

Council for Trade in Services

SECOND REVIEW OF THE AIR TRANSPORT ANNEX

POSSIBLE IMPROVEMENT TO QUASAR AND THE ASAP SOFTWARE

Note by the Secretariat¹

I. INTRODUCTION

1. This document has been produced at the request of the Council for Trade in Services. At the second meeting dedicated to the second review of the Air Transport Annex, held on 1 March 2007, the Council asked the Secretariat to provide a list of possible improvements to the Quantitative Air Services Agreements Review (QUASAR) methodology and database and its visualization software, the Air Services Agreements Projector (ASAP).

2. At the outset, it should be noted that QUASAR, as it currently stands, has not been exploited to its full potential due to time and resource constraints. Additional analysis could be undertaken on the basis of the information contained therein (e.g. by region pairs, traffic ranges, level of development, etc.), and econometric regressions performed to examine, for instance, the determinants of traffic. The Secretariat stands ready to undertake such additional work, if Members so wish.

3. QUASAR and ASAP were produced by the Secretariat within a relatively short time frame, on the basis of standard software (Microsoft Excel), and with recourse to very little additional external financial (SFr. 14,000 for the development of ASAP) and human resources (1 trainee for six man-months). Traffic data have been provided for free by the International Air Transport Association (IATA)², whereas they are normally sold.

4. With additional time and resources, the data underlying QUASAR and ASAP, the information computed and displayed therein and their functionalities could be relatively easily improved and refined. A positive decision by Members on some or all of the improvements suggested would, however, have implications in terms of calendar, dissemination and IT support.

5. It should be noted that the suggestions for improvement that follow constitute what the Secretariat considers feasible, provided adequate resources are allocated, given the information it currently has at its disposal. It cannot however be excluded that, in developing any of the suggestions agreed to by Members, the Secretariat may face unforeseen difficulties or, alternatively, may discover new possibilities for refinement offered by data or new academic research.

¹ This document has been prepared under the Secretariat's own responsibility and without prejudice to the positions of Members and to their rights and obligations under the WTO.

² Subject to pre-agreed restrictive conditions of use.

6. Finally, the list of possible improvements that follows is clearly not exhaustive, and the Secretariat stands ready to study the feasibility of any additional suggestions put forward by Members.

II. POSSIBLE POSTING OF QUASAR/ASAP ON THE PUBLIC WTO WEBSITE

7. At the Council meeting dedicated to the review held on 1 March 2007, several Members indicated that they would favour a posting of QUASAR/ASAP on the public website of the WTO.³ However, no final decision was taken in that regard.

Members may wish to take a final decision with regard to the posting of QUASAR/ASAP on the public WTO website.

8. It should be noted that QUASAR is already available to the general public, via the WTO "documents on line" facility, since its de-restriction on 30 January 2007. However, it is only retrievable in the form of 24 different files and it is neither easy to consult (e.g. Contracting State by Contracting State) nor to download in its present form. The suggestion would therefore be to create a dedicated QUASAR webpage that would enable to search the document according to different criteria and download it more easily.

9. If a positive decision is taken in this regard, the version that would be posted on the web would be that distributed for the March 2007 meeting ("QUASAR 1.0") modified to take account of Members' submissions correcting or complementing the ASA information contained in QUASAR ("QUASAR 1.1"). However, at the date of the issuance of the present document, only one Member, Australia, has provided additional information to the Secretariat; the deadline agreed to by Members to provide such information is 2 October 2007.

In view of the limited amount of information received by the Secretariat so far, Members may be willing to consider the possibility of prolonging the above-mentioned deadline.

III. POSSIBLE IMPROVEMENTS TO THE DATA UNDERLYING QUASAR/ASAP AND TO THE INFORMATION COMPUTED AND DISPLAYED

A. POSSIBLE IMPROVEMENTS TO THE UNDERLYING DATA

10. QUASAR contains two types of data: regulatory, mainly consisting of the codified summaries of bilateral agreements contained in the International Civil Aviation Organisation (ICAO) World Air Services Agreements (WASA) database; and commercial, namely IATA passenger traffic statistics and IATA mileage data on existing services.

1. Regulatory data

11. The current QUASAR sample of Air Services Agreements (ASAs) could be extended beyond WASA by the use of the following sources: the Aeroaccords database, the ICAO legal bureau DAGMAR application, the UN Treaties Series, web searches and individual communications by Members, if they so wish.

12. The subsequent coding of the provisions of any new or updated agreements would be done in a transparent manner, similarly to the way in which plurilateral agreements have been profiled in document S/C/W/270/Add.2, so as to allow for any corrections on the part of the Members concerned.

³ See document S/C/M/87, page 14, paragraph 74.

