IARO report 7.03

Workshop, Barcelona, 2 June 2003.

Today's design and funding issues for airport railways

IARO Report 7.03: Workshop, Barcelona, 2 June 2003

Editor: Andrew Sharp

Published by

International Air Rail Organisation

3rd Floor,

30 Eastbourne Terrace

London W2 6LE

Great Britain

Telephone +44 (0)20 8750 6632

Fax +44 (0)20 8750 6647

websites <u>http://www.iaro.com</u>, http://www.airportrailwaysoftheworld.com

email int-airrail@baa.com

ISBN 1 903108 05 5

 $\ensuremath{\mathbb{C}}$ International Air Rail Organisation 2003

£250 to non-members

Our mission is to spread world class best practice and good practical ideas among airport rail links world-wide.

Contents

Introduction	4
List of abbreviations and acronyms	5
Design matters: trains	8
Wayfinding in airports and train stations	11
Paris	13
Error! Reference source not found Error! Bookmark no	t defined.
Error! Reference source not found Error! Bookmark no	t defined.
The Spanish situation	23
Air rail code sharing - 2	25
Ticketing - question and answer session	27
Good practice in marketing	29
Integrated group packages	30
Integrated group packages - question and answer session	32
The fundamentals - timetables and brochures	33
Good practice in baggage handling	35
Baggage drop	36
Frankfurt - Stuttgart and beyond	37
Benchmarking airport access	38
Where next?	39
Delegates	40
Task Groups, workshops and conferences	46

Introduction

This report summarises the output of the sixth workshop held by the International Air Rail Organisation (IARO), held in Barcelona in June 2003 and chaired by Matthew Coogan of Coogan Associates.

As is usual at these workshops, two topics were reviewed and discussed in depth. In the morning, two aspects of design were covered. Philippe Duffossé of Alstom reviewed plans for Barcelona's Line 9 Orbital Metro: the number of innovations to be built into this is amazing. Then Martijn Geerdes of Bureau Mijksenaar discussed good practice in signage and Wayfinding, based on experiences both at Amsterdam Airport Schiphol and in the New York airports. In the afternoon, a paper on funding issues was discussed. Then Julio Bermejo of INECO gave an update on local issues – concentrating on Barcelona and Madrid, but covering other Spanish airports too.

It was specifically designed to be a low-cost event, timed so that European delegates could travel out and back in a day. Thanks to our hosts, INECO, who were generous in their sponsorship and help, we had an excellent welcome to Spain. This report is a reminder that we worked hard too. Lessons were learnt, ideas were discussed, plans were made to follow up some of the issues. Coverage was by no means exhaustive, and much remains to be done - possibly by means of a follow-up workshop. In addition, some business was done!

To our hosts and our organisers as well as to all our delegates, grateful thanks.

Andrew Sharp

Director General

List of abbreviations and acronyms

ADP	Aéroports de Paris	
AENA	Aeropuertos Españoles y Navegación Aérea (Spanish airports and air navigation authority)	
apm	automated people mover	
ATC	automatic train control	
ATM	Autoritat del Transport Metropolità (coordinating authority for public transport in Barcelona)	
CCTV	Closed circuit television	
CDG	Roissy - Charles de Gaulle airport in Paris	
CDG Express Planned Airport Express between Paris and CDG.		
CFCs	Customer Facility Fees	
DOT	Department of Transportation	
EU	European Union	
GIF	Gestor de Infraestructuras Ferroviarias - Spanish high speed rail infrastructure owner	
IARO	International Air Rail Organisation	
INECO	Ingeniería y Economía del Transporte. Spanish consultancy jointly owned by AENA and RENFE	
IT	Inclusive Tour	
km	kilometre	
m	metre	
m ²	square metre	
NS	Nederlandse Spoorwegen - Netherlands Railways	
RATP	Régie Autonome des Transports Parisiens – the Paris bus and metro operator.	
RENFE	Red Nacional des Ferrocarriles Españoles - Spanish Railways	
RER	Réseau Express Régionale – regional express railway	
RFF	Réseau Ferré de France	

SNCF	Société Nationale des Chemins de Fer Français - French National Railways
TGV	Train á grande vitesse – high speed train
UIC	Union Internationale des Chemins de Fer - international railway union
UK	United Kingdom
US or USA	United States of America
VAL	Voiture automatique legere – light automatic vehicle.
ADV	Arbeitsgemeinschaft Deutscher Verkehrsflughafen (German Airports Association).
AG	Aktiengesellschaft (German joint-stock company)
Amtrak	National Railroad Passenger Corporation
BEST	Benchmarking for European Sustainable Transport
BOB	Best of Benchmarking
carrier	airline
COROP	Continuous survey of passengers at Schiphol.
DB	Deutsche Bahn - German Railways
DC	District of Columbia
Fraport	Flughafen Frankfurt AG - Frankfurt Airport Company
GDS	Global Distribution System
Hbf	Hauptbahnhof - main station
HSL-Zuid	High speed line - south (between Amsterdam and Brussels)
IATA	International Air Transport Association
ICE	InterCity Express - German high speed train
INFOS 2001	Schiphol airport's re-signing project.
interline agre	eement Agreement involving two or more carriers
Kg	Kilogram
KLM	Koninklijke Luchtvaartmaatschappij - Royal (Dutch) Airlines

MML	Midland Main Line. A UK rail franchise, serving Leicester, Derby and Nottingham from St. Pancras.
mppa	million passengers a year
NBS	Neubaustrecke - new high speed line
Pantares	The alliance between the Schiphol Group and Fraport.
SDR	Special Drawing Right. An international reserve asset issued by the International Monetary Fund.
SEA Milan	Società Esercizi Aeroportuali spa. Milan airports operator.
SNCB	Société Nationale des Chemins de Fer Belge - Belgian National Railways
Thalys	French/Dutch/Belgian high speed train service.

Note that UK conventions are used for dates (day/month/year) and numbers (in 9,999.99 the comma , separates thousands: the full stop . is a decimal point). A billion is a thousand million, following US conventions.

Design matters: trains.

Philippe Duffossé, Bid Director Barcelona Metro for Alstom Transport, introduced us to his company and especially to the range of products it was working on for metro applications.

These included numerous innovations.

Two good examples were the Shanghai metro, and the Singapore North-East line. The latter, to start service within a few weeks, was driverless and, at 39 km, the longest driverless metro in the world. A further line in Singapore, the Circle Line, will also be driverless and will connect with some automated people movers (apm) to connect it to off-line areas of high population. Work on this line will start next year and run until 2007.

Barcelona's Line 9 will be an orbital route, running 41 km from north east of the city round the north west and west to the airport and the Zona Franca industrial zone in the south.

It will serve the airport, the exhibition centre, industrial zones, residential areas and university sites. There will be 46 stations, of which 15 offer interchange to metro or suburban lines. It will open in sections.

The customer is the Autoritat del Transport Metropolità (ATM), the public transport coordinating body for the city. The line will be served by 50 5-car trains: each car will be 18 metres long. Delivery will be between 2004 and 2007.

After a debate about short frequent trains or longer less frequent ones, the decision had been for the former: 5-car trains will run at 90 second intervals.

Interfaces with the environment and train – control office communications were two fundamental points in design considerations.

Trains will normally be driverless (although there will be an operators panel in the ends of each train, and Philippe explained the design changes there had been to make this harmonize with the rest of the interior design).

They will operate from rigid catenary, rather than overhead wire.

Much of the route will be in deep tunnel (up to 65 metres below ground level). One interesting decision with a major effect on design had been to use a 12 metre single bore (rather than the 9 metres originally suggested). While this involved a lot of excavation, it provided some valuable efficiencies.

