapidly changing. If we find that this state is holding all that back, then there are going to be problems. I wonder about the attitudinal difference.

Ms Nation—We just had an external audit for our fatigue management program. As part of that audit they looked at interception reports. In those interception reports the drivers actually get to comment on how they found the officer and it is blanked out so the officer does not get to see it when we fax it off, but Queensland Transport as the coordinator does want that feedback and we have provided them with that a number of times. The drivers are quite honest and in Queensland they are writing comments like, 'Great conversation with the officer. Knew all about the scheme. We discussed it. Great conversation.' We get to New South Wales and some of the comments are things like, 'Officer had no idea what fatigue management was. Officer didn't even know how to read my logbook. Officer just had a look and passed it back. Officer pulled me over because I was in a Finemores truck.'

Comments like this are actually coming back from our drivers and I am putting all that forward to Queensland Transport because they said they want this feedback. I have provided it to them but as yet we have not heard anything back. I am not quite sure what they are to do with it but it is definitely starting to show in those. That is a limited number of interceptions. It is not like it is happening commonly, for the amount of trips we do, but out of the ones that are happening the drivers are definitely providing us with the feedback.

Mr MOSSFIELD—Are you providing the same feedback to the New South Wales people?

Ms Nation—We have to fax it off to the appropriate authority, which in this case is Queensland Transport. They told us that they do forward it on to the relevant authorities. We have not had any feedback as to what has been done with it but there is definitely a trend.

Mr MOSSFIELD—What do we need to do to try to get New South Wales more receptive? Do you have any suggestions you could make to this committee about what we could be doing in this regard?

Mr Brothers—Through the ATA and the New South Wales RTA we have been trying to get the message through to the minister and his regulatory bodies. I am not sure what else we can do. The benefits are there. The statistics are showing that there are benefits all around. It just means a bit of insanity is prevailing.

Mr MOSSFIELD—In your negotiations with your own employees, what role does the union play in fatigue management?

Mr Brothers—We have enterprise bargaining agreements with all our employees. They are invited as participants of that process. One, the important thing is that the agreement is between the company and its employees. Two, we have a reasonable relationship with the Transport Workers Union and generally they are positive to the cause.

Mr MOSSFIELD—They sit in an advisory capacity.

Mr Brothers—That is right.

Mr McARTHUR—Who represents the company and who represents the workers in the enterprise agreement?

Mr Brothers—We have a consultative committee that is made up of both the workers and management. They sit regularly, monthly, and our EBAs are part guarantee for improvements to conditions and at least 50 per cent of them are performance based, KPI based, so we are all about improvement in the workplace for safety and security of employment.

Mr McARTHUR—So is there a variation of the workplace agreements from employee to employee? They are not just the same across the board?

Mr Brothers—No, there is a generic part of our intent with all EBAs. There is a component, but they are site specific in the task.

CHAIR—For example, the Bundaberg Sugar contract.

Mr Brothers—Yes.

CHAIR—All the drivers under that pattern would follow the same system.

Mr Brothers—Correct.

Mr Pulver—And they have their own consultative committee, so it is not someone sitting in Melbourne or Wagga or something. Within each work group they have their own EB and they have their own consultative committees.

CHAIR—Obviously the sugar task is 24 hours a day, so you have to have trucks on the road all the time, but what is your general pattern in terms of hours and rest days? Do you have any benchmark against which you try to operate or does it just alter according to the task?

Mr Brothers—They vary.

CHAIR—You say you spend a lot of time on lifestyle and having the drivers home and things like that.

Mr Brothers—Yes. Some tasks are predominantly driving and some tasks have a greater component of loading and unloading. We have done some studies with Monash University. We did some studies with Anne-Marie Fayer and Anne Williamson as consultants, and working with them in their government capacity, looking at fatigue patterns. Depending on the task, we have come to an understanding of what is an appropriate timing, a lenience of work patterns, and it really goes beyond that again. There is another level underneath. All our people are individuals and they all have different capabilities and abilities. We have to take that into account and that is what we were trying to do in our submission to the Queensland government in our fatigue management program submission, to make sure that we definitely incorporate that in the scheme.

