European Commission

Study of certain aspects of Council Regulation 95/93

on common rules for the allocation of slots at Community airports

Final report – 20 May 2000

CONTENTS

I   Introduction

Background

1.1   Recognising the continued growth of air traffic and the delays in and difficulties of increasing airport capacity, the European Commission (the Commission) introduced in 1993 a regulation concerning the allocation of airport slots. This Regulation built on the process of airport co-ordination developed over many years through IATA and initially established to avoid un-necessary congestion. However, it extended beyond the practices adopted by IATA and made some modifications to the voluntary industry guidelines. It is also important to note that it gave legal backing to a necessary industry activity.

1.2   The Regulation aimed to achieve a number of key objectives, for example:

- "…to facilitate competition, and to encourage entrance into the [Community air] market";

- to ensure that slots at congested airports are allocated on the basis of "neutral, transparent and non-discriminatory rules"; and, albeit implicitly

- to encourage the efficient use of airport capacity by making best use of available slots.

1.3   The Commission recognised that the original IATA processes were developed for somewhat different reasons and that with a liberalised internal market in Europe there might be concerns over the Regulation's potential use (explicitly or tacitly) as a tool for competition policy. It consequently placed importance on having proper procedures in place to ensure fairness and transparency in the application of the Regulation, particularly in relation to the assessment of capacity, the independence of the co-ordinator, and the establishment of co-ordination committees.

Scope and structure of the study

1.4   PricewaterhouseCoopers was invited to assess the state of implementation of these aspects of Council Regulation (EC) No 95/93 of 18 January 1993, on the allocation of slots at community airports, in the light of continued growth in traffic leading to increasing congestion at airports. Those aspects concerned capacity analysis, the position of the co-ordinator and the role of the co-ordination committee.

- Airport capacity/designation – in particular this covered the analysis of capacity assessments/determination studies (as per Articles 3 and 6 of the Regulation), as well as the analysis of decisions taken on the basis of Articles 3.2 and 3.4 of the Regulation;

- Co-ordinator - an analysis of the co-ordinator's position in each Member State with regard to independence, resources and finances (Article 4 of the Regulation); and

- Co-ordination committee - an analysis of whether such committees are established at fully co-ordinated airports and whether or not they are complying with the Regulation (notably Article 5).

1.5   We discuss the principal requirements of the relevant Articles listed above within the appropriate sections of this report.

1.6   Particular attention was to be focused on Category 1 airports as defined in Regulation 2408/92. Category 1 airports are generally the larger airports serving European Union's capitals: 18 of EU's 20 busiest airports are Category 1, the exceptions being Manchester and Barcelona. A number of the other Category 1 airports are the smaller airports of a major system and often with little or no commercial traffic, and we have not focused on these airports.

1.7   The scope of this current study is narrower than the work we undertook in 1995 (as Coopers & Lybrand) when we considered all aspects of the Regulation.

1.8   For the purposes of this study, we have assumed that co-ordinated and fully co-ordinated airports are identified by their explicit designation by the Member State concerned. We note in Section III an interpretation by the Commission's Services that any airport where a Member State recognises that an air carrier is required to have a slot, is *de facto* and *de jure* a fully co-ordinated airport. However, we have not applied this interpretation when using the term 'fully co-ordinated'.

1.9   We believe the factual information presented in this report to be accurate at the time of completion of our investigations, 22 February 2000. We are aware that there have been and continue to be changes since that date.

Contents and structure of this report

1.10   In this report, we present our current findings on the status of implementation of the Regulation. We begin in Section II with presenting the current position in relation to the designation status of Category I airports. We next discuss the capacity assessments that have been performed and the designation process (Section III), followed by consideration of the on-going capacity determination process as well as analysis of the degree of capacity utilisation (Section IV). In Section V, we analyse the position of the co-ordinator in each Member State, before presenting a similar discussion of the Co-ordination Committees (Section VI). We give a summary of our conclusions in Section VII.

1.11   Each of Sections III to VI commences with a presentation of the relevant article(s) of the Regulation and the scope of this study in this area. The factual position is then summarised before we offer our comments on the area. The considerable detailed information that we have collected is presented for each Member State in Annexes I to XV. Other detailed information is presented in Annexes XVI to XXII.

Our Approach

1.12   Our information gathering and data collection process can be categorised into six, broadly defined stages, these being:

- the Member State aviation authorities;
- the co-ordinators;
- the principal air transport trade associations;
- the airports;
- the Co-ordination Committee Chairpersons; and
- the IATA Scheduling Conference for Summer 2000.

1.13   We now briefly describe the nature of the contact we have had with each of the parties listed above.

Member State aviation authorities

1.14   Following our preliminary meeting with the European Commission[1], we were provided with the contact names and addresses of all representatives of the individual Member State aviation authorities. In mid-August 1999, we requested information and comments on a number of topics, including:

- confirmation of the co-ordination status of each Category 1 airport within their country;
- where applicable, the detailed capacity analyses required to support the (fully co-ordinated) designation status of its airports; and
- details of the nature of any complaints made against the co-ordinator's decisions and/or the set-up of co-ordination.

1.15   An example of a questionnaire sent to a Member State aviation authority can be found in Annex XIX. The precise composition of each letter varied slightly according to the number and status of the (Category 1) airports within their national boundaries.

1.16   We applied a one-month time limit for each Member State to respond. We also obtained confirmation of the receipt of each letter, followed up to agree timely (and full) responses and where applicable, re-contacted the appropriate representatives in order to discuss and expand on, some of the key issues that were raised.

1.17   With the exception of the lack of capacity analyses provided[2], we received full responses from all of the Member States, with the exception of Spain. We eventually

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[1]   Brussels, 27 July 1999.

[2]   See Section III of this report.

received a partial response from the Spanish government, dated 8 February 2000. The Spanish government authorities indicated that full information should be sought from the co-ordinator, although this is a concern, bearing in mind the apparent adoption of the fully co-ordinated status by a number of Spanish airports, in the absence of any official designation.

The co-ordinators

1.18   In parallel with sending out the Member States questionnaires, we wrote to the co-ordinators (and the government aviation authority representatives) responsible for slot/schedule co-ordination in each Member State.

1.19   We requested a written response (again within one month) to a number of questions regarding the set-up of their slot/schedule co-ordination activities.   In particular, we enquired about:

- the institutional status of the co-ordinator/co-ordinating body;
- the method of financing the co-ordination function;
- the level and adequacy of resources available;
- the co-ordination parameters and 'peak week' traffic levels; and
- the role(s) played by the Co-ordination Committee(s).

1.20   We include an example of a co-ordinator questionnaire as Annex XX of this report. The precise composition of each questionnaire varied according to the number and status of the Category 1 airports within each Member State.

1.21   We kept in close contact with each co-ordinator, telephoning on separate occasions to confirm the receipt of our questionnaire, to encourage full and timely responses, and to discuss some of the key points in more detail.

1.22   The majority of replies were received on (or very close to) the deadline date. The noticeable exception was Greece, a full response for which we did not receive until Mid-January 2000. We provide additional comment and possible reasons for this within the Greek country summary (see Annex VII).

1.23   We have since re-contacted all of the co-ordinators in order to verify the factual elements of the relevant country summaries listed in Annexes I-XV.

Co-ordination Committee Chairpersons

1.24   In order to obtain a clearer and more detailed understanding of the composition, workings and methods for dealing with complaints by each Co-ordination Committee, we sought to interview the respective Chairpersons of each fully co-ordinated, Category 1 airport. We wrote an initial letter to the Chairpersons outlining some of the topics that we wished to discuss. An example of one of these letters can be found in Annex XXI.

1.25   We have either interviewed and/or received a written response from, the majority of the Category 1, fully co-ordinated airports. However, this task proved to be very time-consuming.   The difficulties we encountered in contacting the Chairpersons may be attributed in no small part to the busy work schedules that these individuals generally undertake within their own company (e.g. in an airline or airport).

1.26   However, we must note that we collected most of the outstanding factual information and data, through our discussions with the co-ordinators and other personnel at the IATA Scheduling Conference in Montreal.

The air transport trade associations

1.27   During the first half of October 1999, we conducted a series of extensive interviews with four air transport trade associations closely involved in schedule co-ordination in Europe, i.e.

- the **European Union Airport Co-ordinators Association** (EUACA) – present at this meeting were the principal co-ordinators of Belgium, France, Germany, Spain and the UK;

- the **International Air Transport Association** (IATA) – this meeting was held with the Assistant Director of Business Operations;

- the **International Air Carrier Association** (IACA) – present at this meeting was the Director of Ground Operations at IACA and the Schedules Planning Manager of Air 2000; and

- the **European Regions Airline Association** (ERAA) – this meeting was attended by the Director of Air Transport Policy.

1.28   The agenda for each meeting was centred around the views and opinions of the parties present, regarding issues such as the availability and quality of capacity analyses, the status of the co-ordinators (e.g. independence, resources and finances) and the set-up of the Co-ordination Committees (e.g. structure, composition and role).

The airports

1.29   We contacted a number of Europe's airports, largely through the help and representation of ACI Europe. The contact can be divided into four strands, namely:

- A small number of airports contacted us directly to discuss the study;

- ACI Europe Policy Committee – because of the limited number of capacity analyses that we received (as per Article 3.3 of the Regulation) we wrote to the Policy Committee members, at the fully co-ordinated, Category 1 airports for which we had not received an example of such an analysis;

- in mid-December 1999, we had a meeting with ACI Europe, represented by individuals from Aena, Aer Rianta and BAA, as well as the Director of Policy. This covered similar topics to those discussed with EUACA, IATA, IACA and ERAA; and

- following on from this meeting, the Director of Policy provided additional assistance with the collection of capacity analyses for those Category 1 airports for which we did not have capacity analyses. However, we only received one additional, completed capacity analysis[3], despite the considerable (and ongoing) efforts of ACI Europe.

1.30   We have incorporated the key findings from these meetings within the appropriate sections of our report.

The IATA Scheduling Conference, Montreal, November 11-18, 1999

1.31   We also attended the second half of the IATA Scheduling Conference in order to seek the views of the airline community. The conference represented the most efficient means of identifying and interviewing the relevant personnel, within the time available. The discussions concentrated on the three main areas of our study, i.e. capacity analyses, co-ordinators and Co-ordination Committees.

1.32   We also used this time to conduct face-to-face meetings with a number of the European co-ordinators in order to clear up outstanding issues and complete our evidence gathering process.

1.33   To protect the anonymity of the interviewees, we do not provide a consolidated list of the airlines that we spoke to in Montreal.

1.34   Whilst at the Scheduling Conference, we also held a meeting with an economist at the **International Civil Aviation Organisation** (ICAO).

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[3]   Oporto Airport, Portugal.

II   Airport designation

Introduction

2.1   Article 3 of the Regulation sets out the conditions for airport co-ordination.

2.2   Under Article 3.2 a Member State may designate an airport as a co-ordinated airport provided that "the principles of transparency, neutrality and non-discrimination are met". By contrast, under Articles 3.3 and 3.4 Member States may designate an airport fully co-ordinated after a thorough examination of the possibilities for increasing airport has indicated that there are serious capacity problems that cannot be resolved in the short term. Article 3.5 requires a designation of fully co-ordinated to be lifted when capacity to meet actual or planned operations is available.

2.3   In this section, we record the current designation status of airports in the EU. We also present the opinions of airlines on the status of airports, although we delay our own discussion of the designation status until Section IV. We discuss the designation process in Section III.

Current designation status

2.4   At the time of writing we believe there to be 14 co-ordinated and 61 fully co-ordinated airports in the Community. Our 1995 study identified 13 co-ordinated and 57 fully co-ordinated airports in the Community[4]. Table 2.1 highlights the current designation status of all Category 1 airports. Annex XVI lists the names of all the designated Community airports at the time of writing.

2.5   Clearly, there have been very few additions to these totals over the last 4 years. The most significant changes are the designation as fully co-ordinated of Amsterdam-Schiphol, London-Stansted and Cologne/Bonn, and the move of Milan Linate to co-ordinated from fully co-ordinated. The other changes to the designation of fully co-ordinated airports relate to non-Category 1 airports, several in the Greek islands. In addition, at the time of our 1995 study, both Brussels-Zaventem and Lisbon airports were thought to be 'co-ordinated' airports, although some doubt has now been cast over their designation status and we believe the best classification currently is "not designated".

