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## Joined-up thinking and aeronautical spectrum – waves of panic

We have mentioned before that the UK communications regulator Ofcom is considering shaking up what it sees as lazy and unmotivated public service users of spectrum, such as police, the military and air traffic control, by forcing them to think as if they were in the private sector. That process has now commenced.

Ofcom suggests finding a synthetic price for public sector spectrum. This includes the spectrum that air transport depends on for radars, ground-to-air communications and so on. The spectrum would be priced by reference to what other, commercial, users might be prepared to pay.

There is good economic logic to this – to find the true price of the services governments supply and industry use. Economists would argue that finding the cost of each link of the chain of production is a fundamental step to knowing the real cost (as opposed to just knowing the price charged). The more information we have the better our decision making will be. And, we only value what we think to be valuable. For too long, spectrum was assumed to be free, or at least, it was priced that way.

That is what Lord Carter, a UK Treasury minister, said too in April when he announced that this process would begin, at least in the UK. Note that it is Treasury driving this in the UK, not Transport, or Trade and Industry, or Defence.

More importantly, Lord Carter went further; he also announced that Ofcom will then apply that assumed price to the current users of that spectrum. In other words, the current incumbent users will need to buy the spectrum they use – driving consideration of what each user holds, and really needs to hold. This is being done, Lord Carter noted, to incentivise the release of surplus spectrum. To further incentivise this release, Lord Carter noted that the funds generated from the sale of this spectrum would be shared between Treasury and the public user that releases it.

To put that in terms of air transport, NATS (the UK air navigation service provider) will be charged for the spectrum that it uses. That cost will need to be passed on. And, should spectrum be made available, it will be the Department for Transport that will share in the benefit, not NATS.

Cue cries of outrage from IATA. Ah ha! they cried, this is yet another stealth tax. Some estimates put the cost as high as £4 billion – depending on the price the spectrum is worth for other commercial applications.

To that, Ofcom's economists have a reasoned and logical reply. The only way to make users more efficient in their use of spectrum is to put a value on it. You only value what you pay for. Professor Martin Cave, speaking at a PolicyTracker conference in Brussels in late April, looking at the use of public sector spectrum, was explicit. How else, he asked, can we drive efficiency into this sector?

That is fair enough, insofar as it goes. But there are three things to say here: first, Prof Cave is an economist from the rigorous world of academia, so he cannot start to appreciate the pressures of the ivory tower world of air traffic management. Secondly,

perhaps Prof Cave has overstated the ability of NATS to drive efficiency in European air traffic control (think of the work that has gone into getting SES and SES II off the ground) let alone efficiencies in global standards under the aegis of ICAO. Thirdly, as Adam Smith himself noted 'the market does not build lighthouses'. If the father of markets acknowledges that there is a role for the public sector, that must mean something.

All that is true. But no reason not to press for efficiency. We should do that anyway.

Lord Carter announced that the military (the largest single user of spectrum in the UK) would go first. It agreed to return several tranches of spectrum, starting in 2012. In agreeing to do so, it had effectively conceded that it was using its allocated spectrum very inefficiently. Aviation would follow thereafter.

Commercial users of spectrum account for only 40% of the available spectrum. Aviation uses 27% of the remainder, according to Ofcom, the military 40%. The other large user is broadcasting.

The unused spectrum will be put on the market, and an array of potential users claim that they can find good homes for it. But they too will have to pay what the market can bear for the spectrum. Given that this is spectrum not currently on the market, economic theory requires that an auction is called for.

So instead of blindly arguing that Adam Smith might say that there is no place for the market in public service obligations, NATS, the military, public safety services and other public spectrum users should study Smith closely. They should then release all their spectrum at once, flood the market and drive the market price to next to nothing.

There are a number of issues for the air transport industry to think through, and prepare for in this: the rule in European telecoms regulation is that it is the UK that tends to lead the intellectual debate. So if the UK does this, other European regulators can be expected to be close behind. Indeed the pan-European telecoms regulatory group has already produced a first report on the regulation of public sector spectrum.

