



The Aviation & Space Journal

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THE ROLE OF COMPETITION LAW IN PROMOTING EU SLOT TRADING

Could Slot Concentration of the Incumbent Carriers restrict Competition and lead to the abuse of a Dominant Position?

Alexander Uroš Košenina*

INTRODUCTION

On 3 April 2013, the International Air Transport Association (IATA) revealed global passenger traffic results for February, showing that passenger demand rose 3.7% compared to February 2012. Moreover, it is anticipated that the number of passengers is expected to raise to 3.6 billion in 2016, which is about 800 million more than the 2.8 billion passengers carried by airlines in 2011.¹

In Europe, the annual growth of passengers is expected to reach 2.9% by 2013.

Region	Total passengers (mil, 2031)	Average annual growth (2011-2031)	Share of Int'l pax (2031)	Largest country by region in 2031	Fastest growing country by region (2011-2031)*
Africa	410	5.0%	66%	South Africa	Nigeria
Asia-Pacific	5,042	6.0%	28%	China	China
Europe	2,778	2.9%	76%	UK	Russia
Latin America & Caribbean	1,132	5.2%	29%	Brazil	Brazil
Middle East	605	5.1%	84%	UAE	UAE
North America	2,282	2.0%	19%	USA	Canada
World	12,249	4.1%	42%	China	China

Charts and statistics source: ACI/DKMA

* Countries with over 10 million passengers in 2011

Table 1: 2013 ACI Traffic Forecast Report²

The above figures not only show that by 2013 traffic will start to recover again due to the modest global economic growth, which is projected to accelerate by 2014 onward, but also that 'slots' will remain scarce. In my view, continuous growth in air transport, in contrast to the financial benefits it creates for airlines, will only increase the pressure on the capacity available at congested airports. In addition, following the above mentioned forecast of increasing global passenger demand by 2013, Europe does not lag behind in growth.³

Moreover, restrictive bilateral air service agreements are giving way to open skies type agreements and this liberalisation, together with the emergence of new airline models, in particular low cost carriers, has led to significant network development in most regions, causing increase in airport capacity demand.⁴

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The streamline of the challenges facing Europe in air transport is airport congestion, which, for the expected traffic growth, it seems to remain Europe's trials and tribulations in the future. Currently, Europe is using an administrative slot allocation system and its mechanisms to fight the lack of capacity at the busiest airports. In spite of slot allocation being an effective tool for managing scarce capacity, it is hardly regarded as a comprehensive solution to tackle the congestion problems as it cannot generate additional capacity.⁵

The issue of slot allocation has been discussed among academics for many years now, but the official market for slots has not developed in Europe, except in the UK, where it appears to exist strong support for secondary trading of slots for several years now.⁶ It seems that a successful practice of secondary trading in the UK influenced the drafters of the Slot Regulation 95/93.⁷ The European Commission (EC) has proposed to revise the Regulation to determine to what extent it can be improved, in order to create the best conditions under which capacity can be matched to demand for air transport.⁸ In addition, one of the proposals presented in the Airport package adopted on 30 November 2011 includes secondary slot trading as a new market based mechanism of slot allocation. Furthermore, in December 2012, the European Parliament approved the EU-wide secondary trading of slots, a system which aims to strengthen competition in the EU market.⁹

This paper discusses market access issues and possible competition law concerns coming from the secondary slot trading. Thus, the author will first briefly introduce the policy context of slots, while addressing the current slot allocation system and present the benefits of the secondary slot trading.

In the second part, the competition policy issues will be examined. In the light of the new secondary trading system introduced by the European Commission and its many pro-competitive effects, the questions at issue are the following: Which competition problems pertain to slot trading? What is the role of competition law in promoting this system? Moreover, can competition law actually deal with possible anticompetitive behaviour arising out of the slot allocation and slot trading?

Finally, the author will provide for alternative solutions which could prevent the competition law issues ex-ante, in contrast to the ex-post application of the competition law, and draw the conclusions.

1 AIRPORT CAPACITY AND SLOT REGULATION

1.1. Current situation in the air transport market

Many major EU air carriers regard their slots as a valuable 'asset', especially at congested airports such as London Heathrow. In 2008, BMI British Midland became the first airline to value their London Heathrow slots as assets on their balance sheet annual results.¹⁰ In addition, British Airways for example holds around 3.800 slots per week at Heathrow, which are estimated to have a value of more than 3 billion EUR.¹¹ Moreover, congestion problems and sometimes environmental restrictions (e.g. at Schiphol Airport, The Netherlands) at the busiest European airports create a situation where demand for slots exceeds supply or capacity. In 2011, there were 89 fully coordinated airports located in the Member States of the EEA, including Switzerland. Among these airports, 62 were coordinated year-round, and 27 were coordinated seasonally, whereas there are some airports where demand substantially exceeds capacity at all times, and also others at which overall demand does not

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significantly exceed capacity, but where capacity is scarce during certain peak periods.¹² Furthermore, according to Eurocontrol forecasts of December 2010, it is most likely that 10% of demand for air transport cannot be accommodated in 2030, due to a shortage of airport capacity.¹³ This means that there is a shortage of slots at slot restricted airports, which seems to be a hurdle particularly for new entrants, who cannot get into the airport on the scale they need or in some cases at all.

An example of such ‘newcomers’ are air carriers who have been granted traffic rights based on the US-EU Open Skies Agreement.¹⁴ As of 30 March 2008, the agreement permits any US-based carrier to fly directly to any EU destination and vice versa. However, it seems that it is not likely for the benefits of the transatlantic market to be fully implemented in practice. The exchange of traffic rights as agreed under the bilateral agreement does not necessarily give free access to congested and slot coordinate airports, which in turn creates an inherent barrier to entry into the market for the new entrants.¹⁵ Thus, traffic rights are subject to availability of slots.

To further develop the idea of the example above, provided that slot restrictions are not agreed in advance in the bilateral agreement, the new entrants who would face restrictions at congested EU airports may well argue that free access based on the open skies agreement should be granted to them, irrespective of the existent slot restrictions. Otherwise, the level playing field agreed under Open Skies agreement may be affected because the new entrants cannot exercise their traffic rights. Such imposition of (unforeseen) restrictions would infringe free trade of international air services agreed upon by the carrier’s States because the entrants would not have a ‘fair and equal opportunity to compete’ with the EU carriers. Pursuant to Article 2 of the US-EU Open Skies Agreement ‘(e)ach Party shall allow a fair and equal opportunity for the airlines of both Parties to compete in providing the international air transportation governed by this Agreement.’¹⁶

In conclusion, slot restrictions and both congestion and infrastructure issues at EU airports create a significant barrier for new entrants who wish to enter into the market. The underlying reason for limited slot access and slot illiquidity is a result of historical manner in which slots have been allocated on the one hand and the privileges of use and reuse conferred on incumbent carriers under the existent allocation rules on the other hand.¹⁷ This point will be explained below.

1.2. Current Slot Allocation System

Regulation 95/93¹⁸ on slot allocation as amended, henceforth Regulation 95/93,¹⁹ forms the legal basis of the present slot allocation process, whereas Regulation 793/2004 is perhaps the most significant amendment by strengthening the role of the slot coordinators and making the slot allocation system more flexible.

Under Regulation 95/93, a slot is defined as ‘the scheduled time of arrival or departure available or allocated to an aircraft movement on a specific date at an airport co-ordinated under the terms of this Regulation’.²⁰ Moreover, it defines slot capacity available for allocation (Regulation 793/2004 also included the use of airport infrastructure in the definition),²¹ the process of such allocation, and the supervision and monitoring of how allocated slots are then used. Thus, the allocation of slots in the EU is an administrative procedure, whereas the rights to use airport infrastructure to operate services out of congested airports are allocated by “slot coordinators”, who have a duty to act in a transparent, neutral and non-discriminatory manner.²²

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Slots are allocated by the co-ordinator primarily on the basis of historic use, whereas the incumbent carriers have so called 'grandfather rights', giving them preferential access to slots on the basis of use-it-or-lose-it or '80-20 rule'.²³ Notably, the EC has recently proposed to amend this rule by rising the threshold to 85%, however the proposal was rejected by the European Parliament in its decision of December 2012.²⁴

In view of the new entrants, the main question remains how slots become available? Slots can become accessible in several ways; through airport capacity expansion, exchange of slots on a one-for-one basis, or reallocation from the pool; an example thereof would be a voluntary return to the pool, failure to meet the use-it-or-lose-it rule, the return of slots as a consequence of the airline bankruptcy, or slot divestiture as a merger remedy. When slots are returned to the pool there is a rule that 50% of slots are to be reserved and first allocated to new entrants,²⁵ irrespective of their nationality, in order to encourage competition and maximise their opportunities to enter new market.

Summarising the Irish presentation on Slot Allocation Procedures at the sixth International Civil Aviation Organization (ICAO) Air Transport Conference of 2013, made on behalf of the EU and its Member States, the current slot allocation system in Europe is shown as an effective tool for managing scarce airport capacity in terms of neutrality and transparency, which has contributed significantly to the development of the internal market in aviation. Moreover, the slot allocation system has helped to ensure a level playing field for market access as a basis for competition in the EU market.²⁶

1.2.1. The need to change the slot allocation system

Pursuant to Regulation 95/93, the current EU slot allocation system applied by the slot coordinator at a coordinated airport takes into account the principles of transparency, neutrality and non-discrimination as well as historic precedence of the slots, public service obligations, market access opportunities for new entrants, the IATA guidelines and possible local rules. system of slot allocation is thus not capable of resolving the problem of excess demand. Despite the revision of 2004, which delivered partial improvements, the weaknesses of the system continue to exist. It is therefore quite obvious that under these conditions existing airport capacity will not be allocated efficiently,²⁷ which poses acute danger to safety, efficiency and competitiveness of all parties involved in the supply chain or air traffic.²⁸

While Regulation 95/93 is acknowledged as an effective tool from the EU Commission's point of view, from the perspective of the carriers, particularly new entrants, it rather brings major disadvantages. To briefly illustrate the drawbacks, Regulation 95/93 is based on grandfathering rights of incumbent airlines, which potentially enable the carriers to hold allocated slots in perpetuity.²⁹ Moreover, those carriers have little incentive to hand back slots they hold at peak times, no matter how inefficiently they are used. In addition, the weaknesses of the slot allocation system can be further comprehensively summarised, as it follows. These factors jeopardise access opportunities for new entrants.