2.6   Of the current 75 co-ordinated and fully co-ordinated airports, all were classified as either SCR or SMA under the IATA definitions of schedule co-ordination[5]. All fully co-ordinated, Category 1 airports also have the SCR classification. In contrast, not all Category 1 SCR airports are designated as fully co-

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[4]   This excluded all the Spanish airports.

[5]   SCR indicates 'schedule co-ordination request' status where a co-ordinator is appointed to allocate slots (on a voluntary basis) and SMA indicates 'schedule movement advice' requiring only advance notification of intended operations, according to IATA's definitions of schedule co-ordination.

ordinated, the exceptions being Vienna, Brussels-Zaventem (although this is to change), Milan-Linate, Lisbon, Faro, and the Spanish airports.

Table 2.1:   Designation status of Category 1 airports, by Member State

Member State	Category 1 Airport	Designation status	IATA status
Austria	Vienna	No designation	SCR
Belgium	Brussels-Zaventem	No designation	SCR
Denmark	Copenhagen-Kastrup	Fully co-ordinated	SCR
	Copenhagen-Roskilde	No designation	-
Finland	Helsinki-Vantaa	Fully co-ordinated	SCR
France	Paris-Charles de Gaulle	Fully co-ordinated	SCR
	Paris-Orly	Fully co-ordinated	SCR
	Paris-Le Bourget	No designation	-
Germany	Berlin-Tempelhof	Fully co-ordinated	SCR
	Berlin-Tegel	Fully co-ordinated	SCR
	Berlin-Schönefeld	Fully co-ordinated	SCR
	Düsseldorf	Fully co-ordinated	SCR
	Frankfurt-Main	Fully co-ordinated	SCR
	Munich	Fully co-ordinated	SCR
Greece	Athens-Hellinikon	Fully co-ordinated	SCR
	Thessalonika-Macedonia	Fully co-ordinated	SCR
Ireland	Dublin	No designation	SMA
Italy	Milan-Bergamo	Fully co-ordinated	SCR
	Milan-Malpensa	Fully co-ordinated	SCR
	Rome-Ciampino	Fully co-ordinated	SCR
	Rome-Fiumcino	Fully co-ordinated	SCR
	Milan-Linate	Co-ordinated	SCR
Netherlands	Amsterdam-Schiphol	Fully co-ordinated	SCR
Portugal	Faro	No designation	SCR
	Lisbon	No designation	SCR
Spain	Las Palmas	No designation	-
	Madrid-Barajas	No designation	SCR
	Malaga	No designation	SCR
	Palma de Mallorca	No designation	SCR
Sweden	Stockholm-Arlanda	Fully co-ordinated	SCR
	Stockholm-Bromma	No designation	-
UK	London-Heathrow	Fully co-ordinated	SCR
	London-Gatwick	Fully co-ordinated	SCR
	London-Stansted	Fully co-ordinated	SCR
	London-Luton	No designation	-

2.7   The Category 1 airports that are designated as fully co-ordinated have this classification for the entire year. A number of other airports are fully co-ordinated for

the summer season only (e.g. the Greek islands airports). We understand that no airport is fully co-ordinated for any period shorter than a full season.

Industry opinion

2.8   In our discussions with airlines and co-ordinators, in general there was reasonable agreement with the designation status of the Category 1 airports. The exceptions in the main were with those that have IATA SCR status but which have not as yet been designated as fully co-ordinated, as highlighted above.

2.9   The co-ordination status of Brussels-Zaventem airport is under active review and is generally expected to be classified as fully co-ordinated within the very short term[6], in line with carriers' opinions.

2.10   The positions at Vienna and the Portuguese airports are also under review, although the outcomes of the investigations are less certain than for Brussels-Zaventem. The view of the airline community is very much that Vienna should become either a co-ordinated or fully co-ordinated airport and the four busiest Portuguese airports (Lisbon, Faro, Oporto and Funchal) should all have their SCR status supported by designation as fully co-ordinated, at least for the IATA summer scheduling season. The analysis that we present in Section IV is less conclusive.

2.11   We understand that the non-designation of the Spanish SCR airports as fully co-ordinated is the result of delays in implementing the legislative requirements of the designation process in Spain. Indeed, many airlines had assumed that the airports had already been designated as fully co-ordinated and are acting accordingly.

2.12   The other Category 1 airport whose designation status has been the subject of comment is Dublin. The airlines consider that current arrangements are working satisfactorily and that the increases in both terminal and runway capacities in the first half of 2000 will remove congestion problems. In contrast, Aer Rianta, the airport operator, considers that there will continue to be pressure on certain facilities (particularly for wide-bodied aircraft) during certain times in summer seasons. Voluntary re-scheduling of operations did not work last summer, and this summer of 26 airlines with schedules needing to be re-timed to stay within capacity limits only two have agreed to make minor changes. Aer Rianta is also concerned over the degree of co-operation between all carriers at the airport, and the difficulties of Aer Lingus undertaking three roles at the airport: major base airline, handling agent and Data Collection Agent for IATA at an SMA airport.

2.13   Of the non-Category 1 airports, most comments focused on the designation as fully co-ordinated of all the low traffic volume airports in Greece. A number of airlines and their representative organisations questioned whether or not the degree of congestion at these airports merited their fully co-ordinated designation. However, these airports were not the focus of our work since they are 'non-Category 1'. (We

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[6]   The status of Brussels-Zaventem airport is now expected to change to 'fully co-ordinated' during 2000.

note that we did not receive any complaints over the status of the two Category 1 Greek airports, namely Athens-Hellinikon and Thessalonika.)

2.14   The Greek co-ordinator believes strongly that designation as fully co-ordinated is necessary in view of the ability of many of these airports to handle only very few aircraft at the same time and the practice of the major users of these airports, the northern European charter airlines operating during the summer season, to concentrate flying on the same day.

2.15   None of the co-ordinators raised any serious doubts over the current designation status of their co-ordinated/fully co-ordinated airports. However, a few co-ordinators of some of the Community's non-designated airports believed that a formal designation is necessary. Of the Category 1 non-designated airports, the respective co-ordinators believed that Brussels-Zaventem, Madrid-Barajas, Palma de Mallorca, Malaga, Faro and Lisbon airports should probably all be classified as 'fully co-ordinated', at least for the high density of traffic throughout the summer season.

III Capacity assessments and the designation process

Introduction

3.1 Designation of an airport as 'co-ordinated' is covered by Article 3.2 of the Regulation. It requires the Member State only to meet the principles of transparency, neutrality and non-discrimination, before making such a designation.

3.2 Designation as 'fully co-ordinated', however appears to have additional requirements. Specifically, Article 3.3 of the Regulation states that if carriers representing a majority of operations consider capacity is insufficient, or new entrants cannot gain access, or the Member State itself considers it necessary, the Member State should ensure that a thorough capacity analysis is carried out. We note, however, that the Regulation does not require that designation as fully co-ordinated has to follow this process.

3.3 The capacity analysis should have regard to commonly recognised methods, and have the intention of identifying whether or not capacity constraints exist as well as trying to develop short term remedies for any airport congestion problems. This is intended to ensure that all opportunities to expand airport capacity are properly assessed and implemented. The Regulation does not specify which sub-systems at an airport need to be assessed nor whether these sub-systems are limited to physical infrastructure or extend to cover, for example, manning levels for ground handling services and environmental limits.

3.4 If after consultation with airlines and their representative organisations, airport operators, air traffic control authorities, no means for resolving short term problems are identified, then the airport should be designated as 'fully co-ordinated' for "the periods during which capacity problems occur" (Article 3.4).

3.5 As and when sufficient capacity becomes available to meet actual or planned demand, the Regulation requires that designation as fully co-ordinated must be lifted (Article 3.5). This is an indication that the Commission regards a designation of 'fully co-ordinated' as being the only means available to avoid traffic exceeding capacity, resulting in airport related delays, over-crowding and deterioration of quality of service below acceptable levels.

3.6 It is important to note that we understand that the Commission's Services regards any recognition by a Member State of one of its airports as being an SCR airport under IATA guidelines as being both a *de facto* and a *de jure* designation of that airport as fully co-ordinated under the terms of the Regulation. This is based on the allocation of slots through the IATA process at SCR airports, and the definition of a fully co-ordinated airport in Article 2 (g) of the regulation as an airport where "…it is necessary for an air carrier to have a slot allocated by a co-ordinator". This interpretation means that an airport can be designated as fully co-ordinated without the conduct of a capacity study to demonstrate this need. However, in the absence of a capacity study, a Member State would not know if it were in compliance with

Article 3.5. As noted in Section I, we have not applied this interpretation when referring to fully co-ordinated airports.

Findings

3.7   Table 3.1 summarises for the major Category 1 airports, the capacity analyses produced/provided and the extent of consultation with interested parties prior to designation. In addition, Table 3.1 describes the nature and quality of the studies provided for each Category 1 airport, at the time of writing.

Assessment of analyses provided

3.8   It may be seen from Table 3.1 that surprisingly few capacity analyses have been undertaken (and/or provided to us) for the specific purpose of designation of an airport as fully co-ordinated under the Regulation.

3.9   Of the limited number we have seen, we regard the analysis for London-Stansted as an excellent example of best practice. It was thorough, clear, logical and well supported with factual data, examined the capacity in all critical sub-systems of the airport (namely runway, passenger facilities and aircraft stands). It highlighted as a constraining factor the high level of runway demand and utilisation across each hour of a typical busy week, in particular during the early morning and early evening peak hours. We include a copy of the London-Stansted analysis as Annex XXII to this report.

3.10   The capacity analysis produced for the purpose of designating Stockholm-Arlanda airport was also a very thorough and factually well supported piece of work.

3.11   Of the analyses that were produced for reasons other than airport designation, the studies for Frankfurt and Paris-Charles de Gaulle airports were particularly noteworthy in terms of their structure and level of detail.   The Frankfurt study contained a technical annex and alternative ways for increasing runway capacity were particularly well analysed using detailed operational data.

3.12   The most common reason for not performing a capacity analysis for the specific purposes of designation was the pre-dating categorisation of the airport as SCR within the IATA airport co-ordination process. Prior to the categorisation of an airport as SCR, assessments of airport capacity based on IATA's guidelines were generally performed.   Indeed, IATA SCR status is seen by many within the air transport industry as being synonymous with the 'fully co-ordinated' designation under the Regulation.

3.13   For airports like Düsseldorf, there are legal constraints on the numbers of aircraft movements which are below the physical capabilities of the airport and which have been set for environmental reasons. Thus, no further investigations (i.e. capacity analyses) to determine capacity were deemed necessary.

Table 3.1:   Summary of capacity analysis studies provided for the major, Category 1 airports.

