

Section 44 of the Competition Act (Cap. 50B)

Notice of Decision issued by Competition Commission of Singapore (CCS)

Application for Decision by United Airlines, Inc., Continental Airlines, Inc. and All Nippon Airways Co.

4 July 2011

## Case number: CCS 400/001/11

Confidential information in the original version of this Decision has been redacted from the published version on the public register. Redacted confidential information in the text of the published version of the Decision is denoted by [**%**]

#### **Executive Summary:**

- 1. CCS is of the view that the JV agreement falls within the scope of the section 34 prohibition in the Competition Act (Cap 50B) ("the Act") because it involves joint determination and coordination of all commercial aspects of the Parties' transpacific operations, including prices, for Singapore-North America Origin & Destination ("O&D") city-pairs. However, CCS is satisfied that the Parties have established that the net economic benefit exclusion applies to the JV agreement.
- 2. Therefore, by operation of section 35 of the Act read with paragraph 9 of the Third Schedule to the same, the JV agreement is excluded from the section 34 prohibition of the Act.

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## 1 INTRODUCTION

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3. This Decision sets out CCS' analysis and decision, pursuant to an application made under section 44 of the Competition Act (Cap 50B) ("the Act"), on whether the joint venture agreement ("JV agreement") between All Nippon Airways Co. Ltd. ("ANA"), Continental Airlines Inc. ("Continental") and United Airlines Inc. ("United") (collectively referred to as "the Parties") infringes the prohibition under section 34 of the Act. CCS' analysis and decision is based on the submissions and information provided by the Parties and from relevant third parties.<sup>1</sup>

## 2 THE FACTS AND PARTIES' SUBMISSIONS

## 2.1 The Application for Notification of Decision (the "Application")

- 4. ANA, Continental and United have negotiated a JV agreement and intend to implement the JV agreement in Singapore by 1 October 2011 at the earliest. However, the joint-pricing component under the JV agreement for flights originating from airports in the U.S., including routes that have Singapore as a destination became effective on 1 April 2011 when the JV agreement was implemented in the U.S. and Japan.
- 5. On 13 January 2011, the Parties notified the JV agreement to CCS under section 44 of the Act. The purpose of the Application was for a decision by CCS on whether the JV agreement would infringe section 34 of the Act. The Parties claim that the JV agreement falls outside the purview of the section 34 prohibition as the JV agreement will not result in an appreciable adverse effect on competition in Singapore and will also benefit from the net economic benefit ("NEB") exclusion. The Parties have made this application under section 44 of the Competition Act, in relation to the section 34 prohibition. On the basis of the Parties' submission, CCS proceeded to assess the notification accordingly.
- 6. A summary of the Application and an invitation for comments was placed on CCS' public register on 19 January 2011.<sup>2</sup> CCS did not receive any comments from the public. CCS also wrote to third parties such as travel associations, regulators of the industry, key competitors and top corporate customers of the Parties inviting them to comment on the Application. Fifteen of them responded.

<sup>&</sup>lt;sup>1</sup> CCS approached customers and competitors of the Parties for comments and views on the JV Agreement.

<sup>&</sup>lt;sup>2</sup> Refer to Section 4.4 below for responses received from third parties.

## 2.2 Singapore's Aviation Landscape<sup>3</sup>

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- 7. Singapore is a liberal aviation port. Airlines have full flexibility to respond to market conditions and opportunities. Passengers and shippers have wide travel and flight options at competitive rates. Singapore is also a popular transfer hub for international travellers and shippers. Foreign airlines operating in and out of Singapore can use it as a hub for services to the region and beyond.
- 8. To date, Singapore has established Air Services Agreements with more than 100 countries and territories, including about 40 Open Skies Agreements. Open Skies Agreements allow carriers to operate any number of flights between and beyond both signatory states, enabling them to tap traffic from third countries to improve the commercial viability of scheduled flights.

## 2.3 Increasing Trend of Global Airline alliances

- 9. There are currently three main global airline alliances, namely **one**world alliance, Star Alliance and SkyTeam. The Parties belong to the Star Alliance.
- 10. The European Commission ("EC") and the United States Department of Transport ("DOT") describe the broad spectrum of cooperation that exists between partners of global alliances today in its joint report on transatlantic alliances (see Joint Alliance Report at ¶¶ 19-20):<sup>4</sup>

"Members of the global alliances coordinate on a multilateral basis to create the largest possible worldwide joint network. The global alliance model generally applies to the entirety of member airlines' networks and offers a much wider scope for revenue synergies. While a "basic" level of cooper ation is required by members of a global alliance – generally involving standard code-share JV Agreement, cooperation on Frequent Flyer Programs and lounge access – some alliance members seek higher levels of cooperation to enhance the benefits of the alliance.

Although alliance members cooperate on many aspects of the customer experience, they may nonetheless remain competitors, as the level of integration between and among the members of the alliance varies greatly...."

<sup>&</sup>lt;sup>3</sup> CAAS website at http://bit.ly/ezKkgi (last accessed on 15 March 2011)

<sup>&</sup>lt;sup>4</sup> Transatlantic Airline Alliances: Competitive Issues and Regulatory Approaches—A report by the European Commission and the United States Department of Transportation, 16 November 2010. ("Joint Alliance Report").

11. At one end of the spectrum of cooperation are the basic, arms-length arrangements such as code-sharing arrangements.<sup>5</sup> At the other end are highly integrated joint ventures which include revenue and cost-sharing features. The JV agreement belongs to the latter category. For regulatory reasons, mergers between airlines from different countries are not common.

