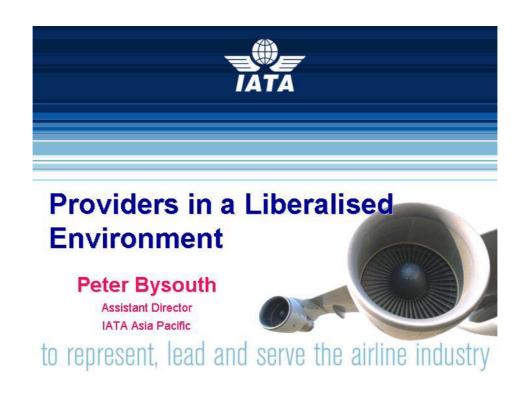
# THE ROLE OF INFRASTRUCTURE PROVIDERS IN A LIBERALISED ENVIRONMENT

By

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Assistant Director IATA Asia Pacific

#### Slide 1- Providers in a Liberalised Environment



Minister Yang, Vice Minister Yang, Distinguished Delegates,

This session on the **Role of Infrastructure Providers in a Liberalised Environment,** is being combined with **Airport, ATC and Fuel Charges** to demonstrate the interrelationship and the need for co-development. Liberalisation, infrastructure development and costing are inextricably linked. The challenges that arise from such complex issues need to be met in an open discussions that need teaming and partnerships to achieve the best possible outcome.

IATA would like to explore what we can do together, what can we do as a team, what we can do in partnership to actually be successful in implementing the explosive growth that is upon us in Asia Pacific.

IATA and industry have entered into several long-term pricing and infrastructure investment

programs with airports and air traffic providers but regretfully the number is but a few. We ask you now. How can you expect to implement, manage and safely control that explosive growth unless we form partnerships to agree the way ahead?

Slide 2- 10 Year Growth at Selected Airports in Asia



These are exciting and challenging times for air transportation. Aviation is rapidly growing in China and in India. Four of the world's top 10 airports are located in Asia - China's airports are experiencing extraordinary growth, an average of 16.5% in the last three years and India is just about to explode; 20% p.a. for the next 5 Years according to India's Minister Praful Patel last week.

Beijing grew 300% and Shanghai has grown 400% over the last 10 years. China has huge airport development programs underway but India is only just about to start. Most of the other airports in Asia are at smaller growth rates but they are still growing faster than anywhere else on the Globe. This slide is out of date on total numbers. For example, Hong Kong, after the recent SARS dip in traffic will now go through 40 million passengers per annum within the next 12 months but the slide still conveys the message.

In 2004 around 1/6th of the world's passengers move through just 12 Asian airports!

In 2015, it could 1/3 to 1/2!

#### Slide 3 - NUMBERS



## **NUMBERS**

#### 2005

USA - ~220m can afford to fly - 3750 airliners China approx 750 airliners India less than 200 airliners

#### 2015

China - 200m afford to fly
India - 200m afford to fly
How many airliners Mr Airbus/Boeing

#### **Aircraft Numbers:**

If you look at the numbers, within a decade both India and China are expected to have 200 million households that will be able to afford to fly in the period 2012-2015. Probably the same amount that the USA has today. But the US has some 3,750-passenger liners.

Today, China has around 700+ jet aircraft but India has less than 170. Lets look at first of our study numbers. How many aircraft could Airbus; Boeing, Bombardier; etc. actually build and deliver in Asia Pacific in the next 10 years? How many can be responsibly financed?

#### Slide 4- NUMBERS



# **NUMBERS?**

- ¬Where do we get 5000+ experienced Captains, 50,000 tech staff, engineers, safety inspectors and ATCs.
- → How do we;

Manage the air routes,

How do we manage the traffic flow,

How do we buy, build and integrate.

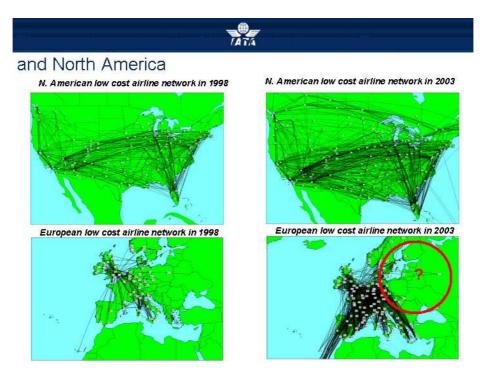
We need to do a global analysis?