There was space within the bore for two levels of track, and for a two-track railway on each level. Normally there will be a single track on each level, separated by direction of travel. The remaining space could be used for turnback sidings, and for overtaking lines (for limited stop trains, for example to the airport). However its real value is for stations. The long-term plan is to have 120 metre platforms at approximately 1 km intervals: a bore large enough to accommodate these as well as the track would save much specialised excavation. Initially platforms will be 100 metres long: again, the wide bore will make station extension later significantly easier. Station stop time is 15 – 20 seconds: there will be platform screen doors. Vehicles will have 4 doors each side for quick loading and unloading. They will also have dynamic maps, like Airport Express Hong Kong.

Each station will have 5-6 lifts (elevators). There had been discussion about lifts or escalators: the latter would have been expensive at such a depth so while some provision was being built in, they would not be supplied initially. It was thought that lifts gave a higher capacity than escalators.

Since platforms will be on two levels, there had also been much debate about the stopping arrangements for the lifts. They will almost certainly stop once, at a mid-level point, and passengers will use ramps for trains in different directions.

A major issue had been the design of the horizontal concrete floor in the middle of the tunnel separating the two levels. It was essential to minimise the vibrations – which had impacted on the design of the bogies in particular.

Maximum end-to-end journey time will be 52 minutes.

Each train will have 122 seats and a total space for 980 passengers at $6m^2/passenger$.

There will be CCTV surveillance, both within trains for passenger security and in front of trains to monitor obstacles on the track. There will be twoway voice communications between train and control office: at this stage it was uncertain whether this would be a one-button system or (as on some other metros, notably the London Underground) a two-button system with one for emergencies and one for information.

There had been no debate about unstaffed trains: the concept was totally accepted and not a problem. The Chairman questioned this, saying that, in North America, it would have been. This was partly because the American public were not ready for an unmanned system and partly union pressure. It was noted that in European unmanned systems had been developed since the late 1960s – on London Underground's Victoria Line, the driver was there for customer reassurance and only closed the doors; and on the Paris Metro, the newest lines were totally driverless.

In an emergency, the normal response was to continue to the next station to evacuate the train: this was likely to be less than a kilometre away. There was a continuous walkway along the tunnel: unlike in Singapore, emergency evacuation would not be onto the track using an emergency exit built into the front end of the train. On the trains, there would be fluorescent emergency signage and markings by the doors.

Philippe said that there had been a wide-ranging debate on emergency exits and emergency evacuation: should passengers stay on trains; should there be emergency refuges? This could be a useful conference topic in its own right: members who had been on the site visit to Airtrain Newark agreed, because lessons had been apparent there. While trains would be air conditioned, hopper windows would be provided for reassurance in case trains failed in a tunnel without power.

The meeting discussed the issue of airport passengers needing more time to board and alight than others: this might cause problems. It was noted that such passengers would no doubt form a small minority of users so it would not be a big issue. Philippe commented that the door open time was adjustable, and that no doubt lessons would be learned about optimal station stop time as sections entered service. It would be possible, within limits, for trains to overtake each other and therefore to have a fast or limited stop service.

Trains would have one small luggage stack in each vehicle; and in some areas there would be longitudinal seats making it easier for passengers with luggage.

The concept of using the same technology and the same trains for an interterminal shuttle was under study.

In response to a question, Philippe said that each 5-car train, including ATC (automatic train control), would cost €5868m.

Wayfinding in airports and train stations

Martijn Geerdes, of Bureau Mijksenaar, spoke on good wayfinding principles

He said that wayfinding is a component of three areas – architecture, human behaviour and human factors, and graphic design. At airports, passengers need a consistent system between highway and gate.

It had been found that 25% of customer satisfaction issues related to wayfinding. Importantly, these related to the need to get to the gate on time, the ability to find toilets and the need to find the exit.

Bureau Mijksenaar had recently signed both the New York airports and Amsterdam Airport Schiphol.

At Schiphol in particular, the psychological needs of passengers had been taken into account in labelling the parking areas. Passengers had enough alphanumerics to remember, with the terminal and check-in area, the gate number, the flight number and their seat; so adding another – the car park zones – was not user friendly. Instead, the car parks had been themed: one had a Dutch theme, another world cities and a third sports. Individual areas were marked by sub-themes within these – clogs, cheese, windmills. Delegates approved: a consistent cry of IARO is to think like a passenger!

Signs within airports were colour coded, with consistent colours used for the three main functions – flying (black on yellow), facilities (yellow on black) and fun (white on blue). Originally flying had been coded black on green, but this had been changed because white on green had become the internationally recognised colour for emergency facilities.

A delegate commented on the experiences of a colleague with a limited knowledge of German. The colleague knew that *ausgang* was exit, and then saw the sign *notausgang*. What would this mean to people? To an English speaker, not exit: it actually means emergency exit. This reinforced the need for clear and consistent pictograms rather than (or as well as) words.

Martijn saw clear advantages in the use of a consistent colour coding world-wide.

His company had also worked with Dutch Railways (NS), where similar concepts had been used when re-signing their 318 passenger stations.

The philosophy had been to draw a mental map of a typical medium sized Dutch station – a square in front, a main entrance, a booking hall, a passage to platforms and a rear entrance. Stations which did not conform to this standard pattern would need special attention in signing.

In the Netherlands, standard UIC (Union Internationale des Chemins de Fer - international railway union) pictograms were used. Martijn conceded that where there were other important standards (for example the US DOT), these would be used instead, although the prime objective should always be to guide and reassure passengers. Pictograms should include a word, to aid the learning process – so each pictogram had a small caption in the top left had corner.

Wording and symbols were white on blue – the NS standard – except that emergency exits were signed in white on green.

Echoing sentiments uttered at our previous workshop, Martijn commented that air and rail were different. In airports there was a convention of using English (and, sometimes, not the local language too): in stations, the local language, UIC pictograms and the national railway colour set were used almost exclusively.

Martijn said that it would be useful if a standard "Travel English" emerged, with a standard terminology. However differences between English and US English in particular (the use of the word van, for example, to indicate a shuttle bus) caused problems.

Paris

Ghislain du Jeu, of French rail infrastructure authority RFF, gave a brief update on issues concerning access to Paris airports.

Access to CDG airport was on the RER line B from Gare du Nord and the southern suburbs. This was an ordinary inner suburban service with few concessions to the air passenger (although, in the last few years, non-stop trains had been introduced and information desks provided by ADP and SNCF at Gare du Nord). Operational responsibilities were divided between the national railways (SNCF) and the metro operator (RATP) with trains changing driver at Gare du Nord.

CDG Express, the proposed Airport Express from Gare de l'Est to the airport, was entering a public consultation stage. He passed round a draft copy of the consultation document, a final copy of which would be deposited in the IARO library.

The authority responsible had allowed six months for consultation, rather than the conventional four. A particular issue here was that the local mayors in particular wanted the existing RER line improved rather than a new line. Another factor – common in airport railway consultation - was that all of the opponents were concentrated locally and could easily lobby local politicians: all of the proponents and many beneficiaries were scattered round the world and could not easily make their views felt.

Orly was served by the same RER line and the VAL automated metro from one direction, or the metro and a bus shuttle from other areas of Paris. There were long-term plans for a TGV station under the airport. The existing orbital Grande Ceinture line round three sides of Paris went very close to the airport, and there were plans to enhance this in the Orly area in particular to improve line speeds.

Where will air rail innovations come from in future?

Andrew Sharp, Director General of International Air Rail Organisation, presented a paper on funding issues. The paper is reproduced in full below.

Introduction

1. The problem, posed to us by an aviation industry expert, is that in the past air rail service innovations and developments had been fostered by full-cost carriers. They are now in prolonged cost-cutting mode and can no longer afford to continue to do this. Low cost carriers are just that, totally unwilling to take on costs or risks from joint ventures with railway operators. So what is the new business model for providing new and better air rail connections?