Ms Nation—It is important to note that the hours scheduling is flexible and is always changing. An example is one of the abattoir contracts, the one that goes out of Yanco. The supervisors are in constant contact with the drivers. There were even changes with the opening of the Citylink and the ring roads and things like that. That feedback came back and that affected the drivers. It affected them positively, because it actually took time off, but that feedback was taken on board. They had problems with queuing at the wharves and things like that, and they went back to the supervisor and looked into going down the night before and sleeping in Melbourne and then being prepared to hop in the queue the next day and things like that, and what worked best for the drivers.

It is actually quite flexible and the supervisors are taking on the feedback and altering the schedules to coincide with what the drivers are telling them. Supervisors are not out there all the time, so the drivers are our best point of call. They are the ones who are telling us, 'We don't like these hours' or 'We don't like leaving the night before' or 'We'd prefer to leave the night before.'

Mr McARTHUR—Are there any elements in the enterprise agreement that militate against fatigue—for instance, being paid by the hour or overtime—that encourage people to spend longer at the wheel?

Mr Brothers—We have adapted the EBA in a lot of cases. We have been working under the enterprise bargaining process for the best part of six to seven years now. Yes, there has

been more reward for drivers doing fewer hours or less mileage these days. The reason for that is to counter that loss of earnings out of the productivity awards that we operated under.

Mr McARTHUR—It is quite an interesting concept in this whole argument that you are actually paying them more and keeping your safety regulations right and doing less mileage to stop fatigue. Are you winning that argument within the company and with the drivers?

Mr Brothers—Yes, we are. It is a fine line, it is a balance, but it is only working with the drivers, the employees, and working with the customer so that we can get more efficiencies out of both ends of the supply chain to enable us to be able to afford those payments.

Mr St CLAIR—Competition is great. How do you get on in Queensland competing against Queensland Rail transport drivers that do not use logbooks?

Mr Brothers—Queensland is part of our growing business actually; it is a growing state. We seem to be competitive, but obviously the North Queensland leg has its problems. I think that rail is very competitive up there, and obviously the access to load utilisation is a problem.

Mr St CLAIR—I was thinking more of the trucking fleet which apparently operates in Queensland without logbooks.

Mr Pulver—They do not affect us at all. I do not think there are any areas where we really compete against Queensland Transport as far as truck against truck is concerned. The biggest noise you hear about Queensland is their freight for cattle. That is what the biggest problem is at the moment with Queensland Rail.

Mr JULL—Did you devise this whole program yourself or was it based on something you saw overseas? To your knowledge, how does it compare with what might be happening in North America or Europe?

Mr Brothers—It really comes back to the fact that we are practitioners, I suppose. I come from a family business, and the founder of our company was a practitioner as well. I think it comes from those grassroots. We know that we are all different, that we are all individuals and that we have different abilities and capabilities. We are not robots. We do not turn on and switch off. Some people have a little bit more agility than others. We just felt that working under legislation that turns you off and turns you on is probably a worse component of fatigue management than what we are advocating.

Ms Nation—Some of the activities that are happening overseas are probably a little bit more advanced than what we are trying to play with here as far as prescriptive hours, whether it is 12 hours or 14 hours. One of the activities happening overseas which I think we need to start to get ahead with in Australia is looking at technology, for a start. They are looking at different equipment that you can fit in cabins to assist drivers. We know from a lot of studies that drivers do not recognise their own fatigue or do not recognise that critical point where they are past it.

They have looked at a lot of technology overseas which is either probably expensive or unavailable in Australia at the moment. They have looked at technology and recognised when the driver is past that critical point. They have also, I think, put in place similar legislation to our OH&S legislation in Australia. They have looked at that risk management based approach overseas and are looking at drivers managing risk or managing legs of the risk rather than going through prescriptive legislation, which is definitely where we need to be heading. We need performance based legislation, looking at risk management approaches, just like with manual handling and things like that.