#### **Global Numbers:**

Is anyone doing a global analysis of the problem? We do see articles on country specific issues but not a global study.

- Where do we get 5000+ airline Captains with 10 years experience.
- Where do we get 40,000 engineers, reservations staff etc
- How do we manage the air routes
- How do we manage the traffic flow
- What does it look like to an infrastructure provider in 2015?

Slide 5 -The growing network of low cost airlines in Europe and North America



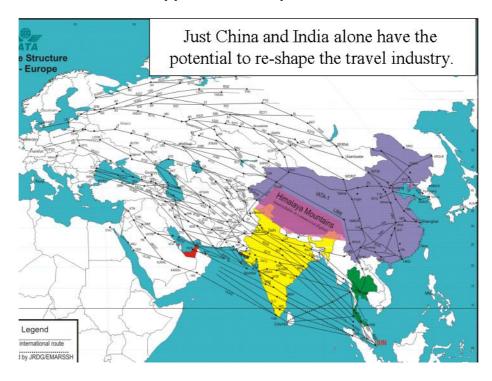
Let us turn to another explosive growth story so that we can have a reasonable model of what could be our situation in 2015. Here is a series of charts mapping the low cost airlines network in both 1998 and 2003 for North America as well as Europe.

What you see in Europe is a dense network focused around the UK, Belgium, France, Switzerland and Italy and expanding rapidly to Spain, Greece, which are traditional holiday markets.

What we do not see here in 2003 is any signs of a dense network in Eastern/Central Europe as well; I would say; not yet. It started in 2004 with emerging airlines in Eastern/Central Europe and network expansion planned by the existing low cost airlines such as Ryanair and EasyJet.

Think about the startups in Singapore and Thailand and now India and China and soon to be Indonesia. What of our airspace in ASPAC, what will it look like in 2012, when will ATC learn to "MANAGE" airspace rather than thinking just about controlling it?

Slide 6- China and India Upper Level Airspace



Lets look at China and India for upper level airspace routes. Not completely comparable of course but it is scale in context that we must examine.

For Infrastructure Providers in a liberalised environment how should we approach it, what should we consider? We should consider how we will manage it into the future.

Slide 7- Infrastructure- Basic Requirements



## **Infrastructure-Basic Requirements**

- → Optimum Routes Fuel saving initiatives
- 对Airport Capacity
- → Air Traffic Management
- → Infrastructure Harmonization

The above slides show why we have to build for the future now to get most efficient infrastructure - for China and India in particular. With that in mind – I would like to discuss some of the basic elements that are required for an efficient air transport system. They are:

Optimum Routes – Fuel saving Airports and Air Route Capacity Air Traffic Management Infrastructure Harmonisation

Slide 8- IATA's Fuel Conservation Plan



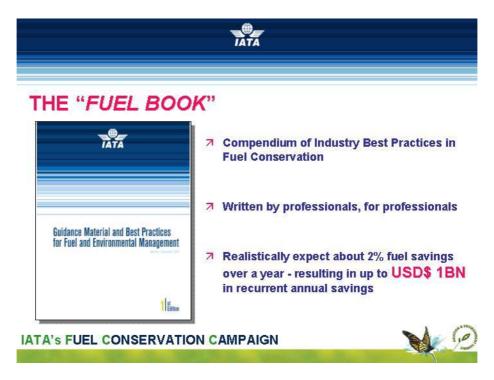
Recently fuel prices hit record highs (US60\$ p barrel) creating problems across most economies. While highlighting the cost problem, it also came about at the same time as the environment was becoming an even bigger problem. Following directives from President Hu and the Premier, China has launched an Energy Conservation plan forming an unspoken alliance with IATA to address our looming environmental issues.

On 24 August 2004, IATA initiated an urgent fuel action campaign aimed at delivering quick win benefits, and identifying longer-term actions to offset the rising fuel prices and at the same time addressing our collective social responsibilities for all of our children and grandchildren.