1.2.2. Weakness of the current slot allocation system

As specified in point 1.2. above, there are few possible situations in which the slots become available; however, the system of allocation these slots has its limitations:



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- It is an administrative system without any market-based mechanisms.
- Carriers are unlikely to return the slots to the pool voluntarily, because they receive no benefits from this transaction, unless they would be losing significant amounts of money on the associated route.
- Moreover, the 50% pool rule for new entrants is inefficient in generating competition. The new entrant definition is primarily based on new entry to an airport, which means that it is essentially only applicable to very small carriers with low frequency services.³⁰ In my view, such carriers often do not offer a serious competitive threat to the main carriers and it is questionable whether easing the expansion of such services enhances rivalry as much as allowing expansion of well-established second tier airlines or alliances.
- Furthermore, the amount of slots available in the pool is mostly small with unattractive timings for carriers, so it is difficult for a carrier to obtain additional slots at the times they need. Moreover, if a carrier were to give up a slot it would be very difficult to regain one at a similar or better time. This gives carriers incentives to hold on to slots for longer than they otherwise would and generate rigidities.³¹
- Next, the use-it-or-lose-it rule was created to reduce slot hoarding, however carriers rather decide to “baby sit” slots even though they would operate inefficiently with half empty or even empty flights, rather than risking reallocation from the pool to the competitor. The result is slot immobility i.e. poorly using the slots by operating low load factors and/or small aircraft at a highly congested airport.³²
- Finally, one-to-one swaps can and do occur but are dependent on carriers identifying mutually advantageous exchanges. However, these do not necessarily represent transfers to the most efficient user, just more efficient users.³³

When contemplating the foregoing points one can say that the current slot allocation calls for a change as it shows some critical flaws when trying to efficiently allocate capacity and maintain effective competition. Instead, the current system creates rigid incumbent slot holdings that are slow to respond to changes in demand conditions, and which consequently create significant barriers to new entry and expansion.³⁴ Moreover, scarcity of slots protects incumbent carriers from effective competition and benefits of the internal market thus cannot be fully exploited. Acknowledging the current inefficient slot allocation system, the EC developed guidelines which aim for allocating slots to those carriers who are able to best use those slots. The EC feels there is a need for a fundamental solution, using market based slot allocation mechanisms rather than administrative system and, thus, the EC has concluded that slots could be better allocated through market mechanisms, including alternative primary trading (e.g, auctions) and secondary trading mechanisms rather than through purely administrative criteria. In turn, the EC introduced secondary slot trading as such market based mechanisms across the EU provided that safeguards to ensure transparency or undistorted competition are established. The proposal is currently going through the ordinary legislative procedure and while already approved by the European Parliament, its final adoption is expected for the second half of 2013.³⁵

1.3. Benefits of new market mechanisms—the slot trading system

Slot trading refers to transfers of slots as between airlines, which exchanges are accompanied by payment of a price reflecting the economic value of the slots.³⁶ The issue is that current regulations do not explicitly prohibit nor allow slot trading, so a various practice in different States have been established. Pursuant to article 8(4) of

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Regulation 95/93, slots can be exchanged only for slots in return. Yet, there has been much debate whether it is allowed to exchange a slot for monetary compensation.³⁷ In the UK, secondary slot trading was practiced at Heathrow airport already in 1990s, yet, legitimised only in 1999 with the English High Court decisions in the case of *R v. Airport Coordination ex parte the States of Guernsey Transport Board*.³⁸ The court held that airlines have the authority under Regulation 95/93 to exchange slots for financial compensation as long as slots are exchanged between carriers rather than simply transferred in one direction from one to another.³⁹ On the other hand, a Dutch court showed a less liberal view on Article 8(4) and held that this provision is designed to limit transfer and exchanges of slots among air carriers, whereas the private exchange of slots would undermine the objectives of Regulation 95/93 as well as the position of new entrant carriers.⁴⁰ Finally, Spain prohibits transfers and exchanges of slots between carriers and would impose fines in case such a transaction would occur.⁴¹

Remarkably, the EC never liked the judgment in the *R v. Airport Coordination* case, and has made clear its desire for the legislation to be amended so as clearly to outlaw slot sales.⁴² It seems that the Commission's intent to introduce another proposal which would have the effect of preventing slot sales was placed on a sinking ship, and quite controversially, there is now generally a strong support for secondary trading from the EC, based on a good practice that has already been in place for several years now, at least in the UK.⁴³ In addition, slot trading is believed to remedy current market entry problems.⁴⁴ Secondary trading will, thus, allow airlines to trade slots with each other at airports anywhere in the EU in a transparent way.

In my view, with this system in force, carriers will more easily decide to transfer slots they do not need as they will receive monetary consideration in return. Moreover, the proposed changes to the current restrictions on trading of slots have the potential to increase the incentives on current users of airport slots to transfer them to airlines that value them more highly, which in the end could increase the number of slots available to airlines wishing to expand.⁴⁵

For the foregoing reasons, the secondary slot trading system will, thus, likely to produce some pro-competitive effects. According to the Mott MacDonald's study⁴⁶ on this topic, ordered by the EC and the Paper prepared by the UK Office of Fair Trading and Civil Aviation Authority,⁴⁷ the effects are shown in the table below, as compared to the current administrative system of slot allocation.



Slot Allocation: Proposed system v. Current system	
Secondary trading	Administrative system
More easy access to congested hubs for new entrants.	Ensuring a level playing field for market access.
Improving slot-mobility because the possibility of trading allows for reactions on changes in demand.	Significantly improving the slot allocation at congested airports in terms of neutrality and transparency.
Better opportunities for carriers having only a small share of slots to grow.	There is little possibility for small carriers to grow as the amount of slots available in the pool is mostly small with unattractive timings for carriers.
Increase of efficiency of slots because the system enables transfer of slots to those carriers who value them most.	Slots are inefficient because carriers do not return the slots to the pool voluntarily, because they receive no benefits from this transaction.
Growth of efficient airlines and alliances.	No efficiency in slots - no efficient airlines and alliances.
Increase of the ability of second tier airlines/alliances to challenge the main incumbents.	Small carriers with low frequency services often do not offer a serious competitive threat to the main carriers.
Increase of competition between major European hubs because the major air carriers focus on maintaining their dominant position at the respective location.	Slot hoarding of hub carriers at major European airports and 'babysitting' of their slots hinders competition between major European hubs.
Creating desired anticompetitive – impacts in case of mergers/alliances of airline. Airlines would be able to sell slots to meet regulators' conditions rather than give them away.	In case of mergers/alliances of airline the most common remedy for a merger to go ahead is divestiture of slots.

Table 2: Comparison of the current and proposed slot allocation system

To conclude, introducing secondary slot trading as a new market based mechanism will, vis-à-vis the current administrative slot allocation system, is expected to bring significant improvements in competition and efficiency, facilitating benefits for air transport users, particularly for new entrants.

2 COMPETITION POLICY ISSUES

Considering the conclusions drawn so far, it is important to address the possible competition concerns arising from such market based approach of slot allocation.

2.1. Potential competition concerns

The key issue of slot allocation lies in capacity restrictions at congested airports where demand for slots exceeds the existing supply. In this respect, it is important to mention that the congestion patterns at individual airports can be very different. For example, at London Heathrow carriers have to handle continuous congestion all over the day, whereas congestion at other major EU airports can be result of alternating peak and off-peak periods. So it may be recognised that Air France at Paris-CDG or KLM⁴⁸ at Amsterdam Schiphol are positioned differently in relation to British Airways

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at Heathrow.⁴⁹

Because of the capacity restrictions at congested European airports, new entry and expansion are restricted and there may be scope for strategic behaviour by incumbent airlines which could distort competition.⁵⁰ Moreover, at congested airports, incumbent carriers effectively control access to existing slots through the possession of grandfather rights, whereas slots are an important input into the downstream market of air travel services, since without a slot an airline cannot fly into or out of a slot coordinated airport. For this reason, incentives for carriers to control a significant proportion of slots are high. However, such slot concentration could restrict the competitors' ability to compete on point-to-point routes or to provide services to or from an airport in general.⁵¹

Furthermore, the main competition concerns particularly arise from the so called 'hub dominance', where hub carriers enjoy benefits of hub networking.⁵² Thus, the introduction of secondary slot trading could be the instrument for hub carriers to increase their slot holdings and potentially create or enhance any market power at hub airports. On the other hand, a hub carrier may face competition from another major carrier at other hub airport, therefore, it will be alluring for a hub carrier to obtain a dominant position in slots so it could use all the slots for itself. The reason behind such 'slot hoarding' is in limiting rivalries and achieving higher margins in some downstream market.⁵³

However, 'slot hoarding' cannot be seen as a competition concern when a hub carrier uses all the slots for itself, especially because the carrier may well argue that it can use all the slots effectively for exploiting hub network effects to the fullest extent and thus creating benefits for consumers.⁵⁴ In addition, slot concentration can increase consumer welfare at hubs acting as natural monopolies with finite airport capacity.⁵⁵ Nevertheless, another situation creates an outweighing concern that slot trading may well 'fall between the main planks of competition rules',⁵⁶ that is, when slots are sold:

- at excessive prices by hoarding slots, thus, raising the value of those slots which they make available;
- with clauses restricting their use so that the buyer cannot compete directly with the hub carrier on any key routes (through use of restrictive covenants or non-compete clauses);⁵⁷
- only at unattractive times;
- only to certain carriers which are not considered to be strong rivals (seen as 'refusal to supply');
- at higher prices to carriers that are considered to be strong competitors;
- on condition that the carrier uses other services that the hub carrier provides e.g. ground handling services (known as 'tying').⁵⁸

Notably, in contrast to sale of slots, leasing transactions may also restrict competition if there is uncertainty about whether the lease would be renewed and under what conditions. This will particularly apply in case where the lessee believes that its current behaviour may affect future terms and conditions in slot leases.⁵⁹

In short, the competition concerns arising from secondary trading can be divided into issues referring to the acquisition of dominance on either a route or at a hub, and into issues pertaining to the distortion of competition on the basis of a refusal to supply or restrictions on sales/leasing of slots. Remembering these issues, it is questionable whether competition law can address them, and if, to what extent.

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2.2. The role of competition law in addressing potential competition concerns

In terms of European Competition Law, Article 101 and Article 102 of the Treaty on the Functioning of the European Union⁶⁰ should be in particular taken into account when dealing with questions of potential competition concerns that may arise from secondary slot trading.

2.2.2. Article 101 TFEU

This provision in its core prohibits agreements and concerted practices that restrict competition. I believe that it would be very difficult to apply Article 101 because a slot transaction normally involves one or a relatively small amount of slots and small value, which cannot have an appreciable effect on competition on its own, either upstream or downstream, and may therefore be de minimis.⁶¹ It is debatable whether the amount of slots traded will increase even if the slot market was well developed. On the other hand, Article 101 would most likely apply if the slot sale or slot lease agreement would contain “non-compete” clauses, whereas the object of such agreement is market sharing and prohibited under Article 101 as such, without any need to examine appreciability.⁶² The question remains whether airlines involved in secondary trading of slots would fall within the meaning of an ‘undertaking’ under Article 101 and Article 102 of the TFEU.

The term undertaking is not defined in the TFEU. According to the Court of Justice of the European Union (CJEU), it is interpreted broadly: ‘the concept of an undertaking encompasses every entity engaged in an economic activity regardless of the legal status of the entity and the way in which it is financed’,⁶³ whereas an economic activity is defined as ‘any activity consisting in offering goods and services on a given market’.⁶⁴ In my view, slot trading cannot be regarded as an economic activity because the sole objective of slot trading is not the one of profit making but to improve slot efficiency and competition, to help reduce the barriers for new entry and to benefit all air transport users, including consumers. In addition, the (now) CJEU held that if the activity is entirely non-profit one it cannot be defined as an undertaking.⁶⁵

Moreover, in the context of undertakings, the relevant market may be an important element for the examination of competition issues. This point will be addressed below.⁶⁶

2.2.2. Article 102 TFEU

Concentration of slots in the hands of one incumbent carrier could potentially rise most competition concerns, particularly pertaining to the question of the abuse of a dominant position. Without a series of slots at preferred time, a competitor cannot operate on its desired route, therefore, at first sight, slot hoarding, refusal to supply, excessive pricing or predatory sales could well fall within the meaning of abuse of dominant position.⁶⁷ However, no firm conclusion can be drawn before one addresses the question of the dominant position, and the market definition.

