C O R R E C T E D V E R S I O N

SELECT COMMITTEE ON TRAIN SERVICES

Inquiry into the factors leading to and causes of failures in the provision of metropolitan and V/Line train services

Melbourne — 6 October 2009

Members

Mr B. Atkinson
Mr G. Barber
Mr D. Drum
Ms J. Huppert
Mr S. Leane
Mr E. O'Donohue
Mr M. Viney

Chair: Mr B. Atkinson
Deputy Chair: Mr S. Leane

Staff

Executive Officer: Mr R. Willis
Research Assistant: Mr A. Walsh

Witnesses

Mr P. Bennett, director, and

Mr B. Luber, executive manager sales, Siemens Rail Services.

The CHAIR — Mr Bennett and Mr Luber, I welcome you to the hearing. As you are no doubt aware, the hearings are being conducted in relation to the factors leading to and causes of failures in the provision of metropolitan and V/Line train services. All the evidence being taken at the hearing is subject to parliamentary privilege under the Victorian Constitution Act 1975 and there is also some privilege accorded under the Legislative Council standing orders. However, if there were evidence that you led today that you were to go outside the room and repeat, that may not necessarily be covered by the same degree of parliamentary privilege so you do need to be mindful of that. All the evidence is being recorded by Hansard and in a couple of days you will receive a transcript and be able to correct any errors to that transcript, obviously realising that the substance of answers or material that has been provided to the committee cannot be changed.

We have your submission. Thank you for that. I would perhaps at this point invite you to make some introductory remarks if you wish to do so and then we intend to proceed with some questions.

Mr BENNETT — Thank you very much for inviting Siemens Rail Services and Siemens in general to attend this committee hearing. We are very pleased to be here and we are interested in sharing our thoughts with you. We have prepared a short presentation, after which we will be happy to answer your questions.

Overheads shown.

Mr BENNETT — Siemens has been in Australia for 135 years and has been providing innovative, technology-based solutions to meet society's most pressing needs. We are a world-leading manufacturer of commuter and metro trains, and in March 2000 Siemens was awarded a contract to supply 62 new three-car trains to Melbourne's metropolitan network. This contract was originally entered into with the National Express Group Australia (Bayside Trains) Pty Ltd. Our trains were specifically designed to meet National Express requirements for use on the Bayside train franchise. As a result we named them the Nexas trains. The first of the trains entered into service on 21 March 2003. Having demonstrated our ability to deliver on time and on budget — something that is not very common in the rail industry in Australia — an option for a further 10 trains was exercised by the Department of Transport to meet a need for increased train capacity and the anticipated additional demand of visitors to the Commonwealth Games in 2006.

It is of interest to us to point out to you that the insolvency of National Express was no impediment to us continuing to provide good support to the Department of Transport. Throughout that period we continued to deliver and maintain our trains. All 72 trains were delivered by January 2006.

Let me talk for a couple of minutes about the design of the trains. Our trains are designed for commuter operations, as opposed to long-distance, high-speed trains. They have superior, high-quality features. They consist of three-car sets — two motor cars and one trailer car. They are DDA compliant, in particular allowing wheelchairs to move right through the train. The aisle is wide enough for wheelchairs to move all the way through the train. We have wide open gangways, which I will come back to later in the presentation. This not only provides the experience of wide open space but also gives enhanced security while allowing the train to operate with partial air conditioning failure, which I will also talk about in a few minutes. Our trains are equipped with airbag suspension, providing superior ride comfort, as opposed to other new trains on the network. They are constructed from long-lasting stainless steel, which reduces the lifetime cost, which is also different from other new trains on the network. They have extra-wide doors, which we designed especially for National Express and at its request, to allow faster entry and egress of passengers.

