I will try to tell you something useful about what we are doing in Europe. We are running a bit late, which, knowing something about European railroads, is nothing that I am unused to. I will remind you of what the English king, King Henry VIII, is supposed to have said to his wives: "Don't worry: I won't keep you very long." I will try to explain something about our situation in Europe. In some ways, as usual, we are a bit behind you in the United States, but there may be a few areas where we have something to say to you about our background, what our problems are, and what we are doing. I will show you some pictures in case you get bored.

George already said that I am responsible for an area called combined-transport; it means intermodal, really. But we have used the term "combined" to represent the idea that it is a combination of rail, road, and waterway—road always being involved, of course, for part of the trip. Combined-transport means about the same thing as intermodal.

Intermodal is something of a flavor of the month, particularly with politicians. I do not know whether it is that way here in the United States, but it is with us. It is a panacea for the ills of transport, and I am afraid there are plenty of ills, not only environmental ones. Rather curiously, and again I guess it is the same here in the States, a lot of the ills of the transport system are due to the success of transport. All you ladies and gentlemen here are far too good at your jobs, and people want to buy far more transport services from us than we can actually supply. The problem is the same in Europe. The real costs of transport in Europe in the last 20 years have gone down substantially. They have gone down because of deregulation, and you know about this. This was done because the transport industry needed to be a lot more efficient. People are restructuring their plants, thinking about what they want to do and where they want to live, and in doing so they use transport more and more—and they keep on wanting to do it.

We are faced with a situation where the ills of the transport system are brought on by the transport practitioners, like you, ladies and gentlemen. Obviously we have to think of a solution if we are going to keep ourselves in business, and keep me in business as well, which as far as I am concerned is equally important.
What is the European Community? At present it is 12 countries, and in January it will become 15. I work for a body called the Commission of the European Union. We are the executive body, and we try to develop policy for the EU. As of next year we will have 15 member states. You have a few more states here in the United States, and I imagine that federal policy doesn’t always agree with state policy. You can be sure that the same is true with us. But sometimes we do actually agree on things.

As I said, the problem we have had is that transport is too successful. What this diagram is supposed to show is that the rate of growth of the economy has continued to excel, while the rate of demand for transport, the top curve, has gone up even faster. I think that this is the picture in the States too. Basically, we are in the same situation—the economy has grown, and the demand for transport has grown quicker.

Will this continue? Our long-term forecasters, and I think Mr. Vickerman is one of those for you in the States, keep on telling us that this is the situation. But the only thing that is true with long-term forecasts is that, of course, they never come true, so do not believe anyone who tells you anything else. Even assuming that you do not believe the econometricians (and I used to be an economist so I know something about econometrics), we are facing a situation where the demand for transport is likely to increase if we can satisfy it. The problem is whether we can sustain that demand, in terms of environmental costs, land availability, and other considerations.

You know that the EU is something like the Northeast Corridor in the States. We are not lucky enough to have the space that you have. But the situation that you get in New Jersey is a bit similar to the situation we get throughout the EU. We are faced with a situation of gridlock, traffic congestion, and so on. We have a situation where at the same time that traffic is going up (I guess it is probably the same in the States), investment is going down in France. So why is investment going down while traffic is going up? Because all state-funded activities are requiring more and more investment, for schools, health for the elderly, and so forth. It has been easy to try to knock the transport budget down to meet other sectoral demands. We find the demand for transport going up, and investment in the transport sector is going down. In addition, we have environmental difficulties.

What sort of solutions might we envisage in these rather trying times? There are a number of options. The first is to make transport more expensive. You can imagine that that is not going to be very popular, although we might have to do it. The second is to make better use of systems. The third is to encourage environmentally friendly modes. The fourth is to put more money into transport, particularly into investment. The fifth, of course, is to clean up road transport.

As I said, the first option is not very popular, particularly with politicians. No politician likes to raise taxes; they always like to bring them down. That is something that we will leave for the end. As for making better use of systems, yes; this is something that we and everybody can do. We have a road system that is congested, but we have railways, inland waterways, and, particularly, shipping lanes, where there is space. This is an area where we have a parallel with you in the United States. If we could use this space, this would help to meet the increased demand for transport. Another point is that these systems of transport are environmentally friendly, or are supposed to be environmentally friendly, and they generally are. So, eureka! I think we have the solution—if we can make better use of the systems that have capacity available, we will also be helping the environment.