Article 102 prohibits abuse of dominant position, meaning that dominant position of a carrier is not prohibited per se. In my view, concentration of slots is not likely to create a dominant position. To illustrate the view, just the mere holding of a high number of slots does not create a dominant position because the relevant market

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which should be considered in a potential competition assessment cannot be defined in relation to market for slots but rather to market for air transport services.⁶⁸

Moreover, in the context of air transport, the relevant market does not include solely services offered by an individual carrier on a particular route between two airports but also services provided over the same route by other carriers, by carriers operating at other airports serving the same geographical areas at either end of the route ('city-pair markets'), or even other modes of transport, such as high speed rail that also offers services between the city pair concerned.⁶⁹ Furthermore, especially on some long haul routes,⁷⁰ consumers would also be able to choose between services via another network airline's hub airport.⁷¹ Therefore, since any relevant downstream transport market might be contested by carriers operating out of different airports or by operators of other forms of transport, this cannot imply dominance of one carrier.⁷²

Although a carrier could have a dominant position, the acquisition of further slots would not imply abuse⁷³ because, as specified in point 2.2.1. above, individual trades of slots are de minimis, which cannot affect competition on its own, either upstream or downstream. Moreover, the carrier could demonstrate that acquisition and use of additional new slots would create positive effects which can be passed on to consumers.⁷⁴

In another case, where a carrier controls all or the vast majority of slots at an airport and refuses to sell slots to actual or potential competitors, one could see this action as an engagement in anti-competitive conduct amounting to abuse of dominant position. Such slots at congested airports where the incumbent carrier owns and controls a facility to which competitors require access to provide services are regarded as an 'essential facility'.⁷⁵ The essential facilities doctrine originates in the US, in particular in Section 2 of the Sherman Act, which prohibits monopolisation and attempts to monopolise, and in Terminal Railroad Combination case of 1912.⁷⁶ In the EU, on the other hand, the development of the essential facilities doctrine has been based on Article 102 of the TFEU. The (then) European Court of Justice (ECJ) has developed a general duty on the owners of essential facility to deal with competitors⁷⁷ and first dealt with refusals to deal with competitors in the case of Commercial Solvents.⁷⁸ It has never, however, explicitly used the term essential facilities, thus, Bronner v Mediaprint and Magill C-241/91 P & C-242/91 P Radio Televis Eireann (RTE) v Commission of the European Communities, are considered in the literature and in courts practice as two of the core cases in the establishment and development of the doctrine.

Noteworthy, courts have never adjudicated specifically on essential facilities in the air transport sector; however, a parallel can be drawn from case law on access to seaports⁷⁹ and on airport charges,⁸⁰ based on which a refusal to supply slots cannot not be viewed as an abuse, where the slots in question were not indispensable to relevant downstream service (i.e., other slots were available from other airlines at the airport or are available at other airports from which competing services might be offered), or where the refusal is objectively justified (i.e., that the incumbent is better placed than others to use the slots most effectively by, e.g., taking advantage of the hub network that it already has in place).⁸¹ Nevertheless, the European antitrust authorities have seemingly the power to intervene in cases of slot hoarding, where an operator holds a dominant position by holding onto all the slots on a particular route. This was the case in Italy, where the Italian Antitrust Authority assessed the position

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of the Alitalia-CAI⁸² on the Rome Fiumicino - Milan Linate route, operated solely by this carrier. The authority has held that Alitalia-CAI has a dominant position in the market and forced the airline to divest 7 slots, which are now in hands of Easyjet.⁸³

To sum up, it is rather questionable whether Article 102 TFEU will apply to the conduct of carriers in relation to slots, as the mere holding of a high number of slots may not confer dominance. In my view, the relevant market is the market for air transport services and not market for slots. This may change as the implementation of the new proposal of the EC aims to open up an EU slot market by introducing the secondary slot trading. However, even with the new market based approach in force, it is questionable whether the incumbent airlines can actually abuse their dominant positions at hub airports by a refusal to supply. Although the CJEU has never ruled on the question of essential facilities in the air transport sector, case law will most likely to develop soon, particularly for the reasons of the developing slot market in the EU and numerous legal issues deriving from slot transactions.

3 CONCLUSIONS AND SOLUTIONS

The current slot allocation system is on the brink of changes with introduction of the 'new' market based mechanism of secondary slot trading. Although the administrative system in force has some major weak points in allocating slots and cannot generate additional capacity, it is still an effective instrument for managing scarce airport capacity.

In my view, it should remain a basis for all further changes or corrections through the market based mechanism, such as secondary trading. In addition, the new market approach will in contrast with the current slot allocation system, bring significant improvements in efficiency of slots, and create a welfare to all air transport users, particularly to consumers and new entrants, based on many of its pro-competitive effects.

Despite many competition concerns which could arise from secondary slot trading transactions, it is not very clear whether competition law could fully address all the competition issues at hand, especially those which arise out of the acute illiquidity of slots.

To begin with, Article 101 and Article 102 of the TFEU and its domestic equivalents do not provide an adequate safeguard to the competition issues that may arise under slot trading because they relate to de minimis value of traded slots and the way in which the relevant market is defined should be considered. In addition, the provisions penalise infringements of the competition rules merely ex-post. In their essence, Article 101 and Article 102 can, thus, be accepted as backward looking instruments, and they may not always prevent in advance agreements or conduct that would lead to significant competition problems. It follows that also the time-scale for correcting problems caused by infringements may be quite lengthy, which may be the case a fortiori in cases where establishing an infringement to the requisite standard may take some time, owing to market definition challenges, for example.⁸⁴

To conclude, it may be thus preferable to provide for additional safeguards to prevent such problems arising ex-ante. Notwithstanding, it should be considered whether and if so how new market rules should be implemented. Potential measures to protect competition could thus encompass ex-ante safeguards by means of changing the

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design of trading mechanism, such as:

- clear-cut prohibition of specific activities by all airlines involved in slot trading, such as a ban on restrictive covenants (terms which unduly restrict commercial freedom);
- increasing the transparency of slot trading, such as publication of achieved prices or volumes of slots traded;
- rules on how slot trading should be managed, indirectly restricting activities by all airlines involved in slot trading. For example a non-discrimination rule which may take the form of invisibility of buyers and sellers or requirements to sell to the highest bidder;
- controls aimed at limiting the actions of specific carriers, for example a cap on slot holding, and
- enforced sale of slots to increase liquidity.⁸⁵

Yet, all these proposed measures do have its pro and cons in terms of both the ability to address the competition law issues raised and the potential impact on the effectiveness of slot trading, the aspects of which are beyond the scope of this paper. In that context, the US experience of slot trading may be of an instructive guideline how to implement the proposed solutions in practice,⁸⁶ from which experiences the EU legislator can draw lessons.

¹ <http://www.iata.org> (accessed 13 Apr. 2013).

² <http://www.airport-world.com> (accessed 13 Apr. 2013).

³ See Table 1.

⁴ Market Access: Slot and Night Restrictions, ICAO Worldwide Air Transport Conference (ATCONF), Sixth Meeting, ATConf/6-WP/89 1 (2013).

⁵ Slot Allocation, ICAO Worldwide Air Transport Conference (ATCONF), Sixth Meeting, ATConf/6-IP/011 2 (2013).

⁶ See e.g., S.J. Langer, *The allocation of slots in the airline industry: a transaction cost economics analysis*, Nomos Verlagsgesellschaft mbH und Co. KG (1996); M. Hawes, *Slot allocation - assigning scarce resources*, IATA Review (1994); Jones, I., Viehoff, I., *The Economics of Airport Slots*, National Economic Research Associates, NERA Topics 10 (1993); Kleit, A., and B. Kobayashi, *Market Failure or Market Efficiency? Evidence on Airport Slot Usage*, in B. McMullen (ed.), *Research in Transportation Economics*, JAI Press, Connecticut (1996); Mayer, C., and T. Sinai, *Network Effects, Congestion Externalities, and Air Traffic Delays: Or Why All Delays Are Not Evil*, NBER Working Paper Series (2002); Ng, C. K., and P. Seabright, *Competition, Privatisation and Productive Efficiency: Evidence from the Airline Industry*, *Economic Journal* (2001).

⁷ Council Regulation (EEC) No 95/93 of 18 January 1993 on common rules for the allocation of slots at Community airports (OJ L 14/93), as variously amended.

⁸ *Supra* n. 5, at 3.

⁹ <http://www.aviationbrief.com> (accessed 13 Apr. 2013).

¹⁰ <http://www.ft.com> (accessed 20 Apr. 2013).

¹¹ J. Pheasant, M. Giles, *Slot trading in the EU*, *Global Competition Review* 31 (2007).

¹² See *supra* n. 5, at 1.

¹³ *Id.*

¹⁴ US-EU Air Transport Agreement (OJ L 134/4).

¹⁵ See: P. Dempsey, *Airport Landing Slots: Barriers to Entry and Impediments to Competition*, XXVI(1) *Air & Space Law* 20-148 (2001).

¹⁶ See *supra* n. 14.

¹⁷ Pheasant, Giles, *supra* n. 11, at 30.

¹⁸ Council Regulation (EEC) No 95/93 of 18 January 1993 on common rules for the allocation of

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slots at Community airports (OJ L 14/93).

¹⁹ Amendments: Regulation (EC) No 894/2002 of the European Parliament and of the Council of 27 May 2002, Regulation (EC) No 1554/2003 of the European Parliament and of the Council of 22 July 2003, Regulation (EC) No 793/2004 of the European Parliament and of the Council of 21 April 2004, Regulation (EC) No 545/2009 of the European Parliament and of the Council of 18 June 2009.

²⁰ See Article 2(a).

²¹ Article 2 of Regulation 95/93 now stipulates: “‘slot’ shall mean the permission given by a coordinator in accordance with this Regulation to use the full range of airport infrastructure necessary to operate an air service at a coordinated airport on a specific date and time for the purpose of landing or take-off as allocated by a coordinator in accordance with this Regulation.’

²² See Article 4(2)(c) of the Regulation 95/93.

²³ If the carrier has used a series of slots for at least 80% of the time during the season, it will be entitled to the same series of slots in the following corresponding season.

²⁴ <http://www.aviationbrief.com> (accessed 13 Apr. 2013).

²⁵ The definition of the term ‘new entrant’ has been revised in Regulation 793/2004 such as to increase potential competition on intra-Community routes. This did however not solve the problem of the small size of the slot pool, mentioned earlier.

²⁶ See supra n. supra n. 5, at 2-3.

²⁷ J. de Wit, G. Burghouwt, Slot allocation and use at hub airports, perspectives for secondary trading, *EJTIR*, 8, no. 2 (2008), p. 152.

²⁸ U. Stockmann, S. Streng, Air Traffic Slots - Allocating or Trading? 6 *European Transport Policy* 9 (2007).

²⁹ K. Boyfield, D. Starkie, T. Bass, B. Humphreys, A Market in Airport Slots, *The Institute of Economic Affairs* 99 (2003).

³⁰ The new entrant definition also extends to carriers wishing to offer intra-Europe services on routes where there are currently at most two other carriers within an airport system. Among the London airports at least, there are few routes that meet this criterion.

³¹ Competition issues associated with the trading of airport slots, Paper prepared for DG TREN by the UK Office of Fair Trading and Civil Aviation Authority, OFT832 (2005), p. 6.