We have a seating layout that provides increased leg room and passenger comfort. We have installed anti-vandalism features, including graffiti-resistant panels, to minimise down time for cleaning these panels if they are vandalised. The trains contain substantial local content, which was fitted at Newport workshops prior to commissioning. We have ergonomically designed seats made from aluminium frames, with separate seat and back cushions, which are easily exchangeable, using a vandal-resistant fastening system. Importantly, the driver's cab was designed in close collaboration with the operators and drivers.

Turning to Siemens Rail Services: at the start of the franchising one of the requirements was to be able to hand over the business to any successor operator, and therefore we formed a separate company, Siemens Rail Services (Bayside) Pty Ltd, which is a special purpose company for maintaining the Siemens Nexas trains. Siemens Rail Services was contracted to maintain these trains under the fleet maintenance agreement for a period of 15 years, which was subject to re-franchising.

What do we do? We perform the preventive maintenance on the Siemens trains in accordance with the agreed rolling stock maintenance plan. We also undertake reactive maintenance as and when needed for a fixed, lump sum price based on different kilometre bands. For your information, the Siemens trains travel between 650 000 and 900 000 kilometres per month. We have key performance indicators in the contract for availability and reliability, and we have consistently met these performance indicators through the maintenance period. We were very proud of our performance and in fact that of the whole rail network during the Commonwealth Games, when, as you may know, Connex came together with the DOT, the unions and UMTL, the maintainer of the other trains and the network, and Siemens. During this period we had an exceptionally good performance of the whole network. This just proved to us what can be done with excellent cooperation between all the parties.

We thought of particular interest to the committee would be what we could learn from the fault reporting system that is used throughout the Melbourne train network. If you look at the statistics, and these are only the statistics that we see as the maintainer of the Siemens trains, in descending order of occurrence we have no-fault-found events, which average about 213 per month — these figures are taken over a year and divided by 12, just to give you some indication — we have vandalism events, of about 110 per month across the Siemens fleet, and of the remaining faults, 65 faults per month are system faults. These would be a combination of windows, lighting, couplers, closed-circuit television, public announcement, air conditioning, doors, pantographs et cetera. To give you some metrics, this relates to 0.03 events per train per day — in our opinion not a very high number.

We have summarised here on the right-hand side of the slide Siemens' views on causal factors leading to failures in the provision of train services. I will cover these in subsequent slides in a little more detail. Firstly, there is vandalism. Secondly, there is the number of different cab layouts in the four train types. There is the poor condition of the infrastructure including low adhesion areas; the 1500-volt overhead supply voltage failure; signals passed at danger; and speed limits. The next two slides give more detail in these areas I have just discussed.

Turning to vandalism first, vandalism of the cab is a frequent occurrence causing disruption to the system. Secondly, there is the number of different train types on the system. There are four train types, each with different driver controls, operated on the Melbourne metropolitan network. Train drivers are required to switch between the train types at short intervals. As each train is remarkably different, particularly in the fault display, this can result in misunderstanding of fault reporting and incorrect operation.

Thirdly, there is the poor condition of the infrastructure. It is no news to you, I am sure, that the public transport infrastructure — and I am talking specifically of the rail infrastructure here — is aged and requires upgrading. It needs renewal and improved maintenance. Areas of very low adhesion are found on the network, and this is significant when we talk about the Siemens brake issues. Specifically, level crossings, points, tracks, sleepers and substations are in need of replacement.

The 1500-volt overhead power supply has been subject to numerous failures. The faults in the tracks and substations lead to unreliability of the 1500-volt supply. As a bit of an explanation here, some of the faults that are found not only Siemens trains but other trains that have sophisticated or modern protection techniques are seen to be train failures when they are not train failures at all. They are only the trains protecting themselves under low line-voltage conditions. We need to distinguish specifically here between train failures and infrastructure failures.

We heard about signals passed at danger in the presentation and discussion with the PTSV this morning. Here we are using a rather generic description of a SPAD, which is passing any signal. Of these, platform overshoots in the Siemens Nexas trains have received heightened media attention; however, attention needs to be paid to all SPADs in all types of rolling stock. For SRS the occurrence, frequency and cause of SPADs is difficult to analyse due to the lack of a transparent reporting system that is capable of critical analysis.