As well as re-focusing efforts in IATA's normal fuel areas of hedging and taxes, we initiated a three-tiered plan that focused on:

- Fine-tuning existing infrastructure particularly route inefficiencies;
- Disseminating global best practice in fuel conservation-The Fuel Book,
- And, encouraging ANSPs to "buy-in" to fuel conservation measures the so-called
   "Save One Minute" campaign.

Slide 9- The "FUEL BOOK"



**The Fuel Book** was an effort to collate all of the world's best operational practice in fuel conservation presently within the world's most efficient airlines. From simple things like recycling to implementation of sophisticated flight planning systems. The book identifies the potential for between 5% and 7% fuel savings across the industry – with as much as 15% available in some airlines. In the short term, we expect a figure of 1% - 2% savings in 2005.

Let me give you some examples:

- Weight reduction saves fuel.
- Good maintenance saves fuel.
- · Good ATC techniques save fuel.

For every kilogram of fuel not burned, emissions are reduced by over 4 kg.

#### Slide 10- ENVIRONMENT AND FUEL BURN



IATA's FUEL CONSERVATION CAMPAIGN



However, what about the environment? IATA and the airline industry have always been mindful of the environmental impact of aircraft operations.

Let me give you some examples. Saving just 1% of the average annual fuel burn for a Boeing 737-300 – or an Airbus A320 – results in **100 tonnes fuel burn saving per annum**, AND most dramatically, **reduces emissions by over 440 tonnes!** 

By ICAO's own estimate, full implementation of CNS/ATM improvements could cut greenhouse gas emissions by more than 6%.

We have a target to achieve a total fleet fuel efficiency improvement of 10% by 2010 – an ambitious target. The effect of our "Save One Minute" Campaign – if completely successful – could be a reduction in annual emissions by a staggering **10 Million Tonnes!** 

Slide 11- Oceanic Flex Tracks



I know you going to say Australia is different, yes they do have Kangaroos and funny attitudes but Airservices Australia, the national air traffic manager is doing a magnificent job with their Five Year Industry Pricing and Investment agreement, their studies, trials and implementation of new technology and their willingness to "give it a go" is an example for all. They have worked with China's ATMB on the introduction of the L888 route North of the Himalayas and they are working with the Airports Authority of India on Bay of Bengal issues and flow control into Delhi and Mumbai.

But they are also working with suppliers bringing innovative funding methodologies and for the introduction of new technologies such as ADS-B. But in case I get mobbed when I step below the Equator I should also mention other progressive providers like Airways New Zealand, who are also working in China, if more with the Defence Force than the CAAC.

Now what are some of the detailed requirements that providers must look to in our liberalising growth environment?



## Role of Infrastructure Providers in Liberalised Environments

- → ANSPs & airports facing traffic growth ~200%- 300%
- More of the same will not give capacity growth
- Need capability to respond quickly
- Must obtain capacity increases with minimal additional staff
- Need immediate actions to increase capacity, efficiency and safety

#### The role of infrastructure providers in a liberalised environment

- Infrastructure service providers are facing traffic growth of 200 300%
- More of the same will not provide the capacity to support this growth
  - o Diminishing returns from actions like multiplying the number of sectors.
  - o Even if this was not the case, service providers could not recruit and train enough staff for a linear increase in numbers to meet the projected traffic growth.
- Should also have capability to respond quickly
  - o Low cost airlines can introduce quite sudden changes in routes, destinations etc, different from the steady increases that we have seen in the past.
  - o The infrastructure providers must become equally agile and quick to respond to new demands.
- Must obtain increased capacity with only small increases on current staff
  - o Improve efficiency with better systems, practices and procedures.
- Some actions to increase capacity, efficiency and safety
  - o Harmonisation of procedures along an entire route gate to gate
  - o Facilitate this by harmonisation of systems and facilities along the entire route (no weak links; everyone up to an agreed minimum standard of CNS/ATM standard)
  - o Coordinate investments in ground systems and avionics with all stakeholders in a region or on a route with the airlines, ATNS providers, airports etc.
  - o Develop regional traffic flow management processes and systems
  - o Business rules will be more important than technical systems
  - Must accept actions in one country/FIR to achieve outcomes in another country/FIR to maximise the collective benefit.
  - o Harmonise military civil coordination to achieve Flexible Use Airspace
  - o The aim should not only be that all civil ANSPs have similar FUA procedures, but all militaries accept common procedures for FUA management
  - Develop Flex Tracks, User Preferred Routes and User Preferred Trajectory capabilities on a gate to gate basis, across as many countries/FIRs as appropriate, and not just within individual FIRs.
  - o Automate routine repetitive procedures as much as possible
  - o Give Pre-Departure Clearances by datalink