³² KLM for example operated Fokker 50s on the Rotterdam - Heathrow and Eindhoven-Heathrow routes. KLM has transferred these slots to Northwest to start up new Transatlantic routes from Heathrow after the coming into force of the EU-US Open Sky Agreement on March 30th, 2008.

³³ See supra n. 31, at 7.

³⁴ *Id.*

³⁵ Supra n. 5, at 3.

³⁶ I.H.Ph. Diederiks-Verschuur and P.M.J. Mendes de Leon, *An Introduction to Air Law* 91 (2012).

³⁷ See e.g., J. Balfour, Slots For Sale, 22 *Air & Space Law* 110 (1997).

³⁸ *R versus Airport Coordination Ltd, ex parte States of Guernsey Transport Board* EuLR745 (1999).

³⁹ The Implementation of Secondary Slot Trading, Paper presented by the UK Civil Aviation Authority, November 2011. <http://www.slottrade.aero> (accessed 20 Apr. 2013).

⁴⁰ *Dutch Bird versus Transavia Airlines*, Decision of 17 July 2001, District Court of Haarlem (Number 75723/KG ZA 01 362).

⁴¹ See supra n. 36, at 91.

⁴² J. Balfour, Slot Trading in the European Union, 53(2) *Zeitschrift für Luft und Weltraumrecht* 151 (2004).

⁴³ Pheasant, Giles, supra n. 11, at 31.

⁴⁴ See supra n. 42, at 145-151.

⁴⁵ Supra n. 31, at 8.

⁴⁶ Study on the impact of the introduction of secondary trading at Community airports, Mott MacDonald 2006, 8-4, <http://ec.europa.eu> (accessed 15 Apr. 2013).

⁴⁷ Supra n. 31, at 8.

⁴⁸ *Royal Dutch Airlines (Koninklijke Luchtvaart Maatschappij)*.

⁴⁹ See supra n. 23, at 156.

⁵⁰ Supra n. 31, at 10.

⁵¹ See: Progress report of the Air Traffic Working Group of the European Competition Authorities on slot trading (2005), p. 6.

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⁵² A hub airline is one which has concentrated flights through a major airport allowing them to operate a hub and spoke network and thus improve the connections it can offer its customers.

⁵³ *Supra* n. 31, at 11.

⁵⁴ *Id.* at 15.

⁵⁵ D. Starkie, *The Dillema of Slot Concentration at Network Hubs in Airport Slots* (Ch 11), Ashgate, Aldershot (2008).

⁵⁶ Pheasant, Giles, *supra* n. 11, at 32.

⁵⁷ A requirement not to use the slot to compete on a particular route (e.g. LHR-Frankfurt) may not be sufficient. An airline could use the slot to release another slot, which it would then use to provide an additional service to Frankfurt. To make the restriction watertight an airline would need to include a broader non-compete clause along the lines of “no new flights on LHR - Frankfurt” route.

⁵⁸ See *supra* n. 51, at 6-7.

⁵⁹ *Id.* at 7.

⁶⁰ Consolidated Version of the Treaty on the Functioning of the European Union, 2010 O.J. (C83) 47; (hereinafter referred as the TFEU).

⁶¹ Pheasant, Giles, *supra* n. 11, at 32.

⁶² See *supra* n. 31, at 15.

⁶³ Case 41/90, *Höfner and Elsnér v Macrotron*, para 21.

⁶⁴ See the (then) ECJ’s judgement on the Case of 12 September 2000, C-180/98 to C184/98, *Pavel Pavlov and Others v Stichting Pensioenfonds Medische Specialisten*.

⁶⁵ See joined cases C-159/91 and C-160/91, *Poucet and Pistre*.

⁶⁶ C. Tobler, J. Beglinger, W. Geursen, *Essential EU Competition Law in Charts*, HVG-ORAC 74 (2011).

⁶⁷ See *supra* n. 51, at 6.

⁶⁸ See Pheasant, Giles, *supra* n. 11, at 33.

⁶⁹ See Nera (2004), ‘Study to Assess the Effect of Different Allocation Schemes: A Final Report for the European Commission, DG TREN’, p. 102.

⁷⁰ For example between Member States and North America or the Far East.

⁷¹ See *supra* n. 69, at 102.

⁷² See e.g., Pheasant, Giles, *supra* n. 11, at 33.

⁷³ *Id.*, at 32.

⁷⁴ See *supra* n. 31, at 15.

⁷⁵ The essential facilities doctrine imposes such an obligation on a dominant firm to deal with its competitors if it controls an indispensable facility that makes it impossible or extremely difficult for an actual or potential competitor to compete with the incumbent firm without access to its facility. See: *Bronner v Mediaprint*, Case C-7/97 [1998] ECR I-7791 and *Magill C-241/91 P & C-242/91 P Radio Telefis Eireann (RTE) v Commission of the European Communities* [1995] E.C.R. I-743.

⁷⁶ *United States v Terminal Railroad Association of St. Louis* (1912) 224 U.S.; See also:

R. Pitofski, D. Patterson & J. Hooks, *The Essential Facilities Doctrine under U.S. Antitrust Law*, 70 *Antitrust L.J.* 443 (2002).

⁷⁷ See T Lang, *Defining Legitimate Competition: Companies’ Duties to Supply Competitors, and Access to Essential Facilities*, in Hawk (ed.) 1994 *Fordham Corporate Law Institute* 245 (1995).

⁷⁸ *Istituto Chemioterapico Italiano S.p.A. and Commercial Solvents Corporation v. Commission*, Joined Cases 6/73 & 7/73, 1974 E.C.R. 223, [1974] 1 C.M.L.R. 309.

⁷⁹ *Sea Containers/Stena Sealink*, OJ L 15/8 (1994); *Rodby-Puttgaarden case concerning a refusal to grant access to the facilities of the Port of Rødby (Denmark): Commission Decision 94/119/EC*, 1994 (OJ L55/52); *Elsinore case: Commission Press Release, IP 96/205 of 6 March 1996*, and *Roscoff case: Commission Press Release, IP 95/492 of 16 May 1995*.

⁸⁰ See: *Commission Decision 1999/198 of 10 February 1999, OJ L 69/24-30 (1999)*; and *Commission Decision 95/364/EC of 28 June 1995 regarding landing fees at Brussels airport, OJ L 216/8-14 (1995)*. See also: *Commission Decision 98/513/EC of 11 June 1998 regarding the application of commercial fees at discriminatory rates at Aéroports de Paris to the supply of ground handling services, OJ L 230/10-27 (1998)*.

⁸¹ Parallels can be also drawn from the *Bronner case of 1997: Case-7/97 [1998] ECR I-7791*. In this case, the court held that for the existence of an abuse within the meaning of the Treaty provision to be capable of being established in such circumstances, it would be necessary not

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only for that the refusal of the service comprised in home delivery to be likely to eliminate all competition in the daily newspaper market on the part of the person requesting the service and for such refusal to be incapable of being objectively justified, but also for the service in itself to be indispensable to carrying on that person's business, for lack of any actual or potential substitute for that home-delivery scheme.

⁸² Compagnia Aerea Italiana.

⁸³ 'A historic decision by the Italian Antitrust Authority (the decision of 25 October, 2012) has consolidated EasyJet's position in the Italian market. This was later confirmed by the Lazio Regional Administrative Court (TAR of Lazio, Section I, judgment no. 8614/2012 of October 18, 2012) and in the second instance by the Council of State (Consiglio di Stato), Section VI, judgment 403/2013 of 23 January 2013. The judgment marked the end of Alitalia's monopoly on the Rome Fiumicino - Milan Linate route, by assigning seven slots previously held by Alitalia in favor of EasyJet".

⁸⁴ See supra n. 51, at 11.

⁸⁵ See supra n. 31, at 19-31.

⁸⁶ For a detailed analysis see: Nera (2004), supra n. 69, at 296-275.

GROUNDHANDLING AT EUROPEAN AIRPORTS

An update over the new rules proposed by the European Commission

Dimitri de Bournonville*

INTRODUCTION AND BACKGROUND

Since 1996, the European Union (EU) has regulated the provision of ground-handling services at airports by Council Directive 96/67/EC (Directive) of 15 October 1996 “on access to the groundhandling market at Community airports”.

In December 2011, the European Commission published a Proposal for a Regulation on groundhandling services at EU airports (“the Proposal”)¹.

The Proposal of the Commission has been the subject matter of debates at the level of the European Parliament and several of its committees, including the Transport and Tourism Committee and the Employment and Social Affairs Committee, in the course of 2012 and 2013².

As a result of these debates, material amendments have been made to the Proposal by the Parliament (“the Amended Proposal”)³.

Rather than listing and reviewing all and every differences between the Proposal and the Amended Proposal, the present article aims at focusing on the amendments which we perceive as important in terms of possible legal consequences for the suppliers of groundhandling services themselves, the airports’ users (i.e., the airlines) and other EU airports stakeholders.

The amendments made by the Parliament to the text prepared by the Commission can be classified into five categories:

1. Amendments aimed at limiting the number of airports where, depending on the decision of the Member States, the minimum number of suppliers of groundhandling services must be increased (as compared with the current situation);
2. Amendments aimed at reinforcing the controls and possible penalties over the suppliers of groundhandling services, including at the stage of the licence’s award and tendering process and with respect to service quality standards;
3. Amendments aimed at increasing the importance and responsibilities of the airport users’ committee;
4. Amendments aimed at providing for further protection of the rights and professional qualifications requirements of the workers in the sector;

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5. Other type of amendments.

MARKET ACCESS

In terms of access to the groundhandling services market at European Union's airports, the Proposal of the European Commission provides that suppliers of groundhandling services should have, as a matter of principle, free access to the market for the provision of groundhandling services to third parties at any airport whose annual traffic has been over 2 million passenger movements or 50,000 tonnes of freight for the previous three years (Article 6.1).

This aspect remains unchanged in the Amended Proposal and notably entails that, except for the freedom of self-handling (which would keep applying irrespective of the size of the airport) and what is said below as regards the mandatory approval scheme, the supply and organization of groundhandling services at small airports remains (un)regulated by the national laws of the Member States.

The Amended Proposal nevertheless imposes a (new) general requirement, that applies irrespective of the size of the airport, to all undertakings active in the groundhandling market (whether as a service supplier or a subcontractor of such a supplier) to be the holder of a proper approval from an independent approving authority⁴ (Article 16.1). The creation of this approving authority is contemplated under the Commission's Proposal (Article 16.2). This seems to be logical since it may have been difficult to understand why safeguards, in terms of goodstanding and qualification of staff in particular, should not have been imposed for groundhandling service suppliers active at smaller (regional) airports of the Union.

The Amended Proposal however makes the above general requirement for an approval applicable only insofar as *"the Member States make groundhandling activity conditional upon obtaining an approval of a competent authority ("approving authority") independent of any airport managing body"*. Even if this amendment seems to have been designed to tackle the situation of smaller Member States willing to cooperate with the (supposedly more equipped) authorities of others, the wording does not appear to be clear enough to avoid further debates on the scope of application of the above general requirements, including at larger airports located in Member States which would not have made *"groundhandling activity conditional upon obtaining an approval"*.

The Proposal of the Commission allows Member States to limit the number of suppliers for certain categories of airside handling (baggage, ramp, fuel & oil and freight & mail) to no fewer than either two or, for airports whose annual traffic has been not less than 5 million passengers annually or 100,000 tonnes of freight for the previous three years, to no fewer than three, for each service category (Article 6.2).