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- 12. In the transatlantic markets, there are currently three such integrated joint ventures.<sup>6</sup> The EC and DOT note that since ownership and control restrictions will remain to limit the freedom of carriers to merge, and given that alliances result in significant benefits for carriers, global alliances and immunised JVs seem likely to continue to play an important role in the transatlantic markets.
- 13. The EC and DOT set out that the stated goal of these integrated joint ventures is to become effectively indifferent to which aircraft carries a passenger physically, i.e. they seek "metal neutrality"<sup>7</sup> in their cooperation. The EC and DOT also note that this form of cooperation is effectively a close substitute to a merger because it typically involves full coordination of the major airline functions on the affected routes, including scheduling, pricing, revenue management, marketing and sales.
- 14. The EC and the DOT recognise in their joint report that such integrated airline alliances bring about potential benefits to consumers such as lower costs and increased capacity through increased density, reduction of double marginalization, fare combinability, better schedules, more seamless customer experience, and frequent flyer program integration.
- 15. In the transpacific markets, CCS is aware that there are currently three integrated joint ventures. They are:
  - a. the joint venture between Delta and Korean Air of the Sky Team,
  - b. the joint venture between United and Asiana, and

<sup>&</sup>lt;sup>5</sup> Code-sharing is an arrangement where competing airlines share the capacities of their flights with one another, where one airline (e.g. United) resells the capacity of a flight operated by another airline (e.g. ANA) under the former's marketing code (e.g. UA).

<sup>&</sup>lt;sup>6</sup> These are between Air Canada, Lufthansa, and United-Continental of the Star Alliance; American, British Airways, and Iberia of the oneworld alliance; and Air France-KLM, Alitalia, and Delta Airlines, Inc. ("Delta") of the Sky Team.

<sup>&</sup>lt;sup>7</sup> The term "metal" is an airlines industry jargon which describes the provision of the aircraft that physically flies the route. This is to distinguish from a "code-sharing" arrangement where the flight is sold under the marketing code of an airline which does not provide the underlying metal operation.

c. the recently approved (by the DOT, the Japanese Minister of Land, Infrastructure, Transport and Tourism ("MLITT") and CCS)<sup>8</sup> Alliance Agreement and Joint Venture Agreement between Japan Airlines International Co. Ltd ("JAL") and American Airlines Inc. ("AA").

## 2.4 The Parties

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## 2.4.1 All Nippon Airways Co. Ltd. ("ANA")

- 16. ANA is a publicly listed company on the Tokyo, Osaka and London stock exchanges and has a number of subsidiaries. ANA has been a member of Star Alliance since October 1999.
- 17. ANA is a major Japanese air carrier engaged in the business of transporting passengers, cargo and mail, as well as the provision of aircraft maintenance and ground handling services. ANA also provides domestic and international travel services, as well as trading and sales operations (such as retail sales at airport stores) and flight reservation and ticketing systems for airlines and travel agencies.

### 2.4.2 United Airlines, Inc. ("United")

- 18. United is a wholly owned subsidiary of United Continental Holdings, Inc (formerly United Air Lines Corporation) ("United Continental Holdings"). United Continental Holdings is listed on the NASDAQ stock exchange in the United States. United has been a member of Star Alliance since it was launched on 14 May 1997.
- 19. On 1 October 2010, United Continental Holdings announced that a wholly owned subsidiary had merged with Continental, and the merged entity is now its wholly owned subsidiary. According to the Parties, Continental and United plan to integrate their operations by 2012.<sup>9</sup>
- 20. United is a major U.S. air carrier engaged in the business of transporting passengers, cargo and mail both within the U.S. and internationally.

<sup>&</sup>lt;sup>8</sup> Refer to Grounds of Decision for CCS 400/008/10.

<sup>&</sup>lt;sup>9</sup> CCS has considered United and Continental as separate entities for the purposes of its assessment of the JV Agreement. Moreover, the Parties advise that the merger of Continental's and United's operations will have only a minor effect on the JV Agreement, mainly with respect to certain corporate governance provisions. For example, as a result of the merger, there will be only two CEOs. Furthermore, the Parties state that Continental and United would have been able to coordinate pursuant to the JV Agreement and in essentially the same manner with or without the merger between them.

## 2.4.3 Continental Airlines, Inc. ("Continental")

- 21. Continental is a wholly owned subsidiary of United Continental Holdings. Continental has been a member of Star Alliance since October 2009. As set out in paragraph 19 above, Continental and United have now merged.
- 22. Continental is a major air carrier engaged in the business of transporting passengers, cargo and mail both domestically in the U.S. and internationally.

## 2.5 Cooperation between the Parties prior to the JV agreement

- 23. Prior to the JV agreement, the Parties had notified the following code-sharing relationships in relation to the following Singapore markets:
  - a. On the Singapore-Hongkong ("SIN-HKG") route, Continental does not directly fly on that route but code-shares with United. ANA does not cover this route;<sup>10</sup>
  - b. On the Singapore-Narita International Airport (Tokyo) ("SIN-NRT") route, Continental, United and ANA code-share on each other's flights;<sup>11</sup> and
  - c. On the Singapore-Tokyo (Haneda) International Airport ("SIN-HND") route, there is no code-sharing arranagement between the Parties.<sup>12</sup>
- 24. The code-share agreements on these routes allow the non-operating carrier to sell tickets for the operating carrier's flights under the non-operating carrier's marketing code. The operating carrier maintains the inventory while the marketing carrier sells a seat if there is availability. The operating carrier receives revenue based upon mutually agreed methodologies [≫].<sup>13</sup>

## 2.6 The JV agreement

#### 2.6.1 The scope of the JV agreement

25. The JV agreement is intended to bring together certain routes of ANA, Continental and United. The focus of the JV agreement involves passenger air services in specific countries in  $[\%]^{14} [\%]^{15}$ .

<sup>&</sup>lt;sup>10</sup> United operates metal along this route and flies 1 flight daily (Source: OAG).

<sup>&</sup>lt;sup>11</sup> ANA and United operates metal along this route. ANA flies 4 flights daily. United flies 2 flights daily. All 6 flights are code-shared between the Parties.

<sup>&</sup>lt;sup>12</sup> ANA operates metal along this route and flies 2 flights daily.

<sup>&</sup>lt;sup>13</sup> [**%**].