This is not a technology debate, notwithstanding the temptation of ANSPs and airlines to think in terms of radar coverage circles on maps. The issue is not about how much spectrum is needed now, and to cover growth. This is a political debate. The debate needs to be about what is the best way to find efficiency in the way ANSPs need to treat their spectrum. In other words, it is about the future of air traffic management. It needs to be played accordingly.

## **The Environment (I): Globally, some ideas make a break for it**

Finally, some clear thinking is making a dash for it from the increasingly bunker-mentality institutionalised-thinking of the aviation environment debate. To stretch that analogy a little, in fact, the clear thinking is making that dash in the time honoured way of bursting out in as many directions as possible – perhaps with the aim of providing several simultaneous moving targets.

As reported a couple of months ago, one dash for intellectual liberty is from a group of carriers working under the name of Global Aviation Deal group. It includes a number of large carriers (BA, Cathay Pacific and Virgin Atlantic) and the airport group BAA. They suggest that the easy solution is to treat aviation as its own free standing nation, with a national emission reduction target.

A second proposal, sponsored by the UN World Tourism Organisation is also being gently floated. It is more nuanced, and aims to address some of the concerns that they have, from their wider perspective. They are searching for a solution that allows tourism industries to grow in developing countries and that treats all parts of the travel and tourism industries equally. This has the support of a number of aviation groups, including a large European industry association.

Aviation faces several issues in reaching a common position in the environment debate. For a long time one of those was a visceral disagreement that environmental questions apply at all. That seems to have been overcome, at long last. At this year's basement entrenched Environment Summit, the focus shifted, finally, to implementation.

The second issue is perhaps as much an accident of history as anything else. At the Kyoto Convention, aviation argued that ICAO was the appropriate entity to manage air transport emissions. That argument was put forward in good faith, but with open eyes: no-one anticipated that ICAO would put on a spurt of speed to make significant changes. It is fair to say that those underwhelming expectations have not been let down.

However, the law of unexpected circumstances did come into play. ICAO did not disappoint in its ability to play for time, but the timeframes in the ten years since the Kyoto meeting have become much, much more rigorous and the sense of urgency overwhelming. The long game that ICAO thought that it could wait out is no more. And, let's face it, urgency is not ICAO's leitmotif.

Even allies that were playing for time, like the USA, are now falling into line. In the last two weeks there have been three hugely significant steps in this debate in the US. The Environmental Protection Agency (EPA) issued a proposed ruling that greenhouse gases are dangerous to health. Assuming this proposal is finalised (a pretty good assumption), the EPA will have authority to regulate greenhouse gases. The EPA concurrently released a consultation document on monitoring emissions in various sectors, including aviation. It is well over 1400 pages long, so tree preservation is clearly not an objective. And two different cap-and-trade proposals have been tabled in the House of Representatives.

There are problems for ICAO in the Kyoto framework, as we described last month. Not least of these is the Kyoto requirement to differentiate between States on the basis of their ability to address the climate change issues (known as 'common but differentiated responsibilities'), versus ICAO's strict principle of equality.

The UNWTO would also point out that exempting airlines, or treating airlines separately is unbalanced – it does not consider the interests of other travel, transport and tourism suppliers equally. And by being outside the Kyoto process, aviation has not had access to various clean development programmes, global emission trading and other goodies.

There is also an argument that if aviation emissions are included in national targets rather than the current sectoral approach (which the European Union proposes) a raft of different methods of meeting these targets are likely to emerge, by country, making managing them quite complex for airlines, destined to fly between the various schemes.

The Global Aviation Deal group's solution therefore is to treat air transport as a new, separate country, with its own targets, specific to aviation. These would be equivalent to national targets – which is generally the preferred approach. Call this the sector-as-nation approach.

This does three things: it brings aviation emissions into the Kyoto framework; by treating all airlines equally it resolves the differentiated obligations issue by sidestepping consideration of which category the State of incorporation of the aircraft would otherwise be in; and it allows the good ship of State Aviation to take advantage of other Kyoto mechanisms such as the clean development mechanism, emission trading and so on.

It is innovative, but hard to see working – after all, for that to happen, existing States would need to cede power over an industry sector. A big ask. And it would beg questions of whether ICAO might not be the parliament of this new notional State – and suddenly we are back where we started.