Many of the debates which took place at the Parliament's TRAN Committee over the past few months related to the impact this latter provision might have on the employment, as some MEP's expected that an increased competition of the sector might lead not only to higher work pressure on employees of the sector but also to an increase of collective dismissals and transfer of staff processes, without being counterbalanced by enough other advantages (except maybe for the airlines, which may have expected to benefit from better prices as a result of the increase of the number of competitors). These debates resulted in the amended proposal that the

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possibility to limit the groundhandling market to three (or more) service suppliers at large airports be restricted to airports whose annual traffic has been not less than 15 million passengers annually or 200,000 tonnes of freight for the previous three years.

This is probably one of the more significant changes to the Proposal, which nevertheless still allows Member States to either fully liberalize the groundhandling market at airports or increase the minimum number of service providers from two or three to a higher number.

REINFORCEMENT OF THE CONTROL AND PENALTIES SCHEME OVER SERVICE SUPPLIERS

Selection process

The Proposal does provide for a far wider and extensive selection process of service suppliers (at airports where their number is limited and where such process needs to be organized) than the one contemplated under the Council Directive 96/67/EC of 15 October 1996 on access to the groundhandling market at Community airports. In particular, it lays down more specific requirements about the criteria for selection⁵ (Article 9).

The Amended Proposal goes further in that respect. For instance, next to the reinforcement of the role and responsibilities of the airport users' committee in the above process (see *infra*), the amended text provides for a requirement that applicants demonstrate the consistency and plausibility of their business plan for the first three years of operation (where the Proposal did not contemplate such a period of time) (Article 9.3(a)). One will note, in this respect, that the duration in question is similar to the one for which business projections are imposed to airlines under the Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 establishing common rules for the operation of air services in the Community⁶. The similarity between the two approval scheme does not go much further than this, as the Amended Proposal still limits the validity of any such approval to ten years (which is an improvement as compared with the five years initially proposed by the Commission), while no such limitation exist for airlines (Article 23).

Another example is the requirement that applicants demonstrate that they will apply *"decent employment and working conditions and (...) a commitment to apply the respective representative collective agreement"* (Article 9.3(d)). This additional requirement may raise difficulties in the future, as one can anticipate that many debates will take place, including before national courts for the case where licence award decisions are challenged, as to the *"decency"* of working conditions, especially in light of the laws and regulations that, in the views of many, already guarantee, within the European Union, the decency of working conditions, whether in terms of working hours, safety, health, wages, social security, etc.

Besides, the necessity to commit to applying all collective bargaining agreements may cause some concerns: some of these agreements apply at undertaking level (rather than at sector level) with the consequence that it will be difficult to ascertain whether this obligation also applies to all the agreements of the incumbent service providers; moreover, these agreements may have originated from the past, where groundhandling suppliers were often a division of the flag carrier and/or in a situation

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of monopoly at large EU airports, with the consequence that some of the agreements may have become irrelevant or be perceived as a form of deterrent for new entrants.

Minimum quality standards

The Amended Proposal suggests important changes to the provisions dealing with minimum quality standards that were initially proposed by the European Commission (Article 32).

First, the Amended Proposal provides that these minimum quality standards will not only apply to the performance of groundhandling services but also to the running of centralized infrastructure by the airport or infrastructure management body (Article 32.2). This change can be understood, as the above services are heavily dependent on the proper functioning of the airport's infrastructure. One may however wonder if the proposed regulation on groundhandling services is the best instrument where these standards should be laid down for airports, and whether it would not have been more logical to tackle this in another text, such as the Directive 2009/12/EC of the European Parliament and of the Council of 11 March 2009 on airport charges, which already deals with airport services quality standards.

One will note that even if the text of the proposed Article 32.3 now expressly provides that the minimum quality standards should be complied with by the groundhandling services suppliers, airport and airport's users in the contractual relationships "between them" (rather than with all and any third parties, including passengers), it can obviously not be excluded that passengers will find in these provisions a valid reason to bring claims against the airlines for the case where these standards would not be met, arguing that either the airlines failed to properly enforce these standards or should be able to claim back any paid indemnity from the groundhandlers⁷.

This is likely to lead, ultimately, to a renegotiation of liability clauses in groundhandling agreements, where, as per the IATA SGHA models, the liability of groundhandlers is strictly limited as well as to some consequential impact on the insurance coverage of groundhandlers in relation to the risk linked to a non-compliance with these quality standards.

While the Proposal is simply referring to the fields which the quality standards are due to cover (such as operational performance, training, information and assistance to passengers, CDM, safety, security, contingency measures and the environment), the Amended Proposal is more explicit, as it now includes an annex where these standards are further specified (Article 32.6). For instance, the standards specified in the annex to the Amended Proposal now expressly comprise the maximum (waiting) time for baggage check-in, transferring passengers between connecting flights, delivery of last item of baggage, delivery of freight and mail, de-icing, boarding and disembarkation. It also provides for quality standards to be complied with as regards the minimum number of staff members able to provide information at the gate or accept complaints or information about lost baggage.

Penalties

The Amended Proposal provides for more possibilities to impose financial penalties and other sanctions on groundhandlers as compared with the Proposal.



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This notably applies in case where suppliers of groundhandling services would have failed to start their activities within the time limit imposed by the tendering authority.

Sanctions, which can go as far as the prohibition to provide services “*in the airport concerned or throughout the territory of the Member State concerned*”, can also be imposed in case the above mentioned minimum quality standards would not be met, on top of the third party actions which this non-compliance may trigger.

Last but not least, the Amended Proposal requires that, in case required standards would not be met by suppliers of groundhandling services in relation to social security and “*decency*” of working conditions, their accreditation be suspended, withdrawn or withheld until the standard in question is again complied with.

AIRPORT USER’ COMMITTEE

The Amendment Proposal provides that, in every airport with an annual traffic over 2 million passengers or 50,000 tons of freight for at least the previous three years, a committee of representatives of airport users must be established, along the lines of the Proposal. The Amended Proposal however innovates in requiring that this committee also comprise representative of the airports and the staff, where the involvement of social partners will be made “*compulsory*” (Article 4.1).

As the concept of “social partners” is not defined in the text, one may wonder whether these should not also include representatives of the staff of groundhandlers. If this was to be the case, one can expect that concerns could be raised by potential new entrants in the context of the licence tendering process. As a matter of fact, the role of the airport users committee is reinforced in that respect under the Amended Proposal. For instance, the tendering authority is now required to establish the licence award criteria “*in agreement*” with the airport users’ committee and to consult the same for the purpose of the setting of the minimum quality standards applicable at the airport.

Finally, it is worth noting that, under the Amended Proposal, it will be more difficult for the airport to just bypass the views expressed by the users’ committee, insofar as any decisions that would be contrary to such views will need to provide “*a statement of reasons for [the] final decision, taking into account the views expressed by the Airport Users’ Committee*” (Article 6.a).

LABOUR PROTECTION RELATED AMENDMENTS

The Proposal has been materially amended by the European Parliament with respect to labour aspects.

As mentioned above, the Amended Proposal has introduced the concept of “*decency*” in relation to the employment and working conditions prevailing at the level of the groundhandlers, with all the debates that are likely to take place, before national courts in particular, as to the specific application of this concept if it was to remain in the text that will eventually be adopted.

Next to this, the Amended Proposal also provides that, in case the supplier of groundhandling services would lose its licence as a result of the selection of new

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suppliers following a tendering process. Member states may require suppliers of groundhandling services which subsequently provide these services to grant staff previously hired by the incumbent service supplier the right to which they would have been entitled if there had been a transfer of undertaking within the meaning of the Council Directive 2001/23/EC of 12 March 2001 on the approximation of the laws of the Member States relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses. The new suppliers will also have to refrain from dismissing staff on economic, technical or organizational grounds (Article 12.2).

The text of the Amended Proposal goes even further in requiring that the costs of a redundancy plan for departing staff in such a case be borne by airlines in proportion to their traffic share handled by the previous suppliers (Article 12.3). This latter amendment, which will also be applicable when a service supplier simply ceases to service a particular airline, is likely to generate much debate in the airport users committee and, as the case may be, to justify contractual derogation to this regime in the groundhandling agreements that will be negotiated between the airlines and their service suppliers.

As already mentioned above, the Amended Proposal also provides that the licence or accreditation of groundhandling services suppliers can be suspended or withdrawn in case required standards would not be met in relation to social security or "decency" of the working conditions, with the consequence that, if the text was to remain unchanged on this aspect, unions and workers representatives may well try to initiate legal actions to that effect with the aim to put pressure on the concerned employer (and this is probably the goal pursued by the European Parliament through this proposed modification of the text).

MISCELLANEOUS

A few other important amendments were introduced in the text Proposal by the European Parliament.

The first of these relate to extension of the definition of self-handling for integrators⁸, which, under the Amended Proposal, shall be free to self-handle all aircraft dedicated to their transport network, whether these aircraft are owned, leased and/or operated by a third party contractor (Article 2).

Another of these amendments relates to the possibility which the Amended Proposal seems to offer to Member States to restrict competition at airports even beyond the groundhandling service market¹⁰, although it is doubtful that Member States will find in this provision a valid legal basis to impose these restrictions without a proper (and other) legal basis (Article 12.1).

The Amended Proposal also extends the approval regime to subcontractors of groundhandling service suppliers (Article 16.1). Although this extension can be understood for core groundhandling services, one can question whether difficulties could arise in relation to subcontracting of services ancillary to the core ones, with the consequences that small subcontractors dealing with such ancillary services may no longer be able to remain active in the sector as compared with the current situation - not to mention the administration burden of the Member States' administration for checking and monitoring the (continuing) compliance by these

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subcontractors with all the financial, employment and operational conditions to which their approval will be subject.

NEXT STEPS

As we are still at stage where further amendments of the texts can be expected, it is obviously too early to draw final conclusions over the proposed regulation and the impact it could have on the sector.

The European Commission is currently awaiting the green light of the future presidency of the Council in order to initiate the inter-institutional negotiation process on the whole airport package. It is likely that the Commission will aim at starting these negotiations as quickly as possible so as to be able to finalize the texts before the next elections of the European Parliament in May 2014.

¹ COM(2011) 824 final; for a detailed overview of the European Commission's proposal, see: Dimitri de Bournonville and Carole Blackshaw, "Groundhandling at European Airports - A look at the potential effects of the draft new Groundhandling Regulation proposed by the European Commission", *The Aviation and Space Journal*, October/December 2011, p. 2.

² See, for instance, the press release of November 2012 of the TRAN Committee, with reference 20121105IPR54901; see also the minutes of the debates which took place at the plenary session of the European Parliament on December 11, 2012 (procedure 2011/0397 (COD)).

³ European Parliament legislative resolution of 16 April 2013 on the proposal for a regulation of the European Parliament and of the Council on groundhandling services at Union airports and repealing Council Directive 96/67/EC, P7_TA(2013)0116.

⁴ Article 16.1 of the Amended Proposal: "No undertaking shall be permitted to provide groundhandling services, whether as a supplier of groundhandling services, as a sub-contractor or as a self-handling user, unless it has been granted the appropriate approval, where Member States make groundhandling activity conditional upon obtaining an approval of a competent authority ('approving authority') independent of any airport managing body".
conditional upon obtaining an approval of a competent authority ('approving authority') independent of any airport managing body".