<sup>&</sup>lt;sup>14</sup> Typically, an airline operates a 'hub-and-spoke' network of routes that radiates from the main airport(s) of its homeland. In the context of an alliance between two airlines from different countries, "gateway-to-gateway"

- 26. The extent of cooperation will include, *inter alia*, revenue sharing, pricing and revenue management coordination, route/capacity planning and schedule coordination. Revenue sharing in the context of this JV agreement means that all revenues from the routes brought together will be pooled and then redistributed to the individual carriers according to a formula established by the Parties. The aim of the JV agreement is to establish 'metal-neutrality' between the Parties, in that each will become indifferent as to which airline operates the underlying metal (i.e. the aircraft) on each route.
- 27. The JV agreement also covers certain intra-Asia routes, including the SIN-NRT route on which both United and ANA currently fly.<sup>16</sup> [ $\gg$ ].<sup>17</sup>[ $\gg$ ].
- 28. The JV agreement has no expiration date, although provisions have been made for the Parties to terminate the agreement under stipulated conditions.

### 2.6.2 The principal provisions of the JV agreement

- 29. The JV agreement includes cooperation of the Parties in the following areas:
  - a. Pricing and inventory/revenue management: The Parties will cooperate with the goal of fully coordinating pricing and inventory/revenue management functions by:
    - i. maintaining a Revenue Management Board to issue overall strategic direction with respect to pricing and inventory/revenue management, and to facilitate strategic alignment;
    - ii. maintaining [≫] pricing organisations which will develop, coordinate and offer fare products on behalf of all joint venture participants;
    - iii. harmonising revenue management and methods and procedures (e.g. passenger protection, duplicate check, and waitlist priorities);
    - iv. identifying and implementing fare classes, fare rules, and other common pricing features;

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refers to the segment that lies between the respective 'hubs' of the two airlines, while "behind and beyond" refers to the segment that connects between a 'hub' and various 'spokes'. Typically, both airlines operate metal on the gateway-to-gateway segment, and code-share on each other's behind-and-beyond segment. <sup>15</sup> [%].

<sup>16 [3].</sup> 

<sup>&</sup>lt;sup>17</sup> Feeder routes refers to the behind-and-beyond operations that 'feeds' passengers from a 'spoke' [24].

- v. coordinating auxiliary service charges and collection policies (e.g. excess baggage charges and special charges for pets);
- vi. coordinating inventory management strategies and decision making; and
- vii. engaging in inventory management communications;

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- b. Revenue Sharing: All revenues from the routes will be pooled and then redistributed to the individual carriers. It is contemplated that the revenue sharing pool would include all passenger revenue from all [≫] segments within the scope of the joint venture;
- c. Route/Capacity Planning and Schedule Coordination: The Parties will develop a joint system for coordinating routes, capacity and schedule planning. The Parties will maintain a Network Planning Board and will also develop an agreed capacity plan;
- d. Sales: The Parties will agree upon and implement joint sales strategies, policies and procedures in an effort to ensure metal-neutrality [≫]. The Parties will also maintain a Sales Board, establish lead carriers for markets covered by the joint venture and share data and provide the requisite technological infrastructure to support sales planning and reporting etc.;
- e. Marketing: The Parties will preserve their individual brands while focussing on the promotion of joint venture services to achieve metalneutrality and maximise customer benefits (e.g. by coordinating on premium customer handling and upgrade programs);
- f. Frequent Flyer Programs: The Parties will further enhance their Frequent Flyer Programs ("FFPs") with the goal of creating consistent FFP benefits for customers regardless of which carrier the customer flies on;
- g. Airport operations: The Parties will align passenger and baggage policies and procedure wherever possible to provide a more seamless customer experience, including more efficient transfers and connections, improved baggage and passenger handling, enhanced check-in and reciprocal baggage chasing and claims.
- h. Additional parties to the joint venture: The JV agreement contemplates the subsequent inclusion of other alliance partners as additional parties.
- i. Governance: The JV agreement will establish specific governance mechanisms and procedures. While the Parties will remain autonomous

and maintain their independent decision-making authority, the JV agreement provides for a Steering Board to  $[\aleph]$ . The functional area governing boards will maintain the Network Planning, Revenue Management and Sales Boards.  $[\aleph]$ .

## 2.7 Approvals and anti-trust immunity from authorities in other jurisdictions

30. On 6 October 2010, the DOT issued a Show Cause Order tentatively approving the alliance, and a final order for immunity from U.S. antitrust laws ("U.S. Final Order") was issued on 10 November 2010. On 22 October 2010, the Japan MLITT issued a final order approving the JV agreement and immunizing them from the Japanese antitrust laws. The Parties informed CCS that the Korea Fair Trade Commission has recommended to the Ministry of Land, Transport and Maritime Affairs ("MLTM") that the JV agreement be approved. The MLTM was still deliberating the application as at 1 July 2011.

## **3** LEGISLATIVE FRAMEWORK

#### 3.1 Section 34 Prohibition

- 31. Section 34 prohibits agreements between undertakings, decisions by associations of undertakings or concerted practices which have as their object or effect the prevention, restriction or distortion of competition within Singapore.
- 32. Section 34(2) of the Act states that:
  - a. "... agreements ... may, in particular, have the object or effect of preventing, restricting or distorting competition within Singapore if they —
  - b. directly or indirectly fix purchase or selling prices or any other trading conditions;
  - c. limit or control production, markets, technical development or investment;
  - d. share markets or sources of supply".
- 33. An assessment on whether an agreement infringes the section 34 prohibition requires an analysis of whether an agreement between undertakings has an anticompetitive object or actual or potential restrictive effects on competition. Further as a matter of enforcement policy, CCS may pursue infringing

agreements provided they have an appreciable adverse impact on competition in Singapore.

## 3.2 The Net Economic Benefit exclusion

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- 34. The NEB exclusion set out in section 35 of the Act, read with paragraph 9 of the Third Schedule to the Act, provides that the section 34 prohibition shall not apply to "any agreement which contributes to
  - a. improving production or distribution; or
  - b. promoting technical or economic progress,

but which does not -

- i) impose on the undertakings concerned restrictions which are not indispensable to the attainment of those objectives; or
- ii) afford the undertakings concerned the possibility of eliminating competition in respect of a substantial part of the goods or services in question."
- 35. The burden of proof in establishing the NEB exclusion lies on the party who claims it.<sup>18</sup>

## 3.3 Application of section 34 prohibition to undertakings

- 36. The section 34 prohibition applies to "agreements between undertakings". Section 2 of the Act defines "undertaking" to mean "any person, being an individual, a body corporate, an unincorporated body of persons or any other entity, capable of carrying on commercial or economic activities relating to goods or services."
- 37. The Parties are corporate entities carrying on commercial and economic activities relating to air transport services and fall within the definition of "undertakings" under the Act. CCS is of the view that the JV agreement is an agreement between undertakings, bringing it within the ambit of the section 34 prohibition.