We used to say you can carry 15 kilos if you are a male or 10 kilos for a female. We know that does not work for everyone. We are all different people, with different body sizes and different abilities. They have moved towards manual handling legislation in Victoria that says, 'Assess the task, have a look at what you're able to do, and put controls in place to control those risks.' What we need to be doing with fatigue is looking at the individuals, looking at the tasks, finding out what the problems are and then putting controls in place. I do not think saying a 12-hour or a six-hour break or things like that is the approach that is going to fit everyone because it is just not realistic. The noise legislation and manual handling legislation and all the other legislation have recognised that and taken steps to move beyond that. It has given the duty of care back to the employers and said, 'Well, it's your duty. You guys work out a way to do it and tell us how you're making it safe.'

Mr MOSSFIELD—You would still support a safety net legislation that enables you to build—

Ms Nation—There is no reason why we cannot set boundaries in place. Obviously, because of the high risk factor of the task we are doing and because, unlike a normal workplace, our workplace affects the community, the community would never accept a broad-brush, free, 'Off you go' approach, but there is no reason why we cannot set boundaries in place and then get employers to coordinate how they are going to function within those boundaries, definitely.

CHAIR—My colleague just said, and I agree, that we may need to get you back. We have gone well over our time and some of us today, regrettably, are on a very tight time limit ourselves and we have Coles Myer waiting to give evidence. I would like to thank you for your evidence today. It has been very helpful—

Mr JULL—Very good.

CHAIR—and very professional, as indeed was your submission, and a lot of the things you are addressing are the sorts of things we heard from the overseas experts, so I would not be too critical of yourselves. You are certainly going down that track all right.

Mr JULL—They speak well of you, in fact.

CHAIR—Could you keep in touch with the secretariat. I cannot tell you exactly when, but we might get you back for another half an hour or 40 minutes some time in Canberra if that would be acceptable. If we have any questions in writing, I trust you will be prepared to

respond to those. Also, you will receive a *Hansard* proof copy of today's proceedings. Thanks very much again.

[2.15 p.m.]

BEAN, Mr Ken, General Manager, Coles Myer Logistics, Coles Myer Ltd

ROBINSON, Mr Dennis, National Transport Manager, Coles Myer Ltd

CHAIR—I welcome to the table Mr Dennis Robinson, the National Transport Manager for Coles Myer Ltd and Mr Ken Bean, the General Manager of Coles Myer Logistics. You will be aware that the committee does not require you to give evidence under oath, but these are proceedings of the parliament and deserve to be treated with the same respect. Any false or misleading evidence is taken as a contempt of the parliament. Are you going to lead, Mr Bean?

Mr Bean—Yes, I thought I would. As we do not have a submission, I thought we would—

CHAIR—Could you give us a 10-minute overview of what you want to say and then we will break into questions. Can you do it in 10 minutes?

Mr Bean—Yes, easily.

CHAIR—A maximum of 10, yes, and then we will interact with you.

Mr Bean—I thought I would introduce the company and then Dennis would give you the technical details about our inbound and outbound transport management. Coles Myer Logistics Pty Ltd is a wholly owned subsidiary of Coles Myer Ltd and we have got 3,700 employees. We have 43 distribution centres across Australia and New Zealand. We service about 2,000 stores and the range of our business is such that we do dry groceries, general merchandise, apparel and footwear, frozen and chilled goods, meat and fruit and vegetables. Of our distribution centres, 60 per cent are company controlled and operated and 40 per cent are contracted. All of our transport is outsourced. We do not operate any heavy vehicles at all in our company, but we operate under contracts with several agreements with all of our transporters.

That is basically the company we manage. I thought Dennis could talk about the inbound and outbound because they are separate for us and we manage them differently. He can give you the technical details. Perhaps you can ask questions of both of us about that later on.

CHAIR—Sure.

Mr Robinson—I will touch on the inbound transport first. The majority of our inbound transport for our distribution centres is what we call free into warehouse trading terms. That means that the cost of transport is included in the cost of goods and, therefore, the goods are actually delivered into our warehouses by the supplier at the supplier's cost, using the transport company, obviously, that he wishes to use because he is paying for the freight. An example of how we interact with that and how we schedule inbound transport deliveries—if I take groceries as an example because it is the largest commodity that we deal in—would be that within each of our grocery distribution centres we have what we call a rebuying team

because they are replacing the orders for the goods that have been sold. They place a replenishment order which has come into place by a trigger within the warehouse management system. When we get down to a certain level, which is based on X amount of weeks sales before that, they will place an order on the supplier.