⁵ For a description of this process, see Dimitri de Bournonville and Carole Blackshaw, *op. cit.*

⁶ OJ L 293, 31.10.2008, p. 3.

⁷ The Amended Proposal expressly imposes the obligation to make all the minimum quality standards, including quantitative criteria, available to the public (Article 32, paragraph 7.d).

⁸ The Amended Proposal defines integrator as "an undertaking offering a door-to-door contractually governed freight and transport service, guaranteeing the transportation of freight and/or mail from origin to final destination and seamlessly integrating transportation, groundhandling, consignment sorting and delivery services".

⁹ Article 12, paragraph 1: "Members States shall examine in detail, against the background of this Regulation, whether a restriction of competition is indicated for further sectors [than groundhandling]".

“TO ALL PASSENGERS, THIS IS YOUR IN-FLIGHT COMPUTER SPEAKING...”

Giovanni Torre*

“To all passengers, this is the in-flight computer speaking...”. It may seem like a sound bite out of a sci-fi movie. However, in the not too distant future, this message could well turn out to be one that airline passengers could hear aired over on-board announcement systems in remotely piloted aircraft.

Driverless metro trains have been a reality for a long time now in Paris and Hamburg and have recently been introduced in Milan on the M5 Line, but pilotless flying is something that has been so far unheard of in the civil aviation sector, although the concept is thriving in major air forces of the world. The US Air Force drones (unmanned aircraft for military use) have been in existence for several years now.

It's clear that it's not a question of "if," but "when." Computers are all set to replace pilots on the command of scheduled commercial flights. It is in this context that we examine the current interest in the so-called remotely piloted aircraft, which has been the subject of a recent regulation drafted by ENAC (the Italian Authority for Civil Aviation) and for which consultations have been ongoing at a national level. The matter has also been the subject of introduction of regulation all across Europe.

Civil applications that are ready for immediate implementation in aircraft remote-piloting include a wide array of services such as ground surveillance, detection of environmental conditions, transmission of data from aerial photography, agrarian uses, monitoring of fires, road-traffic surveillance, coastline surveillance and police activities for national security, civil protection, and search and rescue operations.

The aircraft remote piloting branch displays interesting capabilities to create new industrial opportunities, so it should be considered as worthwhile to sustain industrial development.

Unlike manned commercial aircraft, aircraft remote piloting (ARP) can normally ensure a broader range of applications with different profiles, sometimes characterized by long hours spent in upper and medium altitudes, for extensive areas of use in accordance with planned routes or rescheduled flights during the mission for different purposes, using at least the same airport for takeoffs and landings.

Up until now, the use of unmanned aircraft has been limited primarily to military applications, even though it's nowadays widely recognized by the entire international aviation community as having high potential for dual use, both civilian and military. The ongoing studies on unmanned flights generally tend to exploit almost all the peculiarities of the so called “air power” including altitude, speed, range, versatility

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and flexibility.

Both the United States and Europe have recently awakened to the need for defining a political-industrial strategy aimed at removing the difficulties linked to ARP dual use. In concordance with the industrial forecasts and interests of potential users, the regulatory framework that is expected to come out in the near to medium term would take into account that the formula of >150kg will be probably assigned to governmental activities even though they are not necessarily military. So the actions of that APR would be still under the jurisdiction of the member states. Europe should work to remove or avoid possible difficulties linked to the development of aircraft for civilian use.

So, it is important for the EASA and Member States to try and harmonize their regulatory approaches.

To enable the development of this sector in Europe, airspace access must be ensured and there must be built-in mechanisms that allow the mutual recognition of certificates and approvals. This means that the ARP should be fully integrated in the civil aviation system, but only after establishing rules for airworthiness, crew and operation in a harmonious manner.

All possible attempts should be made to fill up this legal vacuum and the rules must be implemented in an unfragmented manner.

The European Commission should adopt these harmonized rules throughout the continent. These solutions should lead to the achieving the community's goal of ensuring high safety levels for all EU citizens, while permitting, at the same time, the free movement of means and services all across Europe.

However, the European Commission has established a “*Steering Group*”, that is the European RPAS Steering Group (ERSG), to define a program of action to harmonize without precise legal instruments by way of compiling a set of rules to be recommended in separate national jurisdictions.

As is widely known, the United States are currently the world leader in this technology; however, a strong and pragmatic synergy is developing and consolidating at the national level in Italy between a great number of stakeholders, with the full involvement of the Italian provider for air navigation services, ENAV S.p.A.

Up until now, very few European Union member states have published their own set of rules. Italy, hopefully, has developed a note (008/2012) to provide the first set of guidelines on the heels of a regulation it proposed for the APR at the national level.

Upon the expiry of the consultation period, Italy has begun the process of drafting a document that would be a response to the comments received, and which would define the version that will be published. An additional document would be produced on the regulation, which would involve both the means for meeting the requirements and the guidelines for understanding them.

Moreover, a cooperation between civil institutions (European Commission, European parliament, etc.) and military institutions (European Defense Agencies) has already been launched at the European Community level, starting with the involvement of the



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public and private European aviation community, in order to define a process and roll out programs for technological developments and regulatory reviews, aimed at accelerating the use of ARP everywhere, not just in exclusive and segregated air spaces.

It has to be taken into account that the European Regulatory framework of civil aviation is characterized by Reg. CE 216/2008 which defines the responsibilities and jurisdictions. In Europe, well-organized initiatives are implemented and taken into consideration not only for safety aspects, but also for juridical, operational and technical problems related to the civilian use of aircraft remote piloting.

In this aspect, it would be useful to deal with the social aspects such as privacy and data protection, besides several responsibilities related to end users. Such strategies require the setting up of concrete measures to develop regulations and research activities aimed at the integration of aircraft remote piloting (ARP) in non-segregated airspaces. Besides the main aspect of airworthiness, the definition of the requirements related both to the crew licenses and operations are a pre-requirement for the APR use in the airspace.

Development goals are, in any case, closely related to the expected levels of safety in relation to the intended use of the ARP.

As part of the dual use, for the inclusion of ARP in non-segregated airspace, it's essential to align ARP to the operational requirements introduced by the development of well-known innovation projects in ATM world, including the SESAR in Europe ("Single European Sky ATM Research") and NEXTGEN in the United States.

In this context, all Italian companies involved have expressed a strong desire for taking active roles in consolidating and defining all possible technical and operational solutions and regulations, thus ensuring industrial leadership and opportunities for continuous technological improvements thrown up by the ARP in the national aviation framework.

Obviously, in this scenario the main challenges are the interoperability between aircraft with pilots on board, and those that are remotely controlled, as well as the integration of those into non-segregated airspaces.

A key factor in enabling the dual use of ARP would be the maturity of the aircraft command and control system, including the system of ground-to-ground and ground-to-air communications, as well as the minimum performance expectations, in order to operate in non-segregated airspaces, including:

- Data-link security and safety (integrity, continuity, availability), and allocation of radio frequencies to ensure interoperability between all the involved stakeholders (aircraft, aircraft operator, ATC, et cetera);
- Procedures, and self-management, "lost-link" situations, communications and other contingencies;
- Help interface solutions with terrestrial and satellite infrastructures for "strong, safe and secure" navigation and aircraft missions, increasing integration between civilian and military solutions;
- Mitigation solutions or contrasts to potential vulnerabilities or cyber-attacks.

As part of the dual use of ARP in non-segregated airspaces, the analysis of the current operational use of existing terrestrial/satellite structures, mainly military, requires

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the careful scrutiny of the reliability and interoperability of the new systems involved, as well as the analysis and safety and security requirements definition, in order to interact with the Air Traffic Management. Currently, the use of the ARP is limited to portions of segregated airspaces. In order to perform commercial or specialized flights, and to operate in non-segregated or regulated airspaces, or in proximity to airports or within controlled or uncontrolled airspaces, it is easy to predict that the remotely piloted aircraft will have to operate as per the current specifications and related regulations.

In any case, they must not cause any detriment or harm, in terms of safety and security, to the effective and orderly activities of the conventional piloted air traffic.

In fact, referring to the basic principles of certification, and the safety standards that are already established by the current regulations, it wouldn't be easy to design the coexistence of the piloted and non-piloted aircraft within the same airspace, since the different regulatory regimes applicable to transactions and interactions between remotely piloted aircraft and traditional ones are incompatible with each other. Operations must be carried out by remote pilots certified as "Head of flight," as required by the pertinent air rules, and also depending on the classification of the airspace.

For example, it's only reasonable to imagine that the provision of air traffic control services and air navigation services to a remotely piloted aircraft, both for applied means and procedures, should exactly be the same as the ones provided to conventional aircraft.

It is predictable that with the APR dual use in non-segregated environments and over densely populated areas or other similar situations, there would be a sharper focus on the so-called cyber-security of the wireless infrastructure network, both for edge and ground segments. Also, there would arise the need to identify areas of vulnerability and potential threats in order to implement appropriate ways of protection to mitigate the risks, or at least to bring them down to levels considered acceptable.

By the way, a lot more thought has to be paid to the question of integration of ARP in non-segregated airspaces. Such aircraft should be characterized by most-advanced technologies and operational regulations, supported by an adequate ethical procedure to ensure appropriate behavior during military or civilian activities.

Moreover, some theories claim that the use of such fully autonomous systems should not be allowed at all, as long as they are not able to distinguish between a soldier and a civilian. Consequently, the drones should be bound to adhere to laws of the mankind, and be able to defy an order, if it's not ethical.

These statements seem to take for granted the existence of a largely notional cyberspace which is characterized by the presence of an artificial and autonomous intelligence -- something that's not available yet.

By any stretch of imagination, drones just cannot have emotions, nor can they relate to ethics. They cannot analyze situations through anger or fear, however great the influence of these emotions on human beings are, even going to the extent of causing wrong responses. A long-term vision of the ARP use certainly changes the human role, which may no longer be in the design center, shifting from an actual decision-maker "in-the-loop" of process role, to the last position of supervisor "on-the-loop" role.

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At least we cannot ignore the added value of the remotely piloted aircraft, which unlike the piloted ones, would be able to integrate information from multiple remote sensors, while at the same time relating to better functional systems including man himself, in a drastically changing environment that in a few years from now will become too hard to be managed and controlled by an ordinary human being!

A TENTATIVE TAXONOMY OF AVIATION PSYCHOLOGY

Paola Tomasello*

INTRODUCTION

The awareness on Human Factors (HF) in aviation promoted the idea that *safety culture and management* cannot be implemented without integration of the HF perspective. Humans should not be considered the “*weak part*” of the system (inevitably prone to human error), but, in contrast, they “*make*” safety and increase system’s flexibility and capability to adapt.

In 2010 the European legislator adopted Regulation 996, which includes Emergency Psychology (EMP) to support the survivors (or relatives of the victims) of aviation accidents.

It is therefore evident that today aviation psychology spans through several topics: a taxonomy could be attempted, including individual, relational and social behaviour. Starting from the HF perspective, the contribution of psychology to aviation will be presented. The SHELL model¹ recognizing the “*live-ware*” and its interactions as a crucial element in aviation, is a good starting point.

THE “HF PERSPECTIVE”

The International Ergonomics Association (2000) defines HF as “The scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance”.

HF sciences include contributions by psychology, engineering, industrial design, statistics, anthropometry. In fact HF in aviation started from dimensions of the crew compartment and cockpit design. Today we know that, from the psychological perspective, there is more.