On speed limits perhaps this is not the explanation you were expecting. Perhaps you were expecting me to talk about the limits imposed on particular trains at particular places. What I am talking about here is that one of the difficulties in Melbourne's train operation is the set timetable for all weather conditions, which makes it difficult for drivers to set speeds appropriate for the prevailing conditions. It is quite common in other rail systems under degraded conditions for there to be an acceptance that drivers slow down and that timetables can be extended. Here we do not have that. We have a standard timetable for all weather conditions.

What about some solutions? We need to further enhance the performance of the infrastructure equipment as well as the training of personnel, including applying newer, more effective technology. We would suggest that increased focus be placed on point and level crossing upgrade, track grinding — which does not take place in Melbourne — rail replacement and even sanding solutions to improve adhesion.

There are safety solutions. A new train radio system is being built by Siemens today for Victoria. Level crossing technologies we heard of earlier. Automatic train protection, also discussed by the PTSV, is another very important advancement in improving rail safety. Signalling systems and electrification solutions are also in line for upgrade.

With rising urbanisation placing increased pressure on our existing rail systems, the provision and education of safety-critical rail technologies is not only our social responsibility but is a priority for us all. At this point I emphasise how critical safety is for the whole rail community. We share the views held by the PTSV earlier that safety is the no. 1 priority for the industry.

We are looking to the future. In August 2009 Siemens concluded negotiations with MTM, the successful franchisee to replace Connex, to continue managing the maintenance of the Siemens trains for an initial three-year period. This arrangement will enable Siemens and MTM to share their knowledge and focus jointly on providing a superior train service. Siemens is confident that, together with the new franchisee — MTM — and the Victorian government, improved measures will be implemented in the system to manage low-adhesion conditions occurring from time to time.

In conclusion, I pointed out that the Siemens Nexas trains are high quality with a number of superior features over other trains on the system. The brake system of the Siemens Nexas trains performs well and is not the root cause of platform overshoots. Further, SPADs are experienced by all trains over the entire network. The causes of each SPAD must be carefully analysed and a transparent reporting system used to compare differences and similarities in order to establish the root cause.

Siemens Nexas trains were unnecessarily withdrawn from the revenue service during hot weather. If I could explain this a little at this point, because I am sure the question will come. As I mentioned earlier, the Siemens trains have wide, open gangways between the cars, by design. Each car is fitted with two air-conditioning units, one at each end. Each air-conditioning unit has two compressors, and if there is a failure of one of these compressors — one of the air-conditioning units — because of the wide, open nature of the train, we still meet the specified air-conditioning performance. There is no need to take a train out of service if one air conditioner fails.

If a driver walks through a train and feels it is slightly warmer at a particular spot, that may mean that the air conditioner has not failed but is in a pump-down rather than a cooling cycle at that time. There are many reasons why the train should not be taken out of service for specific air-conditioning failure.

The Melbourne rail corridor infrastructure requires significant additional attention in regard to maintenance and upgrades. If the drivers continue to be required to operate trains with different cab controls on a frequent basis, they should be provided with adequate, ongoing support and training. There is a committee at the moment comprising Connex representatives, ourselves and others to look into the standardisation of the drivers cabs to the extent necessary to enable drivers to move from one cab to another.

Lastly, I repeat that Siemens is confident that together with the new franchisee, MTM, improved measures will be implemented in the system to manage the low-adhesion conditions which occur from time to time.

Mr DRUM — Thank you very much. That was very articulate and straight to the point. I am interested in the reporting system. You were, more or less, saying it is up to Connex or the new operator to produce a transparent and open reporting structure or reporting system.

Mr BENNETT — We currently see information on the Siemens trains. We have a little bit of visibility through the FMP on other trains, but we do not believe there is an equal focus on all the trains.