When they place that order on the supplier, within the system it says that if they have ordered this product on a Monday, they know that there is a lead time to allow for it to get into the warehouse. If we say, for example, this particular lead time is four days, if we place an order on a supplier on a Monday we would be expecting delivery of that on a Thursday, for instance. That differs between suppliers, where they are based and which distribution centre has placed the order, depending on distance. The important thing to be aware of there is that we have not determined the four days. In our main buying office, when they have negotiated with a supplier and it has been decided that we are going to range that line in our stores, one of the criteria the supplier has to advise us is the lead time he needs to be able to deliver that to us so we can put that into our ordering mechanism.

The supplier obviously takes on board the volume of stock he normally holds, any manufacturing time, any time that he needs to hold that stock for whatever reason—quality checks or whatever off-site—and then he would factor in the actual physical transit time of getting it to our location. So he actually advises us of that time and that information is then put into our ordering systems. Then when the rebuyer has placed that order, which would either be placed electronically, or actually by the phone or by fax, the supplier is then reminded that our expectation is we are going to get it on Thursday.

Once the supplier then is organising transport to get it from his facilities to our distribution centre, he then generally passes over the delivery time requirements to his transport company. His transport company then knows via the supplier he has to deliver it to us on Thursday and they ring our receiving office to get a time slot. For example, if we take our eastern suburbs grocery distribution centre at Hampton Park in Victoria, they actually receive 24 hours a day, 6½ days a week. When that transport company rings in, he would advise the receiving officer of a preferred time. He may want to deliver in at 4 a.m. or he might want to deliver in at 10 a.m. or in the afternoon or whatever.

Obviously the receiving office have a schedule, a grid of all the slots available, and they will try and fit him in as close as possible, if not exactly on that time. If that time is not available because it has already been pre-booked, they will offer him a time as close to that as possible and then he will either accept it or reject it. That is basically how the replenishment cycle works in our distribution centres. There are some slight variances in some of our other distribution centres where we do not have rebuy teams within the warehouse and orders are actually placed through a buying office. In the main that is for our general merchandise distribution centres. In those centres generally there is more lead time allowed anyway because the stock turns over much more slowly and we carry much larger reserves relative to that. With regard to our outbound movements, our actual deliveries to stores or where we are transferring stock—

CHAIR—That is from the warehouse to the store?

Mr Robinson—From the warehouse to the store.

CHAIR—Is that on contract as well?

Mr Robinson—Yes. As Ken said, we do not actually operate any of our trucks at all and we have not done, I think, for 25 years. We have transport contracts with various transport companies in Australia for various areas. We will have a metropolitan transporter, main transporter for, say, our grocery. If we use Victoria as an example, we use Linfox to do our local and the majority of our country grocery work. Clelands provide our freezer dairy distribution and they actually have their own trucks and we have a warehousing agreement with them, we have a transport agreement with them. Costas do our fresh produce and we have an all-inclusive agreement with them. Basically with our grocery operations, we have a permanent fleet which is supplemented through the transport operator casual vehicles to meet our instore requirements.

When we are determining schedules for stores, we actually work back from the store. Stores roster their staff to receive merchandise and they have a preferred time. Obviously all of that washes out insofar as every store in Victoria cannot get its delivery at 5 o'clock in the afternoon. But basically we take on board what we have negotiated as an agreed time at the store and we work back from that to allow for the order collection time of the store, when they are going to transmit that order, the time it takes for that order to actually come back into the warehouse—because even though it is electronic, there is a time lag of going through the various black boxes, et cetera—the time that it takes to pick that order and then the time it takes us to consolidate, dispatch that order and the transit time back to that store.

CHAIR—There are two issues that come up and I would like you to comment on them. The first one is: notwithstanding the fact that you endeavour to strategically place the slots, there is a criticism that transport companies are held up by warehouses and by stores. What do you do to eliminate double bookings and the like? Probably the worst criticism we have had so far is that a lot of companies who require transport place those transport companies under unrealistic demands. What do you do to eliminate that?