- o Automatic data exchanges between centres for handover (AIDC)
- o Datalink for automatic waypoint reporting etc (ADS-C, CPDLC etc)

#### Slide 13- Role of Infrastructure Providers in Liberalised Environments



## Role of Infrastructure Providers in Liberalised Environments

- Regulators must harmonise processes and regulations across many countries
- ANSPs to embrace new ATM concepts and cost saving technologies
- → Integrate airport and ATM traffic management systems better
- Reduce infrastructure costs with common technical specifications
- Reduce infrastructure costs with sharing of facilities and investments
- Try to achieve common training, qualifications across countries

#### Regulators must harmonise processes, regulations across many countries

o Accept that one provider may be operating in several regions and that they should be able to do so under uniform regulations

#### Embrace new ATM concepts

- o For example, shared separation responsibilities in certain circumstances between pilot and controller, based on the Airborne Separation Assistance Systems (ASAS) concepts now under development
- o These should not be viewed as threatening the work of controllers, but as assistance tools without which the controller will not be able to cope in tomorrow's traffic densities growth will ensure there are more than enough jobs for all

#### Integrate airport and ATM traffic management systems better

 This will be necessary to handle the projected traffic increases safely and efficiently

#### Reduce infrastructure costs with common technical specifications- ICAO?

- o CNS systems
- o ATM systems
- Result will also improve response time to meet quickly changing demands systems become close to 'off the shelf'
- o Follow airlines / aircraft manufacturers lead heavy emphasis on common systems / standardisation for a given model
- CANSO are working in this area but they need more members and more commitment

#### Reduce infrastructure costs with sharing of facilities and investments

o **Do not duplicate** facilities near FIR boundaries – share the use of these systems as though the boundary did not exist – another version of 'seamless' operations.

- Try to achieve common training, qualifications across countries
- Share investment in course development, training facilities etc
- Remember the Numbers, remember the growth and remember our commitment to the environment and safety.

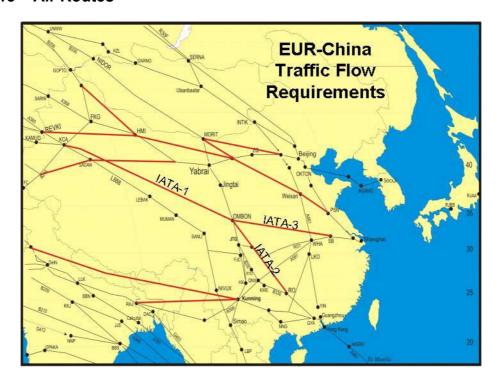
#### Slide 14- SAVINGS



# **SAVINGS**

- New Technology Just replacing and expanding (more of the same) will just not do!
- New Financing − Depending on tax structure several ANSP have entered into x-border leases
- Benchmarking CANSO is leading the way, ANSP own industry body is gaining experience.
- → CNS/ATM RVSM User Preferred Tracks ADS-B.
- New Technology
- New Financing
- Benchmarking
- Lateral Thinking

Slide 15 - Air Routes



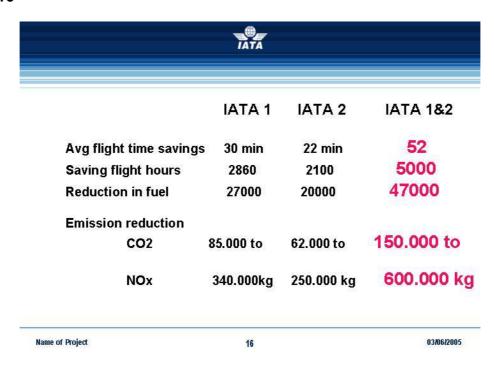
Let's talk briefly about some routes in China: It is fair to say that a lot of improvements can be achieved and Minister Yang and his staff have been significant initiators but we do think there is a long way to go.