Money for aviation facilities

- 2. The aviation industry is of course currently under extreme pressure, and understandably even more unwilling than usual to see aviationrelated money leaching away from the industry.
- 3. In the United States, Passenger Facility Charges (pfcs) are levied: at some Canadian airports improvement charges are raised. In the UK, Air Passenger Duty is understood to raise £1bn a year half at Heathrow. Where is the money going? The aviation industry is reasonably in favour of revenues from such charges being used to support aviation facilities (as do those from the North American examples above) but very unwilling to see the money just going into the Treasury for the general social benefit of mankind.
- 4. But where is the boundary between "aviation facilities" and "general social benefit"?
- 5. A new runway, new air traffic control facilities, a new terminal these are clearly in the realm of aviation. New car parks at airports are usually regarded as aviation too, because most users, the preponderance of users, are air passengers or people meeting them, or airport employees. They can, of course, be spotters and shoppers; or in some cases (for example, at Stansted and Gatwick) people using the airport for park and ride driving to the airport, parking there and riding to their final destination by train or even long distance coach.
- 6. An inter-terminal automated people mover (apm) is clearly aviation but what about one which connects the terminal to the car park, the consolidated car rental area, nearby hotels or the railway station? On the preponderant use argument advanced earlier, these clearly also qualify.

- 7. Next, of course, comes the airport railway. Virtually all Heathrow Express users are aviation related indeed, most are air passengers so BAA was justified in investing what could be described as aviation money in it.
- 8. Airtrain JFK finally and indisputably qualified for pfc expenditure when the Port Authority of New York and New Jersey leased the footprint of the right of way, thereby turning most of it into an on-airport facility. Minneapolis-St. Paul was more ingenious: it argued that over 50% of users of the new Hiawatha Line serving the airport would be airport users (and incidentally that people were missing their flights because of parking problems) so the aviation industry was generating the majority of users.
- "Over 50%" may be thought to be stretching the "preponderant user" doctrine, but really, where should the line be drawn? 75% is clearly "preponderant", as is 66%. So why not 50% + 1?
- Equally if people cannot get to the airport reliably and comfortably

 they'll go somewhere else. As we have found with security, if the
 hassle factor is too great, they will find alternative routes or modes, or
 not travel.
- 11. Moreover, if the uses of the money are unduly restricted, there may be waste. It is sometimes highly cost-effective to make provision for a future enhancement which is not yet authorised (as Heathrow Express did, building the junction for the future line to T5 before the terminal had been authorised: this means that when the line to T5 **is** built, construction will not affect the main Heathrow Express service). It is understood that pfcs could not be used for this kind of work.

Subsidy for rail?

- 12. A paper to a joint congressional hearing in February by the House subcommittees on aviation and railroads said that airlines were opposed to the construction of a government funded high speed rail system. This would compete directly with their short haul routes: such routes on heavily travelled corridors are profitable and crosssubsidise other routes. If the busy routes were eliminated by government-subsidised rail competition, it would be difficult to make the rest of the network profitable. And if airports provide high speed rail connections to city centres, their costs (which the aviation industry has to meet) will rise.
- 13. This begs a number of questions.
 - Supposing it was not the airport which paid the subsidy?
 - Supposing the rail routes were profitable rather than being subsidised?
 - Supposing the competition grows the market?

- Supposing airlines saw the railways as code-share partners rather than competitors?
- 14. One benefit of the UK rail industry privatisation is that one can see that two sorts of routes can be profitable, having covered all of their costs. One is the high speed InterCity service: the other is the airport express. Both sorts are actually or prospectively paying premia to the government for their franchises – and, presumably, making profits for their shareholders.
- 15. Gatwick Express has always paid a premium for its franchise. Heathrow Express has been profitable at operating cost level since its first full year of operation. Midland Main Line and Virgin West Coast are due to be paying a premium now, and First Great Western by 2005/06: GNER's franchise bid called for a very small subsidy (£147,000) in the last few years.
- 16. Competition growing the market is a familiar phenomenon, both where there is air-air competition (in particular, with low cost carriers) and air-rail competition (induced traffic on the initial TGV service, the Paris-Lyon service, was 50% of the total rail market)
- 17. When airlines code-share with other airlines, they do so to expand their route network without having to fly further. They could – and in some cases do – do the same with railways. There are examples in the US, in France, Germany and the Netherlands. Here, the airlines do not lose their traffic, they do not have to compete – they maintain (and even extend) their network. While doing this, slots are freed up for longer haul flights – for journeys which cannot be accomplished by rail.
- 18. So rail can be profitable, competition can grow the market, and high speed InterCity rail does not necessarily mean that airlines lose their traffic.

What is it worth to you?

- 19. What the aviation industry may be prepared to pay for off-airport infrastructure may, of course, depend on the value of the facility to the aviation industry.
- 20. Suppose an enhancement was proposed to a road to the airport which would separate out and therefore speed up airport-bound traffic? Using conventional value of time assumptions it would be possible to put a reasonable figure on the value of this to the aviation business. Clearly, there are also benefits to other industries – other traffic using the road for other purposes would benefit too. If the highway authority could not afford to pay for all of the enhancement, it would be worth the aviation industry contributing an amount up to the value of the enhancement to the aviation business – because the aviation business would then be better off than if it spent nothing and got no benefit.

- 21. One can of course extend this argument to a railway. What is the benefit, the value, of the new piece of railway proposed to the aviation industry? If the aviation industry has to spend less than this to get it, it is better off. And if by doing so, someone else is also made better off, tell them! Tell the world! The aviation industry needs all the friends it can get, doesn't it? Then put this addition to your list of friends in the balance as an unquantifiable benefit and you'll find the project is even more worthwhile than you first thought!
- 22. A good example is the bus lane on the M4 spur approaching Heathrow airport, funded by BAA. The aviation industry benefited, as did all users of the spur. It raised the profile of BAA, who were seen as putting something into the wider community and giving a benefit to all users of buses and coaches into Heathrow. For example, one company was able to run a more frequent service with the same fleet size, because of improved reliability.
- 23. Obviously, if other authorities are prepared to pay, fine, let them. But if the only way for the aviation industry to reap the benefits is to contribute, and to contribute an amount which is less than the value of the benefits it will get, it will by definition be better off by doing so.
- 24. Note that this is not an argument for proportionality. If the aviation industry gets a third of the benefits but is asked to pay half of the costs, the idea should not be rejected because a half is more than a third. It should only be rejected if half of the costs is more than the aviation industry benefits.
- 25. Problems inevitably arise when money is tight, or when the timescales of different funders do not coincide, or when the sum of the contributions is less than the total cost of the contributions. Here, as with any similar commercial issue, one has to scale down the project through value engineering or negotiate and try to reach agreement. If the money is not available in the right budget, is it available in the wrong one perhaps for tourism development, for industrial promotion, for terrorism prevention activities (because fewer cars means less resources necessary for inspection, and terrorist are more likely to come by car than train)?

Who is the aviation industry?

26. In the foregoing discussion the aviation industry has been referred to as if it is one monolithic body – as of course it is not. It is a diverse and far-flung network of individual companies, with a wide range of ownership patterns (state, local authority, shareholders, individuals). So how do you assemble appropriate and proportional contributions from all beneficiaries? Merely to pose the problem in these terms points to the answer: you cannot, so you have to use a second-best approach. Or of course do nothing and forego all the benefit. Someone – the airport authority, the major airline – has to take the hit and either pay the total aviation industry contribution or somehow put together a package with other major beneficiaries. Or user fees of some sort could be used.