## 3.4 **Response from Third Parties**

38. A summary of the Application and an invitation for comments was placed on CCS' public register. CCS also sought views from third parties such as key

<sup>&</sup>lt;sup>18</sup> Regulation 21(a) of the Competition Regulations 2007.

competitors and top corporate customers of the Parties, as well as other relevant parties such as the Ministry of Transport and the Civil Aviation Authority of Singapore, to provide comments. In total, CCS wrote to 16 third parties for their views on the JV agreement.

- 39. CCS received responses from 15 third parties, all of which had no adverse comments in relation to the JV agreement being potentially anti-competitive or having a negative effect on their business. In particular, three of the Parties' competitors replied that they did not have any comment on the JV agreement, and another competitor replied with the view that integrated cooperation such as the one proposed by the JV agreement will have positive benefits for participating carriers as well as their customers.
- 40. The Civil Aviation Authority of Singapore (CAAS) and MOT also provided a joint response, [≫]. CAAS did not have any comment on the Application but noted more generally that the Singapore-USA transpacific O&D markets would be more competitive for the benefit of consumers if legal and regulatory barriers of entry in the form of 5th freedom restrictions beyond Tokyo can be lifted through further air services liberalisation between Singapore and Japan.
- 41. One of the Parties' biggest corporate customers was of the view that the JV agreement would result in greater competition amongst the airlines serving the SIN-USA routes. Specifically, it is anticipated that the JV agreement will create an opportunity to foster healthier competition for transpacific flights involving Singapore, including providing stronger competition to carriers currently providing direct Singapore-United States routes. It is also expected that the economic benefits for Singapore will be an increase in the options available in terms of shorter flight connections, reduction in transit-time wastage, and more competitive air fares available for the Singapore-Japan-United States routes. With regard to the JV agreement providing benefits in terms of better flight selections, schedules, and times, leading to cost savings, as well as savings generated from greater resource integration, the following was highlighted:

"For the Star Alliance agreement, NH [ANA] has reported to bring forward UA's ORD-NRT timing to 55minutes earlier, which doubled the options of onward connections at NRT from 13 NH flights on 10 routes to 22 NH flights on 19 routes. This better scheduling will bring greater convenience for our corporate travellers whose key purpose in having such travels are for work and meeting purposes. Travellers may now be able to cut down on unnecessary layovers or overnight hotel stays, thus reducing further costs. ... with this joint venture, the airlines may now be in a better position to pull and share resources amongst each other, which may in turn result in greater resource optimization and higher cost savings. These cost savings will then be available for airlines to improve on its product offerings and service standards through possible provisions for better trainings for the crew and maintenance of the aircrafts".

42. In terms of the economic benefits for Singapore, it was stated that:

"The economic benefits for Singapore will be an increase in the options available in terms of shorter flight connections, reduction in transit time wastage, and more competitive air fares available for the SIN-JPN-USA routes. [The JV agreement] will bring forth a healthy contribution of competition towards existing carriers flying the transpacific routes".

43. CCS did not receive any comments from the public.

#### 4 **COMPETITION ASSESSMENT**

#### 4.1 Theory of Harm

- 44. As outlined in section 2.6 above, the JV agreement involves the Parties entering into a metal neutral arrangement, whereby they will cooperate on revenue sharing, pricing, revenue management coordination, route/ capacity planning and schedule coordination. These elements of cooperation may amount to price-fixing, output control and/or market sharing that prevent, restrict or distort competition in various Singapore O&D routes covered by the JV agreement.
- 45. In assessing this Theory of Harm, CCS also considered the Parties' submissions that net economic benefits may arise from the JV agreement.

#### 4.2 The relevant markets

#### 4.2.1 Parties' submission

- 46. The Parties define the relevant markets as air passenger transport services, after taking into consideration the ability of other modes of transport, specifically train, coach and ferry, to act as substitutes, factoring in considerations such as travel time, convenience and cost.
- 47. The Parties state that the focal product in the context of the JV agreement involves long-haul and medium-haul international flights. The Parties do not consider other modes of transport to be substitutes, given that the speed and

convenience offered by air travel as stated in the JV agreement is unlikely to be offered by other modes of transport. As such, the Parties are of the view that the market for long-haul and medium-haul air passenger transport services is distinct from other modes of transportation.

- 48. The Parties' view is that air passenger transport markets are defined based on origin-destination city pairs where a passenger begins a journey and ends a journey (O&D city pairs), and not by any specific routing. This, they submit, is in line with the conclusions of many competition authorities,<sup>19</sup> including CCS' approach in determining the relevant markets in the Qantas Airways and British Airways decision released on 13 February 2007.<sup>20</sup> The Parties further submit that every combination of point of origin and point of destination should generally be considered as a distinct and separate market<sup>21</sup> from the consumer's point of view. The Parties also argue that passengers generally would not be prepared to substitute points of origin or destination when faced with a small increase in price and therefore each O&D pair could form a separate market.
- 49. Based on the above, the Parties focus the Application on the SIN-NRT, SIN-HND and SIN-HKG routes since at least one of the Parties operate direct flights on each of these routes which originate or terminate directly in Singapore and therefore these routes are likely to be most relevant to CCS' competitive assessment of the JV agreement.
- 50. In addition, the Parties state that flights to/from two or more airports may belong to the same relevant market as long as the airports are within a given catchment radius of the destination. The closer the frequencies, schedule, connectivity and overall quality of airport services, the closer the substitute flights from different airports can become. For the long-haul and medium-haul services covered in the JV agreement, there is even more reason to consider alternate airports within a metropolitan area as substitutes since ground travel time represents only a small fraction of the total travel time. The Parties also consider and dismiss the possibility of narrower relevant markets, distinguished by time sensitive and non-time-sensitive passengers.
- 51. As such, the Parties are of the view that it would be more appropriate to consider SIN-NRT and SIN-HND routes collectively as a SIN-Tokyo O&D

<sup>&</sup>lt;sup>19</sup> For example, see the European Commission's decision of 11 Aug 1999 in KLM/ Alitalia (M/JV-19) and British Airways/ Iberia/ GB Airways (COMP/ D2/ 38,479).