We have to get past the questions I heard earlier about the Siemens braking problems. Over the last couple of years we have had many people — our own experts, Connex's experts, the Department of Transport, PTSV, the office of the chief investigator — all looking at the train. We have no systemic problems in the train. In fact we

have not got brake failure. There is no overheating of the brake discs, they do not crack, they do not fall off, they are not underrated, the computer system does not go into a spin; this is not a question of a particular train having a fault. This is a question of heightened attention on the Siemens trains. When there is an issue, there is an immediate very strong focus.

We agree that every time there is a platform overshoot and every time there is a SPAD, there should be a full investigation. We are not making light of the seriousness of this at all, but what I point out is that we should not jump to the conclusion that it is an individual train failure. We should look more at the system, in particular where trains are sliding at particular points in the network where there is very low adhesion, which is what we are in effect talking about.

Mr BARBER — Given the distance between train stations in Melbourne coupled with the demands of the timetable, would you say the demands for acceleration and deceleration are higher or lower in Melbourne relative to other systems where your trains operate?

Mr BENNETT — Firstly, I do not have a complete knowledge of where our trains operate. I can give you my personal experience, my personal view, and that is that the acceleration and deceleration rates are not way out of line.

Mr BARBER — Not particularly demanding?

Mr BENNETT — No.

Mr BARBER — You talk about measures of adhesion, and I think you said there is a standard for adhesion of 4 per cent or 6 per cent. In lay terms, what are the physical features that make up adhesion?

Mr BENNETT — This is a very hard subject to talk about in lay terms. We have tried it quite a few times. What we are really saying is that like when you drive your car and come to a stop at a stop sign you are relying upon the grip of your tyres on the road in order to stop. As you would realise, if you brake gently, normally there is enough adhesion to stop on the line. If you brake hard, sometimes you would enable the ABS, if your car has ABS, or if it does not, you would skid to the stop. In other words, there you are trying to use more adhesion than there is available to you.

As you would recognise as a driver of a motor car, under rainy or icy conditions there is less adhesion at that particular point, and it may be difficult for you to foresee that. Unless it is known that there is always poor adhesion in that spot, you enter into that stopping pattern expecting to stop at the stop line, but unfortunately if you go over some low adhesion point, it will take you longer to stop.

Mr BARBER — But you are arguing there is nothing wrong with the functionality of your brakes.

Mr BENNETT — That is right.

Mr BARBER — You are effectively arguing it is on the rail side of the problem.

Mr BENNETT — No, what I am saying is it is the wheel to rail adhesion that is less than needed in order to pull up the trains.

Mr BARBER — Can we just fix the wheel or do we need to fix the rail, and what do we need to fix?

Mr BENNETT — A good start would be to recognise that there are points of low adhesion. All trains are affected by low adhesion. Then we need to look at what can be done on the rail itself in order to improve this adhesion.

Mr BARBER — What sorts of things would you do on the rail.

Mr BENNETT — Grinding and shaping is one thing. Some systems apply sand. This is common in high-adhesion locomotives, for example. Some rail systems around the world have trains that throw sand.

Mr BARBER — Our trams do it.

Mr BENNETT — Yes, exactly; the trams do it. By the way, that does not mean to say that every single train has to be sanded. Some trains running around the network would likely increase the adhesion on the track.

Mr BARBER — You are saying that 213 faults a month are coming back to you and you are finding 'no fault found'. You have a contract to maintain these trains, so I am presuming that those 213 no-fault-found incidences are a bit of a bummer for you, because they have to come back to the shop, you have to run tests, you find nothing and send them back out.

Mr BENNETT — They do not all have to come back to the shop, but yes, we have to attend each one of them**,** and we would like them to be much reduced because there will be less work for us.

Mr BARBER — You are saying they are largely on the human side, that the human did not understand what the fault light meant or there was some other problem somewhere.

Mr BENNETT — There could be all sorts of things, but a portion of the no-fault-founds are a misunderstanding of the indication.