- 27. A lesson from the railway industry may be helpful. In France in particular, if a specific station is undergoing major improvements, a small toll is put on to fares to and from that station to pay for it.
- 28. A similar system has been devised in North America specifically, for consolidated car rental areas at major airports. The funding comes from a special bond issue, backed by Customer Facility Fees (CFCs). The CFC is a user fee levied on all car rental customers: the money pays for the capital costs and sometimes the running costs (the shuttle to the terminals, operation and maintenance) too.
- 29. If done well, it can be totally transparent. If for example you need £100m and there are 25 million passengers through the airport each year, a toll of £1 for each passenger is required for four years. In a number of countries, there are Boards of Airline Representatives who could possibly coordinate this kind of approach.
- 30. Arguably, it is better if airports or airlines do this themselves rather than involving governments - the money is less likely to be diverted to general purposes. Or to other transport projects in the same area. There are proposals to introduce congestion charging in the Heathrow area: this is acceptable, certainly to some parts of the aviation industry, if the money raised goes into improvements for Heathrow passengers. But if it goes to the general funding of transport in London – as the proceeds from the Central London congestion charge do – it could be funding improvements to transport to London City airport, a competitor to Heathrow served by different airlines. This is seen as controversial!

Benefits

- 31. An obvious upside of contributing to the funding of a project is the power to influence it. Not something to be under-estimated in the list of non-financial benefits! The more input the aviation industry airports and airlines has to ground access projects, the more likely it is that they will be fully geared to the needs of air passengers and airport employees. IARO members will not need reminding that these markets are different and specialised.
- 32. Ensuring that there are always plenty of valuable aviation related projects in the public eye may also be a good way of ensuring that aviation money is not taken outside the arena of aviation. Ensuring that these are justifiable and properly prioritised (by unquantifiable benefits like safety, by things like benefits for each £ spent, for example) shows that this is more than just a wish-list
- 33. Because governments are going to tax or impose charges on users whether we like it or not. It is better, surely, to put forward good and beneficial ways of spending the proceeds and trying to keep them in the industry than just complaining about the inequity of it all.

34. We think we have established that, where there are clear benefits to the aviation industry from off-airport ground transportation projects, it is worth contributing anything up to the total value of those benefits in order to secure them, if that is the only way to do so. Having done that, let us return to the original thesis.

Who has paid for what? Full service carriers.

- 35. It is true, of course, that a number of full cost carriers have worked very hard to develop air rail connections. Lufthansa has actively and extensively marketed the Frankfurt Stuttgart service. KLM takes the revenue risk on the Antwerp Amsterdam Schiphol sector, where it code-shares with Thalys. TGV'Air is a valuable product on which much work has been done. A number of airlines have bought into intown check-in at downtown stations. And 10 years ago Alitalia and Lufthansa invested in developing an InterCity rail product (and we understand that Alitalia might be considering doing so again).
- 36. Equally and obviously it is true that these initiatives were taken forward to benefit the airline concerned to gain competitive advantage. Air-rail code-sharing
 - can improve slot productivity (this is driving Lufthansa and Continental Airlines);
 - can reduce costs by eliminating uneconomic short haul flights (KLM's motive); and
 - can extend the market (KLM and Continental Airlines want this).
- 37. In-town check-in provides a better product, better customer service although here we need to do more to get costs and benefits aligned, watching and learning from new models as they appear in Kuala Lumpur, Leipzig-Halle and Chicago.
- 38. Cost cutting can lead to concentration on one's own business, to introversion, to withdrawal to avoidance of looking over the fence to see what others are doing. This can be regarded as short sighted although the imperatives of survival can be a powerful force for this!
- 39. Incidentally, a recurring problem for governments is how to justify spending public money on an airport railway rather than on the local public transport system – why spend it on high-income tourists rather than the local voting workforce? An interesting slant on this has come from Canada, where to sweeten the pill of part-funding a rail link to Toronto Pearson airport, substantial government funding has simultaneously been made available for the local public transport system in the area.

Who has paid for what? Low cost carriers.

- 40. Is it true that low cost carriers are not involved in surface access innovations? Not entirely, and we report regularly in "Air Rail Express" on their interest in rail air links. Southwest's initiative, giving free rail travel to Burbank airport; Ryanair's highly successful selling of Stansted Express travel; Buzz's initiatives in click-through booking of onward rail travel (which we hope its new owner will build on): these are all positive examples which have appeared recently in "Air Rail Express". The use of the Kuala Lumpur in-town check-in by low-cost carrier Airasia is another very positive example, and as the first use of downtown check-in by a low cost carrier, well worth watching.
- 41. We do not know the extent of Southwest's financial involvement in the first example, but we suspect the others required relatively trivial outlays. We do not under-estimate the work and commitment involved, but the **financial** outlay was probably low.
- 42. And we suspect that they generated significant customer satisfaction. Passengers travel (for example) from central London to Dortmund. So if Buzz sold them tickets for Stansted Express from London to Stansted and on DB between Düsseldorf and Dortmund as well as tickets for the flight between Stansted and Düsseldorf all in one transaction, satisfaction is greater. One is reminded of the story of Fiorello LaGuardia, Mayor of New York in the 1930s, who refused to get off the plane from Chicago at Newark airport, insisting that he'd bought a ticket to New York and not New Jersey!

Where next?

- 43. Clearly, the level of costs involved in optimising use of existing facilities as these low-cost carriers are doing and investing in new ones (as full service airlines have done with in-town check-in in London in particular) are very different. So the comparison could be seen as a bit invidious.
- 44. But does this show us a way forward now, when money is short? Success is selling what a customer wants and making money out of it.
- 45. It means getting closer to customers to find what they actually **do** want in co-operation with other suppliers. A UITP survey on the benefits of leisure and tourism to public transport revealed that co-operation with other partners helped profitability.
- 46. Customers may want parking at Heathrow integrated into their flight, or rail at both ends, or a hotel booking and we understand that Easyjet are considering integrating hotel reservations into their flight booking system.

- 47. It means meeting these individual needs at low costs and packaging them profitably. It means exploiting the web for its potential for showing and selling onward travel options. It would, for example, be relatively easy to provide people with maps showing how to get to their final destination as they book their flight, their journey.
- 48. Everyone is different. One size does not fit all. I want the product I want, to satisfy my needs, not the product you want to satisfy yours. Is the new model based on information, communications and technology, on full use of the Internet, and on partnership? And on really creating a close relationship with customers as individuals?
- 49. This may mean providing end-to-end travel at the lowest cost: analysis is necessary (for example) to see where – if – this means a reduction in short haul flights on some sectors in favour of rail. French experience may be instructive: they have 9 years experience of TGV'Air, where a number of airlines sell travel to French domestic destinations via Charles de Gaulle and the high speed train network.
- 50. Because we suspect that people do not actually care whether they travel by train or plane, as long as the components of the journey work for them. But the components have got to work for all parties.
- 51. Interchange, especially when baggage is involved, has got to be right. Customers also need to know what exactly the journey will involve. The timetable has got to be right, has got to meet real needs – so more dialogue between airlines, airports, railways and customers is necessary, with a focus on potential shared benefits. The commercial situation has got to be right – again, with more dialogue, more mutual understanding, more willingness to learn, more basic communication of the vital elements.
- 52. And what can non-users, what can the travel trade tell us?
- 53. Heathrow Express, owned by an airport operator, has showed what the aviation industry and the railway industry can produce. Could an airline run a train service at a profit, or better than an existing operator? Why not? If it did, there would be a double benefit – profits to the industry and batter service to passengers.

Conclusion

- 54. There is a clear role here for IARO and its conferences, seminars and workshops. We can bring together people for discussion, sharing and learning, in a neutral arena and in a forum where different people present have tried different ideas and made them work!
- 55. It needs all delegates to be proactive in inviting others to come an airline with a relationship problem with its railway needs to invite key players from the railway industry to come: a railway serving a short-sighted airport needs to bring our meetings to their attention.
- 56. Above all, we all need to be open to ideas, to change. Is my way really best?

Where will air rail innovations come from in future? Discussion.

There was a discussion about Andrew's paper, led by the Chairman. Were the ideas saleable? Were they idealistic? Would they work in the particular circumstances of the delegates?

Delegates brought out the following issues.