However, airlines need daily choice in routes - as weather changes daily, if not hourly and it can affect flight times by over an hour on long haul flights. This means that multiple on the day route choice and choice of Entry/Exit points are critical for safe and efficient operations.

On the screen are the basic routes coming from Europe into China and vice versa. It is good to see that we now have L888 route links to several Chinese cities – but the Himalayas L888 remains a very restricted route to 3-4 engine aircraft with extra oxygen and special regulatory waivers. That is why we need new and more efficient routes like the new IATA proposals depicted on the slide; IATA Routes 1, 2 and 3.

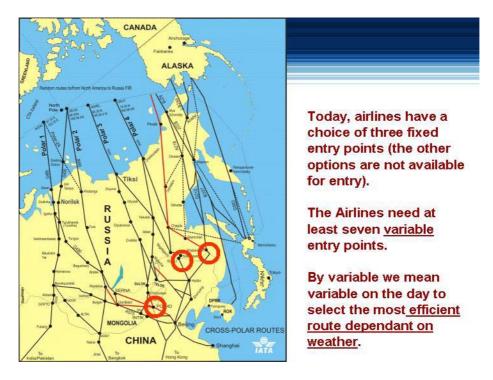
Failure to expand new routes means unnecessary fuel wastage, reduced payload and unnecessary environmental pollution.

Slide 16



This is the savings per year if the IATA routes are opened. Impressive Numbers and I am not just talking about the convenience for passenger for shorter flight time.

#### Slide 17



Another major issue is the opening of additional entry points into China. Today, airlines have a choice of three entry fixed entry points. These entry points are fixed and had to be agreed with the airlines before operating. If agreed, they cannot be changed with less than two or three day's n notice. As I said before due to changing weather conditions, there are many times when the agreed route is not the most efficient one. Therefore, airlines need triple the number of entry points to achieve efficiencies and reduce pollution. However, congratulations once again to Minister Yang for a further 5 entry points to the West of those indicated on the slide but the daily lack of flexibility in using those routes is still the problem.

We need to work together with the military to supply them with information to give them confidence to know exactly where our civilian aircraft are located, what is their identification and what is their flight path intent.

Slide 18- AIRPORTS



For both China and India's growth, it is important that you create enough capacity to meet the demand. This has been one of the biggest bottlenecks in the US and in Europe. But, no more as regards new airports "Taj Mahals" please, especially not at New Delhi and Mumbai airports in the new privatisation schedule. Terminals that are:

- Functional Yes,
- Efficient Yes,
- Smart Yes,
- Impressive Maybe, but
- Grandiose No, No, No.

Please build on the basis that the passenger will pay directly and be happy with the product and service they get. For airports it is also critical to "turn aircraft around" in the most effective way in order to meet efficient schedules.

For example in lessons learned: London Heathrow is one of the world's busiest airports - with a declared runway capacity of 84 movements per hour in all weather conditions. BUT the airport throughput capacity is only 78 aircraft per hour! London is constrained by parking bays, aerobridges, baggage handling, facilitation and so on – NOT by runway capacity.

Hong Kong has a stated capacity limit of 52 aircraft/hour on its twin parallel runways – Why?

On the issue of the Hong Kong International Airport proposed sale; I have spoken to journalists in the SAR who believe aeronautical charges will have to increase because "HKIA is going to need a new runway soon." - Ridiculous, lets change the procedures, lets fix the Pearl River Delta airspace, let's not waste money on a new runway.

When our **IATA Airport Consultative Committee** assists an airport – they review every element of operation - and they provide advice on what is required for maximum efficiency as well as ways to achieve self-sustaining revenue. In India, we are beginning the process but I must say I am a bit alarmed that India is about to embark on building the rumoured Taj Mahal II and Taj Mahal III in the Delhi and Mumbai privatisation process.