13. In the longer term, a database of the texts of all these agreements could be created. Such a database would allow for the tracking of all successive amendments of relevance to QUASAR, a functionality currently absent from WASA.

2. Commercial data

14. The IATA traffic data presently used are the actual numbers of passengers flown. This gives the same weight to a Zurich-Paris passenger as to a Zurich-Sydney passenger. To correct this bias, it would be preferable to use, as the professionals of the sector do, data expressed in revenue passenger kilometres (RPK). This would constitute the best approximation of traffic data, since value data on a city-pair or country-pair basis are not publicly available. IATA sells such a RPK mileage set.

15. ICAO load factor statistics could also be used in combination with IATA traffic data, provided the two were compatible, to compute capacity deployed.

16. Finally, existing services are now identified through IATA information on direct services, i.e. flights operated under the same flight number by IATA member airlines. Further work would allow the singling out, within direct services, of non-stop services, which are an interesting measure of the degree of the "connectivity" of a given air network.

B. IMPROVEMENT TO THE INFORMATION COMPUTED AND DISPLAYED

17. The improvements to the underlying data described above would allow for:

- (a) the mapping of fifth and seventh freedom traffic rights in legal terms (full granting, partial granting, absence) and in commercial terms (effective operation, exercise through code-share, unused rights). Subject to the availability of underlying data, this information could take into consideration geographical restrictions (e.g. only some city-pairs) and capacity restrictions. These rights could be displayed in two different manners. Firstly, from the point of view of a bilateral segment (i.e. for a given country-pair, or possibly city-pair, the bilateral carriers and third-party carriers that are allowed/present). Secondly, from a "combination of rights" points of view, i.e. taking a bilateral agreement as a "pivot" and analysing how it combines with other agreements to allow (and to which extent) fifth or seventh freedom rights. These displays would not, however, provide traffic data, since the computation, on the basis of publicly available data, of the amount of traffic carried under fifth and seventh freedom rights remains, at this stage, an insoluble problem. The Secretariat would nevertheless be watchful of any research breakthroughs in this regard and incorporate them as appropriate;
- (b) the mapping and, possibly, the measurement of the rare instances of eighth and ninth freedom traffic rights;
- (c) the incorporation in the profiles and the displays of plurilateral ASAs, which at present are dealt separately in QUASAR and are not incorporated in ASAP;
- (d) the display of additional information regarding capacity, designation, code-sharing⁴ (including third country code-sharing) and ownership⁵;
- (e) subject to the availability of underlying data (in particular ICAO's DAGMAR and Aeroaccords), the extension and adaptation of QUASAR/ASAP to cargo traffic⁶;

⁴ See document S/C/W/270/Add.2, page 401, paragraph 658.

⁵ See document S/C/W/270/Add.2, page 408, paragraph 673.

- (f) the factoring-in of routes;
- (g) subject to IT decisions (see below), the possibility of "customizing" QUASAR/ASAP to the specific needs of the user (e.g. different weights attributed to the various market access elements, removal or addition of specific elements);
- (h) the introduction of a "time dimension", another feature absent from WASA.

IV. IMPLICATIONS

A. IMPLICATIONS OF A THE POSTING OF QUASAR/ASAP ON THE WEB

18. While the creation of a specific dedicated QUASAR page on the WTO public website is a relatively easy undertaking, the posting of ASAP on-line would probably require additional IT developments. The ASAP software was initially designed for a CD-Rom support and, given the very limited budget and timeframe under which it was developed, it is unlikely to fulfil all the pre-requisites for a fully-fledged searchable WTO database. Hence, its posting on the web may require additional months of work. If Members so agree, the Secretariat intends to pursue this objective, since ASAP is an integral part of QUASAR and allows, in particular, the visualization of data that are not readily accessible from QUASAR (e.g. regulatory and commercial data relevant to any selection of bilateral agreements).

19. ASAP will also be made available to the general public through the sale of the CD-Rom, alone or packaged together with the review-related publications.⁷

B. IT SUPPORT ASPECTS

20. A more robust software solution for the underlying database is needed. The size of the QUASAR database (around 100,000 individual entries) already exceeds the capabilities of Excel. A professional application, such as for instance SQL (which is used for the IDB), would have to be employed if the volume of data were to increase, which would inevitably be the case with new and updated agreements and even more so if some of the structural improvements suggested above are retained by Members.

21. Such a software migration would also be necessary to enable new possibilities of refinements, such the ability, requested by some Members, to discard from the QUASAR weighting elements that they do not consider as restrictive.

⁶ See document S/C/W/270/Add.2, page 331, paragraph 469.

⁷ So far, the documentation of the first review (S/C/W/163 and its addenda) and document S/C/W/270 of the second review have been published, respectively in a blue volume in all three official languages and in a purple volume in English only.