Mr. Hong Wan-Shik (PUSAN)

The reason that I repeated this question is that, although Japan is fortunately free of this problem, it seems to me that the conditions in Bangkok resemble Pusan. In our country parents go to great pains to send their children to a good school. So even if a school is far away parents will send their children there and as a result traffic increases. My child is going to junior high but because the school was too far away we moved house. In school winter and summer vacation periods the traffic congestion problem in Pusan is alleviated to some extent. In order to tackle this problem seriously we are making ceaseless efforts in conjunction with the department of education. In particular we are constantly trying to prevent students coming to school by car and urge parents to send them to school on public transport. It's a bit strange to say we are "teaching" them but at any rate this is how we are appealing to people. I hope Bangkok will maintain its efforts.

Chairman

Thank you. I would now like to move on as we are out of time. Thank you for your opinions.(Applause)

Presentation

Mr. Lam Chuen Fong

1 Assistant Chief, Transportation Engineer, Infrastructure Division, Singapore

Chairman

Next, we will have a presentation from Singapore. I believe Singapore is a very advanced city in the field of traffic management. Before the presentation I would like to hand out some extra materials. I will now hand the floor over to Mr. Lam of Singapore.

Mr. Lam Chuen Fong (SINGAPORE)

Mr. Chairman, fellow delegates, ladies and gentlemen, I'm honored to be with you here to share our experience in tackling transportation issues in Singapore. And before this presentation, I shall talk about the strategy we have adopted and various measures we have taken and the recent development that has taken place. But first of all, I would like to give a little background information about my country. Singapore is located some 137 kilometers north of the equator. It comprises the southern tip of the Malayan Peninsula. It is a small island republic measuring 42 kilometers in the east west direction, and 23 kilometers in the northsouth direction. It has a total land area of 641 square kilometers. In 1993, we had a population

of 2.9 million people and a vehicle population of 584 thousand, of which 308 thousand were cars. This works out to 1 car for every 10 persons. Like any other major cities, we have our traffic problems. Young Singaporeans aspire to own cars. But with more problems on the roads, the traffic problems will be further aggravated. It could be as bad as this scene. This slide shows a major road in the city in the late 60's. As you can see, it was so congested and grid-locked that it was merely a big parking garage. This slide shows a major road not too long ago, traffic volume is high, but it is flowing quite smoothly. In fact, we're able to achieve a pretty good traveling speed in the city today. 30 kilometers per hour, point-to-point, including stoppage at traffic signals. Only 16% of roads in the city are experiencing conditions worse than this standard. The good traffic conditions in Singapore are the result of strategy and measures adopted by the Singapore Government. It is a strategy that addresses the whole spectrum of transportation planning, development, and management. I shall now talk about each measures in the strategy in a bit more details. The first measure in the strategy is to have an integrated land use and transportation planning. While the planners are planning for the land use in Singapore, they are mindful of the need to maximize the developmental potential of the land. At the same time, they aim to reduce the need to travel. Currently, the government is planning to introduce on a moderate scale of decentralization of commercials and office activities. We intend to develop 4 regional centers in major residential towns. These four centers are shown as the small blue circles in this slide as compared with the city center, the big blue circle on the slide. These regional centers will then provide some job opportunities and commercial activities in the regions. People staying in the regions can travel to the centers for work or shopping, without going down to the city.

The second approach is to build a modest, but efficient road network. Being a city-state, the road network is planned such that it is compatible with the urban environment. Our priority is given to the movement of bus and public transport and commercial vehicles. Public cars are actually given a de-priority in the network. We have a hierarchy of roads ; major roads like expressways for regional travel, collector roads like arterials for distribution, and local roads for access. As of end 1993, we had 2,905 kilometers of paved road, which includes 112 kilometers of expressways. In the last decade or so, we have been focusing our efforts on maximizing the junctioning capacity. This is because we do not have much land for expansion. Building flyovers like this, or even expanding existing ones, underpasses is a way to increase capacity. Recently, following the successful commissioning of the tunnel section of an expressway in the city, the government has embarked on a study to construct more such underground roads in the city. This slide shows the conceptual

network of the underground ring road.