#### Slide 19- CAPACITY



# **CAPACITY**

Matching Capacity of the Air and Airport is Extremely Important!

Lack of airspace capacity causes long lines of delays on ground as aircraft wait their turn for departure Matching airport capacity with airspace capacity is vitally important.

Narita airport some time ago suffered significant aircraft departure delays on the Pacific route to North America. However, when RVSM (Reduced Vertical Separation Minima) was implemented these ground delays disappeared overnight.

Slide 20- Pearl River Delta



Now let me focus on one of the most challenging infrastructure improvement potentials in China and in the world. The Pearl River Delta airspace is one of the most inefficient and penalizing airspaces in the world. It is worth the time to spend few minutes on the issue.

The Pearl River Delta (PRD) redesign is a perfect example where proper, different approaches can make a significant difference. The PRD covers a complex system with five different runways, three different administrations and some difficult terrain. Some have said it was because of a piece of history called the Bamboo Curtain. It is handled to this day still handled in a very inefficient and uncoordinated way. Redesigning the approaches are also very Critical to Air Traffic Management and Efficiency. IATA has thanked ATMB and the CAA's from Hong Kong and Macau for providing airspace design specialists for a Technical Working Group for the Pearl River Delta to address this problem. However, as we all know the issues in the PRD are much bigger than what this one group can easily resolve.

I mentioned Narita and the benefit of RVSM to clearing ground delays. Well next must be Hong Kong's parallel runways limited to 52 aircraft per hour. Sydney with capacity limited by noise caps manages 80 aircraft an hour. If we cannot sort out the airspace at Hong Kong SAR and the PRD, then who does pay for another runway? Who pays for the inefficiency? Who pays for the additional pollution?

Slide 21- What is the Urgency?



# What is the Urgency?

- Capacity Constraints
  - → Infrastructure will not accommodate expected growth
- → Potential Economic Limitation
- → Fuel wastage
- 7 Potential Future Safety Risk
- → Environment
  - 7 Air Pollution
- ATC Facilities Lacking Integration
- **▽COST, COST, COST**

What is the Urgency? In a nutshell - Capacity Constraints. With explosive expansion, the current procedures and infrastructure will not accommodate the expected growth. It will lead to:

- Potential Economic Limitation
- Fuel wastage in millions of kg per year
- Potential Future Safety Risks due to uncoordinated traffic procedures
- Environmental NOx and CO2 Air Pollution, and
- ATC Facilities Lacking Integration

Slide 22 - Pearl River Delta



In the Initial Phase Report we estimated that **at Hong Kong alone**, **Fuel wastage** is in the excess of **84 million kilograms**. **O**ver 531,000 minutes of flight time per year could be saved – just by procedure re-design.

We desperately and urgently need this airspace to be redesigned in order to gain the necessary financial and environmental benefits.

Slide 23



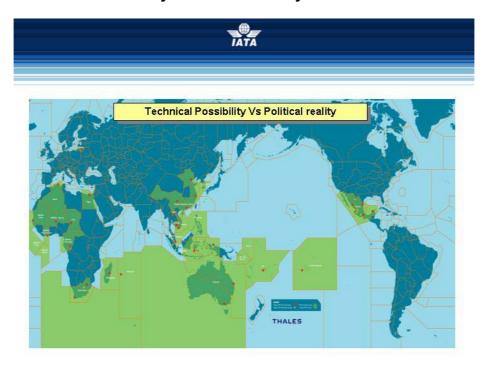
The last issue I would like to address today is an issue of great importance if you all want to be global players. That is **Harmonisation** 

Here is the dilemma - This map shows over 200 Flight Information Regions on the globe. If we add frequency boundaries, sector boundaries, meteorological office boundaries and so on, there are **over 2000 airspace** divisions on the planet.

But at any one time, there are only about 5000 aircraft airborne in the globe's airspace! There are only 20,000 air transport aircraft on this planet. Why has it been **so** difficult to achieve the global harmonisation that the airlines and the worlds environment need?