Member State	Category 1 Airport(s)	Designation	Capacity analysis produced for purpose of airport designation?	Capacity analysis provided to PwC?	Comments on capacity analysis	Extent of consultation prior to designation
Austria	Vienna	Not designated, but under review	In process	No	Currently being assessed	N/A
Belgium	Brussels-Zaventem	Not designated, but expected to change to fully co-ordinated	In process – runway section completed	No	Currently being assessed	Expected to be the Belgian airlines, Belgian CAA, airport authority and the Executive Committee
Denmark	Copenhagen-Kastrup	Fully co-ordinated	No	No	Conducted prior to original SCR designation.	SAS, Maersk Air and airport operator
Finland	Helsinki-Vantaa	Fully co-ordinated	No	No	Conducted prior to original SCR designation.	Technically none
France	Paris-Charles de Gaulle	Fully co-ordinated	No	Yes – but not conducted for designation	Produced to justify need for 3rd runway Very thorough	Co-ordination Committee
	Paris-Orly	Fully co-ordinated	No	No	Not conducted – only done for infrastructure changes	Co-ordination Committee
Germany	Berlin-Schönefeld	Fully co-ordinated	No	Yes – but not conducted for designation	Highlighted terminal congestion Fairly brief	As per Article 3.4
	Berlin-Tempelhof	Fully co-ordinated	No	Yes – but not conducted for designation	Highlighted terminal congestion Not deemed necessary for designation Fairly brief	As per Article 3.4
	Berlin-Tegel	Fully co-ordinated	No	No	Not deemed necessary for designation Only a summary letter provided	As per Article 3.4
	Düsseldorf	Fully co-ordinated	No	No	Administrative restrictions severely limit capacity Not deemed necessary for designation	As per Article 3.4
	Frankfurt	Fully co-ordinated	No	Yes - but not conducted for designation	Highlighted need for a 2nd runway Very thorough Not deemed necessary for designation	As per Article 3.4
	Munich	Fully co-ordinated	No	Yes – but not conducted for designation	Produced for opening of new airport Not deemed necessary for designation	As per Article 3.4

Member State	Category 1 Airport(s)	Designation	Capacity analysis produced for purpose of airport designation?	Capacity analysis provided to PwC?	Comments on capacity analysis	Extent of consultation prior to designation
Greece	Athens, Thessalonika	Fully co-ordinated	Yes	No	Greek CAA conducted own internal assessments Updated if infrastructure changes	Appears limited
Ireland	Dublin	Not designated	N/A	No	N/A	N/A
Italy	Rome (Fiumicino, Ciampino) Milan (Malpensa, Linate, Bergamo)	All fully co-ordinated, except Milan-Linate (co-ordinated)	Unsure	No	ENAC unsure if capacity assessments were performed at time of designation	Air carriers, airport companies, co-ordinator, customs and ATC
Netherlands	Amsterdam-Schiphol	Fully co-ordinated	No	No	Informed that airport authority conducts an annual operational plan	Major Dutch air carriers, airport authority and ATC
Portugal	Lisbon, Faro	Not designated	In process	Only for Oporto airport	INAC has asked major airports to conduct an analysis	N/A
Spain	Madrid-Barajas, Palma de Mallorca, Malaga, Las Palmas	Not designated – but operating as if fully co-ordinated	In process	Yes – details the methodology applied	In process of conducting full studies for the busiest airports	N/A
Sweden	Stockholm-Arlanda	Fully co-ordinated	Yes	Yes – for purpose of designation	Appears to be comprehensive In Swedish	Major Swedish air carriers, airport authority and co-ordinator
UK	London-Heathrow	Fully co-ordinated	No	No	Not deemed necessary for designation	Airline Scheduling Committees and .airport operator informed
	London-Gatwick	Fully co-ordinated	No	No	Not deemed necessary for designation	Airline Scheduling Committees and airport operator informed
	London-Stansted	Fully co-ordinated	Yes	Yes – for purpose of designation	+Very thorough and clear +Covers all aspects of airport capacity +Well supported with factual data	All airport users and their trade associations, airport operator and ATC
	London-Luton	Not designated	N/A	No	N/A	N/A

3.14   Our discussions with co-ordinators indicate that the requirements of Article 3 of the Regulation are regarded as relating very much to the issue of designation. The identification of means of removing capacity restraints is associated much more with the activities carried under Article 6 of the Regulation, the on-going assessment of capacity and co-ordination parameters for the forthcoming season. We discuss the detailed determination of capacity further in Section IV.

The competent authorities

3.15   The respective civil aviation authorities or transport ministries are the competent authorities responsible for airport designation in each Member State in the EU. This is in line with the requirements of Article 3 of the Regulation.

3.16   The competent authority responsible for producing the capacity analyses at each airport varies within and between Member States. For example in Greece, the Civil Aviation Authority is responsible for carrying out the capacity analyses whereas in the UK, in general, it is the airport operator. Within Germany, the recent analyses of capacity were performed by a number of different bodies, including the University of Stuttgart (for Stuttgart airport), the US Federal Aviation Administration (for Frankfurt airport) and an independent British consultant (for Munich (II) airport).

3.17   A few individuals/organisations suggested that all future capacity analyses should be conducted by a single, independent body such as Eurocontrol. There is a certain attractiveness in standardising the method for analysing capacity at each airport, in order to ensure a consistency of approach and fairness within the derivation of outputs. However, there was considerable resistance elsewhere amongst the air transport community to such an arrangement/requirement, with a general preference for the status quo to be maintained.

Consultation

3.18   Although formal capacity analyses appear lacking, in general there does seem to have been adequate consultation in line with the requirements of Article 3, prior to the designation of airports as fully co-ordinated. There is some tension in relation to the determination of capacity and co-ordination parameters between airlines and some airport operators. While the airlines carry the cost burden of delays resulting from too high an assessment of capacity, it is the airport operators whose image can be affected by delays and congestion. We discuss this further in Section VI.

3.19   A major exception to consultation is Greece, where as we have noted, the airlines in general question the designation of the smaller Greek airports as fully co-ordinated. There appears to have been very limited consultation prior to designation, although (as with all other Member States) we were informed that no formal complaints were ever made to the body responsible for designation (i.e. the HCAA).

3.20   A number of airlines have also questioned the adequacy and the effectiveness of the consultation in both Paris and Madrid-Barajas in relation to the additional capacity provided by runway enhancements. However, as these relate more to co-ordination parameters than to designation, we discuss them later.

Changing status

3.21   Despite efforts to increase capacity, there is a general expectation that airports will move from co-ordinated status to fully co-ordinated status. There are examples, however, of airports that have or might change status in the opposite direction. While for Milan Linate this change of status is we understand intended to be permanent, for other airports a co-ordinated status (or non-designation status) may be only temporary.

3.22   Such a change might arise from a significant increase in capacity (e.g. the opening of an additional runway). However, this increase in capacity would be likely to be consumed by traffic growth over a relatively small number of years and therefore require the re-designation of the airport as fully co-ordinated. A number of parties with whom we discussed this issue considered that it was preferable for the airport to continue as fully co-ordinated throughout. This would require some re-definition in any revised regulation.

Designation criteria

3.23   We have discussed in Section II the views of the airlines in relation to the designation of Category 1 airports and to other fully co-ordinated airports. It is clear that the intentions of the Commission in relation to transparent and objective designation of airports have not been fully achieved. We consider that this is due not only to the absence of proper application of the Regulation but also to its basic conception and formulation.

3.24   A number of interested parties, in particular the air transport organisations, expressed concern about the underlying motives driving the desire of some airports to upgrade their status to 'fully co-ordinated'. Indeed, a common theme throughout many of the interviews was that the desire of some airports to be designated was not based on a serious capacity constraint, but more on the notion that being 'fully co-ordinated' was akin to being 'grown up' within the industry. These comments were made particularly in relation to airports in Eastern Europe.

Discussion of issues emerging

Capacity analyses

3.25   It is clear from Table 3.1 that very few Member States are completely compliant with Article 3 of the Regulation with regards to the production and supply of capacity analyses. A full capacity analysis goes some way beyond the assessment of current airport capacity and associated co-ordination parameters. It should examine all elements of capacity influencing the volume of traffic that can be handled, and should examine all possibilities for increasing capacity. In contrast, the twice yearly exercises to determine capacity available for slot allocation will tend to focus on smaller scale, tactical improvements in critical areas and perhaps assess the acceptability of, for example, longer delays in order to accept higher traffic volumes.

3.26   Only Sweden has provided a capacity analysis produced for the purposes of designation of its sole fully co-ordinated airport. France, Germany and the UK have

conducted and provided capacity assessments for some of their airports but not all and therefore are not fully compliant with an interpretation that designation as fully co-ordinated requires a capacity analysis. (However, to the extent that the Commission's Services' interpretation is applicable, then there is probably compliance with Article 3).

3.27   There is a question as to whether the lack of capacity analyses for each fully co-ordinated airport in these States is a more important issue than the 'compliance by inaction' of a number of Member States, specifically Austria, Belgium and Portugal. These states have not undertaken/completed/provided capacity assessments for their major airports which in the general view of the industry might well be designated as fully co-ordinated (as discussed in Section II).

3.28   It is important to recognise that the preparation of capacity assessments is not an end in itself. The Regulation calls for the preparation of a capacity assessment for the dual reasons of justifying the designation of an airport as fully co-ordinated and of identifying ways in which capacity may be increased.

3.29   The possibilities for a major increase in the capacity of an airport (e.g. by the addition of an extra runway or terminal) are sufficiently well known within the air transport industry, that it is almost certainly superfluous for the Regulation to require a capacity study just for this reason. The ability to make minor improvements to the operations of an airport to increase its capacity is arguably better covered through scrutiny of the co-ordination parameters produced twice a year supported by discussions of the Co-ordination Committees. Therefore, the second reason for having an initial capacity assessment might be better handled in other ways.

3.30   We turn now to consider the first reason for a capacity assessment, namely the designation of an airport as fully co-ordinated.

Designation criteria

3.31   We consider that a more important debate surrounds the criteria for designation of an airport as 'co-ordinated' or 'fully co-ordinated', and indeed the very definition of these terms.

3.32   It is clear that the current designation provisions within the Regulation are not entirely satisfactory, particularly for fully co-ordinated airports:

(a)   They are not sufficiently precise to ensure a designation of airports that is in line with general industry opinion;

(b)   The interpretation of the Commission's Services that a capacity analysis may not be a necessary condition for designation as fully co-ordinated indicates again a lack of clarity in the Regulation; and

(c)   There is a potential circularity in Article 3.3 (ii) which establishes as one of the triggers for a capacity assessment, and thence a fully co-ordinated designation, the existence of serious problems for new entrants in obtaining slots at the airport. However, slots are only

needed at a fully co-ordinated airport and therefore it is not legally possible to "...encounter serious problems …" in obtaining them prior to designation as fully co-ordinated. (This circularity does not of course exist if the Commission's Services' interpretation is legally correct.)

3.33   In addition to tightening the Regulation and policing compliance in this area, there are a number of alternative options in theory available to improve the designation of airports:

- Taking advantage of the new IATA Scheduling Guidelines;

- Linking designation to the level of traffic volume; and

- Linking designation to the level of capacity utilisation.

We now discuss these possibilities in turn.

3.34   The majority of airport users we held discussions with during this study have regarded and used the terms 'fully co-ordinated' and the IATA term 'SCR' synonymously. There is a possibility that confusion may increase following the adoption of new terminology and classifications in the significantly revised IATA Worldwide Scheduling Guidelines, which came into effect from March 2000. This suggests that airports should be classified according to three different levels of co-ordination, based on the degree of utilisation of capacity in evidence:

- **Level 1, non co-ordinated:** in this category, IATA assigns an important role for ensuring the smooth functioning of operations at an airport to the handling agent;

- **Level 2, schedules facilitated:** this is the successor to the SMA designation in that a schedules facilitator is responsible for collating all submitted movements and, if a conflict likely to lead to congestion is detected, organising voluntary changes to one or more of the schedules;

- **Level 3, fully co-ordinated:** this designation is intended to be equivalent to SCR and fully co-ordinated status as established in the Regulation. When there is no (immediate) prospect of increasing capacity and schedule conflicts are arising, then a schedules facilitated airport should become fully co-ordinated.[7]

3.35   This revised approach does not (probably deliberately) define in absolute or quantified terms what an airport's designation should be or when it might change to a different level of co-ordination (be it 'up' or 'down'). Therefore, of itself it would not necessarily resolve the problems of inappropriate designation of an airport identified in Section II.

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[7] The latest version of the IATA Worldwide Scheduling Guidelines now uses just the Level 1, Level 2 and Level 3 classifications to refer to fully co-ordinated, co-ordinated (formerly known as Schedules Facilitated) and non-co-ordinated airports.

3.36   One option available for a revised Regulation would be to require any airport categorised by IATA as Level 2 or 3 to be treated as co-ordinated or fully co-ordinated airports under EU legislation. This approach would in fact be consistent with the Commission's Services interpretation of the current situation i.e. that recognition of an airport as SCR is a designation of an airport as fully co-ordinated. Any revision would need to be carefully drafted to guard against the potential for future changes in IATA guidelines leading to an airport designation that was inappropriate.

3.37   The second alternative would be to link designation to the traffic throughput, probably passenger volume, of each airport. This has some attraction for designation as a co-ordinated airport, although would not be appropriate for designation as fully co-ordinated, as discussed further below.