The third approach of the strategy is to develop efficient public transport system. Our past planning studies have pointed out that the most cost effective way to meet individual's travel needs is by means of the public transport systems. Hence the government has invested a substantial amount in developing the system, which are now providing, reliable, and comfortable service to the public. In fact, about 70 % of the commuters use public transport to travel to their workplace in the city. Bus is still the backbone of the public transport system. In 1993, we have 2,711 public busses carrying about 2.85 million passenger-trips per day. We also have a modern Mass Rapid Transport System, or the MRT, which was carrying 650,000 passenger-trips per day. In order to promote public transport usage, it is necessary to make the systems effective. The government has therefore spent considerable effort to ensure good accessibility and provide good supporting facilities. For example, we have good pedestrian linkages for easy and comfortable access to bus stations and rail stations. We also provide park and ride scheme. We have 68 kilometers of bus lanes for smoother bus movement during rush hours, and we have built shelters for the convenience and comfort of commuters.

It is also desirable to have a good integration of bus and MRT. The public transport operators has also jointly introduced a common fare-card system which can be used for rides on both MRT and the bus. Using the fare-card, commuters will also enjoy a fare concession when transferring between the MRT and the bus, or between a feeder bus and a trunk bus.

Having planned and provided the necessary infrastructures, it is also necessary to manage them. And this approach is traffic management. Basically, we aim to ensure better utilization of the transport facilities. We also aim to ensure safety. The measures taken in the traffic management are not uncommon to traffic engineers, such as one-way streets and yellow boxes. We have recently upgraded our computer controlled traffic signal system to a real-time system. We called it GLIDE. This is a dynamic system in that it monitors traffic condition of the city streets every five seconds and automatically selects the appropriate signal cycle and green time for the particular junction. It also selects adjacent junctions and link them together to give a green wave. Other things the GLIDE can do include fault reporting, so that our maintenance contractor can attend to the fault such as blown bulb expeditiously. We are now in the process of extending GLIDE to cover the whole island. This project will be completed by 1997.

What we have done so far is the management of the supply side. It is also necessary to manage the demand side. This is so because if there is no restraint on usage, we will have more traffic congestion on our roads. Moreover, we don't have land

to expand our infrastructure to meet the unsatiable demand.

Demand management can be grouped under two categories, one on ownership, and the other on usage. Ownership measures are designed to influence one's decision to own a car. On the other hand, usage restraint measures are designed to influence one's decision to use it. For ownership restraint, we have used fiscal measures such as high import duty and additional registration fee. We have found them successful. Recently, the government introduced a vehicle quota system which is more effective. This is because the government can control through this scheme the growth rate by deciding the number of new vehicles to be allowed on the roads. Currently we are keeping the annual growth rate at about 3.5%. In usage restraint, we make using a car an expensive affair so that one will prefer public transport to private transport. Traditionally parking charges and parking provisions can be used. But they are not that effective. So, in Singapore, we have introduced two other measures, viz the Off-Peak Car Scheme and the Road Pricing. Owners of a car registered under the Off-Peak Car Scheme need to pay less tax, but have to pay additional fee if he has to use the car for a period in the daytime. Through this scheme, we are able to allow more Singaporeans to own cars without adding congestion. Perhaps the most interesting measure we have implemented is the Road Pricing. The principle behind it is that if one use the road, one has to pay for the usage as well as the congestion so caused. We think that this is fair and reasonable. So far, we have implemented two schemes, namely the Area Licensing Scheme in the city, and the Road Pricing Scheme or RPS on the expressways.

The Area Licensing Scheme, or ALS, was first implemented in May 1975. Under this scheme, the area in the city affected is called the Restricted Zone. Vehicles entering the zone, or RZ during the hours of operation must display a valid area license on the windscreen. Each entry point to the RZ is demarcated by a gantry like this one. There are police personnel stationed at the entry points. Their duty is to take dawn the registration number of vehicles which have not displayed valid licenses. When it was first introduced, only cars and taxis were affected. And we operated it only during the morning rush hours. The scheme was successful. We have achieved more than 35% reduction in volume of traffic entering the city. Since then, we have made changes to the system a number of times. All these were made after close monitoring of the traffic conditions in the city. Today, all categories of vehicles are affected, except for public busses and other essential service vehicles. The time of operations have been changed. Recognizing the different congestion levels at different hours of the day, we have introduced two types of licenses, a whole day license and a part-day license. A whole day license will cover the time period from 7 : 30am to 6 : 30pm, while a part-day license from 10 : 15am to 4 : 30pm.