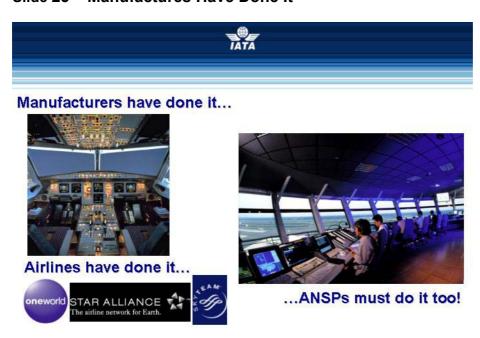
The answer is **parochialism.** We have all heard the phrases "...but my airspace is different...". "...I need a unique solution...", ".... Europe is not the same as the US..."."... Australia only has a few hundred airliners...". "...Africa is underdeveloped...". "...Our military requirements are different." etc. etc. etc. Please – Do not make this mistake. We all live in a global environment, we are all responsible for this planet and while aviation is now more fuel efficient than 90% of cars on our roads WE ARE, and WE WILL continue to be **TARGETTED!** 

Slide 24- Technical Possibility Vs Political Reality



Here is an indicative graph of one manufacturer with a system that electronically communicates with each other system in neighbouring FIRs without modification. However, not indicated here as that the Australian TAAATS system also talks via AIDC to the Hughes system in Airways NZ.

Slide 25 - Manufactures Have Done It



We need to recognise that the airlines and aircraft manufacturers have gone past that parochial state. We have moved past the days of individual airlines specifying aircraft with switches that go "up for off" in some cases, and "down for off" in others.

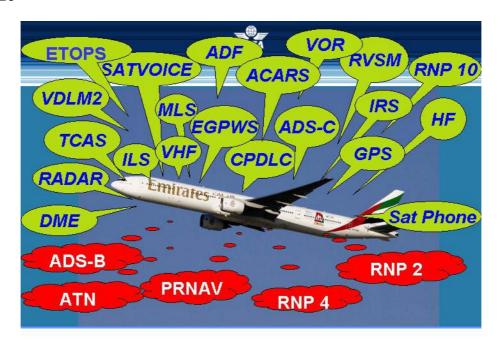
The aircraft that come off the production line now are, for all intents and purposes, common and harmonized. Any lack of harmonisation within the aircraft is most likely the

function of the airspace that they will operate in and not the airline or manufacturers requirements.

Airlines have created alliances. Airlines from all over the world have come together to create efficiency and economies of scale – and to achieve harmony – WITHOUT challenging the individual "sovereignty" of the airline.

Aircraft are now the <u>common denominator</u> of the ATM system. We need therefore to build our future ATM system around that common denominator – NOT build individual systems that force airlines to fit multiple equipment, or to retrofit at great expense. We must achieve harmonization of Air Navigation Service provision. But what of the airspace itself? In smaller countries what about looking at amalgamated Upper Level Airspace management. Not a EURO Control cost-plus, plus system but perhaps a unified contracted system delivering integrated, harmonised, fuel and cost efficient systems.

Slide 26



I said the aircraft coming off the production line are harmonized but look at what they have to fit in order to be able to transit those 2000 airspace boundaries!

- We <u>need</u> to rationalize equipage, procedures, and operating practices.
- We **need** to get down to a common, harmonized, minimum set of equipment.
- We need to take equipment off the aircraft if it is not required.

And, for my second Minute on Airport and ATC Charges, we must all think about rationalising the cost to industry. As well as being an environmentally focused industry we must become a low cost industry if we wish to continue to grow in a rational, responsible way.

Slide 27



In May 2004, ICAO asked industry to develop a roadmap to implement future ATM.

IATA, Boeing, Airbus and a number of suppliers and airliners rose to the challenge – and delivered the industry Roadmap for the **short and medium term**.

This document is not just <u>another plan</u>. It takes the best from all of the existing State and Regional plans and strategies – AND integrates them into a **global** strategy.

ICAO has asked that this Roadmap be incorporated into a new edition of the ICAO Global Plan – and after consideration by States; we expect it to become Global policy later this year.

Then, we will need to implement it.