3.38   The current Regulation places on air carriers operating at co-ordinated airports only the requirement to provide relevant information requested by the co-ordinator. The information likely to be requested is almost certainly basic data on the intended schedule (e.g. timing, dates of operation, aircraft type, destination). Therefore, it is information which all airlines produce for their own purposes, information which the travelling public will use, and information which airport operators need for their flight information display systems and to otherwise ensure the smooth operation of their facilities.

3.39   In view of this, automatic designation of an airport as co-ordinated when a certain passenger throughput were reached would appear to offer some benefits to consumers from an information provision stand point, without imposing significant costs on the air transport industry.

3.40   The question then arises as to what would be an appropriate throughput trigger. Only three European airports handling more than 5 mppa in 1998 were not co-ordinated, fully co-ordinated or SCR, and even these three (all in France) are understood to be considering a move to co-ordination. The trigger might indeed be lower, since the Commission's Directive on ground handling requires that from January 2001 there should be more than one ground handling agent at airports with a throughput of more than 2 mppa. Therefore, the important role envisaged by IATA for the (single) handling agent at Level 1 airports becomes problematic above this traffic volume. On the other hand, such a level would automatically include approaching 100 airports in Europe as a whole, and perhaps 70 within the 15 Member States, and this may be more than is necessary.

3.41   The purpose of the existing Regulation, however, is to control the allocation of capacity when it appears that demand would otherwise exceed capacity, and designation for information purposes alone would be incompatible with this objective.

3.42   Extension of automatic designation based on passenger throughput for fully co-ordinated status is not appropriate since congestion is determined not by traffic volume alone, but also by capacity availability, and this leads to consideration of a third possibility.

3.43   The third option directly associates designation with the shortage of capacity. A more precise definition, with a quantifiable measure of the different levels of capacity utilisation associated with the different levels of co-ordination would certainly be objective. We explore this further in the following section. However, while there are some interesting results from this exercise, it has indicated to us that it would be unlikely to be any more effective than current arrangements and as with any mechanistic approach risks producing unforeseen results.

Conclusions

3.44   As noted above, most Member States have not conducted and/or provided capacity assessments. However, a corollary of the interpretation by the Commission's Services of designation as fully co-ordinated as a result of recognition of SCR status, is that Member States do not have to undertake these analyses in order to designate airports as fully co-ordinated.

3.45   The term 'period' in Article 3.4 relating to the times during which capacity problems occur, is universally interpreted to mean 'season'. This may or may not have been the Commission's intention.

3.46   Harmonisation with the new IATA definitions of three levels of co-ordination would appear sensible, and this could include use of the term 'schedules facilitated' rather than 'co-ordinated', in order to avoid confusion between 'co-ordinated' and 'fully co-ordinated'.

3.47   The conditions in a revised Regulation under which an airport may be designated as co-ordinated or fully co-ordinated should be improved and extended. Article 3.3(ii) should be modified to reflect the intervention of the co-ordinator/schedules facilitator to seek a voluntary modification to a proposed schedule. It is for debate whether this should provision should be apply just to new entrants. Article 3.3(i) might also be extended to allow carriers to seek a capacity assessment to appeal against a designation of fully co-ordinated that was considered inappropriate (i.e. to appeal against an unnecessary fully co-ordinated designation).

3.48   Additionally, airports within Member States should automatically assume the same designation status (with associated rights and responsibilities) in legal terms as their voluntary designation status under the IATA system, provided that there were safeguards against changes to IATA definitions.

3.49   The automatic designation of an airport as co-ordinated (Level 2) when a particular passenger throughput is reached should be discussed with the industry. It is likely that this throughput would be 5 mppa or lower. This would be consistent with one of the objectives of the Regulation, namely "to facilitate operations".

IV   Capacity determination and utilisation

Introduction

4.1   Article 6.1 of the Regulation requires the 'competent authorities' at a fully co-ordinated airport to determine the capacity available for slot allocation biannually and provide this data to the co-ordinator.

4.2   The Regulation requires competent authorities to produce these studies in co-operation with representatives of air traffic control, customs and immigration authorities, air carriers using the airport regularly and/or their representative organisations and the airport co-ordinator. Where the competent authorities are not the airport authorities they should be consulted.

4.3   The capacity determination studies should be produced according to "commonly recognised methods" and the results provided to the airport co-ordinator in good time prior to the scheduling conferences.

4.4   In addition to assessing the compliance of Member States to Article 6 of the Regulation, we also requested a series of other data sets in order to examine the degree of capacity utilisation at each Category 1 airport. In assessing the usage of the runway at these airports, we were able to compare the degree of utilisation at fully co-ordinated, co-ordinated and non-designated, Community airports.

4.5   We requested copies of the following studies, charts and data sets from the co-ordinators of all Category 1, fully co-ordinated airports:

- the latest (biannual) capacity determination study;

- a summary of the key schedule co-ordination parameters;

- hour by hour statistics for a week in the peak season, of the number of slots available and the number of slots used. (The data should relate to the element in the airport's capacity, which is considered to be at or near the binding constraint); and

- a copy of the latest NAC chart.

Findings

4.6   The airlines with which we consulted in general appear satisfied with the approaches that were being adopted in most Member States in relation to the on-going assessments of capacity. In particular, we identified many examples of all parties (including airlines, airport operators, ATC organisations and co-ordinators) working together to identify and then implement small increases in capacity. However, there were two airports, Madrid-Barajas and Paris-Charles de Gaulle, where significant infrastructure enhancements produced, in the airlines' view, disappointing capacity additions.

4.7   We received complaints from a variety of users and their representative organisations regarding the intervention of the Spanish government over the declared co-ordination parameters at Madrid-Barajas. Despite significant capacity enhancing measures at the airport, restrictions are placed on the runway capacity.   We understand that this is for community relation reasons to attempt to avoid the imposition of legal environmental limits.   We were informed that the proposed increase in the number of movements per hour at Madrid-Barajas, as listed in the analysis of capacity, was reduced by approximately 10% following a review by the Spanish government.

4.8   The third runway at Paris-Charles de Gaulle was initially only going to offer an increase in the number of movements per hour of 12. After intense debate in the Paris Co-ordination Committee, the increase in movements was raised to 17 per hour. The airlines concerned expected an increase of between 25 and 30 movements following the completion of the additional runway and suggested that the more modest initial increase was to aid the evolution over time of the hub operations of Air France. We understand that the airspace capacity of the Paris terminal movement area (TMA) is the principal reason for this apparently limited increase in hourly movements.

4.9   We further understand that changing the Paris TMA could affect the approach route and hence the capacity of Brussels-Zaventem Airport. This is a consequence of the proximity of the airports. On certain approaches to Brussels-Zaventem, aircraft currently descend through airspace that might be required for a revised or enlarged Paris TMA. This would give rise to a complex problem with economic, commercial and political dimensions without a clear mechanism for its resolution.

4.10   Table 4.1 summarises the nature and quality of the data provided in response to our written requests as well as a list of the competent authorities responsible for performing the (biannual) determinations of capacity. It appears that in most Member States, as expected, the airport operators are deemed to be the 'competent authorities' responsible for these studies.

4.11   We have not received an example of a biannual capacity determination study from the co-ordinators that we consider to be "best practice". The majority of the data we received took the form of lists of co-ordination parameters. However, this is not an infringement of the Regulation, since Article 6 only requires the competent authority to provide the 'results' to the co-ordinator and there is no requirement for the whole study to be made available to interested parties.

4.12   Annexes I to XV summarise the degree of compliance of Member States with Article 6 of the Regulation and describe in more detail the approximate co-ordination parameters applied at each Category 1 airport. The co-ordination parameters do not describe all the individual scheduling constraints at each airport, since in reality the situation is far more complex.

4.13   The co-ordination parameters applied at each airport in general appear to be consistent with the area of binding capacity constraint. For example, a stand constraint results in the co-ordination parameter being the number of available stands.

Table 4.1:   **Summary of the capacity determination/utilisation data provided by each Member State/Category 1 airport**

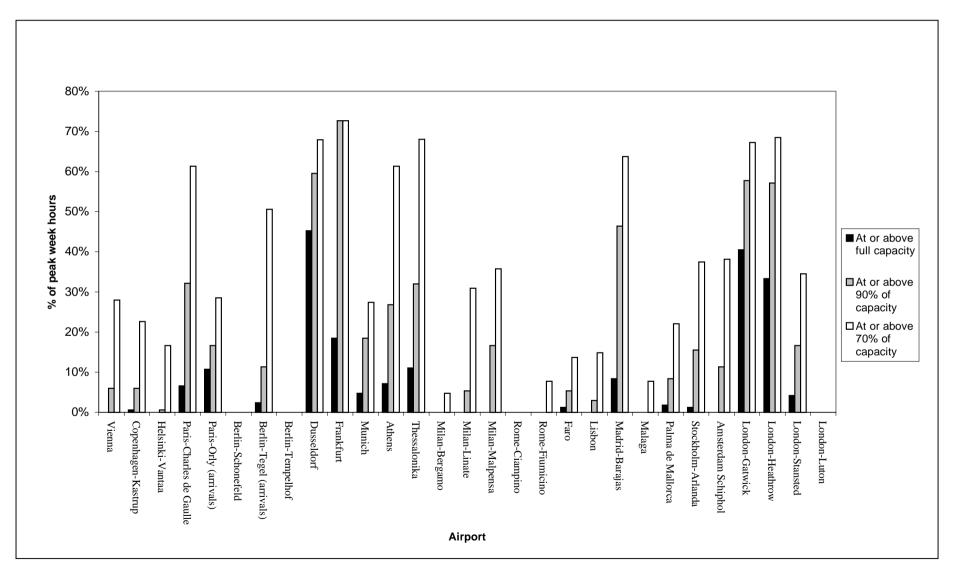| Airport	Full capacity determination study provided as detailed in Article 6 (1)?	Competent authority	Updated bi-annually?	NAC chart provided	'Peak week' data provided?
Vienna	N/A-co-ordination parameters provided	Would be airport operator	Expected	W99	Yes–runway/terminal
Brussels-Zaventem	N/A–co-ordination parameters provided	Expected to be airport operator	Expected	No	No–runway data in graphical form only
Copenhagen-Kastrup	No–co-ordination parameters provided instead	ACD, ATC, airport operator, Board of Airlines and co-ordinator	Yes	S99	Yes–runway
Helsinki-Vantaa	No–co-ordination parameters provided instead	Airports Department of CAA	Yes	S99/W99	Yes–runway/terminal
Paris-Charles de Gaulle, Orly	No–co-ordination parameters provided instead	Airport operator	Yes	S99	Yes–runway
Berlin airport system, Düsseldorf, Frankfurt, Munich	No–co-ordination parameters provided instead	Airport operator	Not always	S99	Yes–runway
Athens, Thessalonika	No–co-ordination parameters provided instead	HCAA	Yes	No	Yes-runway
Dublin	N/A–co-ordination parameters provided	Would be airport operator	Expected	No	No
Milan, Rome airport systems	No–co-ordination parameters provided instead	ENAC	Yes	W99	Yes–runway
Amsterdam-Schiphol	No–co-ordination parameters provided instead	Airport operator	No-annually	No	Yes-runway
Faro, Lisbon	N/A–co-ordination parameters provided	Would be INAC	Expected	S99	Yes–runway/terminal
Las Palmas, Madrid-Barajas, Malaga, Palma de Mallorca	N/A–co-ordination parameters provided	Would be airport operator	Expected	S99/W99	Yes–runway/some terminal
Stockholm-Arlanda	No–co-ordination parameters provided instead	CAA/ATC	Yes	S99	Yes–runway
Heathrow, Gatwick, Stansted, Luton	Yes–but only the annexes/various sections of some the studies	Airport operators	Yes	S99	Yes–runway

4.14   We have not been informed of any concerns of airlines that there are inappropriate constraints at any airports (excepting those identified above which are disagreements with the quantum of capacity, not the area of constraint).   However, without the detailed capacity assessments we have been able neither to verify nor to identify if there are any differences between the co-ordination parameters and the declared capacity.

4.15   Annex XVII describes the principal areas where capacity constraints exist at each of the Category 1 airports, at the time of writing.   The identification of the binding constraints was based primarily on information collected through our correspondence with the co-ordinators.