These slides show the different types of licenses, this pair of licenses are for vehicles, the right one is the partday license. This slide is for motorcycles, again, the right one is a part-day license. And these are the slides showing the license fees for different types of vehicles.

The latest measure introduced in June this year is the Road Pricing Scheme, or RPS. The RPS is applied to an expressway which carries extremely high volume of traffic. It operates more or less the same as the ALS, except that the license is cheaper. During the hour of operation, we have achieved a 39% reduction in traffic volume. What has amazed us is that there is no appreciable increase in traffic volume on other nearby roads.

Mr. Chairman, I would now like to give an update on the recent development with respect to land transport issues in Singapore. I have selected three topics for this presentation. They are the introduction of light rapid transit, the electronic road pricing, and lastly the formation of a new transportation agency in Singapore.

As we all know, the Light Rapid Transit System or the LRT, is a medium capacity public transport system which can be used to fill the gap between the bus and MRT. In Singapore, we see that the LRT can be used to replace the feeder bus service, or as a regional service for a traffic corridor where demand is not high enough to justify a MRT. The government has invited proposals to construct two such LRT systems. One of them is to serve a new town that is on the right-hand side of this slide, to link it to a MRT station located at a neighboring town that is located on the left-hand side of this slide. The proposals are now under evaluation. On the pipeline, our transportation engineers are planning for more such LRT routes. This is just another step taken by the government to promote public transport usage. Another area we are working on is the electronic road pricing. The current road pricing scheme such as the ALS is basically a manual system. It has some shortcomings. For example, it allows unlimited entry using the same license for the day. It has limitation on expansion. Also, as it covers an area, it does not differentiate whether certain road in the area is actually congested. The ERP makes use of the latest electronic technology which allows us to overcome the shortcomings of ALS. It allows us to have different pricing structure at different time. It can be used to charge on a per-entry basis. And it can be used to charge different rates at different levels of congestion. The basic equipment used in the ERP scheme are the microwave antenna, in this slide, in-vehicle units, and the smart card. A vehicle must have an in-vehicle unit installed under the windscreen. As for the motorcycles, one way is to attach the unit to the handlebar. The driver must insert a stored-value smart card into the invehicle unit. The unit will then show the value in the card. The in-vehicle unit is basically an active transponder and is capable

of writing data onto the smart card. This slide shows the general arrangement of the equipment, and this slide shows the equipment as installed on-site. When the vehicle approaches the microwave antenna, the antenna will send signal to check on the vehicle unit, and instruct the unit to deduct a certain amount of money from the stored value in the smart card. The system is therefore very user-friendly, in that the drivers need not bother about any licenses for ALS or RPS. The system also requires less police personnel than the ALS.

In 1993, we have invited three consortiums to develop the prototypes of ERP for us to test and evaluate. We are pleased to announce that three weeks ago, we have selected one consortium and awarded the contract to implement the ERP in Singapore. By the end of 1997, we will be able to see the full implementation of the scheme, which will be used to replace the existing ALS and the RPS.

Last but not least, I would like to inform the conference that on First September this year, a new semi-government agency is formed in Singapore to take full charge of all land transportation issues. This is the Land Transport Authority. Previously, there were a number of government departments and agencies involved in this areas. With the formation of the LTA, as we call it, all the experts from these agencies are brought together under one single organization. This way, we can have a more coordinated and integrated approach to land transportation issues in terms of planning, policy formulation, building, and management. The LTA aims to provide a world-class land transport system for Singapore.

To conclude, we can say that the land transport strategy we have adopted has worked well for Singapore, and the government is resolved to continue to apply these measures more vigorously so as to meet the challenge in the future. More transportation infrastructures will be built within the permitted space to meet the demand, and measures will be taken to encourage higher dependency on public transport. As for the road pricing, the government intends to use it to tackle congestion in time and at places. This means that we will expend the ERP's coverage to other congestion spots, be it a road or an area, and charge different rates at different levels of congestion.

Mr.Chairman, before I end this presentation, I would like to thank the Mayor, the honorable Mr.Kuwahara and the city of Fukuoka for arranging and inviting us to this conference, and the organizer for giving us this opportunity to present our paper. Mr. Chairman and fellow delegates, I thank you. (Applause)

Discussion

Chairman

Thank you Mr.Lam for your very lucid explanation. The circumstances under which the current traffic management policies have been introduced were made very clear. I am sure that the information we heard concerning the development of policies to control traffic flow into the central city will prove very useful in controlling transport demand in the future.