<sup>&</sup>lt;sup>20</sup> CCS case number 400/002/06.

<sup>&</sup>lt;sup>21</sup> Geert Goeteyn, *Market Definition in the Aviation Sector*, in Remedies in Network Industries: EC Competition Law Vs Sector Specific Regulation 226 (2004).

market. The reason given is that Haneda Airport serves as a good alternative to Narita International Airport for travellers between Singapore and Tokyo as it is well connected by international as well as domestic flights. It is also near Tokyo's business districts.

52. The Parties conclude by arguing that it is not necessary to take a definitive view of the market definition, given that the JV agreement is unlikely to lead to an appreciable adverse effect on competition and, in any case, because the JV agreement will give rise to net economic benefits and should therefore be excluded from the section 34 prohibition.

### 4.2.2 CCS' assessment

- 53. CCS notes that, typically, the starting point for market definition relating to the provision of scheduled air passenger transport services is the origin and destination (O&D) pair, usually a city-pair. Passengers generally want to travel to a specific destination and will not substitute another destination when faced with a small, non-transitory increase in price. Therefore, each combination of a point of origin and point of destination can form a separate market. This is in line with CCS' past decisions on similar airline cooperation JV agreements.<sup>22</sup>
- 54. The SIN-NRT and SIN-HND routes may be deemed to be part of the same origin/destination market, given the close proximity of both airports to Tokyo. However, CCS notes that the Parties' operations do not overlap on the SIN-HND route. Only ANA operates metal on this route, and the Parties are not even code-sharing. As such, SIN-HND does not constitute part of the focal product.<sup>9</sup>
- However, CCS does not consider that the stand-alone O&D routes of SIN-HND and SIN-HKG are relevant markets, given that, according to the Parties,
  [≫]. As such, CCS' assessment will exclude these two O&D markets [≫].
- 56. In summary, given that the Application specifically concerns the impact of the JV agreement in Singapore, CCS will limit its competition assessment of the JV agreement to the focal product of air passenger transport services on Singapore O&D city pair routes which are covered under the scope of the JV agreement. However, CCS does not consider it appropriate to limit the focus of its assessment to intra-Asia routes, without having regard to transpacific routes that affect Singapore passengers.

<sup>&</sup>lt;sup>22</sup> Qantas & British Airways Restated Joint Services Agreement, CCS 400/002/06, and Qantas & OrangeStar Alliance Co-operation Agreement, CCS 400/003/06.

- 57. In particular, CCS' assessment will focus more on the following O&D routes where the current market positions of the Parties are relatively stronger:
  - a. SIN-NRT;<sup>23</sup>

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- b. Singapore-Washington; and
- c. Singapore-Chicago.

## 4.3 Object or Effect the Prevention, Restriction or Distortion of Competition within Singapore

## 4.3.1 Parties' submission

- 58. The Parties consider that the provisions of the JV agreement referred to in paragraph 29 may raise questions of compatibility with the section 34 prohibition. However, the Parties submit that the JV agreement will not result in an appreciable adverse effect on competition in Singapore.
- 59. However, in coming to this conclusion, the Parties only focus on three routes, namely the SIN-NRT, SIN-HND and SIN-HKG routes. They state that they have relatively low market shares for these three routes, and other factors such as the presence of strong competitors in the market, the ease of entry and the transparency of pricing and other flight information in the market mean that the JV agreement will not result in an appreciable adverse effect on competition in Singapore.

## 4.3.2 CCS' assessment

- 60. An agreement will fall within the scope of the section 34 prohibition if it has as its object or effect the prevention, restriction or distortion of competition within Singapore. In this context, when an agreement has as its object the restriction of competition, it is unnecessary to prove that the agreement will have an anticompetitive effect in order to find an infringement of section 34. In assessing the object of an agreement, CCS considers the objective meaning and purpose of the decision in the economic context in which it is to be applied.<sup>24</sup>
- 61. The JV agreement involves the cooperation between the Parties in all commercial aspects of the Parties' transpacific operations (see Section 2.6.2). CCS notes that the Parties intend to integrate their transpacific business

<sup>&</sup>lt;sup>23</sup> Excluding the SIN-HND O&D route.

<sup>&</sup>lt;sup>24</sup> See CCS 600/008/06 Pest Control Case at paragraph 49.

beyond mere code-sharing through the JV agreement and effectively act as a single carrier with respect to their transpacific business. Under the JV agreement, the Parties will share revenue on transpacific routes and coordinate in a number of key parameters of competition including pricing, capacity, scheduling and sales and marketing.

- 62. Unlike under the current (pre-alliance) code-sharing arrangements where Parties may still compete, under the JV agreement the Parties will cease to compete with respect to their transpacific services. In striving towards metal neutrality in respect of their transpacific business, the Parties will have little ability (due to the obligations set out in the JV agreement) and incentives (due to their revenue sharing arrangements) to compete with each other in respect of the relevant markets.
- 63. CCS is therefore of the view that, given the level of integration on the Parties' transpacific operations and close level of coordination on key parameters of competition, including pricing, the JV agreement by its very nature has the object of appreciably preventing, restricting or distorting competition in the relevant markets. However, as will be discussed below, the Parties have satisfied paragraph 9 of the Third Schedule to the Act that there are Net Economic Benefits from the JV agreement, and it is therefore excluded from the operation of s 34 of the Act by virtue of s 35 of the Act.

#### 4.4 Net Economic Benefit ("NEB")

- 64. An agreement that falls within the scope of section 34 may, on balance, have a NEB if it contributes to improving production or distribution or promoting technical or economic progress and it does not impose on the undertakings concerned restrictions, which are not indispensable to the attainment of those objectives or afford the undertakings concerned the possibility of eliminating competition in respect of a substantial part of the goods or services in question. Individual agreements possessing these characteristics are excluded from the section 34 prohibition.
- 65. In general, the assessment of the benefits flowing from an agreement will be made within the confines of each relevant market to which the agreements relate. However, where two (or more) markets are closely related, efficiencies are considered.