4.16   With the information available, we have been able to estimate the degree of runway utilisation at all major, Category 1 airports except Brussels-Zaventem and Dublin, according to the percentage of the total peak week hours during which **runway** utilisation is at or above:

- full capacity;

- 90% of full capacity; and

- 70% of full capacity.

4.17   Figure 4.1 summarises the approximate degree of runway utilisation at those Category 1 airports for which we have received both 'peak week' runway data and a summary of the co-ordination parameters in operation.   In calculating the approximate utilisation 'percentages' we have looked at the pattern of utilisation across all hours of the day.   We have not allowed for some of the airports being closed during the night. Similarly, if we repeated the capacity assessment for just the operational hours of each airport (or even a subset of the 'busiest' three or four hour period) we would probably observe much higher levels of utilisation.   Annex XVIII provides an alternative, more detailed view of the capacity utilisation statistics.

4.18   By comparing just the degree of runway utilisation between the airports, it appears that the fully co-ordinated status of the following airports is probably justified:

- Copenhagen-Kastrup airport;

- Paris-Orly and Paris-Charles de Gaulle airports;

- Berlin-Tegel, Düsseldorf, Frankfurt and Munich airports;

- Athens and Thessalonika airports;

- Stockholm-Arlanda airport; and

- London-Gatwick, London-Heathrow and London-Stansted airports.

4.19   However, the runway utilisation chart would suggest doubts over the 'fully co-ordinated' designation of the following airports;

Figure 4.1: Runway utilisation at selected Category 1 airports during a 'peak week' in 1999

- Helsinki-Vantaa airport;

- Milan-Malpensa and Milan-Bergamo airports; and

- Rome-Ciampino and Rome-Fiumicino airports.

4.20   We would urge caution in the use of these conclusions. For example, there is little difference in the percentage of hours at or above full capacity of the three Scandinavian airports in the Figure, yet the conclusions are different.   More importantly, we have only studied one component of an airport's capacity, and binding constraints might exist in another component. For example, we understand that there is a capacity limit in the Terminal Movement Area for the three Milan airports which might constrain traffic.

4.21   Of the other airports, Berlin-Schönefeld and Berlin-Tempelhof have very low rates of runway utilisation, with no hourly movements within 70% of the declared runway capacity. However, we understand the reasons provided for the designation status of these airports, are related to the congestion in the terminal buildings. Although Amsterdam Schiphol is busier, there were still no hours when it was planned to be at or above full runway capacity.

4.22   Based on the runway utilisation data, there is support for a fully co-ordinated designation of Faro, Madrid-Barajas and Palma de Mallorca airports. The evidence for Vienna, Malaga, and Lisbon airports is less conclusive, however. We note again that the runway is just one area of an airport where a binding capacity constraint may exist[8].

4.23   While this analysis gives an interesting insight, we do not regard it as definitive for a number of reasons. It is only an approximate analysis for one week in the year, albeit a 'peak week'. Analysing the precise degree of capacity utilisation is a complex task. Most importantly, as we point out throughout this report, this analysis has considered only one of the critical elements of an airport, namely runway capacity.

Discussion

Definition of a slot

4.24   This analysis highlights one of the more important aspects of airport slot allocation, namely that a slot is not necessarily linked only to runway capacity but to all co-ordination parameters[9]. It best describes the ability to plan to operate at an

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[8]   We were informed that the principal capacity constraint at Malaga airport was related to the availability of space in the terminal building, although at Lisbon the runway was in fact, one of the most congested elements of the airport infrastructure.

[9]   We use the term 'co-ordination parameters' to refer to the numerical values of the binding constraints that a co-ordinator uses to assess whether a given set of schedules can be accommodated at an airport. Co-ordination parameters includes runway, apron and terminal capacities, with the last two

airport within a specified time period (normally 15 or 30 minutes) with the expectation that all necessary resources will be available to accommodate that operation. These resources may include runway, stand and terminal capacities, depending on where the constraints exist. At a number of airports, the resources considered extend beyond this and include terminal airspace capacity, surface access capacity and environmental capacity. We consider such coverage to be best practice: only if all these resources are available can an operation be planned in the expectation of avoiding congestion and having access to the airport. ACL has adopted this approach at the London area airports, including relevant physical constraints and when appropriate night movement restrictions.

4.25   Defining a slot to have all necessary resources, including environmental capacities (e.g. a share of the noise basket, or noise quota), is an elegant means of linking slot allocation with environment constraints and giving an EU-wide legal framework for handling the increasing incidence of environmental limitations. If not included in the slot allocation system, then environmental capacities would need to be handled by some parallel system, increasing costs and decreasing efficiency and convenience since carriers might obtain the necessary resources from one system but not from the other.

4.26   A further advantage of defining a slot in this way is that the "usage rights" associated with a slot become more precisely defined. The Regulation lacks clarity over what constitutes a slot, the rights and responsibilities of slot holders, and the legal nature of slots. This issue may become more important if slot trading becomes more wide-spread, but would also be useful as airline alliances, code-shares, and franchising increase. In addition, slot labelling would assist in tracking slot exchanges, leases and 'minding', and for this the full dimensions of each slot would need to be specified.

4.27   Attributing to a slot the several resources that are necessary to operate at a particular airport, has certain implications for the process of slot allocation specified in the Regulation. For example, when a carrier wishes/needs to make changes to a slot which it has operated for a number of years, the co-ordinator needs to treat such a changed historic with care and appropriate priority, since a number of resource requirements are changing even if the timing remains constant. For example, an increase in aircraft size might not have an impact on runway capacity, but might require a larger apron stand, and would certainly use more of the available capacity within the terminal.

4.28   A further amendment would be needed as a result of the requirement of Article 4.7 (d) for the co-ordinator to make available information on "remaining available slots". This becomes impossible to comply with since slots are multi-dimensional and non-homogeneous, and indeed are only created from a number of components at the request of an air carrier. Prior to such a request, a slot does not exist, only the "raw materials" to make it.

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often further disaggregated (e.g. narrow or wide-bodied stands, Schengen/non-Schengen). Environmental quotas may also constitute co-ordination parameters.

4.29   For precisely the same reason, this approach to describing a slot is also in conflict with one of the more innovative features of the Regulation, namely the slot pool. The Regulation describes the slot pool as though a slot were one dimensional (i.e. a runway movement). If the Commission wishes to move away from this vision, then Article 10 would need to refer to a 'resource pool' and might need some modification of the usage clauses to cater for, say, a change to a smaller aircraft type. The preference given to new entrants (if continued) might need to refer to 50% of available capacity in the constrained areas.

Determination of co-ordination parameters

4.30   The determination of the capacity available for slot allocation is the responsibility of the competent authorities (Article 6). As noted above, the competent authority is normally the airport operator. A number of issues arise in this area:

- Should the term 'competent authorities' refer to those capable of assessing capacity or to those responsible for and authorised to identify organisations that have this capability?

- Should the capacity so determined equal the co-ordination parameters, or may there be some variation?

- Should the determination of capacity available and/or co-ordination parameters be binding on the co-ordinator?

4.31   In general, 'competent authorities' is taken to mean the body responsible for organising the determination of available capacity and not necessarily for conducting the exercises (although in many situations it would also be capable of carrying out the tasks in many areas of capacity). Some confirmation of this interpretation in a revised Regulation is probably worthwhile.

4.32   Determination of capacity can be a very mathematical and mechanical exercise. This is certainly true for aircraft stands and for terminals, where simulation of passenger flows, dwell times, processing rates, physical areas and quality of service standards, allows capacities to be determined. Runway capacity, the area where the airport operator is least likely to have the technical ability to carry out the determination, is dependent on system configuration, separation criteria and assumptions concerning aircraft mix.

4.33   The last factor, *ceteris paribus,* is important since not only are market rather than technical judgements required (and therefore should be made by the airport operator rather than, say, the air traffic control provider), but also it impacts the potential use of the airport by different categories of users. A policy issue therefore also exists. This is particularly the case with general aviation users, which are normally not able to predict activity sufficiently in advance[10], and which operate a very diverse range of aircraft types, from single engine propeller aircraft right through

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[10]   This is a generality and there are some segments of this category, particularly corporate aircraft, that do have significant advance notice of operations.

to sophisticated business jets. There is a need for decisions as to whether the capacity determination for an airport should presume in advance that capacity will be used by this category of user, and if not whether any available capacity should only be made available closer to the day of operation. This leads to a further issue as to whether the authority for these decisions should rest with the Member State, the airport operator, or a wider community of interest.

4.34   It may be appreciated that although the approaches to determining available capacity are widely applied, there are a number of critical judgements or policy inputs that can greatly influence the results. Therefore, there may be an additional role for the co-ordination committee to play either to advise on these aspects or to express opinions for the competent authorities to consider.

4.35   The co-ordination committee already has a responsibility to advise on *inter alia* "possibilities for increasing the capacity determined in accordance with Article 6". As we discuss in Section VI below, many co-ordination committees play a very useful role in identifying areas where minor improvements can be made, and this is probably in line with the Commission's original intentions. However, this clause also allows the co-ordination committee to suggest capacity increases by lowering service standards. This would be particularly the case for runway capacity where the acceptance by the airlines of higher delay rates would increase capacity.

4.36   It is perhaps at this stage that there may be some merit in distinguishing between 'capacity available' and 'co-ordination parameter'. It may be appropriate for a properly formed co-ordination committee to discuss the capacities which the competent authorities have declared, and then to advise the co-ordinator of the co-ordination parameters which it recommends should be used for slot allocation. These co-ordination parameters:

- might be the same as the capacities determined;

- might be higher if there were agreement that longer delays and/or lower standards of service were acceptable; or

- might be lower to allow for recovery periods if delays were considered too long or if service standards were too low.

4.37   It is important that there is a capacity analysis for each co-ordination parameter applied, and a co-ordination parameter for each capacity element that is constrained. The rationale for any difference between available capacity and the co-ordination parameter needs to be clearly set out and justifiable. The consequences of such differences also need to be identified.

4.38   Such discussions/decisions can clearly have considerable influence on the operation of the market at any airport, placing considerable importance on a properly constituted and functioning co-ordination committee, and the service standards and delays assumed for the initial capacity determinations. The results also have obvious importance for both airport operators and for air carriers in view of the consequences for costs and for image.

4.39   Another aspect of capacity determination and co-ordination parameters is that the available resources are used by all airport users, be they air carriers or others, such as general aviation. The definition of a fully co-ordinated airport in Article 2 requires only air carriers to have a slot to operate at such an airport, and does not apply to other aircraft operators. The objectives and process of slot allocation are in danger of being negated if only one group of users needs a slot for operation at a fully co-ordinated airport.

4.40   Therefore, although strictly an allocation issue, and therefore outside the scope of our work, there may be some benefits in certain parts of the Regulation applying also to other 'aircraft operators' (possibly business aviation) and not just to 'air carriers'. This would allow slots to be allocated to business aviation. There are some parts of this community that can give greater advance notice, than the more usual day or evening before operation, and that would benefit from earlier confirmation of operations. It would also impose the same obligations on these operators as are applied to air carriers. Historic preference would continue to apply only to series of slots and not single slots.

4.41   While there are some arguments to support requiring the co-ordinator to apply the co-ordination parameters determined, we favour maintaining flexibility for the co-ordinators and allowing a degree of discretion where his/her experience can be exercised. Determination of capacity while a very quantitative exercise does not always produce an exactly correct answer. Estimation of demand suffers from statistical variation in load factors and on-the-day perturbations to flight schedules. In this environment, a requirement for a co-ordinator to apply exactly a co-ordination parameter could result in a request for a slot being rejected for the lack of available to capacity to accommodate a handful of passengers. We consider that the co-ordinator should retain the flexibility to exercise his/her judgement. This also creates some protection from the theoretical possibility of the co-ordination committee developing some local rule favouring particular categories of user.

Conclusions

4.42   We consider that there is considerable merit in any revised Regulation recognising that a slot should be a timing related not just to available capacity on the runway system, but to all the different resources that are necessary to operate at an airport.

4.43   The Regulation might also distinguish between the authorities that are responsible for ensuring that capacity analyses are conducted, and the organisations that have the technical competence to conduct them.