I would now like to ask for opinions and questions of any nature from each city. Mr. Hong Wan-Shik of Pusan, please go ahead.

Mr. Hong Wan-Shik (PUSAN)

Mr. Chairman, I would like to ask a question. Singapore is currently implementing numerous cutting edge traffic policies and has provided some very interesting information. In particular, as I mentioned before, we at Pusan City are looking into introducing the ERP system by 1998 and so are very interested to hear about this system. Therefore, what I want to ask is this. At any point did you take into consideration the form of the card to be used and how expensive the road usage fee should be? Also, once the ERP system is in place will you discard other systems or will you have them running in tandem? That's all.

Mr. Lam Chuen Fong (SINGAPORE)

Thank you for the questions from Pusan's friends. When ERP is implemented in 1997, it will replace the ALS and RPS. In other words, it is a way to automate the ALS and RPS.

Mr. Hong Wan-Shik (PUSAN)

Earlier you said that the card is a pre-paid card but would you elaborate on this smart card a little further please? Is it a type of IC card?

Mr. Lam Chuen Fong (SINGAPORE)

Yes. The "Smart Card" is actually the size of a credit card, but it has an IC chip built in. So it is an active card. It can respond, it can send message out to the microwave antenna and it can receive message and take actions on the card itself. It's IC based card.

Mr. Hong Wan-Shik (PUSAN)

You could probably use it as a credit card too, couldn't you?

Mr. Lam Chuen Fong (SINGAPORE)

The government has not planned to use it as a credit card. There has been talk by other operators like parking operators who want to make use of the same card for parking charges. Obviously, there is a scope we can use. At the moment, we just want to concentrate on using the card the ERP well. The fact is that one departmental store is using quite a similar type of card for parking charges and also for their own crediting facilities, so the card itself is a pretty powerful device that can be used for a lot of things.

Mr. Sabudin Mohd Salleh (KUALA LUMPUR)

I understand that the ERP, electronic road pricing, had been implemented before, that was about fifteen years ago in Hong Kong, but it had been withdrawn due to federal problems, especially upon privacy of a person. I would like to ask whether your department has looked into these problems before the implementation of ERP.

Mr. Lam Chuen Fong (SINGAPORE)

I understand one of the issues of the ERP, the Hong Kong demonstration projects. If I am wrong, my friends from Hong Kong can correct me, as they were imagined my classmate. The system is that they have a monthly billing system. They send a bill for your usage each month to your home, and so that privacy question is raised because you may not receive it. Your wife may receive it and your wife would know where you had been to. In our system, it is a deduction on the spot, so in other words, there is no reporting of your movement although, I mean in one computer, there's a record that the IU has passed through that spot at a time. Those are considered confidential information. That will not be disclosed to other parties. The deduction is made right on the spot. When you pass the gantry, you pay for that passage, and so there's no need to follow up on billing, and there's no need to worry about people knowing where you have been.

Mr. Hung Tung Chun, Louis (HONG KONG)

What Mr. Lam said was true. In Hong Kong, back in 1985 when it was introduced a test, the ERP pilot system, we had a different technology. At the time, the Smart Card has not been invented. I think the proposed system in Singapore using the Smart Card System should eliminate this privacy problem. Thank you.

Mr. Lokman Hakim bin Mohd. Jasan (IPOH)

I like to get some questions from Singapore. You also have this problem with vehicles registered in Malaysia coming down to Singapore. So how do you intend to improve

on the system for Malaysian registered vehicles?

Mr. Lam Chuen Fong (SINGAPORE)

Well for the benefit of the delegates from other countries, Singapore and Malaysia are very close to each other. Our citizens like to go and visit each other's cities. In this way, they support commercial activities or otherwise. The ERP, when we designed the system, we have actually looked at how we can extend it to other countries' vehicles. Basically the government's thinking is that if it were used to control congesting, that any user, be it a foreign country vehicles or a local vehicles will have to pay for the price. The way to do it is not firm, I would say, but one way is that there'll be booths that will be set up at the crossway checkpoints where Malaysian registered vehicles can rent an in-vehicle unit and then when you return to Malaysia you just go back to the booth and return that unit. But the details, I don't have it now.