Timing – the fact that capital has to be spent up-front, long before any income accrues – causes the major problem. Different solutions have been devised in different places, to suit local needs and governance; but we need to be open to importing new ones.

In the particular circumstance of Barcelona, this had not been an issue. The local government wanted the new line (and improved public transport generally) and were prepared to fund it.

Heathrow Express and Gatwick Express showed that profits could be made at operating cost level. The level of profit of Gatwick Express was not known, but Heathrow Express had made profits of $\pounds 5m - \pounds 10m$ each year since its first full year of operation. Currently these were insufficient to pay the interest on the initial debt, although the funding model showed that this should happen in time and indeed the initial debt should also be paid off.

Forecasting traffic levels was difficult. Members needed to share experiences here. What were the forecasts, who had done them and how good were they?

We needed to attract politicians to our meetings as well as operators. They needed to be given a vision, to be told what was possible. We needed to spread the net wider, to gain a wider audience.

The Spanish situation

Julio Bermejo, Director de Transportes Terrestres for the Spanish consultancy INECO, gave an update on the current situation in Spain and in particular on rail access plans and proposals for the main Spanish airports.

RENFE was the national integrated main line rail network. It took 93% of all railway revenue in Spain, with the rest going to purely local networks. Operations had not been organisationally separated from infrastructure: RENFE was still infrastructure owner as well as train operator. GIF had been created to manage the high speed lines.

A law to change this and create what was known as the New Spanish Railway Model was under discussion but had not yet been enacted. It proposed a framework where access to the rail network was no longer in the control of RENFE, and where a rail operator could be in either the public or the private sector.

Barcelona

As well as the Line 9 automated metro we had heard about that morning and the existing regional stopping train service, there had been plans to run the high speed line between Madrid and Barcelona through the airport. This was difficult geographically, however, and a number of compromise options were under evaluation.

An initial proposal – for a complete loop from the high speed line under the airport – had been discarded. A more realistic alignment served the existing station at El Prat de Llobregat, some 2 km from the airport, where there would be interchange with the present regional service. The latest – but still unapproved – plan was for the high speed line to run to a station near to the existing terminals and then on to central Barcelona.

It was likely that the present regional service would be extended eastwards to the new terminal, which would be between the runways.

Madrid

There were firm proposals for RENFE to run a regional service or an Airport Express between Chamartin station and Barajas airport. this would be funded by central government. The area around Chamartin, in the north of the city, was to be extensively redeveloped. The line would supplement the metro, which had been funded by the regional government.

There was still debate about whether the existing metro would be extended to the new terminal. This was because the regional line was likely to be more cost-effective than the metro. A station box had been built into the basement. Both projects were likely to happen, with some EU funding.

It was likely that the new heavy rail service would run to both the new terminal and the current ones, but this had not yet been finally decided.

A second main line was being built between the two main line termini of Atocha (in the south) and Chamartin (in the north): this would not serve Nuevos Ministerios station (location of the in-town check-in for Barajas) because of geographical constraints.

Malaga

A new regional train service was planned to supplement the existing halfhourly local trains. A new terminal was planned: a station box would be built in the basement of this and local trains too would serve this new station.

Asturias airport (Oviedo)

A new regional line to the airport was under consideration.

Palma

A railway was unlikely to be justified here – so much of the traffic was on inclusive packages, and IT passengers were notoriously unwilling to use public transport.

Modal split

Julio had quickly collated some easily-available mode share statistics, but promised to make available a better set based on a consistent set of more up to date figures.

Air rail code sharing - 2.

Eric Stokhuyzen, Director Alliances, KLM Royal Dutch Airlines made a presentation, "Help, there's a Thalys under the runway!".

He described in detail the air-rail code-sharing arrangement in the Netherlands between KLM and Thalys.

Historically there had been 8 - 12 daily flights between Amsterdam and Antwerp: these had generally lost money. From 21 January 2002, KLM had entered into a code-sharing agreement with Thalys: flights will be replaced by trains in June 2002. This was a happy re-start to an old co-operation.

He commented that the "Air ticket = rail ticket" system gave passengers better accessibility to the airport and was very simple, very easy once negotiations were complete. The code-share with Thalys was much more complex - and more frustrating.

There is a strong contrast between the aviation industry environment and the railway industry environment. The rail environment is open: the airline environment is closed and controlled. Rail systems are generally not standardised: there is no check-in procedure. Coupons are not collected, unlike in the air. Data availability was limited.

Because of this, KLM has adopted pragmatic solutions. Advance reservation is necessary on the trains: the inventory of seats is held in an SNCF system unlinked with the air inventory. It is based on blocked space: KLM buy a fixed number of seats and load them onto the KLM reservation system. The trains have KLM flight numbers. In this way, the airline shares the commercial risk with the train operator.

There are some coding problems: not all systems are able to recognise ZYZ as well as ANR as a valid 3-letter IATA code for Antwerp.

Passengers starting from Antwerp have to exchange their air coupon for a Thalys ticket containing the reservation information. In the other direction, KLM collect the AMS - ZYZ flight coupon and give the passenger a boarding pass with information about the train reservation (coach and seat).

Information is the main challenge. The Thalys service is publicised on the inflight magazine and the arrival video: airport signage reinforces this. Flights are on the airport monitors but Thalys trains are not. There is no system for updating real-time Thalys train running information. These are real challenges! Both parties need to be proactive to ensure that passengers are properly informed.

KLM gets little feedback: do passengers actually travel on the trains? Booking levels have been below expectations and there is little information on why this should be. There is a suspicion that one issue is competition from Brussels airport and this is being investigated. There is a high no-show percentage: there is a major investigation under way this month to find out exactly what is happening.

A problem may be that the departure information at Schiphol station shows the train destination as Paris: passengers may not realise that they go to Antwerp as well.

Another issue is that, while the code-share is with Thalys, there are other trains between Antwerp and Schiphol. Passengers could be using these - in which case KLM is paying Thalys for accommodation not used.

KLM would like the whole process more aligned with airline practices and systems. They are trying to bring railway practice closer to airline practice on this route. This will be helped by their share, with NS, in the operation of the HSL-Zuid project. This will be completed in 2006, after which Thalys trains will be able to run at higher speeds on this sector. They would also like to be able to access the train reservation system directly, rather than blockbooking.

The passengers who actually use it like it - they are pleased with the quality of the product.

Ticketing - question and answer session

Questions to Mike Welch

Given that currently Amtrak is a political football, what is the likely future position on the North East Corridor?

The North East Corridor is the best of Amtrak, and is always likely to be insulated - and indeed isolated - from the carrier's other problem areas.

What is the situation regarding the planned high speed rail corridors in the US?

There are 10 designated high speed rail corridors, but these are very much for future development.

Does the code-sharing make money for Continental Airlines?

Revenue is pro-rated, so each operator gets a share according to the sector mileage. This applies whether the code-share is with a regional air carrier or Amtrak.

Is there adequate car parking at the four code-share stations?

Yes, generally.

Questions to Eric Stokhuysen and Herman Gelissen.

Thameslink wanted to offer e-ticketing using a print-your-own system, and wondered if there was any experience of this?

NS plan to do this: it means ensuring that all the conductors had mobile phones with the ability to check the validity of self-printed tickets.

Is the "Air ticket = rail ticket" going to remain exclusive to KLM?

No. NS do not have any agreements with other airlines - yet - but expect to. It was easier to experiment with the home airline first.

Did the fact that it only applied to KLM tickets bought in the Netherlands give rise to any competition issues?

The EU had been asked if there would be any problems with competition and discrimination legislation. No definitive answer had been received, but since it was an open commercial agreement, it was thought that there would be no problems.

Is it likely to be extended to KLM tickets bought outside the Netherlands?

Doing so would represent more cost to KLM for little profit. It was a Unique Selling Point, which was particularly valuable and particularly profitable in the home market. There is at the moment no intention to go global: it would double the cost and not seriously increase revenue.