4.44   The co-ordination committee should also have a role to recommend co-ordination parameters to the co-ordinator. However, the adoption of these parameters should be left to the experience and judgement of the co-ordinator.

4.45   Although strictly an allocation issue, and therefore outside the scope of our work, there may be some benefits in certain parts of the Regulation applying to other 'aircraft operators' and not just to 'air carriers'.

V   Co-ordinator

Introduction

5.1   Under Article 4 of the regulation a Member State must ensure that a slot co-ordinator is appointed for each fully co-ordinated and co-ordinated airport for which the Member State is responsible. The same co-ordinator may be appointed for more than one airport. The regulation states that air carriers using the airport regularly, their representative organisations and the airport authorities should be consulted before the appointment is made. In addition, the co-ordinator must have a detailed knowledge of air carrier scheduling co-ordination.

5.2   The co-ordinator is required to act in accordance with the Regulation in a neutral, non-discriminatory and transparent way. The requirement for transparency is stated in Article 4.7, which requires co-ordinators to make available for review to all interested parties the following information:

- historical slots by air carriers;

- requested slots by air carriers;

- allocated slots, and outstanding slot requests by air carriers;

- remaining available slots; and

- a description of the criteria used in the slot allocation process.

5.3   Member States are required to ensure that the co-ordinator acts in an 'independent' manner.

5.4   The co-ordinator is responsible for undertaking the following tasks at each fully co-ordinated airport under his control:

- the allocation of slots;

- monitoring the usage of slots; and

- the withdrawal of slots in the event of non-usage.

5.5   The Regulation requires a co-ordination committee to provide advice and assistance to the co-ordinator. A list of the co-ordination committee's responsibilities is provided in Section VI. The co-ordinator is not, however, required to follow the advice of the co-ordination committee.

5.6   In the remainder of this section, we report on the implementation of these requirements, in particular the designation of co-ordinators by Member States and an assessment of the co-ordinator's position in terms of independence, resources and financial support. We then provide a summary of our key conclusions.

5.7   Annexes I to XV offer more detail on the role of co-ordinators at Community airports and the institutional frameworks under which they operate.

Findings

5.8   Table 5.1 summarises the stati of the co-ordination bodies and the co-ordinators in each Member State with at least one, fully co-ordinated Category 1 airport. Table 5.2 summarises the corresponding positions for the five Member States with non-designated Category 1 airports.

Status

5.9   It may be seen that the co-ordination function is being increasingly performed by companies owned by the major airlines in each Member State. This is a model pioneered by ACL in the UK and now widely copied and improved. Although co-ordination is still undertaken by a company owned by airlines, the possibility of lack of independence is further reduced by the involvement of more than one carrier. However, in Finland and Greece the co-ordination activity is still undertaken by the national carrier.

5.10   This is also the situation in four of the Member States without any designated fully co-ordinated airports, namely Austria, Belgium, Ireland and Portugal. In the fifth state, Spain, the airport operator, Aena, performs the co-ordination function. This situation is unique in the EU.

Appointment and tenure

5.11   In most Member States, the head of the co-ordination company or airline/airport department is appointed for an indefinite term. Indeed, in Germany the co-ordinator is a natural person named in legislation, with a legislative amendment being required for his replacement. Similarly in Finland, the co-ordinator is a named appointee of the Finnish Civil Aviation Authority and as such, can only be removed from office by order of this body (despite the co-ordination function being financed entirely by the national flag carrier). The continuity in post is potentially greater for these individuals in the independent co-ordination companies than it is for those heading airline/airport departments, since the latter are more easily transferred to other internal positions. The possibility of transfer could in theory influence a co-ordinator's independence. We note that six of the seven individuals concerned were in-post during our previous review of the regulation.

5.12   However, in both France and Italy, the head of the co-ordination companies, COHOR and Assoclearance, have limited terms in office and are elected by their boards. While this arrangement guards against potential complacency and creates an event when shareholders are obliged to consider the position, it nonetheless creates a situation in which the individual concerned is very conscious of his actions in relation to slot co-ordination and his re-election. This is certainly true for the head of COHOR who has expressed to us his misgivings about this arrangement.

5.13   We return to the question of whether or not the co-ordinators are behaving independently later in this section.

Table 5.1: Status of co-ordination body and head of co-ordination for countries with at least one Category 1, fully co-ordinated airport

Member State	No. of 'co-ordinated' airports[11]	Status of co-ordination body	Co-ordination body owned by?	Financing of co-ordination body	Head of co-ordination appointed or elected?	Comments on issues of independence
Denmark	FC=1, C=0	Independent company (ACD)	Airport authority and Danish airlines	The owner organisations	Appointed by Ministry of Traffic for an unspecified time period	
Finland	FC=1, C=0	Sub-division of Finnair	Finnair	The owner airline	Appointed by Finnish Civil Aviation Authority	All staff are employees of Finnair
France	FC=2, C=0	Independent company (COHOR)	10 French airlines	The owner airlines	Elected by COHOR board for 4 years	Co-ordinator re-elected by airlines
Germany	FC=8 , C=9	Head of Co-ordination is a 'natural' person	Not applicable	The owner airlines, Ministry of Transport	Named in legislation by Federal Ministry of Transport	Co-ordinator's salary paid by government
Greece	FC=33 , C=0	Sub-division of Olympic Airways	Olympic Airways	The owner airline	Appointed by Olympic Airways for an unspecified time period	All staff are employees of Olympic
Italy	FC=10 , C=3	Independent company (Assoclearance)	Airlines and airport concession companies	The owner organisations	Elected by Assoclearance board for 3 years	Co-ordinator re-elected by airlines and airports
Netherlands	FC=1, C=0	Independent company (SACN)	4 Dutch airlines	The owner airlines	Appointed by Ministry of Transport for an unspecified time period	SACN appointed until 1 November 2001
Sweden	FC=1 , C=0	Independent company (ACS)	CAA and Swedish airlines	The owner organisations	Appointed by CAA for an unspecified time period	
UK	FC=4 , C=2	Independent company (ACL)	11 UK airlines	Airport operators, UK airlines and data sales.	Appointed by ACL board for an unspecified time period	Majority of costs financed by airports

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[11] N.B 'FC' refers to the number of 'fully co-ordinated' airports and 'C' refers to the number of 'co-ordinated' airports.

Table 5.2:Status of co-ordination body and head of co-ordination for countries with at least one non-designated, Category 1 airport(s).

Member State	Number of airports under co-ordination[12]	Status of co-ordination body	Co-ordination body owned and financed by?	Head of co-ordination appointed or elected?	Comments on issues of independence
Austria	SCR=1, SMA=5	Sub-division of Austrian Airlines	Austrian Airlines	Next co-ordinator will be appointed by Austrian CAA (also for an unspecified period)	Terms of reference for Head of co-ordination state 'dispensed from obligation to serve Austrian Airlines' Vienna airport flight information systems connected only to the co-ordinator's systems
Belgium	SCR=1, SMA=0	Sub-division of Sabena	Sabena	Internally appointed by Sabena for an unspecified time period	Looking to change the current co-ordination set-up
Ireland	SCR=0, SMA=1	Sub-division of Aer Lingus	Aer Lingus	Internally appointed by Aer Lingus for an unspecified time period	Airport is only SMA and therefore co-ordinator has no power to enforce the slot preferences of his employer
Portugal	SCR=4, SMA=1	Sub-division of Air Portugal	Air Portugal	Appointed by Portuguese CAA for unspecified period	Co-ordinator reports to INAC on neutrality of slot allocation decisions
Spain	SCR=16, SMA=4	Sub-division of Aena	Aena	Internally appointed by Aena for an unspecified period	Not financed by and not reporting to, user airlines Unsure how Aena recovers costs of co-ordination

[12] Number of airports under co-ordination refers to all SCR/SMA airports, i.e. not just Category 1. N.B. FC implies 'Fully co-ordinated' and C implies 'Co-ordinated'.

Financing and resources

5.14   The cost of co-ordination in each Member State is met entirely from within that state, either by just the airlines of the state or in some cases supplemented by contributions from the airport operators concerned. Excluding Spain, the largest involvement of airports is in the UK, where they provide 75% of ACL's revenues. The situation is different for those airlines that carry out the co-ordination function through an internal department, and for Spain. In these cases, the organisations concerned carry the full cost of co-ordination.

5.15   In general, it appears that the co-ordinators have adequate resources to undertake their responsibilities under the Regulation. The two frequently mentioned exceptions were Greece and to a lesser extent Portugal, both Member States where co-ordination is performed by a department of the national airline. It was apparent from our difficulties in obtaining information from the Greek co-ordinator that he is over-worked and under-resourced.

5.16   A number of co-ordinators reported not having adequate IT systems particularly in relation to monitoring slot usage and performance. In general, this appears to derive from delays in implementing or acquiring new systems rather than an unwillingness/inability to fund these improvements. Table 5.3 provides an illustrative comparison of the adequacy of the resources provided to assist each co-ordinator with his/her work and the state of IT support available. Several co-ordinators use SCORE, software which has been developed specifically for this purpose. We were informed that the SCORE system is able to meet the majority of the reporting requirements outlined in the Regulation.

Independence and behaviour

5.17   Despite potential weaknesses in the institutional status of some co-ordinators, and possible lack of resources and/or funding, we have not identified any suggestions of lack of independence of behaviour of any co-ordinator within the EU, despite our explicit enquiries. Indeed, on the contrary, the airline community has given favourable reports on all the co-ordinators, even those struggling through lack of resources.

5.18   Although the institutional status of the co-ordinator in a number of Member States, especially Greece and Portugal, is probably not 'best practice', there has been no criticism of the behaviour of the individuals concerned: they are regarded as being extremely dedicated and carrying out their allocation role well, despite having few resources.

5.19   Only one co-ordinator has been frequently identified for a somewhat rigid, bureaucratic and potentially over-zealous interpretation of the Regulation, even though his independence has not been questioned. Such behaviour is not best practice, as most co-ordinators find that flexibility helps in their endeavours to accommodate as many requests as possible.

Table 5.3:   **Summary of adequacy of resources and finance for co-ordinators of at least one, Category 1 airport.**

Member State	No. of staff (including co-ordinator)	Approx. number of staff per Fully Co-ordinated or Co-ordinated airports (or SCR/SMA)	Approx. number of annual co-ordinated movements per staff member ('000s)	Comments on nature/level of IT investment	Comments on level of resourcing and finance
Austria	5	0.8	80	Limited ability to monitor slot usage	Funding appears to be adequate
Belgium	4	4	80	Using SCORE – comprehensive	Funding appears to be adequate
Denmark	2	2	140	Using SCORE – comprehensive	Funding appears to be adequate
Finland	4	4	40	Unable to meet all reporting requirements – being replaced	Funding appears to be adequate
Greece	4	0.1	Unknown	Believed to be inadequate	Resources very stretched
France	9	4.5	80	Purchased 'core' ACL system in 1997	Funding appears to be adequate
Germany	19	1.1	100	Appears adequate, but being replaced	Funding appears to be adequate
Italy	12	0.9	68	Using SCORE – comprehensive	Funding appears to be adequate
Ireland	2	2	80	Unable (but not required) to monitor slot usage and performance	Appears to be limited
Netherlands	4	4	100	Some limitations on reporting	Funding appears to be adequate
Portugal	4	0.8	40	Unable (but not required) to monitor slot usage	Appears to be limited
Spain	15	0.8	80	Appears to be adequate	Funding appears to be adequate
Sweden	2	2	130	Unable to accurately monitor slot usage, but due to be replaced soon	Funding appears to be adequate
UK	26	4.3	50	Appears to be adequate, but due to be replaced soon	Funding appears to be adequate

N.B :

- Source of aircraft movement data: ACI Europe Traffic Report 1998. No aircraft movement data found for Erfurt Airport (Germany), Palermo Airport (Italy), Cantania Airport (Italy) and some of the Greek airports.

- For co-ordinators of non-designated airports, estimate of staff per fully co-ordinated/co-ordinated airports and staff/annual co-ordinated movements based on IATA definitions of SCR/SMA.

Discussion

5.20   As noted, the trend in the status of co-ordinators is to establish a separate company. This is based on the ACL model, although this has been refined in other Member States, especially in relation to the ownership of the company. This model is currently best practice.