The UNWTO proposal considers a number of further issues. It starts from a deep understanding of the process. The same but differentiated responsibilities approach effectively creates three ranks of countries (Annex I States and non-Annex I States; these non-Annex I states are then divided into 'emerging' and 'developing' countries).

These are a nation based designation, but the obligation to meet emission reduction targets fall to individual airlines. What this means is that international flights might not count towards national targets if they are flights to or from a developing country. That is difficult for long haul airlines and distorts the market.

On a related point, airlines from developing countries (which stand to gain most from development of its tourism infrastructure) gain little from the exclusion of aviation from the global scheme, because clean development funds cannot then be earmarked to them to develop their tourism infrastructure.

Therefore, the UNWTO suggests that all flights be included in the full Kyoto framework. The flights would be categorised by city pair and be included in national emission reduction targets. Flights between two Annex I States (or domestic flights within an Annex I State) would be subject to absolute targets on reduction, those within or between emerging non-Annex I States be part of that emerging country's intensity obligations and those between Annex I and non-Annex I developing States would be exempt.

In other words, emissions would be applied to national targets by State of registration of the carrier involved, or if a sectoral approach is to be taken, to global aviation targets. The UNWTO prefers a national approach. This would be overseen and referred by a group of international organisations, including the UNFCCC, the UNWTO, ICAO and the IMO.

There are clearly miles to go before this debate is put to sleep, but it is encouraging that new thinking is hoving into view. The results of Copenhagen will matter, and this needs to be monitored carefully.

## **The environment (II): Regionally, it is petty politics as usual**

Back in Europe the environment debate turned into one of those favourite pastimes of the bureaucrat last month – a turf war. Good to see that nothing is more important than turf. Nothing, not even the saving of the planet, can stand in the way of that. Quite right, too.

The particular issue is that of NO<sub>x</sub> (nitrous oxide emissions). There has long been concern that NO<sub>x</sub> emissions may require a multiplier to be attached to the emissions caused by aircraft – currently the formula takes into account CO<sub>2</sub> only. This would further increase the number of tonnes of credits the airlines would need to purchase to offset each tonne of fuel burnt. It would thus also increase costs. At the time that the aviation emission trading scheme was finalised, this issue was left open.

Sensing an opportunity to take back some ground lost when DG ENV developed the ETS for aviation, DG TREN (the normal regulator for air transport) commissioned an environmental engineering firm to study the issue. It, knowing which side of the bread the butter was on, came to the conclusion that there was not enough known about this issue yet. It suggested a time horizon of three to five years. It also suggested that DG TREN should work with ICAO on this issue.

This produced an uproar over at DG ENV – which is driving the ETS procedure. How dare anyone else make such suggestions? It has to be said that occasionally the self confessed brilliance of some of the DG ENV staff can blind even themselves, but this they could see for what it was – or at the very least, what they feared it might be. Not a debate about science but a naked grab for power.

DG ENV argued that the ETS legislation mandates a NO<sub>x</sub> review, and thus, it was in their bailiwick. They demanded two things: an inter-service consultation, to take place in May, and the commencement of the review on the impact of NO<sub>x</sub>. And they got their way – perhaps an indication of DG TREN's (lack of) confidence in its rear-guard turf reclaiming actions.

Now we have two unedifying sights in prospect – the review on the NO<sub>x</sub> gases (and kiss goodbye to the three to five year horizon) and an inter-service consultation sometime in May. The one thing that we are unlikely to see is any sort of stakeholder consultation. That obligation was discharged, according to DG ENV, last year.

Thus does the intricate detail of the expansion of the ETS come onto the table... It goes without saying that this should be monitored closely. Active engagement will be called for. At least there is a study on the table that says that caution should be called for – with a timeline for appropriate action. The storm in a tea-cup nature of the way this dispute has been tabled should not mask its importance for the industry.

## **SESAR: A pan-European visionary of the first order**

At the very same time as Prof Cave was making his ideologically pure, theoretically-market-driven speech about releasing the hidden value in the air traffic control's spectrum holdings, the ANSPs and other parts of the industry were gathering to draft an altogether different proposal. They were looking at possible responses to a Commission green paper seeking views on whether European funds set aside for European transport networks (TEN-T) should be extended to air traffic management, to fund the implementation of Single European Sky and SESAR (the SES technology platform).