Slide 28- Benefits for ASPAC Nations



# Benefits for ASPAC Nations

- → World Class Air Traffic System
- Environment Energy conservation programme
- Increased Capacity to meet expected demand
- → Enhanced Safety

The benefits for ASPAC Nations are many:

- World Class Air Traffic System
- Energy Conservation Less fuel wastage
- Environment Energy conservation programme
- Increased Capacity to meet expected demand
- Enhanced Safety
- Economic Development

#### Slide 29- AVIATION CHARGES ISSUES



## **AVIATION CHARGES ISSUES**

•CHINA - US\$1 per km, (exorbitant) Need to reduce with growth to Sanya FIR charge of US\$0.50 in 5yrs.

•INDIA - Airlines showed over collection of 20% in 2004. Need partnership & IATA assistance with growth, a gradual reduction over 4yrs.

•PHILIPPINES - Relatively low price but requires assistance; what ever the problems, Govt fiscal issues not an ICAO justification for increases.

**CHINA** – Recognise the military's needs by assisting them with more cost efficiency information. Would new ADS-B technology with more aircraft data on airlines be what the PLA needs before giving more routes to civil operators?

**INDIA** – Yes, India needs new infrastructure but we both need the Partnership that has been offered by IATA for pricing and planning for funding over the long term. India does not need Taj Mahal II and III at Delhi and Mumbai. Passengers should pay for the terminal charges; the passengers can then be the judge of the new terminals real efficiency attractiveness and value.

PHILIPPINES – Charging the airlines extra in enroute charges to overcome financial problems in Government is not justification for an increase in ANS charges. IATA would like to offer to seek untied help and advice, calling on associate partners to assist in planning and restructure of the ANS service. Perhaps significant restructuring of airspace and new training and technology could give the upgrade you require and allow savings and fuel and the environmental efficiencies you desire; especially if the Philippines is to become a West Pacific hub.

#### Slide 30- The Golden Opportunity



# The golden opportunity....

(.....learn from others mistakes made in the past)

IATA is committed to support you, we all want long term infrastructure, pricing and partnership plans.....

Please contact Peter at: bysouthp@iata.org for papers on:

- India Partnership and Teaming An IATA Vision 2005-2010.
   IATA Policy: Charges Aspects, Commercialisation of Airports and ANSPs.
   Aspects of the Introduction of an Aviation Economic Regulatory Authority.
- ✓ IATA Airport Charges Comparisons; Submission to HKĞ (SAR) LegCo Ápr 05
   ✓ IATA Submission to HKG (SAR) LegCo Airport Authority Privatisation Jan 05
- IATA Partnership Outcome Airservices Australia 5 Year Pricing and Infrastructure Agreement

We talked about Fuel Saving and what we can do to save our environment. We touched on route improvements and a harmonized ATM-CNS system.

India, China and the balance of nations of our region should not make the mistakes that some other countries made when they liberalised their aviation.

You all have an excellent opportunity and IATA is here to support you. We are confident that India and China are on the right path of carefully building a viable aviation infrastructure.

In China tremendous investments have been made in airports, terminals and air traffic control facilities. And I think we all can agree that the next steps in investment needs to go into your airspace - in routes, more options for flight planning, initiatives to increase airspace capacity (such as RVSM) - and redesigning the approaches in the Pearl River Delta. In India, they are ahead on airspace development but are behind in new infrastructure development.

We are here to offer our services and our perspective of best practices in the world today - and of course share the painful lessons learned from the past. Unfortunately, time is not on our side. Growing traffic numbers and economic demands require rapid change. We look forward to working with you all. IATA is committed to support the industry. In deed, we would like to form partnerships for Infrastructure and Pricing. (Everyone please note that that was my third short Minute on Charging and prices).

Let us look to agreeing Five Year Pricing Agreements underpinned by Capital investment programs all part of a harmonised national and hopefully harmonised global ATM plan

Ladies and Gentlemen, in Aviation - The Dream is (still) Alive. But this time it is earth bound, this dream is simply efficiency and efficacy in air space management in Asia Pacific and in the rest of the world as well.

#### Slide 31