5.21   There would be the possibility of extending the right to invest in a co-ordination company to non-national airlines, or to the airport operator. Although we have identified some interest in wider ownership, we have not detected any significant improvements to schedule co-ordination that this might bring.

5.22   Endeavouring to define a framework for a completely independent co-ordinator/co-ordination company, runs the risk of also creating 'institutional orphans', as no one is completely independent. As it is, a number of the co-ordination companies are having to take steps to limit the liability of both themselves and their employees in the event of successful legal action by an aggrieved airline. Also, any further distancing from the industry could have implications for career progression and the attraction of the right calibre of staff with appropriate exposure to industry needs.

5.23   There are few attractive options for creating greater independence. Both airlines and airports have some vested interest in schedule co-ordination and slot allocation, and yet the co-ordinator needs to have some institutional and legal status. Government ownership would be likely to be viewed by many as a retrograde step, and the necessary discipline of the civil service would not be compatible with the commercial awareness and flexibility required of a co-ordinator. Equally, a privately owned co-ordination company operating for profit would not be welcomed by the industry, and arguably might not perform the tasks required of the co-ordinator to the same level of competency as is currently the case. However, if the Commission wished to have greater independence it would have to follow one of these courses, but we do not recommend it.

5.24   The current best practice for institutional status of co-ordinators is clearly the establishment or appointment of an independent company on ACL lines. While there are potential weaknesses in this arrangement, not only is it difficult to identify a model which would be better, but also and more importantly the weaknesses are only potential and the model by general consensus is working well.

5.25   In the majority of countries, the costs of co-ordination are paid for by national airlines, either all the major airlines through an explicit mechanism, or the national carrier through the absorption of costs of its co-ordination department. It is clear that the second approach appears unsatisfactory and leads to under-resourcing of the co-ordination, allocation and especially monitoring functions.

5.26   In both Spain and the UK, airports contribute significantly to the costs of co-ordination, although via different mechanisms. The airports in turn will recover their costs through the airport charges levied on their users. Where appropriate, the costs incurred by airport operators should be recognised in any regulatory control of their airport charges. The involvement of airports in the costs of co-ordination would be

even more appropriate if the Commission decided to adopt automatic designation of airports as co-ordinated triggered by passenger throughput as discussed in Section III, given the information provision rationale of this suggestion.

5.27   An involvement of an airport in the payment for the costs of co-ordination might bring with it both an interest/right to invest in the co-ordination company (as discussed above), and/or the right to select and appoint the co-ordination company for its airport. There are a number of co-ordination companies in operation in the EU, and if the number of fully co-ordinated airports increases over time, there are likely to be economies of scale to be generated from some co-ordination companies functioning internationally. It would also add a degree of competition to the provision of this service.

5.28   The work of the co-ordinators could be greatly improved by both allowing greater co-operation between the co-ordinators and by giving the co-ordinators greater powers of enforcement.

5.29   The slot monitoring process could be improved significantly through closer co-operation both within and between Member States. The sharing of allocated slot times between departure and arrival airports would improve the knowledge of co-ordinators in relation to deliberate and pre-meditated off-time performance at each airport. Comparison of allocated departure and arrival times of a flight would reveal if the imputed flight time was realistic or if the airline intended to operate off-slot time at either or both airports. We believe the co-ordinators would welcome such an ability, but have not been able to undertake this co-operation for lack of funding.

5.30   We noted in our 1995 report that the Regulation gives the co-ordinators very few powers of enforcement other than slot withdrawal under certain conditions. A revised Regulation should support the work of the co-ordinators by defining a series of measures which might be taken to handle intentional, persistent and significant abuse of the slot allocation process. These measures might include:

- requirement of airport operators to publish and display only cleared slot times;
- issuing of warnings to offending carriers;
- "Naming and shaming";
- delaying or diverting aircraft;
- slot withdrawal, either immediate or for future seasons;
- according lower priority in future slot allocation, both at affected airports and throughout the EU;
- financial penalties; and in extreme cases
- withdrawal of air carrier operating licences or traffic rights.

5.31   Greater powers of enforcement would lead to greater adherence to the discipline of the slot allocation process by all carriers so not undermining the process and creating congestion to be suffered by all, including the majority of carriers that seek to operate to allocated slot times. It would also reduce the wastage of slots and

scarce resources that currently occurs. Immediate slot withdrawal could ease pressure on facilities or enable other users to take advantage of the released capacity, although this might be difficult for a commercial air carrier to do during the course of a season. It might also lead to some passenger inconvenience if flights were cancelled or re-timed significantly.

5.32   As noted in our 1995 report, some care would be needed to ensure that the relationship between the co-ordinator and the air carrier community were not damaged, and that penalties were only imposed for deliberate, frequent and material abuses of the Regulation.   Another aspect of this is the decisions on which organisation should be responsible for deciding and then imposing the penalty. The ultimate penalty of withdrawal of air carrier operating licences or traffic rights would clearly need to be imposed by the Member State.

Conclusions

5.33   Although there are a number of weaknesses in relation to the co-ordinator, in general, current arrangements are functioning well. Any revised Regulation might seek to make some minor improvements, but we would recommend caution in relation to any desire for requiring greater independence in the institutional status of co-ordinators. The current Regulation has created a satisfactory framework and attempts to improve on current best practice could lead to a deterioration.   The most we recommend would be for the Regulation to encourage the trend for co-ordination to be performed by an independent company owned by the airlines of the Member State concerned. While this has some weaknesses, it is the best practice model currently in operation.

5.34   A combination of the UK and German models probably offers the best option in terms of independence. In the UK, airports contribute financially to co-ordination, and this has led to a very open process with all parties involved. The addition of the German decision to make the co-ordinator a 'natural' person gives the co-ordinator a greater security of tenure. However, it would be better for such a natural person to have his/her salary paid by the co-ordination company.

5.35   The financing of slot co-ordination by the carriers of the Member State concerned, sometimes supported by the airport operator, is also a well-established practice, which has a number of advantages. We see some advantages for greater involvement of the airport operator in financing co-ordination activities, with costs being recovered through airport charges, although the arguments supporting this are by no means overwhelming.

5.36   Given the importance of the co-ordinator in influencing the shape of the competitive market for air services in the EU, the Commission might wish to include in a revised Regulation, its right to veto/change the appointment of a co-ordinator.

VI   Co-ordination Committee

Introduction

6.1   Under Article 5 of the Regulation, a Member State must ensure that for each fully co-ordinated airport under its jurisdiction, a co-ordination committee is established. A Member State may choose whether or not to form a committee at co-ordinated airports.

6.2   The Regulation states that participation in the committee should be available to *at least* the following interested parties:

- air carriers and/or their representative organisations using the airport regularly;

- the airport authorities; and

- representatives of ATC.

6.3   The co-ordination committee should advise the co-ordinator, in a consultative capacity on the following issues:

- possibilities for increasing the capacity determined in accordance with Article 6;

- opportunities to improve the traffic conditions at each airport;

- complaints on the process of slot allocation;

- methods for monitoring the usage of slots;

- guidelines for the allocation of slots (taking into account local conditions); and

- serious problems for new entrants obtaining usable slots from the pool.

Findings

6.4   Annexes I to XV provide more details on the role of co-ordination committees at Community airports and assess the degree of implementation of the Regulation in relation to the establishment of the co-ordination committees at each fully co-ordinated airport. In particular the annexes review each committee's constitution, its membership, its role in the co-ordination process and the influence it exerts.

6.5   We now summarise the key findings from our research into the workings, structure and composition of the co-ordination committees. In several countries, the co-ordination committee has established a number of sub-committees, and we discuss these separately.

Role of the main committees

6.6   The Chairpersons that we interviewed stated that the (principal) co-ordination committees fulfil all six roles outlined in Article 5 of the Regulation. In the individual Member State annexes we provide examples of the workings of the committees. A

number of the examples listed could in theory be associated with one or more of the committee's roles.

6.7   We have received no complaints from interested parties claiming that a certain co-ordination committee was unwilling to perform any of its six roles. In a number of committees, problems in relation to complaints on the process of slot allocation or difficulties for new entrants to obtain viable slots have simply not arisen. However if they did, we were assured that the issues would be discussed and debated, within the co-ordination committees.

Sub-committees

6.8   Of the ten Member States containing at least one fully co-ordinated Category 1 airport, six co-ordination committees have introduced sub-committees in one form or another. There are four main types of sub-committee, namely:

- capacity sub-committees (for the whole airport and/or the area where a binding constraint exists e.g. the runway);

- complaints (Mediation) sub-committees;

- slot performance sub-committees; and

- executive sub-committees.

6.9   All of the sub-committees have a lower official status than the main committees. Extensive use has been made of the capacity sub-committees (e.g. in the UK and Spain), whilst in general, the complaints sub-committees have not needed to be convened very regularly (due to the lack of complaints).

6.10   The slot performance sub-committees in the UK (and Spain) have been very successful in bringing about a reduction in off-slot performance by some user airlines. The slot performance committee effectively 'names and shames' the slot abuser, which is usually sufficient to encourage a reversal of the air carrier's behaviour. Slot performance sub-committees are widely accepted as being the preferred approach to tackling slot misuse. They also help the co-ordinator monitor the use of allocated slots.

6.11   Executive sub-committees are in place (or currently being set-up) in Belgium, Spain and the Netherlands. In general, the executive sub-committees have narrower membership lists and meet more frequently than the main committees. In Belgium, its primary role will be to 'direct the policy and general management' of the main committee, whereas in Spain its overall remit is to 'define the policies' of the National Co-ordination Committee (and provide recommendations). Executive sub-committees are an efficient means of reaching consensus on how to resolve day to day issues and problems at the airport. However, the main co-ordination committees usually have to ratify the most important and far-reaching decisions.

6.12   Table 6.1 describes the types of co-ordination committees that have been set-up in Member States with at least one Category 1, fully co-ordinated airport.

Table 6.1: **Types of co-ordination committees for countries with at least one Category 1, fully co-ordinated airport**

Member State	Co-ordination committee(s) at…		Co-ordination sub-committee(s) with remit for…				Comments
	National/General level?	Local/airport?	Executive role?	Capacity-assessment?	Slot performance?	Complaints/ Mediation?	
Belgium*		✈	✈			✈	Set-up to be confirmed by April 2000
Denmark		✈				✈	No complaints received
Finland		✈					Based on previous Scheduling Committee
France		✈ (Covers both Paris airports)				✈	Additional governmental committee to investigate slot abuse
Germany	✈	✈		✈			General committee does not have power to ensure compliance of local committees
Greece	✈						
Italy		✈					Sub-committees may be set-up
Netherlands		✈	✈				Executive Sub-Committee has lower official status
Sweden		✈					Similar to Danish committee
UK		✈		✈	✈		Slot Performance Sub-Committee has proved very effective

* Intended set-up.

Membership

6.13   The membership of the various co-ordination committees varies between Member States. The membership of some committees is a cause for concern in relation both to the status of the co-ordinator on the committee and the rights of individual and/or non-national airlines to attend. The majority of co-ordinators have only observer status on the co-ordination committee. This is acceptable provided that they have a right to attend and not able to attend only at the invitation of the committee.

6.14   It is also apparent that a number of co-ordination committees are interpreting the Regulation in a way that only allows individual airlines to attend with the sponsorship of their trade association/representative organisation. For example, the Paris Co-ordination Committee is we understand open to some French airlines on an individual basis, but to foreign airlines only on the basis of their sponsorship by an airline association. This lack of transparency causes concern for some airlines, even though they may not have any particular complaints about the working of the committees concerned.

6.15   Ideally, we believe that in co-ordination committees such as Paris, that do not have individual foreign carrier representation, it is very important that the representative organisations do not draw their committee member from another domestic airline.

6.16   The Greek National Co-ordination Committee only permits foreign **or** domestic airline representation through the pre-specified associations.

6.17   Table 6.2 describes the membership and Chairmanship of each co-ordination committee as well as the role of the co-ordinator and the national government on each committee.