The Industry Consultative Board – the means by which industry (ANSPs, suppliers and airspace users – that is airlines to you and me) has input into the process – had already made its view on this crystal clear. Yes. The rest is mere detail. But it was not all plain sailing, nor plain thinking.

One of the arguments that the green paper response uses is that this funding will allow aviation to build intelligent transport systems, or ITS. For the Commission, so much of a goal is ITS that it already exists as an acronym. Ironically, one of the most obvious users of any spectrum that might be made available should the spectrum efficiency programme be introduced would be companies looking to introduce ITS in Europe. But only for trains or cars, so they don't count.

So on the same day, in the same city we had the UK Treasury demanding efficiency and self funding on one hand; and an application to build a new network, publicly funded, on the other hand. One is national, one is regional. Does anyone spot the conflict?

As far as some members of the ICB are concerned, we should spend more public money building a new European ATM network. That is what SESAR is all about. The SES is a European ideal after all.

Notice the clever way the two very different concepts of SES (a political process) and SESAR (the technical specification by which that political goal might be carried out) are fused? ANSPs will deliver their part of the SES agenda by merging into functional airspace blocks (FABs). If there is money available to help with that, obviously 'snouts to trough' must be the order of the day.

But, if it was your money, you might want to think about other approaches before signing up to this – like perhaps putting the entire delivery of a single European ATC service up to tender, perhaps. Would NavCanada, or the FAA, or AirServices for example, not want to try to provide the services for less than it might otherwise cost to create an equivalent European built system? Alternatively, we might want to look at other ways to introduce a certain amount of competition, as we canvassed last month.

It is important to keep the two concepts of the political process and what the new world will look like separate. It is clear that SESAR will call for considerable investment. That is what the SESAR JU is for. It is finding ways to fund this and involve industry. In the USA there have been equally tense conversations about the funding of NextGen.

But that is the technical platform – how, if you will, not who. ‘Who’ is an altogether different question. To date, we have assumed that FABs of ANSPs would do so. But there is no reason to assume that – particularly if they will need funding in any event. We canvassed last month the thought that the current model is broken. This is not going to fix it.

As the Reason Foundation, a US think tank, discussed in a recent publication, there is no capacity for most ANSPs to be prudent. There is no mechanism for excess funds to be put aside for a rainy day (or rainy couple of years, as now seems in prospect). Interestingly, NavCanada has such a provision, but is an exception. Normally, if there is a shortfall (or an ‘under recovery’ in the jargon) it must be recouped in two years.

You might think that CANSO might want to push for discussion of alternative solutions. After all, their stated goal is global, seamless, commercially provided air traffic services. Instead, it was elbows deep in the drafting of the funding application on behalf of the ANSPs. The ANSP view is not necessarily that of the industry as a whole.

At one point the ANSPs proposed that they should, of course, be funded for delivering FABs, but air space users (airlines, remember) should not, on the very obvious grounds that the ATC network does not talk to aircraft, but only to certain pieces of equipment on aircraft. Therefore the airlines are not entitled to assistance. So that clears that one up.

Actually, this is a very major point. The cost of SESAR is in both harmonising and then providing ground and air-borne equipment. The ground equipment will be funded via user fees. In other words, by the airspace users. That is to say, the very self same people who will fund the air-borne components, too. And each aircraft calls for very expensive kit.

And there is the rub. The technology seems to be on a renewal cycle of about seven years at the moment; aircraft are renewed every 20 or 25 years. The business case for retrofitting aircraft with this equipment is very poor. The savings that accrue are network wide, not per aircraft, or even per airline. And, because the airlines, sorry, airspace users, are very reluctant to fund each round of upgrade possible, the ATC systems need to be backward compatible for technology from the 1960s.

If we were able to start again, bring all aircraft up to speed and get the network benefits of new systems and capacity improvements, the benefits to society in saved fuel and emissions, saved time and increased efficiency would be immense.