Mr Bean—Let us take the first one. There is no doubt that over the past 12 months or so there have been delays getting into warehouses and things and that is generally caused by seasonal peaks or inclement weather. We can have a DC getting flooded or we can have a whole myriad of things that happen—our computer system might go down. By the time you get to the point of managing that, vehicles are already on their way, slotted to move in and it happens. So it is one of those things where you are on the fly. You say, 'Well, how can I manage this?' and the best way to do that is to get through and receive as much as you can in the day it is happening but then reslot over the next few days to get it back into sync again.

CHAIR—Let us say you have got a limited queuing business there, but you come to the realisation that you have had a truck from some company that is not going to get through in a reasonable time. Do you advise that company so the driver can have rest periods and the like?

Mr Bean—Are you saying the driver is already on the road, or we know we are behind?

CHAIR—He might even have arrived and you have got a queue because of some problem. Rather than just let him wait his turn do you ever say—

Mr Bean—We give them the option.

CHAIR—'Come back at six in the morning.'

Mr Bean—Yes, try and reslot them—absolutely. When he gets to the gate and we know we are three, four or five hours behind we would say, 'This is our position. This is where we are. Do you want to try and reslot your load? Do you want to wait in the queue? The option's yours,' and try and manage it that way.

CHAIR—Okay. What about the second problem? Sometimes a company will place the transport operator under unrealistic time lines.

Mr Robinson—Are you talking about outbound to our stores, deliveries from our warehouses to our stores or—

CHAIR—No, mainly from your suppliers to your warehouses.

Mr Robinson—Right. We do not directly get involved in that. As I say, when it is agreed that is a warehouse line we are going to slot, the supplier has given us a lead time that we work by. If we had a situation where a supplier was committed to delivering to us by Thursday and for some reason he had had a manufacturing problem, his equipment had gone down or for some reason he could not get hold of that stock for us and he was going to be delayed, we would expect he would advise us that he is not able to meet the due delivery date. I do not think—and, of course, I cannot say for sure—we would have any supplier that would instruct their drivers to try and make up time on that basis.

CHAIR—You would not put a time on it?

Mr Robinson—But we would not have visibility of that and we certainly would not put any pressure on them in that regard.

Mr Bean—All we have is a time window that we are receiving the vehicle to. What happens at the back end of that, our expectation is that is in the manufacturer's time.

Mr Robinson—If we are expecting that order on Thursday and as we are working through the week we are filling up all of our time slots and everything else to be able to schedule labour and equipment and basically organise the day, the last thing we would want is for a supplier to deliver in a day earlier anyway. That would be an interruption. We are not going to run out of stock because we have already, in our reordering systems, allowed that we are going to get it on Thursday with the appropriate buffers of stock anyway. So it would not benefit us one iota to get it in early. In fact, we would not be able to receive it in. We would probably have to tell him to come back.

Mr JULL—When selecting a contractor, what criteria do you use? Is cost all important? What other factors do you take into consideration?

Mr Robinson—No. Generally speaking, when we are nominating a transport company that is going to work for us, we do it through a tender situation. As a general rule, because we are a fairly large user of transport—at Hampton Park alone, for example, we push out of there a thousand pallets a day, and that is just one DC servicing one area—by default it tends to lead us to only deal with the larger transport organisations anyway, and I think we would all agree that the larger transport organisations are fairly reputable, professional organisations, so we have a feeling of comfort in that.

Insofar as when we put the tenders out, cost is certainly a factor to us, but we actually consider the overall service package. We would not want to be associated with any transport companies that did not have a reputable and professional reputation. In most instances through our marketing people they want to put Coles Supermarkets or K-Mart or Myers on the side of the trucks and we do find that if any of their drivers have cut off Mrs Smith we actually get the call first. We take that seriously because, first of all, we want to assure Mrs Smith that it is not our driver, but we do not walk away from our responsibility there. We will make sure that we contact the transport company. They confirm if that was the driver and they go through their counselling processes. It is the sort of thing that Finemores were touching on, who do some work for us as well in New South Wales.