Technical aspects

6.18   There is also much debate over voting powers on the committee. Some committees operate a one person one vote approach, while others have votes allocated on the basis of number of operations, with perhaps 10% of votes being allocated to the capacity providers (viz. airport operator and ATC). This has been refined in Amsterdam-Schiphol and Brussels-Zaventem from the original constitution of the London Co-ordination Committees, to limit the share of any individual carrier to 40% of the votes. The approach in Paris is perhaps best since there is no voting mechanism, and attention is concentrated on discussing and presenting all points of view.

6.19   ACI Europe has indicated that it considers airports should receive half of the votes. In practice, there are relatively few sessions when a vote is taken, with members seeking to reach a consensus. The preference of the airlines is that all views should be heard by the co-ordinator, even those in the minority. In any event, the views of the co-ordination committee are not binding on the co-ordinator.

Table 6.2:   Summary of co-ordination committee membership for countries with at least one Category 1, fully co-ordinated airport

| Member State | Memberships open to… | | | | | Comments on appointment/role of… | | |
	All interested carriers?	Representative organisations of carriers?	ATC	Airport operator	Others	Chairperson	Co-ordinator	National government/aviation authority
Belgium	✈	✈	✈	✈	General aviation	Elected annually	Observer	Observer
Denmark	✈	✈	✈	✈	-	Elected bi-annually	Secretary/ Observer	Observer
Finland	✈	✈	✈	✈	Handling agents, security/police/cu stoms	GM of Airport Operations appointed	Member	Member
France	Foreign airlines may be invited by ARC/IATA	✈	✈	✈	General and military aviation	DGAC appointee	Member	Chairperson
Germany	Foreign airlines may be invited by BARIG	✈	✈	✈	-	Ministry of Transport appointee	Observer	State government as member and Federal government as Chairperson
Greece	Airlines can only be represented by BAR	✈	✈	✈	-	GCAA appointee	Observer	Chairperson and a member
Italy	✈	✈	✈	✈	Police, customs	Airport Director of ENAC appointed	Member/ Observer	Chairperson
Netherlands	✈	✈	✈	✈	-	Elected every 3 years	Observer	Observer
Sweden	✈	✈	✈	✈	Police, customs	Elected annually	Secretary/ Observer	Member
UK	✈	✈	✈	✈	-	Elected annually	Observer	None

6.20   Of potentially greater concern to foreign airlines was the relatively short notice sometimes given for a meeting of some co-ordination committees, and the late or non-inclusion on the agenda of important matters relating to capacity issues (and discussed under any other business). The problems were reportedly most apparent in Greece and Spain, but two instances in Munich were also noted.

6.21   The short notice given for meetings can compound the difficulties of meetings normally being held in the language of the Member State, as competent and trusted translators cannot always be found in time. A number of individuals considered that there would be benefits in holding all meetings in English, even though this was not always their mouth tongue.

6.22   In addition, to the absence of a common committee language, the lack of detail on the agendum and the high frequency of committee meetings across Europe, all serve to put downward pressure on the levels of attendance and the seniority of representatives.

6.23   Table 6.3 lists some of the more detailed points of the formation and work of the national/local co-ordination committees.

Table 6.3:   Summary of co-ordination committee arrangements for countries with at least one Category 1, fully co-ordinated airport

Member State	Constitution?	Frequency of meetings per year	Language of meeting	Voting procedures	Notice of meeting	Comments on agenda/minutes	Comments on work of committee
Belgium	Being finalised	Once	English	1000 votes distributed amongst members	3 weeks	-	Drafting of constitution and some capacity-related issues
Denmark	Yes-provided	(at least) Twice	Danish	One member, one vote	2-4 weeks	No comments/complaints received	Operates in air of 'mutual co-operation and goodwill'
Finland	No	Twice	Finnish English	None	2 weeks	Minutes available to all members	No official complaints made
France	Yes-provided (in French)	(at least) Twice	French	None	3 weeks	Miscellaneous item at end of agenda for open discussion	Local rules enforce slot performance and limit abuse
Germany	Yes-provided (in German)	(at least) Twice	German	One member, one vote, but never used	4 weeks	Items on agenda not always clear	Work is mostly capacity-related (very few complaints made)
Greece	Yes-but not provided	Twice	Greek	One member, one vote	6 weeks	Sometimes less than one weeks notice provided	Focuses on views of airports
Italy	Yes-but not provided	Twice	Italian	None	Minimum of 1 week	Agenda sometimes distributed quite late	Work is mostly capacity-related (very few complaints made)
Netherlands	Yes-provided	(at least) Once	English, Dutch	1000 votes distributed amongst members	2-3 weeks	No comments/complaints received	Mostly slot performance and capacity-related discussions
Sweden	Yes-provided (in Swedish)	(at least) Twice	Swedish	1000 votes distributed amongst members	2 weeks	No comments/complaints received	Work is mostly capacity-related (very few complaints made)
UK	Yes-provided	(at least) Once	English	1000 votes distributed amongst members	10 months	Draft agenda sent out 6 weeks in advance for comment	Legal measures resorted to on some occasions.

Conclusions

6.24   Co-ordination committees throughout the EU generally operate in a consultative capacity as required by the Regulation. We see no need for any major change or addition to this remit or to the description of the six roles specified in the Regulation, other than the expansion of its role in capacity determination as discussed in Section IV.

6.25   The development of sub-committees (e.g. slot performance, executive and capacity-related) at various airports has added to the efficiency and scope of work as well as to the overall importance of the co-ordination committees. In particular, we recommend the further development of slot performance sub-committees throughout the EU as one means of reducing slot abuse. However, while encouragement in a revised Regulation of this best practice is worthwhile, it should not be made mandatory as it may not be appropriate in all locations. However, the revised Regulation should make it clear that if sub-committees are established to specialise in certain aspects, the power of the individual sub-committees should not be allowed to supersede the power of the main co-ordination committee, and the main co-ordination committee retains its rights and obligations as specified in the Regulation.

6.26   The membership of the co-ordination committees should be as wide as possible. It is vital that the co-ordinator has a right to attend all meetings, although probably as an observer rather than full voting member. Additionally, all users and aspiring users (domestic or foreign airlines) of the airport, should be able to attend the main co-ordination committee meetings in their own right or be represented by a trade organisation. This would ensure that the views of all the interested parties may be expressed. However, there is clearly a need to reduce the numbers of members of the sub-committees, although they should still comprise a 'representative subset' of the main committee. In practice, the expense of attending the many meetings being held around Europe will act as a natural moderator of attendance at most meetings.

6.27   The appropriate voting mechanism for each co-ordination committee is subject to debate. Indeed, the primary objective of a co-ordination committee is to advise the co-ordinator within its consultative capacity. In this environment, the application of any voting structure adds little to the value derived from hearing the opinions and views of all the interested parties, an approach adopted by the Paris Co-ordination Committee.

6.28   It seems reasonable to request that adequate notice (say, one month or more) should be provided to all members of the co-ordination committees and that the agendum should be clearly defined and subject to amendment or addition, where requested. There will inevitably be occasions when there needs to be an urgent decision of the committee, and a meeting is required at short notice or an item needs to be added to the agenda. In these circumstances, the revised Regulation should require that any decisions taken are temporary and subject to final ratification within the full committee meeting (called with adequate advance notice with the item explicitly included on the agenda circulated when the meeting date is announced).

6.29   Whilst a common language across all committees would be desirable, we believe this to be neither feasible nor appropriate.

6.30   The revised Regulation may wish to state explicitly that scheduling committees that exist under IATA auspices have no legal status under the Regulation.

VII Overview and conclusions

Introduction

7.1   In this section, we draw together our findings on the application of those aspects of the Regulation which we have been asked to investigate.   We also summarise the best practices we have identified.   Finally, we offer some views on possible changes to the Regulation in these areas.

Current position and best practices

Article 3: Designation

7.2   The designation of airports as fully co-ordinated, and to a lesser extent co-ordinated, is unsatisfactory, in relation to the criteria for designation, the designation process, and the application of the Regulation. This situation arises from weaknesses in the drafting of the Regulation, compounded by a number of Member States being slow to apply the Regulation in the way intended by the Commission. This has a resulted in perhaps seven airports not being explicitly designated as fully co-ordinated when in the general opinion of airlines and co-ordinators they should be.

7.3   A revised Regulation should provide a clearer definition of the conditions under which an airport should be designated as fully co-ordinated. The condition implicit in the current Regulation is that without designation, traffic at the airport would exceed available capacity and that voluntary approaches to modifying schedules to stay within capacity limits would be unlikely to succeed, based on failure of such voluntary approaches in previous seasons.

7.4   There is uncertainty over the designation process and whether a capacity assessment needs to be conducted to allow a Member State to designate an airport as fully co-ordinated. Certainly though, in order to comply with Article 3.5 capacity assessments need to be conducted regularly to verify whether demand is still at the level of available capacity.

7.5   It is difficult to say if Member States have complied with Article 3 of the Regulation in view of the opinion of the Commission's Services that recognition of an airport as SCR is a designation of that airport as fully co-ordinated.

Article 6: Co-ordination parameters

7.6   In general, the twice yearly determination of available capacity and the co-ordination parameters is working satisfactorily. There is good consultation between interested parties in most Member States with fully co-ordinated airports, and the parties are active in seeking means of increasing capacity.

7.7   There is however some concern from the airlines over the relatively modest increases in capacity at Paris Charles de Gaulle and Madrid-Barajas, following the opening of new runways. Although consultation took place, the airlines had no mechanism for appeal when dissatisfied with the decisions of the Member States.

Article 4: Co-ordinator

7.8   We believe that all co-ordinators are behaving independently, even if institutionally a number of the co-ordinators remain employees of the national airline with co-ordination being conducted by a department of the airline. The main impact of the lack of institutional independence is the provision of inadequate resources for the co-ordinator to function properly.

Article 5: Co-ordination committees

7.9   Co-ordination committees are again generally functioning as required by the Regulation. There are, however, some concerns over right of attendance at meetings and for some co-ordination committees foreign airlines believe there to be restrictions and that they may only be present under the auspices of an airline association. The revised Regulation should make clear that any air carrier serving or wishing to serve the airport is allowed to attend committee meetings. Also, the co-ordinator should have the right to be a member of the committee, even if without voting rights.

7.10   Further concerns relate to the advance notice of meetings and agenda items, the impact of these points particularly emphasised by the custom of most committees of holdings meetings in the mother tongue of the country. Although a number of parties have raised concerns over voting arrangements, we consider that provided the co-ordinator is not obliged to accept the recommendations of the co-ordination committee, there should be no need to prescribe an approach to voting in the Regulation.

7.11   A positive feature of the co-ordination committees has been the development of a number of specialist sub-committees.

Best practices

7.12   We summarise in Table 7.1 the instances of best practice that we have identified during the course of our study.

Table 7.1:   Summary of best practices in airport co-ordination

Area of best practice	Current best practice
Capacity assessment for designation	London Stansted Airport
Co-ordinator independence	Independent co-ordination company, modelled on ACL and owned by airlines.
Security of tenure of the head co-ordinator	Designation of a natural person, as in Germany
Recognition of a slot as package of necessary resources	ACL
Establishment of slot monitoring committees	ACL, Spanish co-ordinator
Voting arrangements on co-ordination committees	Amsterdam and Brussels distribution of votes, Paris decision not to vote

Future revision of the Regulation

7.13   We consider that the definition of a slot should recognise that it contains all resources necessary to operate at the airport (except traffic rights).   This would include all binding constraints, as well as other resources which were not binding at the time of first allocation of the slot. Thus, a slot would typically be described by:

- a time period relating to the planned landing or take-off time (the slot specifying which, and the time period reflecting when appropriate any constraints imposed on an airport system by the capacity of the terminal movement area);

- stand capacity (probably specified aircraft type and intended parking time and possibly area of apron i.e. terminal adjacent or remote);

- terminal capacity in terms of average or peak number of passengers carried and probably the type of operation (domestic/international, Schengen/non-Schengen, high risk) and if appropriate the terminal used; and in some airports

- share of environmental capacity (e.g. noise basket or quota).

7.14   Such a recognition that a slot is multi-dimensional, has several implications for a revised Regulation. For example, the Regulation may need to be more specific about the priority given to changed historics, while all references to slots and the slot pool would need to be drafted to recognise that a slot is not one dimensional.