Mr BARBER — I have had this for years when dealing with mechanics working on my car. You are saying it comes back to you. They say there is something wrong with it. You look at it, and there is nothing wrong with it. Where does that discussion go?

Mr BENNETT — If the no-fault-found result comes back repeatedly, then of course you are very likely to find a fault condition. But with good training and good understanding of the operation of the rolling stock we believe that no-fault-founds can be reduced, particularly if there is a will not to find a fault.

Mr BARBER — Sure. On a point of order, Chair**,** it would be great to get those examples of where there are variable timetables around the world in relation to weather conditions. If you could flick us some examples, I would like to look at one of those.

Mr BENNETT — Sure.

Mr VINEY — In your earlier evidence you indicated that there was no grinding on the Victorian system. My advice is that is not correct, so what is the basis of your evidence for that?

Mr BENNETT — My information has been that there is no regular grinding of the Melbourne network, but I am happy to stand corrected if that is incorrect.

Mr VINEY — Presumably Public Transport Safety Victoria would have the overall responsibility for making sure that was occurring; is that correct?

Mr BENNETT — To my knowledge the operator would grind the rails.

Mr VINEY — We will investigate that and have the committee informed more accurately, I guess. Putting these overshoots in lay terms, it seems to me there are three potential points of fault. One is the vehicle itself; the brake system fails for whatever reason, and that may be a combination of reasons. It might not be a complete failure; it might be just a less than adequate performance level. The second is obviously the adhesion element that relates to the train — that is, the wheels. The third is the adhesion element that relates to the track. Is that correct?

Mr BENNETT — Can I describe it slightly differently? The wheel-rail adhesion is one thing. It is the adhesion between the two surfaces.

Mr VINEY — Correct, but there are two elements to that surface, are there not? There is the surface on the wheel and the surface on the track, and it is how those two elements connect that creates the adhesion.

Mr BENNETT — Yes. But there are other reasons — —

Mr VINEY — So if there is a fault, it could be one or the other or both or a combination of factors.

Mr DRUM — Slime.

Mr BENNETT — But there could be some more reasons. For example, the train might have been going too fast.

Mr VINEY — Correct.

Mr BENNETT — For example, the brake might have been applied too late.

Mr BARBER — Can you not measure all that, though? You are logging that data, are you not?

Mr BENNETT — The trains were not designed to have a very extensive fault recording system on board. There is a limited fault recording memory, which was primarily designed for maintenance purposes. Since the start of this issue we have, however, enabled a fault recording system. Immediately after one of these incidents, if the driver remembers to push the button, there is data saved. The immediate past data is preserved. That is then downloaded by the maintenance staff and read.

In every single incident where the button is pushed we record the data. We send it to the operator, Connex, and they form a view from this data. What we can see from the data is when the brake was applied and how much brake was applied. We can deduce what the adhesion was. You cannot actually measure the adhesion, but based on the parameters that are recorded you can deduce what the adhesion was at that point.

Mr VINEY — I am struggling with something in your evidence and would like your comment on it. I do not know whether there are two or three elements, but in my layman's terms it is three: the system itself, the wheel and the track. Your evidence seems to be suggesting that it substantially sits with the track, the rail infrastructure itself. That was the tone of your evidence.

If that is true, why is it that the cluster of these overshoots is occurring with Siemens trains and not other trains on the system? If it is entirely down to the system, why is that occurring more substantially with your trains? This is not an accusatory question; what I am really trying to get at is: is there a problem with the interrelationship between your train sets and the track as opposed to other train systems and the track?

Mr BENNETT — You would not be surprised to know that this question has occurred to us many times too. One of the difficulties we have is that we have no data on the extent of sliding in other train types. This is what I was talking about earlier as an open and full analysis. Whether we call them platform overshoots, whether we call them SPADs or whether we call them sliding conditions, we are not stopping at or not braking at the rate expected or intended by the driver. I do not know whether there are more events on Siemens trains than there are on other trains.