Is it likely to be extended to other airlines?

In principle yes. Clearly it would increase the complexity of the system particularly from the ticket checking point of view - but maybe in time no airline serving the Netherlands would be able to afford not to do it!

When did it start?

October 2000.

Revenue allocation is based on a survey of departing passengers, but conventional wisdom is that arriving and departing passengers have different characteristics. Is this a problem?

The survey of departing passengers is done daily, but every 6 months arriving passengers are surveyed too and data from this are used for validation. In fact there seems to be very little difference between arriving and departing passengers - maybe 1% to $1\frac{1}{2}\%$.

Have you considered something like an add-on fare for inbound passengers who do not qualify for the free travel, giving them simplified ticketing?

KLM are keen to expand the system, both to inbound passengers and to those using Belgian Railways (SNCB). Belgian passengers can exchange their flight coupon for a ticket to Schiphol on any train - SNCB, NS or Thalys. There are major problems with ticketing for inbound passengers: KLM are reluctant to make any more complications - at least before they have fully investigated what is going on now.

Attendants on the Acela trains help you with your baggage, which is very customer friendly - is this an issue with using trains in Europe?

Maybe.

What happens if the inbound passenger's train ticket is collected during their *flight*?

There are problems. One solution may be to settle with Thalys on a sold coupon basis, not a collected coupon basis. It is a problem for KLM if passengers use NS or SNCB trains rather than Thalys - they then have to pay NS and SNCB as well as Thalys.

Good practice in marketing

Examples of good practice in marketing were reviewed.

These covered

- package deals, especially for groups and
- experiences of airport rail timetables and brochures.

Integrated group packages

Mike Adamson and Andy Wakeford, Thameslink Rail introduced their system and its ticketing systems for air passengers.

Thameslink Rail operates a major north-south route through the heart of London. It runs between Bedford, 70 km north of London, and Brighton, 80 km south, and serves both Luton Airport and Gatwick Airport.

It carries 125,000 passengers a year, with an annual revenue of £144m. It is profitable, paying a premium to the Strategic Rail Authority for the franchise. It is a subsidiary of Govia Ltd., a joint venture between the Go-Ahead Group (65%) and the French company Keolis (35%).

About 16% of Luton Airport passengers use rail: at Gatwick the share is 18%, spread mainly over 3 operators (Thameslink, South Central and Gatwick Express) - although other operators also served Gatwick, from the east and west.

Luton Airport Parkway station was opened in November 1999: it is linked to the terminal by a frequent free shuttle bus service. Before that there was a shuttle bus service from the main station in the centre of Luton. The airport currently handles 14 mppa - 85% on scheduled flights. The fare from London is around £10: there is coach competition, and Midland Main Line also serves the station.

Gatwick is long established as London's second airport, with a station immediately adjacent. It has recently lost traffic because of BA's decision to concentrate more on Heathrow, but their slots are being taken up by, in particular, low cost carriers. There are 25 million terminating passengers at the airport each year. The one-way fare to London on Thameslink is £9.80.

Because there is significant on-rail competition at Gatwick, Thameslink's strategy is to move the buying decision to the point where the trip is booked, so that people decide in advance to use Thameslink. Another part of the strategy is to ensure that rail travel is seen as part of the total transport solution.

As part of this, they have a number of novel fare initiatives - both current and planned.

The Outback Roundrider is a group travel product, set up and retailed by Medigen, a third party. It includes a taxi ride of up to 16 km to a station and a rail fare, with a fixed price for up to 4 passengers. The airports fare is $\pounds75$, competitive with either a taxi throughout or long-term parking. Because of the way it is sold, Thameslink have very little involvement in the marketing. The product, now 3 years old, makes around Euros 39,000 a year.

There is an Internet booking arrangement with Easyjet. When people book an Easyjet ticket, they are offered discounted rail travel on Thameslink. Discounts, like those of Easyjet, are at two levels. For example, London to Luton Airport costs £4 if booked more than 8 weeks in advance, or £8 if booked between 7 days and 8 weeks in advance. Tickets are mailed to passengers: newer technology is needed in order to expand sales. Revenue from this currently is around Euros 1 million a year.

Thameslink also offer Internet booking for travel between Luton Airport and Gatwick, for people flying into one airport and out from the other.

They also plan a ticket on demand system, to avoid mailing tickets. This will be similar to - and compatible with - the current system used by Stansted Express. Passengers will be able to book on the Internet, pay by credit card, receive a magic number, put the credit card in the ticket machine before travelling and receive their ticket. This will open the way to significant expansion (with the removal of the seven days notice, currently necessary because tickets have to be posted): the cost of sales will also drop significantly. The first ticket machine equipped for this will be installed at Luton Airport shortly

Their policy is to have a multiplicity of small deals tailored to specific markets rather than to have one all-embracing scheme. These include

- deals for bulk sales by specific charter operators for example, Monarch and British European both sell Thameslink tickets on board
- deals with Tourist Information Centres, especially in London
- Sales and promotion through the Aviance ground-handling group, part of the Go-Ahead Group.

The future strategy was to have simple solutions, add-ons to the air journey and deals with partners in order to reach the passenger early on in the decision making process.

Integrated group packages - question and answer session.

How does on-rail competition at Gatwick work?

This is a unique situation. The theory when Britain's railways were privatised was that there would be on-rail competition at different prices. In general this does not work - it doesn't happen as envisaged. There are 3 operators running trains between London and Gatwick: Gatwick Express charges a different fare, and different tickets have to be bought for Gatwick Express and for the other companies (although there are also tickets which are valid on all three). This is confusing to the passengers and gives relatively little benefit.

Thameslink tends to serve the eastern and central side of London, with termini at London Bridge, Blackfriars, City Thameslink, Farringdon and King's Cross. For passengers from Gatwick, these are very different to Victoria, the terminus served by the competition which is in the West End. So Thameslink feel they have some control over the situation for Gatwick passengers, who consciously choose one or the other.

With Luton Airport, however, they are in competition with Midland Main Line (MML), running to St. Pancras, very close to King's Cross Thameslink - so there is a danger that MML will benefit from Thameslink's marketing activities.

What about employee travel?

Employees form a significant and valuable market, and Thameslink have done deals with major employers at both Luton Airport and Gatwick.

The fundamentals - timetables and brochures.

Bob Longworth (Manchester Airport) and Stephen Holt (Birmingham Airport) spoke on their provision of train time publicity for their airports. This was particularly important in the UK, where rail operators were in competition with one another and tended to provide operator-specific timetables.

<u>Bob Longworth</u> stressed the importance of information on how to get to and from the airport. They had produced timetables aimed at air passengers, focusing on the airport. This again was different from the timetables produced by the rail operators, to whom the airport was just another stopping point.

Information in the timetable is grouped by origin and destination, rather than by operator.

Essentially there were two timetables - one for trains to Manchester (including a city centre guide) and one for places further afield.

Both included information about the airport.

<u>Stephen Holt</u> said that the airport was some 500 metres from Birmingham International station, a multi-functional interchange. Currently there was a bus shuttle between the airport and the station, but a new Doppelmayer cable-powered transit system would be introduced within the next few months.

Services at the station were also multi-functional, ranging from InterCity services operated by Virgin Trains and regional services to Wales to local services operating within the West Midlands conurbation. None were dedicated.

As in Manchester, two timetables had been produced - one for the conurbation and one for other major destinations. Both featured diagramatic maps.

Both maps and timetables were geared to places air passengers travelled to most. This tended not to be the case with the train services - for example the major train service ran from Birmingham International to London, but few air passengers wanted to go to London.

A major problem in the current year was engineering work seriously affecting weekend journeys.