Mr. Hong Wan-Shik (PUSAN)

I would like to ask a question to the gentleman from Ipoh, Malaysia. Are number plates the same in Singapore and Malaysia?

Mr. Lokman Hakim bin Mohd. Jasan (IPOH)

They are very different.

Mr. Hong Wan-Shik (PUSAN)

If that is the case, scientific technology should solve the problem. The reason being that you can tell whether a car is from Singapore or not by its electronic system.

Mr. Lokman Hakim bin Mohd. Jasan (IPOH)

You have to make sure that every vehicle using the routes in Singapore will be equipped with all the facilities, only then, the electronic equipment will be functioning. So in the case of Malaysian registered vehicles, I think it will take some time, and then will cause a lot of problems at the causeway and at the entry point for this thing to be equipped. It might cause a lot of traffic congestion, even at the causeway. So I think I would like to know whether for Malaysian registered vehicle whether the present system, the manual system will still be in use.

Mr. Lam Chuen Fong (SINGAPORE)

No, when we switch to ERP, we will not be using the manual system. The concern is valid. I mean your concern is valid. We know that there will be some tooling

problem at the site. We have to plan a way such that this can be carried out smoothly.

Mr. Leong Siew Mun (KUALA LUMPUR)

Mr. Chairman. I would like to ask a question on the ERP or so. I understand that for this ERP scheme, there might be regular users, and occasional users. And for the regular users, they may have to purchase the in-vehicle units and does the government subsidize all the purchase of the in-vehicle units, or is these invehicle units refundable if they don't want to use? And how about those occasional users, they may just want to go through the particular section of the road once in a year? Do they also need to buy it? Is there any alternative means of paying in using the facility? Thank you.

Mr. Lam Chuen Fong (SINGAPORE)

The intention of the government is to have all vehicles registered in Singapore to have in-vehicle unit installed. It is very difficult to differentiate whether they are regular users or occasional users, and after all, as my statistics have suggested, we are going to extend it to cover other congestion spots. I don't know. Maybe one day we'll cover the whole island. Anyway, since we're going to extend it to cover other congestion spots, then it will be difficult to differentiate whether one is a regular or one is an occasional user. All vehicle owners are required to pay for their in-vehicle units.

Chairman

I'm sure there are many opinions on this issue but I would like to end the discussion on this particular topic and move on. I would like to hear from as many people as possible so are there any questions or opinions from those who haven' t spoken so far?

Mr. Denis Mander (AUCKLAND)

Do you see any point in the future when road pricing in Singapore is being used to its full potential and you have to resort to other measures?

Mr. Lam Chuen Fong (SINGAPORE)

Can I confirm your question is that whether in the future, we may have to go for another scheme?

Mr. Denis Mander (AUCKLAND)

That's right.

Mr. Lam Chuen Fong (SINGAPORE)

Well we don't really know. There's no crystal ball. That's why we can't look into the crystal ball. Road pricing has I think a lot of potential, that's for sure. It influence the behavior of the drivers, but it plays on the economic of using private transport system. The drivers may eventually get used to the system. In other words, the paying that they fear at the beginning will erode over time. Then we will be at another step. Obviously, the easiest way for us to do is to increase the price. That means that there is a great elastic way for us to manipulate the control, the usage of private cars. But maybe it's true that one day, people will get so insensitive to RPS or ERP that we may have to resort to other measures. I don't know, really.

Ms. Tsoi Man Chee, Mavis (SINGAPORE)

May be I just Supplement. What ERP portion will hopefully will control the usage of the car? But we are not asking that people not travel at all. We will provide alternatives. Like developing the light rail. And the MRT, extending the MRT to allow people to have an alternative to private car usage. It is not to discourage traveling. But it is just to help to manage the use of private vehicles, and in place of it, we encourage the usage of public transportation, with LRT, the extension of MRT. Thank you.

Mr. Lam Chuen Fong (SINGAPORE)

Mr. Chairman, just to add on, the point we're making is that road pricing is effective, but it is not our only tool in controlling traffic. As I said in my presentations, the strategy involves planning, building infrastructure, and management, so it's very important to look at the planning side, and also look at the infrastructure side. When we use ERP, somebody said that when you have a golden hammer, everything looks like a nail. You can hammer it. But the truth is that we have to provide good alternatives, and that's why the government is spending a lot of effort in promoting the public transport system as a good alternative. So that people can have a good cause and there's no need to rely on the private transport system.