Mr VINEY — Certainly as has been reported, that has been the case.

Mr BENNETT — I do know there have been a couple of clusters. In particular in poor weather conditions or light rain after dry spells there have been a number of sliding events. In each of these clusters we have analysed the train performance — by 'we' I mean Siemens, the Department of Transport and Connex — and found no fault in the operation of the brake system at that time.

Can I spend 1 minute to explain. The way the system works is that when the driver applies the brake, we have the brake on the two motor cars. Under normal, good adhesion conditions that is quite sufficient to pull the train up under normal operating conditions. Should the train enter a period of low adhesion and slide take place — obviously slide means that the wheels are going more slowly than the train is moving forwards — then there is a conversion to the pneumatic brake which applies on all the bogies.

If there is a brake on all the bogies rather than just the two motor bogies, then you can brake the vehicle with a lower available adhesion. The wheel-slip protection as we call it, or the ABS in automotive terms, has been proven on test to perform excellently and in fact to perform down to a very low level of adhesion. But you must remember that as soon as this ABS or WSP operates, there is an automatic release of the brakes, just enough to arrest the slide and then to reapply the brake again. But whenever there is any application of WSP or ABS the train will go further than the driver had expected.

The CHAIR — Can I ask about your work in training drivers and the understanding that operating personnel have of the equipment — What is the process you use particularly for new drivers to acquaint them with your trains and what ongoing training might you be involved in in terms of your trains?

Mr BENNETT — Generally we have trained the trainer. We have trained a few people, the operators, and the operators then train their large number of drivers. If I were to make another personal comment, I think a lot of this trouble started when National Express departed and Connex pulled the whole lot together. When drivers were asked to move from the Siemens trains to the other trains or vice versa they had not been trained in the train type, and that is when incidents started to occur in a greater number.

I am very aware that it is not easy for drivers to move from train types if they have not been trained adequately on the different operating conditions. We have made a change to a minor aspect of handling the Siemens train, the brake handling, in order to make it equivalent to the other trains. That is not to say the design was wrong, bad or at fault. Together with National Express, it was designed differently to the other trains. In order to have the train handle in that sense similarly to other trains we were asked, and were obviously keen, to make a minor change to the way in which the brake controls the final stopping point.

Mr O'DONOHUE — To go back to this issue of track grinding, presumably you have had exhaustive discussions with the operator, with Public Transport Safety Victoria and other relevant authorities about this issue. Can you perhaps elaborate on that point, because as you and Mr Viney identified, the condition of the track is one of the elements that is potentially responsible.

Mr BENNETT — I am happy to stand corrected. I do not work in the maintenance facility every day, but to the best of my knowledge there is no regular track grinding program in Victoria as there is in some other places.

Mr O'DONOHUE — Have you been given an explanation as to why that has not occurred?

Mr BENNETT — There is a lot of history in Victoria that it is just the way it is.

Mr O'DONOHUE — If I can ask an additional question, you said in your conclusion that your trains were unnecessarily withdrawn from service during the hot weather. We have heard from different groups — we have not heard from the union, because it declined to attend — about the hot weather. What is your view of why your trains were withdrawn from service, in your opinion, unnecessarily?

Mr BENNETT — One of the changes I am hoping will come from MTM — and perhaps this is a personal bias, because I work for an engineering technology company — is that I would like to see these things based on engineering judgement. I would like to see the chief engineer decide what has to happen, not a number of people in the operations. The chief engineer should decide whether the train is withdrawn from service.

The fault management protocol, which you have heard has been updated and renegotiated, is a very complex document — from what I have seen, it is 172 pages that the drivers are required to understand — and to recognise the full extent of these faults across the whole fleet, across the four fleets, is a tremendous task. Personally I believe it is broken down into far too many different levels of detail, and to my mind if under these exceptionally hot conditions the train could operate and the passengers were still able to get some good fresh air and breathe normally, maybe with slight discomfort and slightly increased temperatures, the train should have certainly been allowed to operate. Even today I think there should be every focus given to trying to keep the train in service rather than to remove it from service for any minor reason.