- The secondary route south towards London Marylebone was closed on a number of weekends in early summer so that a key section could have a second track installed.
- Once that was back in operation, the West Coast Main Line to London was closed between Milton Keynes and Hemel Hempstead a distance of some 40 kilometres for about 18 weekends. Trains would be replaced by buses.

- On a number of Sundays, trains would not serve the airport at all: again, there would be a bus service between central Birmingham, the airport and Nuneaton (on the West Coast Main Line). It had been through the airport's initiative that the buses were serving the airport itself rather than the International station, a bus ride from the terminals.
- Finally, going north, the line between Wolverhampton and Stafford was closed on some weekends.

Compounding the problem was the difficulty of getting accurate information. Because of uncertainties about work programming, Railtrack had initially planned not to publish a timetable at all for weekends but to rely instead on the Internet, leaflets and posters. However they had found that they were obliged under their licence to do so - so they had published one, but one based on very preliminary plans and was unlikely to be adhered to.

It was clearly desirable to publish accurate information - passengers would keep travelling, would keep on arriving by air at Birmingham - but the airport could not produce accurate information if it couldn't find it.

In response to a question, he said that he thought it would be even more confusing for passengers if the airport provided buses to key destinations at weekends too.

Good practice in baggage handling

This section reviewed the state of the art on baggage handling for this kind of railway. Because of the multiplicity of terminals served and the fact that relatively few passengers were air travellers, Heathrow Express-style in-town check-in was difficult - and even more financially complex than for a dedicated airport express.

Bob Longworth discussed plans for baggage drop systems for Manchester airport.

This was followed by a description of the integrated baggage handling system at Frankfurt and its contribution to rail-air intermodality, by Hans Fakiner.

Baggage drop.

Bob Longworth, Ground Transport Manager of Manchester airport, discussed their future plans. He stressed that this was what they wanted to do, not what they did do at the moment.

Baggage drop was part of their long term strategy - partly for customer convenience, partly because of the need to optimise space at the airport. Passengers would be able to leave their bags in a designated place, and be re-united with them at check-in: this saved them carrying their bags particularly at interchange points. The concept could apply both at the airport (at the station, at car parks) and remotely (at Leeds, York and Crewe stations, for example).

They had already made a trial of the system at one of the airport car parks for two airlines - it worked well, but costs were high.

The new Ground Transport Interchange, currently being built and opening next May, was designed to be a receiving point for bags and passengers - those arriving by bus, coach, train and light rail.

Because they already have 100% Hold Baggage Screening, there is no need to screen bags at source - but the cost issues remain.

Self service check-in machines, especially for passengers with just hand baggage, may be a way forward.

Common user terminals are being developed, which will help by economising on space. These are self service check-in machines but with a common user front end, like cash dispensers: they were not dedicated to one airline or alliance.

It is possible for these machines to issue baggage tags. Passengers would then have to carry their own bags to the baggage drop point or a manned check-in facility.

Frankfurt - Stuttgart and beyond.

Hans Fakiner, Aviation Strategies Commissioner for Intermodal Systems for Fraport AG (Flughafen Frankfurt Main AG), described air rail integration and substitution at Frankfurt.

Their goals were to strengthen the hub function of the airport, to increase its catchment area, and to increase capacity. The co-operation with Deutsche Bahn (DB) was forecast to increase airport capacity by around 5%, by freeing up slots currently used for short haul flights.

There had been a regional rail station at the airport since 1972: the new AIRail station for high speed trains had opened in 1999. The presence of high speed rail intensifies competition between airports.

The station at Köln/Bonn airport was due to open in 2004.

The new Frankfurt - Köln high speed line (NBS) is to open on 1st August 2002, initially with a Frankfurt - Köln shuttle halving the present travel time. From 15th December 2002, there were to be 9 trains an hour at Frankfurt AIRail station. The full air-rail service between the two cities would start in January 2003, with Customs and baggage facilities at Köln Hbf.

On the Köln trains, baggage would not be containerised in special luggage compartments as on the Stuttgart service. Instead, bags would be loose-loaded into a reserved passenger compartment (with the seats protected by special covers - this is done for some mail services already). They would then be offloaded into containers at Frankfurt or Köln. This would save modifying coaches - which were common-user ICE-3 sets, which could go anywhere in Germany (and indeed to some places beyond).

The Frankfurt - Stuttgart service is running well. About 30% of the space on the trains is used: this had not changed since August last year. There are about 5000 passengers a month - 20% of the total air and rail traffic between Frankfurt and Stuttgart.

Lufthansa is to cancel its Frankfurt - Köln flights, but is unlikely to withdraw planes from Frankfurt - Stuttgart because of competitive pressure: they do not want long-haul traffic to go Stuttgart - Paris instead of Stuttgart - Frankfurt.

Responding to a question, Hans said that 4000 pieces of baggage were checked in each month at Stuttgart, and 90% of passengers using the train declared themselves very satisfied.

Finally, he looked forward to welcoming delegates to the IARO Air Rail Conference in Frankfurt early next year.

Benchmarking airport access

Miguel de Bernardo of INECO spoke on the European Union (EU) Airport Access Benchmarking study, of which he was the leader.

The EU had, under its 5th Framework Programme, sponsored a series of benchmarking conferences - BEST, Benchmarking for European Sustainable Transport. One of the results of these was a series of benchmarking workshops (BOB - Best of Benchmarking) - essentially to test practical applications of the output of the conferences.

The BOB studies deal with road safety, railways, and airport access.

The airport access study is looking at good practice in public transport use, and at alleviating congestion and bottlenecks. It aims to identify key factors affecting the use of public transport to access airports.

Participants included the airports of Amsterdam Schiphol, Bologna, Brussels, Copenhagen, Dublin, Germany (ADV), Heathrow, Lyon St-Exupéry, Manchester, Milan (SEA Milan), Paris (ADP), Spain (AENA), Toulouse and Vienna.

A number of working meetings had already been held.

Initially there had been a brainstorming session to attempt to establish what benchmarks were important: unfortunately the data to support these ideal benchmarks were not readily available. Therefore a combination of data collection and site visits was being used, in an attempt to learn transferable lessons. The outcome would be a description report for each airport (basic data) and a final synoptic report.

Surface access strategies and key factors affecting use of public transport by both air passengers and airport employees were being studied as part of this.

Where next?

Cyril Bleasdale, Chairman of IARO, invited delegates to share their own views of the day.

- What, specifically, did they get out of it?
- What action plan will they go away with?
- What was not covered which should have been?
- What needs to be covered in a follow-up?
- What should IARO do next?

Thameslink picked up the point that information needs to be clear and in a form people are expecting it. The comment from KLM that passengers were looking for trains to Antwerp and didn't expect them to be going to Paris was interesting - and, to the traditional railway mind, unexpected. Trains, unlike planes, often make many stops! It shows one of the key differences between the rail market and the air market which we need to keep in mind.

AccesRail commented on the two different types of airline - those using GDSs, and low-cost carriers. Airlines were not monolithic! Perhaps IATA needs to adapt more to the changing environment.

Birmingham Airport suggested putting the workshop papers on IARO's website, perhaps in the Members Only section.

ADP suggested an IARO working group on intermodality. They had been particularly interested by the concrete case studies.

Future needs were identified as follows.

- More on information how to get train information and ticket sales information to the passenger. How do you catch the right train and buy the right ticket? How do you access the system?
- How can we share market research?
- What will make a difference to passengers in travelling especially those not speaking the language of the country they are visiting?
- What do people need to know?