Mr Bean—You might want to mention, too, we have a code of conduct that we have put together. I do not know whether you want us to leave a copy with you on that, but that goes with it, and talks about the occ. and safety and the issues around that we would require in those sorts of matters too.

Mr St CLAIR—Do you 'own' the forklift drivers in your distribution centres?

Mr Robinson—Yes, in our company operated ones.

Mr St CLAIR—And they are on a 24-hour basis on some of these distribution centres, aren't they, on receiving? I thought you mentioned that.

Mr Robinson—Yes.

Mr St CLAIR—Do you have any form of fatigue management for those drivers in that capacity? Is it something that you would think of, that they are operating that sort of machinery?

Mr Bean—Not formally, but we certainly have an occ. health and safety procedure that covers a whole range of things, from the time they work, how they work, and the breaks and so on and so forth. We would not call it fatigue management. We certainly call it occ. health and safety practices.

Mr St CLAIR—Do you largely stay in the three eight-hour shifts with those people?

Mr Bean—Yes, pretty much, in most of our centres. Some do not operate 24 hours a day, some do. So where they do, we absolutely do.

Mr Robinson—You would probably find also that in the major distribution centres, whether it is the NUW or the SDA unions, they have fairly strict operating requirements themselves.

CHAIR—I think the committee's question was more about what pro-active policies you have. If you were here today, you would have heard various other witnesses say how transport companies are looking at being pro-active. Finemores was a good example. I think our question to you was that in those areas where you do have motorised transport, albeit as basic as forklifts, do you have a management program, quality of life program? Perhaps it may not apply so much if you are just on straight eight-hour shifts. But beyond that code of practice you do not have a special program?

Mr Robinson—No, I would not say that. At each of our distribution centres within those sites, through the personnel managers, we have occupational health and safety officers, we have committees—

CHAIR—You have a safety committee?

Mr Robinson—We have safety committees, my word, which are represented by—

CHAIR—And you have incentive schemes for the warehouses that have the lowest number of accidents and so on?

Mr Robinson—In some sites we do. We do not have an across-the-board incentive scheme, but it is something that we are looking at. In fact Ken might want to touch on it. He has just comes back from the States recently, and Wal-Mart.

Mr Bean—The whole occ. health and safety issue for our centres is extremely important. I would not just single out the forklift drivers, either. It is the whole distribution centre itself, with people on pallet drivers and things, so it is a whole range of things. We would not just isolate that.

Mr St CLAIR—I was trying to get to whether it was all done under a contract, a bit similar to your transport—

Mr Bean—No.

Mr St CLAIR—or whether they were your employees and, if they were your employees, whether they are doing eight-hour days. It is not as relevant as if it were contract.

Mr Bean—We certainly do have fairly strong occ. health and safety procedures throughout the whole DC, for everybody working there, and we are very vigilant about that.

Mr MOSSFIELD—Your code of conduct for the transport companies that work for you does not specifically relate to fatigue management issues as such, does it?

Mr Robinson—No, it does not.

Mr MOSSFIELD—Do we see any value in looking at that question?

Mr Robinson—Yes, absolutely—and in fact nothing to do with the fact that we are attending this inquiry today—this was an initiative that the company put together. This was the first one we produced actually in September 1998, so it is having its first birthday. This predominantly was to alert people and educate people on how we expect them to behave within our distribution centres. This was particularly aimed at anyone who might enter our distribution centres—that is, people from the transport industry or it could be maintenance people or anyone coming into our site—what our expectations are, the major focus on the OH&S aspect of it.

It also then went on to cover areas like a Coles Myer harassment policy so that everyone had a full understanding of that, whether they are a visitor or whether they are an employee; goods in transit, conflicts of interest, et cetera. It was actually raised at a meeting two weeks ago by the authors of this booklet in Logistics that we should expand on it now to include such things, so we are actually looking at that and we're about to do a reprint of this because it is something that will be reviewed annually. That is something that we will be requesting our people to include in that.