#### 4.4.1 Parties' submission

## 4.4.1.1 Contributes to improving production or distribution or promoting technical or economic progress

## <u>Reduction in fares & increase in output by eliminating inefficient double</u> <u>marginalisation pricing</u>

- 66. The Parties submit that the JV agreement will allow them to coordinate their pricing and revenue management and therefore eliminate inefficiencies that are inherent in interlining and code-sharing arragements, which tend to produce "double marginalisation", i.e. a double mark-up of fares.
- 67. The Parties claim that the elimination of double marginalisation will lead to lower fares for consumers.<sup>25</sup> In aggregate, a highly conservative estimate of the fare savings Singapore O&D passengers will enjoy as a direct result of eliminating double marginalisation on itineraries covered by the Parties' JV agreement will be approximately [≫].<sup>26</sup> Figure 1 in **Appendix 3** depicts the estimated one-way fare savings from eliminating double marginalisation for interline/codeshare passengers in ten popular Singapore-U.S. city pairs.
- 68. The Parties also claim that the improved connection opportunities and the significant reduction of double marginalisation on O&Ds involving multiple carriers are expected to significantly increase traffic volumes across the networks of the Parties. The Parties suggest that this is supported by

<sup>&</sup>lt;sup>25</sup> The Parties suggest that economic literature shows that integrated (immunised) airline alliances reduce fares on interline flights due to a substantial elimination of double marginalisation. Whalen (2007) finds that fares of immunised alliance interline flights are between 13-20% lower than traditional interline fares. This compares with a reduction for code-share fares of between 5-9%. Due to the reduction in double marginalisation, fare levels under immunised alliances approach those charged for 'online' itineraries by single carriers, which are not subject to double marginalisation. 'Online' (i.e., single carrier) fares are 16-22% below traditional 'interline' fares.

The Parties cite further empirical studies (Brueckner and Whalen, 2000; Brueckner, 2003; Brueckner, Lee and Singer, 2011) to show that each successive degree of integration over traditional interlining reduces double marginalisation, and thus results in sequentially lower fares. Codeshare tickets by immunized alliance partners are approximately 11.2% lower than standard interline tickets.

<sup>&</sup>lt;sup>26</sup> The Parties suggest this estimate of fare savings from reduced double marginalisation, which is based on applying the results of the Brueckner, Lee and Singer (2011) study, is highly conservative because unlike United, Continental only recently joined the Star Alliance (October 27, 2009), and therefore during the year ending 2010-Q3, there were very few Continental-ANA codeshare or interline passengers.

Based on the analysis of U.S. DOT international survey data for year ending 2010-Q3, approximately 1,200 interline and codeshare passengers travelled on ANA/United-Continental between Singapore and Houston, paying an average of \$1,888 one way. As shown in the Brueckner, Lee and Singer study, the elimination of the double marginalisation inefficiencies that remain in these codeshare and interline tickets would reduced the average fare by 11% resulting in a \$210 one-way fare saving under the JV Agreement. The Parties say that based on the results of the study, fare savings from the elimination of double marginalisation on Singapore-Houston alone would benefit passengers by more than [**\***].

empirical literature<sup>27</sup> and natural experiments<sup>28</sup> involving similar joint ventures. According to the Parties, the JV agreement is expected to increase the volume of traffic by 66,000 onboard passengers annually.<sup>29</sup>

69. The Parties set out that they expect to add flights on transpacific routes to meet this additional demand.<sup>30</sup> Furthermore, the Parties envisage capacity increases by upgauging aircraft on some transpacific routes.<sup>31</sup> These new transpacific routes will allow new service options for customers travelling to and from Singapore as well.

#### Maintenance and expansion of non-stop service

70. The Parties claim that the JV agreement will help the Parties shoulder the costs associated with providing an international air service, enabling them to maintain and, over time, expand their non-stop services on international routes. Further, the increase in demand arising from the reduction of fares (as a result of reduction of double marginalisation and other efficiencies) will support the introduction of new routes with direct services or new flights on existing non-stop routes. The Parties expect the network benefits to justify the introduction of further services in the future.

#### Expanded online network

- 71. Under the JV agreement, the Parties submit that they will be able to expand their immunised online network significantly by adding [≫] new Asian points to Continental/United's current immunised alliance network, and a total of [≫] unique U.S. airports that ANA does not currently serve.
- 72. The Parties cite economic literature on alliances, which has found that alliance members take several measures to improve convenience for connecting

 <sup>&</sup>lt;sup>27</sup> Whalen (2007) finds that output from immunised alliances is 52-88% higher than traditional interline services, whereas for traditional code-sharing the output is 22-44% higher.
 <sup>28</sup> Service the service of the servic

<sup>&</sup>lt;sup>28</sup> Specifically, the Parties submit that alliance partners that generate greater connectivity (such as Northwest/KLM, who have enjoyed a metal neutral joint venture since the 1990s and therefore generate substantial numbers of connections over their hubs) also offer far more capacity on hub-to-hub routes than other carriers in order to support the new, higher levels of flow traffic. The Parties cite the U.S. Department Of Transportation, Office Of The Secretary, International Aviation Developments, Transatlantic Deregulation, The Alliance Network Effect (Second Report) (2000), available at http://ostpxweb.dot.gov/aviation/Data/transatlantdereg.pdf.

<sup>&</sup>lt;sup>29</sup> See ANA, Continental and United, 'Pacific Joint Venture: Traffic and Revenue Forecast (Response to Interrogatory #2), prepared for the purposes of DOT ATI application (UA000839-UA000840)..

<sup>&</sup>lt;sup>30</sup> For example, [**X**] as well as better connections for those routes since customers can fly either on United-

ANA or ANA-ANA scheduled flights, doubling the chances of such customers finding available flights.