Perhaps the best, quickest and most equitable way would be to write cheques for the price of equipment to all airspace users and declare an end date for current technology that you can mark on a calendar that uses units like days and months, not decades.

Equip the users. Let the FABs sort themselves out, or face the consequences of having to compete. That would be the easy, quick, cheap way to make aviation an intelligent transport system worthy of wearing an acronym.

## **The use it or lose it rule: used, but now it may be lost**

One should never forget that politicians have long memories. No slight, no put down, no reversal, no matter how trivial to the rest of us, is ever forgotten or forgiven. It is only a matter of time. Revenge is, after all, a dish best served cold.

It was, and is, ever thus. This month's evidence of this global truism was the changes to the slot rules the airlines sprang on the world at the end of March. You may remember that this was done by the airlines in conjunction with the Commission without consultation with the Parliament, or anyone else.

Even more importantly, you need to remember back to last year, when the slot rules were due for a regular review. At the time, the Parliament was making very ominous noises that they were intending to conduct a wide-ranging review of the slot rules. Some MEPs had even mooted prohibiting slot trading.

The Commission, fearing that the Parliament may intervene, decided that rather than submit the regulation to the Parliament they would use a dodge – they would consider the situation for themselves and suggested some minor tweakings to the implementing guidelines. The theory was that honour was satisfied in both directions by this: there was a review, as required, but not one that upset the current system or its beneficiaries.

That is a good theory, but the MEPs were upset by that little ploy. Now, with the slot use rule waiver, they got their revenge.

The Commission presented the *fait accompli* of the temporary change to the slot regulations to the Parliament for approval at the end of April. And the Parliament bit back.

The change to the next season was approved. But, and this is a big but, after that, the slot regulation is to come up to the Parliament for a full review, and any changes to the rules will, from now on, be decided under the co-decision process. To lock that requirement in, the Parliament made clear that they would not endorse the next Commissioner unless this was on the agenda.

In other words, the Commission is to re-open the slots issues, do a full study, including an impact assessment and consultation and return with a proposal by year end. So, something of a hollow victory to the airlines perhaps.

Airports, airlines and even ANSPs must start to prepare for the consultation process. This is something that will take some time and thought. And participation. It has long been the view of Aviation Advocacy that airports, ANSPs and others should have a seat at this table. They need to start putting their thoughts together.

## **Europe ratifies the Cape Town Convention**

As we foreshadowed in December, the European Union has now officially ratified the Cape Town Convention, and the Aircraft Protocol. The Convention provides for an

internationally recognised and recorded right in security interests created over high value mobile assets.

That right, and importantly, the priority of that right, is evidenced by its registration in a publically accessible international register. Registration gives priority over later registered interests. The right is created when an asset (such as an airframe or engines) is used as security in a leasing or other similar financial transaction. In most cases, this right has priority over any local title interests or claims. The Convention also provides remedies that allow creditors to repossess the assets in the case of the debtor defaulting or becoming insolvent.

The process of ratification in Europe has not been without twists and turns, including, as we noted, the fallout from the War of Spanish Succession of 1701. That in turn resulted in what has been called in European circles 'the Gibraltar Issue'. Only recently has Spain and Britain agreed to discuss any treaty documents together.

The second delay surrounded questions of competency between the Member States and the Union. Member States long considered that the EU only had competence on the insolvency mechanisms and not the substantive insolvency and bankruptcy laws themselves. A creative way around this issue was struck – the EU ratified the Treaty and Protocol to address the issues of jurisdiction and insolvency (where it is agreed the Union has a role) but opted out of any consideration of enforcement – leaving this open to Member States to include as part of their domestic law, but not as part of the treaty.

In any event, the EU ratifying the Treaty and the Protocol is an important step forward and is to be welcomed. Airbus and other European manufacturers will certainly be pleased. Ratification allows them to match the sort of discounts that the US Ex-Im Bank has been able to provide to airlines in States that have ratified the Treaty. This discount can be up to a third of the risk premium that would otherwise apply.

**For further advice or information on any of these issues please do not hesitate to contact us at [info@aviationadvocacy.areo](mailto:info@aviationadvocacy.areo)**

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