Mr LEANE — In relation to the breakdown of faults in the table you had, I personally understand the 'no fault found' degree, having worked on a big system that relies on electronics, flagging codes and all that as far as fault, but I want to touch on the vandalism and the types of vandalism that you get in your faults and the types of vandalism that can affect a train running.

Mr BENNETT — I am not an expert in this area, but there are seats, for example; external vandalism; vandalism in the driver's cab, which is inexplicable.

Mr BARBER — Put a lock on the door at night time.

Mr BENNETT — I do not know if it comes at night time, though. I do not know when it comes.

Mr BARBER — Point taken.

The CHAIR — I was interested that one of the points you raised was technology for road crossings, railway crossings and so forth. Obviously a number of incidents are occurring around the system from time to time

where there are motorists who are not clearing crossings and so forth, and there is concern about both the accident rates and also the consequent delays and so forth to the system. I wonder if you can elaborate a little bit in terms of the technology that can be deployed, that has been deployed or that is under test at the moment, and how that might contribute in your expectation and perhaps that of the commissioning groups to a more reliable service.

Mr LUBER — If you look at the level crossings, we are trying to move into the area of technology at level crossings and particularly into intelligent type of level crossings. Siemens worldwide is undertaking a lot of research into that, similar to what has been installed at Springvale Road and a level above that whereby you do have cameras or lasers or some sort of intelligent system without putting too much equipment at the crossing, because you do not want too much equipment there, so that you can get information. When there is some occurrence such as cars banking up on the crossing or a car stuck on the crossing, this information can be transmitted so that the train is aware of it. It is a difficult sort of technology because if a train is coming up to a level crossing and it happens so that you cannot stop the train, it is not possible, but definitely technology like that will reduce the number of incidents, and we definitely are involved in that sort of research and deployment to look at that aspect, because you cannot replace every level crossing with a grade separation. It is just not affordable.

Mr DRUM — Mr Bennett, in your conclusion you state that the Melbourne rail corridor infrastructure requires significant additional attention in regard to maintenance and upgrades. Can you be a little bit more specific on what aspects of the rail system need to be upgraded?

Mr BENNETT — One example that we gave in our written submission was that we see that the Siemens trains are hitting the hard stop. What is a hard stop? The bogie obviously moves underneath the train, and if the bogie were to move excessively, then it gets to the point where the body and the bogie touch each other; that is a hard stop. That should never happen. By design, if the network is within the specified parameters, there is no point that the body should touch the bogie in this hard stop point, and yet we are seeing areas where the two are coming in contact. This shows that there are areas of the network that are out of tolerance.

Mr BARBER — Too bouncy, like that; is that what you are saying?

Mr BENNETT — No, what I am saying is that curves may not be aligned or, yes, there may be dips in the track.

Mr BARBER — Are you able to tell which sections, or is it just that the thing comes back to the shop with a smashed whatever?

Mr BENNETT — We have, I understand, tried to find which points of the network are involved, but here we are using the train as a test tool. It is not intended to be used in this purpose at all.

Mr DRUM — And you would then make the Department of Transport aware of those?

Mr BENNETT — We talk to our customer, Connex.

Mr DRUM — But it is not their responsibility.

Mr BENNETT — Is it not Connex's responsibility to do everything on the network?

Mr VINEY — Good question.

Mr DRUM — Maybe.

Ms HUPPERT — Which raises an issue I had wanted to ask a question about, which is your relationship with Connex.

Mr DRUM — I would have thought the state of the track would be Connex's responsibility.

Mr BENNETT — Again I am subject to correction, but I think that Connex and its partners, as the franchisee, are responsible for the maintenance of the entire network.