Then we come to the question of intermodalism. This is really where intermodalism starts in the EU. Here in the States I think intermodalism was developed on the basis that it would increase the efficiency of the transport system as a whole, in terms of its rate of return. In the EU the reasoning was different. It was really to face up to this problem of the demand for transport, of how to satisfy the demand for transport in an environmentally friendly way. If we can do this and make the transport industry more efficient at the same time, so much the better.

A question I should address, particularly here in the States where everyone is supposedly more liberal than in the EU, is, Why should the EU want to do anything anyway? Will the market be able to provide the right answers? I think the answer is no, to be honest. And I am not saying that because I have a friend in Moscow, or used to have a friend in Moscow. It is
only realistic when you assess our situation, where the costs of transport are not correctly rep­presented by the market. The costs are not correctly represented with certain modes of trans­port, particularly road transport, which does not pay its full costs—its direct costs to the infrastructure and its full costs to the environment. We also have a problem of investment in this system as a whole, because most of our private-sector investors are short term. Anything that goes over 3 years the investors do not want to know of. We have a great problem in try­ing to get people to invest in transport facilities because the payoff here is too long and the risks associated with it are too great. I do not think that the private sector is going to provide the answers that it should without some help from the public sector.

So what are we going to do? One of our problems with intermodalism is shown here [slide], and it is that most of our goods move over short distances. That is not surprising be­cause the EU is a lot shorter than the States, of course. I think, though I stand to be corrected, that the average distance over which intermodal transport in the States is commercially viable is 700 to 800 miles, or even longer. The situation with us is that we hardly have any trans­port that does that. If our intermodalism has to be based on only competing for traffic that is going more than 700 to 800 miles, well, we do not have any such traffic. Intermodalism in this case will not work. I hope this has made the point. Anyway, we hope this is not the case. What we have to do is find ways where the private sector can react to this situation and develop combined-transport, intermodal transport that is viable and attractive to the user. This is a big point. We do not have many transport users in the EU. We do not have many shippers with philanthropic attitudes. We have to provide a multimodal system that people will want to use—and it will have to have the same quality and the same cost as the road alternative, which people basically wish to use.

This poses a problem for us. The railroads in the EU have many admirable features, but most of these are technical and not commercial. Many of the railways never knew how to deal with their customers in the first place, and those that actually did forgot. This poses something of a problem today, when quality of service is all-important. We have to enhance the effectiveness of our railway system. What are we trying to do?

The first thing we are trying to do is develop integrated planning. This is what we call a trans-European network for combined-transport. All of those routes you see there [slide] are routes that we are aiming to develop for combined-transport by the beginning of the next cen­tury. They are all routes where there are fairly large volumes of traffic moving sufficient loads to move at least one train a day. They cover routes where traffic is over 400 to 500 kilometers, where we think that it should be viable to move by rail or waterway.

We are trying to develop an integrated approach to networks. One of the big problems with our railway systems in the EU is the fact that they are run individually, by each nation. The European states' thinking is that if it is international, it is someone else's problem. Our railways are too nationalistic and not really interested in the international business, which is the fastest-growing sector of the EU freight market.

There we are. That is the waterway system [slide]. Our equivalent of the Mississippi is called the Rhine. And our doublestack of the Rhine is river barges with 400 containers on them. Unfortunately, we have only one other river, the Rhône down in the south, which is in no way comparable with the Rhine. But at least we have some waterway capacity, which can play an effective role in the development of intermodalism in the EU.