From an unspecific point of view, we say “HF” to indicate a physical or cognitive property of an individual or social behaviour that is distinctive of human beings and affects socio-technical systems’ functioning and balance between the human being and the environment.

At the level of social interaction, “HF” focuses on social properties that are unique and distinctive of human beings; cultural and organizational factors are important.

Hence, HF involve all the aspects connected to the way human beings engage with the world surrounding them, with the aim of increasing performance and safety.

In this perspective, psychological sciences can offer a great contribution.

It is interesting to note that, in the history of HF sciences, the object of study remains constant: “*interactions*”. That means not HF (or other) elements in isolation are important, but the understanding of the mutual interactions.

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The view expressed in the paper reflects only the one of the author.

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A safety culture (and management) cannot be implemented without integration of the HF perspective and, we add, the HF perspective cannot be implemented without the contribution of psychology.

AVIATION AND SHELL MODEL

In the “total aviation system”, we consider the interactions among people, procedures and equipment, including for air traffic services. The value of the SHELL model (Edwards, 1972) was bound to the emphasis on interactions between the components of the system (hardware, software and live-ware) and between the latter and the environment.

In 1975, Hawkins turned the SHELL model into the SHELL model (fig.1), introducing a further LIVEWARE dimension within the original concept. The fundamental difference between the SHELL model and the SHELL model is that the latter strongly emphasized the need to add a further LIVEWARE dimension (the person!). Hawkins therefore developed a diagram to illustrate the interactions between central live-ware and each of the other four elements (H, S, L, E) (Hawkins, 1987).

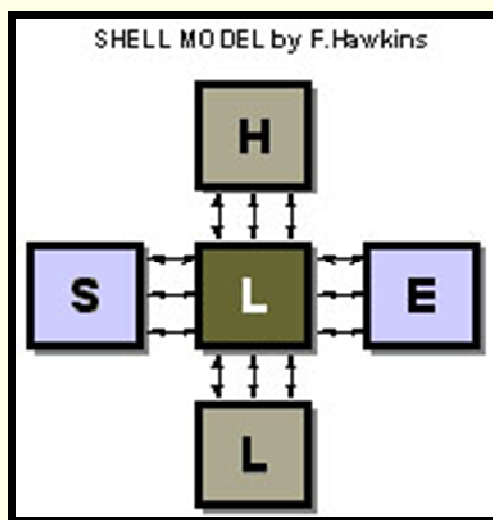


Fig.1

Hawkins’s model focuses on the pivotal role of the central human component of the socio-technical system and in this framework all interactions have to be explored starting from the human component.

The environment is here portrayed as a resource among the others, while in Edwards’ model it represents the blurred immaterial envelope in which all resources (S-H-L) are embedded; live-ware resources represent any human actors, therefore including relational and communicational aspects such as teamwork and leadership.

The SHELL model gives emphasis on the individual (central Liveware) in interaction with the other 4 components, instead of giving emphasis to the broad interactions between all the resources S, H, E and L. It is clear that this model cannot be applied to analyse interfaces that don’t include the “human” factor, such as H-H interface, E-S interface and so on (Reinhart, 1996).

The SHELL perspective is nevertheless very useful, considering each person (central L) engaging with each of the other 4 components. Each relationship is a “human possibility”, while any mismatch between the central Liveware and any other component always leads to a source of human error (Marine Accident Investigator’s International Forum, 2000).

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WHAT ABOUT PSYCHOLOGICAL SCIENCES AND THEIR CONTRIBUTION TO HF PERSPECTIVE IN ATM SYSTEM?

Since HF is concerned with the application of what we know about people, their abilities, characteristics and limitations to the design of equipment they use, environments in which they function, and jobs they perform, it is now interesting to explain in more detail how psychology can contribute.

Since psychology is a discipline covering several aspects of the study of human behaviour, a tentative taxonomy (fig. 2) for its contribution to present day aviation can be attempted.

Starting from the SHELL model and its 4 interfaces (L-S interface, L-H interface, L-E interface and L-L interface), one can classify psychological disciplines identifying the specific and specialist branches of psychological sciences pertinent to each of the four interfaces.

L-S interface is the interaction between the Liveware and Software². In this field, work and organizational psychology can help to drive organizational changes and development processes in order to make clear the mission, the vision and the values of the organization, so that risk factors and a possible solutions can be identified: for instance, in the past, some early checklists did not have any written responses for the specific situation change on the lists and the pilots at the time did not check the checklists properly. To reduce the error of L-S interaction, Hawkins (1987) suggested the solution (standard operating procedure = SOP) which is still used.

The L-E interface considers in particular three environmental factors: noise, heat and vibration (Hawkins 1987), which spur psychophysiological and neuropsychological dimensions of the human organism. Psychophysiology is important for the study of the impact of stress, fatigue and workload in normal, abnormal or extraordinary conditions, while neuropsychology is important for the study of the relationship between the nervous system and cognitive functions (in ATM it especially concerns with attention and working memory).

The interaction between the Liveware and the Hardware (L-H system) is usually named human-machine interface (HMI). HMI science argues that the design of controls and displays, which is subject to the L-H interaction, should be matched with human characteristics and conveniences in order to minimize the possibility of L-H error occurrences (Hawkins 1987) and not to assume the human error as unavoidable, which was the thinking in aviation about 50 years ago. Cognitive psychology and neurosciences study higher mental processes (perception, situational awareness, decision making and so on) and apply the results to the design of hardware resources. The last interface in the SHELL Model is the interaction between the central Liveware and Liveware resources. This L-L interface is initially related to the personnel recruitment and assessment (work and organizational psychology). Therefore it obviously deals both with organizational climate and culture and with group behaviour, leadership, crew/team cooperation/teamwork and personality interaction.

HF experts have found that the problems of L-L interaction, such as errors within teamwork had caused a great deal of accidents.

On March 27, 1977 there was a collision involving two Boeing 747 passenger aircraft on the runway of Los Rodeos Airport (now known as Tenerife North Airport) on Tenerife island in the Canaries. With 583 fatalities, the crash remains the deadliest accident in aviation history. The accident was the result of several errors. In it L-L error constituted a prime contributory causal factor leading to the disaster. The investigation on this accident in fact reported that there had been confusing communications between the ATC tower and the crewmembers in the aircraft.

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In terms of L-L interaction it is possible to promote training programmes which are CRM (Cockpit/crew Resource Management), TRM (Team Resource Management), and LOFT (Line Oriented Flight Training) oriented. In fact effective communication, teamwork and better cooperation among crew/team members can considerably contribute to reducing the occurrences of L-L errors (Hawkins 1987).

According to applicable Eurocontrol Guidelines, “the main objective of TRM for operational ATS staff should be the development of attitudes and behaviours which will contribute to enhanced teamwork skills and performance to reduce teamwork failures as a contributory factor in ATM incidents and accidents”. Since C/TRM is based on interpersonal skills, it is crucial the contribution of Clinical psychology which can help the individual to be aware of his way of being, feel and act in each and every occasion.

Finally, emergency psychology concerns the peculiar L-L interface after a critical incident/accident including the stress management of survivors and relatives.

CONCLUSION

When we say “aviation psychology” then, do we refer to one discipline or to a family of disciplines? The author of present article believes in the second option and offers her contribution to a taxonomy of aviation psychology in Figure 2 below:

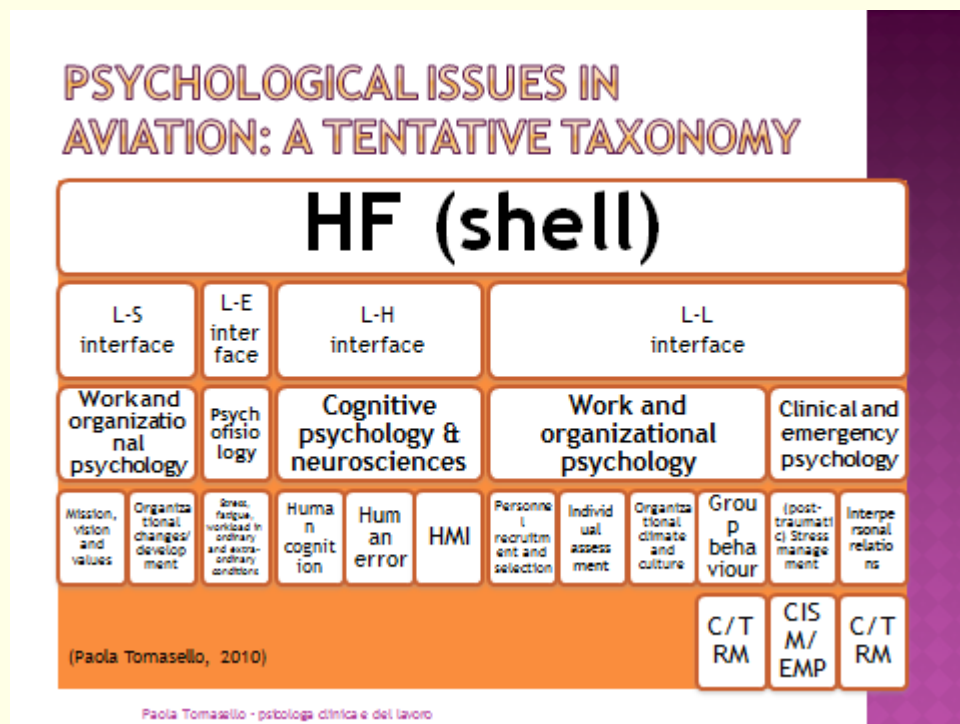


Fig. 2

¹ Software, Hardware, Environment and (two times) “Live-ware”, proposed by Capt. Frank Hawkins and later recommended by ICAO in the Human Factors Digest No 1 (Circular 216 - AN/13) in 1989.

² In the SHEL and SHELL model, Software is not only lines of di code and computer functionality, but also operating procedures, rules, symbols, presentations, semantics and all practices which influence the human.

A CODE OF CONDUCT FOR SPACE-BASED ACTIVITIES BY 2013?

Carlo Trezza*

2013 should turn out to be year that brings to a successful conclusion, the initiative originally launched by Italy towards the creation of a code of conduct for space-based activities. It is a project that our country presented at the Berlin space conference in 2007. It was later acknowledged by the European Union, and then approved by the European Council in 2008 and subsequently launched on to the international scene.

It is now the main initiative that is aimed at ensuring that European space-based activities, on which the world is increasingly dependent, are conducted in a peaceful and cooperative atmosphere.

There are around thousand satellites in orbit now that are indispensable for the survival of key areas such as civil and military communications, meteorology, and aviation and maritime. Faced with an enormity of interests that are at stake, it is considered miraculous that the military conflicts that occur on land, sea, air and even cyberspace, have fortunately not extended to the outer space yet. Space wars are still confined to science fiction. However, offensive capabilities do exist, and the main risk is posed by the anti-satellite weapons that are capable of destroying or damaging satellites and objects in orbit. The US and Russia experimented on them during the cold war, but since then they have adhered to a de facto moratorium on its actual deployment. Both countries were aware of the potential risks to their precious but vulnerable space assets, had they been exposed to hostile actions at any point in time. In 2007, however, such moratorium did not prevent China from testing its version of the anti-satellite weapon, surprisingly, by shooting down its own satellite. The following year, the US followed suit by destroying one of its own satellites with an anti-satellite weapon, even as it was previously reported that the satellite which was in danger of crashing into Earth's atmosphere. Fortunately, five years later, these events have proved to be just isolated incidents and mankind can heave a sigh of relief that the dreadful arms race in outer space has not taken place yet; there is still time to take preventive action.