Ms HUPPERT — Clearly your relationship in the train system is with Connex rather than the Department of Transport or other entities, so I think we should be looking at that relationship rather than things outside your area of responsibility. But it would seem to me from your presentations that there seems to have been — —

Mr DRUM — There is a different question coming.

Mr BARBER — Or some instructions from head office.

Ms HUPPERT — It is not a different question. You have talked about the good relationship you had with National Express and how you were hoping to have a good relationship with MTM. You have not actually commented on the relationship, but I understand there is a current contract arrangement and you cannot comment on what is under the current contract. I just wondered what you were expecting and why you think the relationship with MTM will make the difference that you have referred to in your last paragraph.

Mr BENNETT — What I am hoping to come out of MTM is a uniform organisation that has responsibility for the whole network under one management and in particular has some strong engineering capability.

Ms HUPPERT — But Connex has had responsibility for the whole network for a number of years, so that is not going to change.

Mr BENNETT — In the time that we have worked with MTM to date we have been impressed by its engineering skills.

Mr DRUM — Could you help us out with an opinion on what you consider to be the capacity of the current system? Again we have heard conflicting evidence from various witnesses about what the current capacity is of the system. Are we running the system at 100 per cent capacity now? Is there scope for better management? Will the new operators be able to come in and find additional capacity by running more trains, more often, more frequently? Or in your opinion is it already at or very close to full capacity?

Mr BENNETT — If I could take a small subset of that answer and say that every train that is not in the depot is one train that is out in the system able to be used. Therefore with improved mean distance between failures, including the 'no fault founds', we would have more trains on the network to operate a greater system. Personally I am not able to comment on whether the infrastructure is able to take significantly more services.

Mr DRUM — Which is the question we are trying to get to.

Mr BARBER — How many of your trains are in the depot as we sit here?

Mr BENNETT — I do not know how many are in the depot right as I sit here today, but we do have a maintenance program. As I pointed out, there is preventive and corrective maintenance. Trains must return to the depot on a programmed basis for their normal servicing. We would not want to see more than two or three trains at the depot at any time.

Mr LUBER — Maybe to complement the answer on that question, we have seen before from the Department of Transport's presentation that increasing the actual number of trains that can operate on the system with the introduction of automatic train protection is being looked at by the department, where you can have shorter overlaps and therefore increase the quantity of trains more safely but also increase the capacity of the network. That is something we support as a supplier, but also it was recently investigated in New South Wales and seen as something that could improve the capacity without having to build additional tracks, which is really costly.

Mr DRUM — Our evidence has been ranging between anywhere from very close to capacity at the minute to up to over 100 per cent additional capacity within the existing system. We are trying to find where the truth is.

Mr BENNETT — Could I ask Brian to also respond to a question that you asked an earlier group today concerning the Bendigo line and the axle counters. That is sensitive to me because we are the supplier of the axle counters.

Mr LUBER — I think there are two aspects to it. We were not actually involved in the fault finding. Mostly it was the communications system, which is not directly related to the axle counter system. But the availability of the system was questioned; there, that was inherent in the actual design. It was not in the actual product but in the way the product was structured in the system. Rather than having for a passing loop two lots of systems, there was only one. If that did fail for whatever reason — the communications system or lack of operations — the entire system failed. What we have just gone through — we are practically three-quarters of the way through — is redimensioning the system to increase the availability substantially, so that if there is some sort of failure, the system can at least continue operation safely.

Mr BENNETT — It has been now installed in the way that we would have recommended it to be installed in the first place. So we are talking about adding additional equipment in order to ensure that a failure of one item does not stop the train.

Mr DRUM — It is only four years late. That is good.

The CHAIR — Bonus answer. Can I thank you, gentlemen, for appearing before the committee today and for the information that you put before us in evidence. As indicated, the transcript will come through and you will have an opportunity to check the accuracy of that in respect of the comments that you have made. Thank you for being with us.

Witnesses withdrew.