<sup>&</sup>lt;sup>31</sup> Joint application of ANA, Continental Airlines and United Air Lines before the Department of Transportation, December 23 2009, Appendix B, p. 4.

passengers. In particular, they co-locate in airports, reducing the distance and time passengers need to catch their connecting flights and/or to retrieve their baggage and they may retime schedules to improve connection possibilities.<sup>32</sup>

- 73. In addition, the Parties submit that after the formation of the joint venture, passengers flying from Asia on transpacific routes will be able to connect 'online' to an additional [26] airports served by Continental or United ([26] U.S. and [26] international airports). Moreover passengers flying from one of these [26] airports via a transpacific route to Asia will be able to connect 'online' to an additional [26] Asian airports served by ANA.<sup>33</sup> The Parties submit this generates in total [26] new O&D pairs between U.S. or other international airports and Asian airports on which passengers can fly 'online' (metal-neutral online connections).
- 74. In relation to Figure 2 in Appendix 3, the Parties point out that a substantial volume of passengers can be expected to benefit from these new 'metal-neutral' routes and state that 7.5 million passengers fly from or to one of the [≫] Continental or United unique U.S. airports from Asia annually. The [≫] Continental or United unique international airports account for a combined total of 3.4 million passengers to/from Asia annually. Finally, there are annually 700,000 passengers flying from or to one of the ANA's [≫] unique Asian airports to/from the U.S.<sup>34</sup>
- 75. The Parties further submit that 30 new Singapore O&Ds are expected to be created by the implementation of the JV agreement (refer to **Appendix 1** below). These 30 O&Ds represent city pairs involving Singapore that—because of the JV agreement—become "feasible" for the Parties to serve as an "online" city pair based on the passenger modeling that the Parties use to forecast traffic in the ordinary course of business.<sup>35</sup> The Parties further note that it is possible that additional Singapore O&Ds will be created because of the elimination of double marginalisation and the significantly lower fares that will follow.

<sup>&</sup>lt;sup>32</sup> See, e.g., Brueckner and Whalen (2000).

<sup>&</sup>lt;sup>33</sup> See Exhibit JA-2 of the ATI application, p.3.

<sup>&</sup>lt;sup>34</sup> *Ibid.*, p.1.

<sup>&</sup>lt;sup>35</sup> Feasible city pairs are those that can be created using the current schedules of the Parties subject to certain constraints such as minimum connection times, maximum layover times, and excess circuity and that have positive projected demand.

- 76. Additionally, the Parties submit that seven Singapore O&Ds will benefit from reduced stops and travel times as a result of the JV agreement (refer to **Appendix 2**).
- 77. The Parties therefore submit that Singapore residents, as well as passengers travelling to and from Singapore will benefit from the expanded online networks which create greater choice of schedules and more convenient flight connections.

### Improved quality of online connecting services

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- 78. The Parties submit that the coordination framework provided by the JV agreement will allow carriers to integrate their network operations and service offerings more thoroughly, allowing for a superior coordination of schedules and route planning, including:
  - (i) upgrading multi-segment city pairs to one- or two-stop services;
  - (ii) offering travellers a wider choice among alternative online connective points (i.e., a wider range of paths between point of origin and destination from which to choose); and
  - (iii) reducing travel times for trips between over 280 connecting city pairs.
- 79. The Parties suggest that the recent American Airlines/British Airways transatlantic JV provides a natural experiment to demonstrate the benefits of metal neutrality on flight scheduling.<sup>36</sup> The Parties submit that Singapore travellers will realise similar scheduling benefits and improved connectivity from the JV agreement which will will contribute towards Singapore achieving and maintaining its air hub status through improved connectivity as well as bring about other flow-through economic benefits to related industries. [≫].
- 80. The Parties also argue that Singapore passengers will not only benefit from improved scheduling on the "spoke" flight between [≫], but also from more convenient scheduling on transpacific gateway-to-gateway segments, [≫].
- 81. Given the above, following the implementation of the Parties' JV agreement, passengers originating in Singapore are also likely to benefit from a more optimised schedule, providing an additional connecting option to LAX and the multiple destinations United serves beyond its Los Angeles hub.

<sup>&</sup>lt;sup>36</sup> The **one**world transatlantic JV also includes Iberia.

#### Expansion of fare products

- 82. The Parties submit that the JV agreement will allow the Parties to:
  - a. offer consumers a greater variety of joint fare products (including discounted fare products, joint tour products, convention products, and group travel products);
  - b. increase the number of consumers to whom these joint fare products are made available; and
  - c. offer consumers discounted fares over a broader network of services.
- 83. In addition to the above, the Parties will be able to offer their passengers the following options for all classes on a [≫] trip:
  - a. United/Continental metal on both legs;
  - b. ANA metal on both legs;
  - c. United/Continental connecting to ANA; or
  - d. ANA connecting to United/Continental.
- 84. The majority of passengers will have four effective scheduling options, instead of two, for their outbound and return Singapore flights since the Parties will be indifferent between which of the four options a particular passenger travelled on. Thus, the Parties would be incentivised to provide the best possible routing at the best possible fare to win the passenger's business. The Parties will offer the same options on the [≫] return.
- 85. The Parties argue that Singapore residents, as well as passengers travelling to and from Singapore, are expected to benefit from this expansion of fare products available and the discounted fares.

#### **Cooperation on FFPs**

86. The Parties submit that they intend to fully cooperate in relation to their FFPs (above the level of cooperation currently held via the bilateral code-share relationship) allowing consumers to accrue and redeem mileage on flights operated by any of the Parties, including base miles, bonus miles, elite qualifying miles, and elite bonus miles in a 'metal-neutral' way across the JV agreement carriers. The Parties also intend to develop joint incentive programs for specific categories of frequent flyers. Passengers who already

benefit from reciprocal FFPs<sup>37</sup> on Star Alliance flights will have reciprocal FFP benefits that go beyond those linked to Star Alliance membership.

87. The Parties point out that, compared to lesser forms of integration, this enhanced FFP reciprocity will allow passengers, including Singapore residents, to earn more miles on routes that are not served by the airline with which they have an FFP membership. On other routes, the enhanced FFP reciprocity will further reduce the trade-off they face between saving time (and money) and earning miles.