Delegates

Said Abubakar Advisor, Air Rail Intermodality Express Rail Link Sdn Bhd, Level 25 Wisma UOA II 21 Jalan Pinang 50450 Kuala Lumpur Malaysia

00 603 2164 2277 ext 1005, fax 00 603 2166 7069, email spektra@KLIAekspres.com

Mike Adamson Account Manager Thameslink Rail Friar's Bridge Court, 41-45 Blackfriars Road, London SE1 8PG

020 7620 5717, fax 020 7620 5099, email mike.adamson@thameslink.co.uk

Zulkifli Alias Vice President Air Rail Services Management Express Rail Link Sdn Bhd, Level 25 Wisma UOA II 21 Jalan Pinang 50450 Kuala Lumpur Malaysia

00 603 2267 7040 fax 00 603 2166 7069, email zulkifli@KLIAekspres.com

Didier Aujouannet Strategy & Commercial, Aéroports de Paris 291, bd. Raspail, 75014 Paris CEDEX 14.

00-33-1-43-35 75 46 (fax 00-33-1-43-35 73 20, email didier.aujouannet@adp.fr)

Zoltán Benedek Head of Strategic Planning Department Budapest Airport PLC Budapest-Ferinhegy H-1675 p.o.b 53 Hungary

00 361 296 85 95, fax 00 361 296 64 35, email zoltan.benedek@bud-airport.hu

Miguel de Bernardo INECO Paseo de la Habana, 138 28036 Madrid Spain

+34 91 452 12 00, fax +34 91 452 13 00, email mbernardo@ineco.es

Cyril Bleasdale Railnews Stanford House, 8 Long Ridge Aston, Stevenage, Herts SG2 7EW

01438-880451 fax 01438-880801. Email cyril@railnews.co.uk

Barbara Born Veranstalter- und Airlinesvertrieb UB Personenverkehr PMM 6 Deutsche Bahn AG Stephensonstraße 1 D-60326 Frankfurt am Main Germany

0049 69 26 56874, fax +49 69 265 7809, email barbara.born@bahn.de

Arthur de Bos Project Developer Siemens Nederland N.V. Prinses Beatrixlaan 26 Postbus 16068 2500 BB Den Haag The Netherlands

0031 0 70 3332746 (fax 0031 - 70 3333639, email arthur.bos-de@siemens.nl)

Louise Cordwell Customer Services Manager First North Western Platform 2, Wilmslow Station Station Road Wilmslow, Cheshire SK9 1BU

0161 228 8257, fax 0161 228 8320, email louise.cordwell@firstgroup.com

Hans Fakiner Aviation Strategies Commissioner for Intermodal Systems Fraport AG Flughafen Frankfurt Main AG D 60547 Frankfurt am Main Germany

+49-69-6-90-7-11-46 (fax +49-69-6-90-5-97-02, email h.fakiner@fraport.de)

Louis Farinaccio Continental Airlines Operations Centre, Terminal C, Newark International Airport, Newark, NJ 07114 USA.

001 973 681 0312 (fax 001 973 681 0441, email louisf@coair.com)

Herman Gelissen Director Sales & Marketing Netherlands Railways HGB IV 5 k 28 Postbus 2025 3500 HA Utrecht, The Netherlands

Stephen Holt Ground Transportation Planning Manager Diamond House Birmingham International Airport Birmingham B26 3QJ

0121 767 7076, fax 0121 767 7454, stephen.holt@bhx.co.uk

András Koncz Head of Airport Development Budapest Airport PLC Budapest-Ferinhegy H-1675 p.o.b 53 Hungary

00 361 296 85 95, fax 00 361 296 64 35, email andras.koncz@bud-airport.hu

Roland Lemmel Responsable Planification Aéroportuaire Aéroport de Bâle-Mulhouse F-68304 Saint-Louis Cedex France

0033 389 90 25 41, fax 0033 389 90 75 36, email rlemmel@euroairport.com

Bob Longworth Ground Transport Manager Manchester Airport M90 1QX

0161-489-2708 (fax 0161-489-3812). bob.longworth@manairport.co.uk

Adriaan A. Mast Managing Director Schiphol Real Estate Amsterdam Airport Schiphol Postbus 7501, 1118 ZG Schiphol Airport The Netherlands

Hans Peter Moeller Deutsche Bahn AG Stephensonstrasse 1, D60326 Frankfurt-Main Germany

+49 69 265 14246, fax +49 69 2 65 75 38, email hanspeter.moeller@bku.db.de

Hans van Oel Program Manager Amsterdam Airport Schiphol Postbus 7501, 1118 ZG Schiphol Airport The Netherlands

0031-20-601 43 42 (fax 0031-20-601 36 96). Email oel_j@schiphol.nl.

Andrew Sharp Room B217, MacMillan House Paddington Station London W2 1FT

020-8750-6632 (fax 020-8750-6647, email intl_airrail@baa.com).

David Short Director of Legal Services IATA Centre, Route de l'Aéroport 33, PO Box 416, CH-1215, Geneve 15 Airport Switzerland Maarten Spaargaren Manager Business Development Netherlands Railways HGB IV 5 k 28 Postbus 2025 3500 HA Utrecht, The Netherlands

+31 30 2356130 (fax +31 30 2358012 email Maarten.Spaargaren@ns.nl)

Eric W. Stokhuyzen Director Alliances KLM Royal Dutch Airlines Amsterdamweg 55, 1182 GP Amstelveen, The Netherlands

0031 2064 95362, fax 0031 2064 88291, email stokhuyzen@klm.nl

Oddbjørn Taraldsvik Manager, Railways & Interline Partners AccesRail Inc Sutton House, 158 Victoria Street, London SW1E 5LB

020 7834 4712/4714 (fax 020 7821 6667, Email oddbjorn.taraldsvik@accesrail.com)

Pierre Vidailhet, Strategy & Commercial, Aéroports de Paris 291, bd. Raspail, 75014 Paris CEDEX 14, France

Andy Wakeford Thameslink Rail Friar's Bridge Court, 41-45 Blackfriars Road, London SE1 8PG

020 7620 5717, fax 020 7620 5099, email andy.wakeford@thameslink.co.uk

Michael Welch, Managing Director Operations Continental Airlines Operations Centre, Terminal C, Newark International Airport, Newark, NJ 07114, USA.

001 973 681 0301, fax 001 973 681 0441, email mwelch@coair.com

Jean-Pierre Widmer Institut für Verkehrsplanung und Transporttechnik (Swiss Federal Institute of Technology) ETH - Hönggerburg (HIL) CH - 8093 Zürich, Switzerland

0041 1 633 30 88 (fax 0041 1 633 10 57, email widmer@ivt

Task Groups, workshops and conferences

Task Group reports are usually the topic of all or part of an IARO workshop.

Copies of the reports of the first (in Berlin in 1999) and second (Milan, 2000), are available price $\pounds 250$ (free to IARO members). The report of the Madrid workshop is in preparation.

These workshops are very focused, dealing in detail with a restricted number of key issues, and complement the regular Air Rail Conferences. Workshops and conferences (with site visits) have been held as follows.

- 1993 Zürich
- 1994 Paris
- 1996 London (Heathrow Express, Stansted Express)
- 1997 Oslo (Airport Express Train)
- 1998 Hong Kong (Airport Express Line)
 - Frankfurt (with the AIRail station and the Cargo Sprinter)
- 1999 Workshop 1: Berlin (the Schönefeld link)

- Copenhagen (the Øresund Link)

- 2000 Workshop 2: Milan (Malpensa Express)
 - Paris (plans for CDG Express)
 - Washington (Baltimore-Washington International Airport)
- 2001 Zürich airport: Air rail links improving the partnership
 - Workshop 3: Madrid (and its airport rail links)
 - London Heathrow (Heathrow Express)
- 2002 Workshop 4: Amsterdam, for railways serving airports but not as their main job - "Help - there's an airport on my railway".

- New York (the Airtrain projects)

Planned workshops and conferences

- 2002 Kuala Lumpur and its new Express Rail Link (October)
- 2003 Frankfurt/Stuttgart and air rail integration (February)
 - Hong Kong and Shanghai (October)
- 2004 Brussels
 - San Francisco

Details are available from IARO, or on www.iaro.com.

Future plans are, of course, subject to change.