When we introduced this, it was not something we just posted out to our transport companies or whatever. Within every distribution centre in every state we called in all our transport companies, we called in all our contractors and we actually had a workshop of walking through it so that they could see that we were very serious about it. It was accepted very well, and when we issued the final copies to the senior managements of all of our transport companies, they actually had to sign an acknowledgment that they agreed to it and that they would communicate that down through all of the people that would come in contact with us and so on. It was a fairly formal process.

Mr McARTHUR—We have heard some evidence before the committee that when things go wrong in the transport chain the drivers have to make up for the difference by breaking the regulations or speeding. Have you any policies and penalties and a demurrage type approach to some of your suppliers if things go wrong? What actually happens to the drivers and suppliers? Do they pick up the difference or are they just part of the chain when it goes wrong?

Mr Robinson—We do not have any formal penalties, whether it is on lateness of goods coming in or any formal penalties for lateness of goods if they are going out to our stores. We certainly monitor all of the activities through various key performance indicators that we have. An ultimate penalty would be loss of contract, I suppose, if it were a transport company that was just totally unreliable, but that certainly is not linked to—

Mr McARTHUR—What pressure do you put on the drivers if the drivers are an hour late because of some other cause that was beyond their control?

Mr Robinson—Nothing. We do not put any pressure on at all. In fact we are rather generous with our delivery window in stores. In our grocery stores we have actually set them at three hours, so if we tell Burwood supermarket that he is expecting his delivery at 3 p.m., that can be 1½ hours either side, and that is just for a local delivery. So they are pretty

generous. Insofar as our more long-distance stores, no, there is no pressure put on there at all. We do not just use road systems. For our North Queensland stores we use the rail system through Toll North now, which used to be QRX. In Queensland we do not have a road service of groceries that goes past Gladstone. We certainly do send by road certain perishable goods, but all of those times and schedules are based on the times that the transport company has supplied to us that he needs to meet in legal times, and allowing for all the necessary breaks and also allowing for a multidrop aspect.

Mr McARTHUR—You do not press the companies for better delivery rates, cheaper rates and sharper time schedules? We hear a lot of customers are demanding those sorts of things, disregarding the legalities.

Mr Robinson—No. It really would not work for us because—

Mr McARTHUR—Why are you different from every other customer who wants it delivered instantly?

Mr Robinson—I suppose we have to have a lot more discipline in our operations. If we talk about a supermarket, he will be getting deliveries from our grocery distribution centres. He will be getting deliveries from our fresh produce distribution centres. He will be getting deliveries of freezer and dairy and meat products. On top of that he is getting deliveries from direct suppliers. If we were to take a metropolitan store, they will receive anything up to 160 deliveries in a day. Obviously their major deliveries come from our distribution centres. What we do not want to do is have the vehicles clash. In other words, they have to process the stock. There is no advantage for us to crib an extra hour or two because our stores are not expecting them. As I said before, they have a delivery window and we try and ensure the delivery windows do not overlap.

CHAIR—By owning your own warehouses you control the strategy, so to speak?

Mr Robinson—Yes.

Mr Bean—If you think about a supermarket or any store we have, they will have staff in the store ready to replenish the goods. If you come earlier or later, the staff are scheduled to do certain things, so we try and sequence them in, and that is why we control the distribution to that point. But it is not that finite that a minute makes a difference.

CHAIR—You keep your windows reasonably open.

Mr Bean—Reasonably open, so that they can be met on the outbound side to stores.

CHAIR—That was very interesting evidence because we wanted some end user evidence. You are probably not the best example because you have got a pretty fair strategic position. We are probably looking for people who do not have that warehouse intermediary. You have broken up the task into two roles and that way you have been able to impose a certain measure of control. However, that is not in any way to diminish the value of your evidence. It has been excellent. We thank you for voluntarily offering to appear before us,

albeit without a submission, and if we have any other questions I trust we can ask you those in writing and you will respond?

Mr Bean—Certainly.

CHAIR—You will receive a *Hansard* proof copy of today's proceedings as well. I thank you, members of the public and members of the media for your attendance.

Resolved (on motion by **Mr St Clair**):

That this committee authorises the broadcasting of this public hearing and the publication of the evidence given before it this day.

Committee adjourned at 2.43 p.m.