The presence of tens of thousands of space debris that litter the orbits of our satellites has acted as a brake on the so-called "weaponization" of space. It has to be noted that even an object that measures an inch in size, when thrown at an astronomical speed against a satellite, could cause irreparable damage to it. Debris has had a huge impact on the space industry, one that is comparable to the radioactive waste from our nuclear industry. If anti-satellite weapons went into action, damages would increase exponentially.

But the self-control demonstrated by the nearly fifty space-faring countries with

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SPACE

demonstrated space capabilities has partly been an offshoot of international diplomacy. The 1967 treaty on the peaceful use of outer space does not expressly prohibit the weaponization of space and anti-satellite weapons; it only prohibits space-based nuclear, chemical and biological weapons, not the conventional ones. An extensive reading of the concept of “peaceful use” would lead naturally to the argument that any kind of weapon is forbidden in space. But this is not an interpretation that guarantees success.

Today, the 1997 treaty is the main body of text that regulates the space. In the meantime, nothing more significant has happened. Every year, the UN General Assembly approves by a large majority, a resolution on the prohibition of placing offensive weapons in space. China and Russia are the biggest supporters. But neither in New York, nor in Geneva have they been able, so far, to bring the matter to the negotiation table. Whenever they tried, they met with strong resistance from the US, especially during the time of the Bush administration which was totally refractory to any kind of multilateral effort that could damage America's perceived space superiority.

It is during this period of total inaction that the Italian initiative of 2007 on a code of conduct for outer space activities came up. After reviewing the relevant international documents and contesting the ongoing collision risks, misunderstandings, interference and dangerous manoeuvres in space, Italian experts constructed a text aimed at filling the identified gaps. The initiative includes measures on control and mitigation of debris, prior mutual notification of activities in outer space, and registration of space objects. It also imposes specific international mechanisms for consultation. Although suspiciously viewed by the Bush administration, the initiative was later examined with interest by Obama's administration. Perhaps, the most significant development in recent years has been the turnabout in US space policy. With its new space strategy launched in 2010, America has become more willing to adopt a multilateral discipline in the space field, showing interest in the European project. In recent years, the latter has obtained the support of the major space powers, including Russia, which, while not giving up the hopes of a real space treaty, has come to terms with the less ambitious but more realistic European proposal.

Last year, the Russian-American convergence has led the group of the eight industrialized countries (G8) to approve a text which recognises the increasing dependence on space-based activities and to support the transparency and confidence-building measures in the space sector. Appreciation was expressed for the European initiative on a code of conduct. Albeit with a language marked by caution, the G8 has indicated its willingness to pursue and deepen the discussions on this subject. Never in the past has it been possible to reach such a consensus. A favourable climate has been created for finalizing the process launched by Europe. 2013 should, by all means, turn out to be the favourable year to cross the threshold. It is important not to miss this opportunity.

Translated from Italian into English by Liliana Genovese

RECENT NATIONAL REGULATORY INITIATIVES FOR CIVIL AVIATION SECURITY

Doriano Ricciutelli

General aspects

The events of 9/11 in the US, and, more recently, the terrorist attack in Burgas, Bulgaria, in 2012, have shown that aviation can be the aim of terrorism in any nation, not just those involved in critical situations.

That is why it has become imperative, both at international and EU level, to develop new initiatives which provide for stringent prevention and control measures, in line with internationally recognized standards, coupled with continuous monitoring of all aspects of aviation: infrastructure, airport operators, carriers, general aviation, as well as passengers, luggage, cargo, vehicles, and the general public.

In Italy, the authorities in charge of aviation security are, primarily, the Prime Minister's office, the Ministry of the Interior and the Ministry of Transport. ENAC, the national designated authority (ministerial decree of 21/7/2009), has the task of defining and coordinating aviation security measures.

It designs the National Security Programme, it monitors its implementation and adapts the Programme where necessary.

ENAC is also competent for outsourcing security activities, and verifying they are carried out in an efficient and regular manner, a task it performs in close cooperation with law enforcement services.

ENAC defines both security measures and the National Security Programme via Cisa, the Inter-ministerial Committee for the Security of Air Transport and Airports, which it chairs and for which it provides the technical secretariat.

The National Security Programme and the Security Circular Letters

The National Security Programme, PNS, as an instrument of international cooperation is featured in Annex 17 of the Chicago Convention and in ECAC Doc. 30, and it is also foreseen in Art.10 of Regulation 300/2008 on common rules in the field of civil aviation security.

It is aimed at guaranteeing the security of passengers, crews, operators, the general public and airport infrastructure, as well as an efficient and regular functioning of civil aviation in its prevention of unlawful interference.

These provisions are crucial for security, in that they are aimed at preventing the introduction on board of weapons, explosive devices, dangerous goods and any other item that could disturb the normal functioning of air traffic.

On the 19th of March 2012, ENAC published the third edition of the PNS (Prot. 00011/DG)¹, which was amended by provision Prot. 00000/22/DG of the 25th of MY 2012.

MISCELLANEOUS MATERIAL OF INTEREST

In the field of aviation security there are also ENAC's circular letters, which are documents that supplement the regulatory framework.

Their aim is to improve comprehension of the rules by all those involved, thus creating a correct and transparent relationship between those implementing the rules, and those inspecting the correct implementation.

A typical circular letter consists for instance of explanatory notes to help the interpretation of the provisions, or of criteria and ways in which to demonstrate compliance with them.

Circular letters can deal with specific matters or requirements which demand a certain approach, or they can be intended for certain categories of subjects, in order to enable a harmonized application of standards².

ENAC has recently published two circular letters on security: one on the Programmes for the Security of Airports, Carriers and Other Subjects (SEC 4 of the 23rd of January 2013), and one on the content and procedures of security training (SEC 5 of the 20th of December 2012, published on 7 January 2013) and one on small airports and demarcated areas (SEC 6 of the 15th of May 2013).

As far as the first letter is concerned, it is useful to specify that it is based on the above-mentioned Regulation (CE) n. 300/2008, which lays down that 'each airport operator, air carrier and entity implementing aviation security standards should draw up, apply and maintain a security programme in order to comply both with this Regulation and with whichever national civil aviation programme is applicable'.

Circular letter n° 4 has indeed been established to explain how security programmes should be drawn up, and what their content should be, in order to be valid and approved.

The programmes also contain provisions on internal quality control which lay down the way in which the operator assures conformity with the relevant methods and procedures³.

Circular letter n° 5, which entered into force on the 6th of February 2013, aims at assuring that security staff is adequately trained, pursuant to the provisions of Regulation (EU) 185/2010⁴ laying down detailed measures for the implementation of the common basic standards on aviation security.

It establishes procedures and instruments to ensure that training programmes as used by instructors and trainers are drawn up according to regulatory provisions, and applied in a standardized manner.

ENAC has therefore annexed a Security Training Manual to the circular letter, which contains the *curricula* for the various categories of staff, criteria and explanations as to the training methods, the number of hours for each training course, and post-course assessment methods.

As for certified instructors, they have to provide ENAC before the 5th of August 2013 with an electronic version of the training programme they teach, the content of which has to be in line with the Training Manual.

Conclusion

We can establish that the necessary steps have been taken to fulfill the common basic



MISCELLANEOUS MATERIAL OF INTEREST

rules in the field of aviation security as indicated by the European Union. Having said this, we see room for an operational improvement of strategic aspects such as the quality of services, awareness-raising of everyone involved in security, and above all, training of staff.

¹Official ENAC source.

²The circular letters published by ENAC so far are:

SEC 1 of the 7th of October 2004 on “Qualification and training of security instructors”

SEC 2 of the 7th of October 2004 on “Outsourcing of security checks at airports. Operational procedures for airport managers”

SEC 3 of the 7th of October 2004 on “Modalities to assess the technical-professional requirements for security companies and professional requirements for security staff. Professional training programme for staff carrying out security checks. Certificate of security staff.

³ See Commission Regulation (EU) n° 18/2010 of the 8th of January 2010.

⁴ See Commission implementing Regulation (EU) n° 246/2013 of the 19th of March 2013, Commission implementing Regulation n° 189/2013 of the 5th of March 2013, Commission implementing Regulation n° 104/2013 of the 4th of February 2013, (all) amending Regulation n° 185/2010.

ELFAA AGAINST THE “STOP THE CLOCK” MEASURE

Alessandra Laconi

On the 16th April 2013, according to the EU ‘s co-decision procedure, the European Parliament voted by a large majority in favour of the “stop the clock” proposal, that will temporarily halt the inclusion of intercontinental flights in the EU Emissions Trading System (EU Emissions Trading Aviation Directive 2003/87/EC) for a period of one year to allow ICAO member states to agree a market-based mechanism to limit the growth of international aviation emissions.

In 2010, the ICAO Assembly agreed on the goal of “carbon-neutral growth” project by 2020 and the aviation industry also committed to a similar goal as well as to reduce by 50% the 2005 emission levels within 2050.

The European Commission previously expressed the aim to offer ICAO a chance to put a global ETS solution in place, but if this does not happen by next autumn the Directive will be reactivated.

As a consequence of the exposed derogation, the ETS Directive will not be enforced and payment will not be required by EU regulatory authorities in respect of extra-EU flights operated by airlines which exceed their emissions limit and are unable to buy additional allowances.

It must be underlined that the ETS Directive has been widely criticized by non-EU airlines and governments and was subject to a challenge by the Air Transport Association of America (now Airlines for America) before the English High Court, which was referred to the Court of Justice of the European Union (ECJ). In December 2011 the ECJ ruled that the Directive was not contrary to the Chicago Convention and to general principles of international law.

While the major European international carriers have so far welcomed the “stop the clock” proposal, intra-European regional and low-cost carriers are against the derogation. The European Low Fares Airline Association (ELFAA) issued a statement “deploring” the vote and pledged to bring a legal suit.

According to ELFAA’s opinion, the exemption of more than 80% of EU aviation CO2 emissions renders the inclusion of aviation environmentally ineffective, imposing an unfair burden on intra-EU operators and passengers. Furthermore, ELFAA urges the European Council to reject this proposal, which is considered as environmentally ineffective, discriminatory and distortive of competition to the detriment of passengers travelling within the EU. For example, a passenger flying from Milan to New York via another EU airport will face a EU ETS charge on his first flight. However, a passenger flying to New York directly from Milan will face no emission charges at all.

Following such a point of view, the “stop the clock” measure seems to fail one of the

MISCELLANEOUS MATERIAL OF INTEREST

key principles underpinning the validity of the original inclusion of aviation in the EU ETS, that of non-discrimination of air carriers.

Notwithstanding the concerns exposed by ELFAA, on the 22nd April 2013 the European Council approved the described temporary derogation from the EU greenhouse emission trading scheme.

FORTHCOMING EVENTS



Italian airports: meeting the challenge of traffic growth and the competition among airlines

This conference is organized by SITA in partnership with the University of Bologna and it is dedicated to the Italian air transport industry.

Join this half-day conference and you will have the opportunity to hear presentations on topics at the heart of the industry's concerns, such as:

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- new policies of the Air Navigation Service providers
- new EU legislation
- new opportunities for airport development
- new synergies between traditional and low-cost carriers and their influence on airport development
- ... and much more

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