If we are going to talk about quality and cost, one of the areas we must focus on is, obvi­ously, the terminal. There has been a lot of activity and very interesting discussion on terminals during this conference. We are doing a lot on terminals. One of the areas that we are developing is automated terminals. This rather futuristic diagram is supposedly capable of persuading you that it is possible to run an automated terminal. I am not necessarily saying that this will work, but the idea is that we have trains that are shuttling into a central hub. In this hub we have equipment that will be capable of unloading a train, loading it, and send­ing it on its way again in 15 to 18 minutes. Instead of having direct trains from point to point, we send all of the boxes to this hub. The trains arrive, and the boxes are sorted out. The trains go back to where they came from after shuttling through the hub. This system is based, ob­viously, on the aviation system. Whether it works or not, well, we will wait and see.
As you know, transport technology tends to be a bit different from the nuclear sector, which I know something about. The firm that has actually worked on this project has been a nuclear firm because of all of the cranes and so forth that are necessary. If it works, it would mean that, for instance, in a country like France you could offer a 24-hour turnaround, terminal to terminal. In other words, it would work on two cycles of 12 hours. In the first 12 hours you move the box to the central hub. In the next 12 hours you send the box off to its destination. In 24 hours, a box coming into the system would also depart from the system. If it works, it will be a good idea. Whether it will work depends on the reliability of the technology.

However, if we want to make a serious attempt to develop intermodal, we have to reduce the frontier, or distance. This means we have to get into other markets for intermodal. This is an idea of an Austrian firm (actually Austria will be a member of the EU next year). This firm has developed, for six trains, carrying pallets that will call at regular terminal points. The pallets would be moved on and off very quickly. A similar idea is being developed in France. You know the French TGV system, called TGV freight. It is to have very fast 300-kph (180-mph) trains, circulating between key points with automated equipment to load and unload them at these key points, and the trains would keep moving. Obviously they are very expensive, but if you get a very high utilization out of them, they may be profitable.

Well, those are some of the ideas. I don’t think that we are short on innovation in the EU. The problem will be to translate these ideas into the appropriate technology. That is another photograph of the technology for transferring pallets very rapidly.

How do we get capacity flawless? One of the things we are developing in our trans-European network is a high-speed train system. This is a photograph of the high-speed train system. We are positively tilting the budget for investment in the EU in favor of rail. This network links the main population centers of the EU. The idea is to have this open, up and running, early in the next decade. This is important in terms of passenger movement. With us, when we talk about intermodal, the focus is often on the freight side. But in reality, when we talk about environmental damage and so forth, it is the passenger car that is very often the main culprit. If we want to, if you will allow me to say it, avoid falling into the hole that you fell into here in the States and maintain a public passenger transport system, we have to offer, throughout the EU, good, high-quality public passenger transport systems. The backbone of this is the high-speed rail network, which is well under way and hopefully will be completely open when we will see the lines set out there, early in the next decade.

As a corollary, this will also free up capacity for freight trains, because a lot of the passenger trains will move off the conventional system onto the high-speed system and give us the extra capacity we need on the freight system. I think this network concept is important. In a way I suppose it is a bit like the Interstate highway system here. I will admit that when we develop our ideas we often think about what you are doing in the States, and very often we find the ideas very satisfactory. I must tell you that.

We have some nice trains. Someone said this morning that shippers will not pay for nice trains. Okay, they won’t. The nicest one I think is the Italian high-speed train. But there is a problem with the rails, and that is their image. Not that we all should become locomotive buffs, but I think that railways have to tone up their image and get equipment where people are interested in them. This is really something to travel on. This Italian high-speed train will compete with anything Boeing or McDonnell Douglas will do in terms of style. It is interesting where the high-speed train network is in place now. Something has radically changed—the attitude of the public toward the railways. With these sorts of trains, people think that they are on a new modern mode of transport and do not think that air transport is the only transport worth having. Without saying that locomotives are all-important, the concept of design must fit into intermodal, particularly as far as the railways are concerned.

We have done something in the past as well. This is a 1923 photograph that I thought you might be interested in. You might think that we are far behind you, but we are not that far behind you. I brought this slide because it is of one of our first intermodals. You see this yellow little thing here. This is a container, believe it or not. It is about 4 tons. And this modern gantry device behind was a thing that was used to lift it on and off the train. So we started quite a long time ago. The unfortunate thing is that we kept on with those for quite a long time, and we did not develop new ideas. Well, we are catching up now.
This is an Austrian train running through the Alps, where we are carrying the whole vehicle. I put that slide on, not because I think it is the best means of intermodal transport, but because I thought the picture was rather nice. Here is something that you might like [slide].