Mr. Choi Chi-Gook (PUSAN)

In Pusan buses account for 38% of passenger transport. Therefore, our bus policy is extremely important. According to what was said before by the representative

from Singapore, despite the existence of LRT and MRT, buses still make up the majority of public transport. I think you can infer from this that the bus system is quite advanced. Therefore, if you wouldn't mind I would like to hear a little bit more about the bus system. In particular, who are the core operators, how is the price structure decided upon and what kind of ticketing system do you have? Please explain these points in a little more detail. Thank you.

Mr. Lam Chuen Fong (SINGAPORE)

Singapore has gone through a major transition stage in the past system. In the late 60's, we had six operators. We have the same problem as Naha, that the bus operators are competing with each other, and so there were a lot of repetitions of route coverage. In the 1971, the government decided to step in to revamp the bus system. So this numerous bus companies, we amalgamate them to form one single bus company at that time. And all the routes are being rationalized so there's no duplication of route coverage. As time goes on, the government decided that it was time to introduce another bus company as a competition. This is more to make sure that there is competitions for value of money. The government is controlling on the routes which bus company can run so that we ensure that there's no duplications of routes so the company will have to compete on the services they provide. Now today, these two bus companies are actually publicly listed, so in other words, they issue shares to the common folk of Singapore, so they have to report on their earnings, revenue, and so on. And there's one more thing that the Singapore government has done, and that is there is no subsidy whatsoever given to the bus companies. They have to make sure that their operation is trim, neat, and up to acceptable level. What happens today is that the bus companies, these two bus companies are reporting profit, that they are all right. One thing that they have done is that they make sure that trip size are trim so that the mobilizing rate is more than 95%, in other words, less than 5% of the trips should be inside the garage for repair. When the MRT was first implemented in 1986, there has been some duplications of route coverage by the MRT as well as the bus, so the government decided to look at certain routes of this, run by the bus companies, and for those routes duplicated MRT service, they have been taken away. And the government also wants to encourage that there is a fair share of ridership between the bus company and the MRT, and so they proposed, or they encouraged the bus company, the transport operators, meaning the bus company as well as the MRT to join hands to come up with this common plan, common ticketing system of fare cards so that people can use the bus and MRT as a transport service.

So in other words, they are trying to make sure that both are mutually supporting

each other rather than competing with each other. Well, today, I am sure that the bus companies are still running, that they are all right. Well actually in Singapore, the bus services, if you look at the bus grid size of 2,700 busses. There are not enough to really meet the travel needs of Singaporeans. What we have actually are two services. We call Scheme A and Scheme B bus. These are actually school busses and factory busses, factories have their own bus. These are busses which are licensed to run during the rush hours to carry commuters, so as a supplementary service to the public bus service. In Singapore, the school hours operate very early, around 7 : 30am. So the school bus will just carry the students to schools, and after that, there's no other services so they're idle. The government allows the school bus operator to use it during the rush hours, and that is from about 8 : 30 onwards, even 8 : 00am onwards to supplement public bus. And that proved to be useful in solving our public transport needs. One point I would like to make is that light rapid transit is a new thing that we have proposed to introduce. We don't have it yet. The light rapid transit, as I said, is aimed to replace the feeder bus service. Feeder bus are those bus which run in the town to bring all the people who stay in the town to the major bus interchange and MRT station.
The feeder bus is not very profitable service. The bus company has been reporting that they make money from the trunk service, but they have to subsidize the feeder bus service, so introducing LRT which aiming at a high level of service standard, in other words people unfamiliar to MRT, they like the air conditioned service, they like the punctuality of the service because everything's on schedule, so they don't mind paying more for such kind of service, and so we expect that using it as a feeder service is actually better than a feeder bus. Did I answer your question?

Mr. Choi Chi-Gook (PUSAN)

Thank you for your detailed explanation.

Chairman

We are out of time so I would like to halt the discussion at this point. Mr. Lam and Mr. Tsoi of Singapore, thank you for your cordial explanations. We will now have a coffee break. The room we will use is the Tsuru-no-ma west room. The meeting will recommence at 3 : 45 p.m. Thank you.

..... *COFFEE BREAK* .....

Chairman

It seems everyone is here, so I'd like to resume the conference. Now, the last of