We heard this morning about the Iron Highway from Mr. Engles. Well, this is an Iron Highway. This is the Channel Tunnel, from England to France. I deliberately picked this truck because I thought you might recognize an American-made Mack truck, which is coming off a train in this slide. This system, which is now up and running, is working well. In a way, this might be the precursor of the concept of moving the whole vehicle, instead of moving boxes or trailers. You see the lorries coming off the train. This is not a very simple terminal. This is quite a sophisticated terminal, and all of the equipment of the terminal is sophisticated and expensive as well. But it works. I am not certain it is going to be viable. But what we are looking at now is a whole range of concepts that involve moving a whole vehicle. This concept could be viable in very high-traffic areas where we could concentrate flows of getting service, about every 15 to 20 minutes in the day. If truckers have to wait 1 or 2 hours to get on a train to do 200 kilometers, they will go by road. So we have to get high traffic. We have to get efficient terminals. If this can be achieved, we may get somewhere.

We are also thinking, of course, about your ideas of road railers. We have 11 designs of road railers up and running in the EU at the moment. I think the road railer is suitable for certain niche markets. It might be suitable for moving into underdeveloped markets in Eastern Europe. What we have on offer is a whole range of ideas, which we will see whether the public and the shipper will accept in the future. That is the big point—whether the shipper will accept them. This [slide], I think, is going to be the prime mode of intermodal for us, whether it is by water or rail. This is a swap body. This is a new terminal in Paris, where basically it is handling swap bodies.

As I say, we have a lot of options. We have the hub system called Commeter. We have a research program that we are starting in the near future with which we are going to give 50 percent joint funding to firms interested in new technologies, particularly in intermodal. So, we've got high tech. We've got medium tech, which is, I suppose, running the lorry onto the train, as we saw running through the Channel Tunnel. We've got low tech. I hope there's nobody from road railer here, but I call road railer low tech, in a way. So we have a whole range of ideas at the drawing board stage, though we have to push them forward now, combined, if intermodal is going to be successful.

I am overrunning a bit on my time. I am not like Henry VIII, I'm afraid. So let me conclude. What can I say as a conclusion? I think intermodal has a window of opportunity to the extent that everyone now is aware of the problems of the environment and the problems of gridlock. I do not think that this window of opportunity is going to be open for very long. Automobile manufacturers here in the States and in the EU are aware of the problems, and they are going to be developing better vehicles. I have seen test tracks of vehicles in the EU with Volkswagen cars running around at 80 mph without distance between them, all radio controlled. You can imagine what that does to the capacity of the road system. I have seen new test bed vehicles, heavy road freight vehicles that are very friendly to the environment in terms of noise and emission. These things are going to be coming on stream in the next 5 years. If intermodalism is going to take off, it has 5 years to do it. If it does not do it, well, we will wait and see what happens.

When I talk about intermodalism, of course I am not talking about doublestack; that is going to work anyway. I am talking about intermodalism as a concept, as a mode. Intermodalism, if it is going to work, has to be thought of as a mode in its own right, something that you are going to ship with. You are not going to ship with rail, you are not going to ship with water, you are not going to ship by road—you are going to ship intermodal. We don't think like that now. It requires a quantum jump in our thinking, and I believe we have a few years to do it. If we do not do it—intermodalism will not work.

Therefore, the problem comes back to management, the problem comes back to the industry. Is the industry going to be capable of accepting this challenge? From the public sector, we are prepared to help. We are prepared to help with aid. We are prepared to intervene in the market. We are prepared to give subsidies to develop combined-transport, to develop intermodal transport. To quote a famous railroad man, the Director General of the French rail-
ways said a number of years ago that he was sure that *technically* railways had a great future, well into the next century—if the railmen don’t close them down first. I think, though this wasn’t entirely serious, that it is a legitimate comment. The problem is management thinking.

Will the various managers in the different modes be prepared to work together? In the EU we have not seen that yet. There are some changes. We would like to get them into a situation where they think that working together is going to make everyone better off, rather than someone worse off. If we can do that, I think we can succeed.

As I say, I believe that there are many areas here in the United States where the problems that you have are similar to ours. In certain areas you have advanced quicker than we have. In other areas, we may have something to tell you. This implies that we should be thinking together about some form of cooperation, some form of structure where we can put our ideas together and develop the best parts of our thinking, and in that way advance intermodalism as a whole. I leave that thought with you. We in the EU are interested in doing that, and if anyone here in the hall is interested as well, I would be glad to hear from you.