#### Better offerings for corporate customers

- 88. The Parties submit that the JV agreement will enable the Parties to participate fully with each other in corporate travel agreements, expand the scope of their joint offerings to corporate clients, and offer smaller corporate accounts a comprehensive, fully-integrated price/service proposal. Other benefits to corporate customers in Singapore include:
  - a. discounted travel over a wider carrier network;
  - b. increased ability to qualify for volume discounts;
  - c. simplified management (i.e. one contract and one point of contact for administration);
  - d. harmonised discounts that are easy to implement and communicate to staff; and
  - e. specialised reports that will enable the customer to manage corporate travel more efficiently and qualify for additional discounts.

#### **Operating** Efficiencies

#### Lower unit operating costs arising from economies of density

89. The Parties argue that code-sharing, as envisaged by the JV agreement, involves revenue pooling and will result in significant incremental traffic for the Parties, allowing them to achieve economies of density superior to those

<sup>&</sup>lt;sup>37</sup> A FFP reciprocity agreement basically means that airlines mutually recognise each others' FFPs. For example, airlines A and B (i) recognise miles that members of their respective FFP earn on flights operated by the partner airline; and (ii) grant members of the respective partner airline's FFP the same benefits they grant their own frequent flyers. A FFP reciprocity agreement increases the number of routes on which the passengers of partner airlines can collect air miles. This puts consumers in a better position and hence increases their willingness to travel with the partner airlines.

achieved by carriers that code-share on a non-immunised basis and achieve lower unit operating costs.

- 90. The Parties submit that load-factor increase and optimisation of aircraft usage exert downward pressure on average variable and total costs per passenger. Greater frequencies imply capacity increases. Both the cost and the capacity effects potentially lead to price decreases and increased consumer welfare.<sup>38</sup>
- 91. The Parties submit that there are several reasons (i.e. the substantial reduction in double marginalisation, increased number of connections etc.) that may lead to higher passenger volumes under the JV agreement. This increase in traffic allows the airlines to:
  - a. Carry more passengers per flight, increasing their load factors and hence exploiting the economies of scale embedded in the airline industry;
  - b. Optimise aircraft deployment, using aircraft more efficiently in light of flight frequency and passenger demand, as well as using ground facilities and personnel more intensively; and
  - c. Increase frequencies and hence capacity.

#### The joint venture is likely to increase capacity and load factors

- 92. The Parties submit that the JV agreement is likely to have a positive effect on carriers' capacities and load factors. This claim is based on the experience drawn from the Atlantic Plus agreement in 2003 between United and Lufthansa in relation to transatlantic services which the Parties suggest allowed United and Lufthansa to achieve additional economies of density beyond what might have achieved through lesser forms of cooperation.
- 93. The Parties point out that in its Final Order approving the joint application by several Star Alliance carriers, the DOT agreed "with the Joint Applicants that, based on the experience of United and Lufthansa within Atlantic Plus, substantial public benefits are likely to result from immunized cooperation. For example, the implementation of Atlantic Plus provided United and Lufthansa with the necessary economic incentives to invest in joint facilities, resulting in reduced costs and enhancements to the consumer experience."<sup>39</sup>

<sup>&</sup>lt;sup>38</sup> 'With economies of traffic density, however, [...] traffic gain reduces the cost per passenger, yielding [...] downward pressure on fares.' See Brueckner (2003), pp.105-118; Footnote 2.

<sup>&</sup>lt;sup>39</sup> Final Order, Joint Application of Air Canada, The Austrian Group, British Midland Airways Ltd., Continental Airlines, Inc., Deutsche Lufthansa AG, Polskie Linie Lotniecze LOT S.A., Scandinavian Airlines System, Swiss International Air Lines Ltd., TAP Air Portugal, United Air Lines, Inc. to Amend Order 2007-2-16 under 49 24

94. The Parties refer to the impact of the Atlantic Plus joint venture on United and Lufthansa's capacity and load factors and submit that the cooperation (and in particular the Atlantic Plus agreement) has allowed United and Lufthansa to embark on significant capacity expansion, while maintaining or even increasing load factors at commercially viable levels. In turn, the increase in demand has enabled the parties to offer more capacity on the Germany-U.S. routes.

#### The joint venture is likely to allow for cost-reducing aircraft-type reconfigurations

95. The Parties submit that the increase in load factor is likely to reduce overall costs, as the expansion of capacity can allow airlines to reconfigure their aircraft. Higher passenger volumes are thus expected to materialise under the JV agreement. The Parties also submit that the reconfiguration of the types of aircraft used to serve a schedule on a given route generally leads to lower average variable costs, which results in the potential for price reductions.

## Likely capacity increases generate further economies of density

- 96. To the extent that capacity increases, the Parties submit that the first-order impact of this is to exert downward pressure on prices for Singapore residents, as well as passengers travelling to and from Singapore. The Parties observe that under the analysis of Atlantic Plus referred to above, Lufthansa and United increased capacity faster than the North Atlantic average. Likewise, the Parties are intending to increase capacity on the transpacific routes. The Parties suggest that this in itself will have a depressing impact on prices.
- 97. Further, the Parties argue that any likely increase in capacity may be driven by the increase in demand from connecting passengers, but it will also benefit 'non-stop' passengers. Airline capacity is lumpy, so that capacity can typically only be increased in large increments or not at all. Airlines then adjust pricing to maintain high load factors. Such large increases in capacity have a depressing impact on fares, including those for 'non-stop' passengers.
- 98. In addition, the Parties submit airlines normally measure profitability on a segment basis rather than by O&D. If yields are higher for 'non-stop' passengers, then airlines have an incentive to sell more such seats, rather than use the capacity for lower yielding connecting passengers. Again, this will tend to depress fares for 'local' passengers.

U.S.C. §§ 41308 and 41309 so as to Approve and Confer Antitrust Immunity, Docket OST-2008-0234, page 3. (July 10, 2009).

#### Cost savings

- 99. The Parties submit that there will be cost savings arising from
  - a. integrated sales, marketing, promotion, and distribution functions;
  - b. cooperation in pricing and inventory/revenue management;
  - c. sharing of airport operations and facilities;
  - d. joint scheduling, route, and capacity planning;
  - e. streamlining of FFP and airport lounge networks;
  - f. cooperation in procurement; and
  - g. harmonisation of IT and accounting systems.

## 4.4.1.2 Not imposing restrictions which are not indispensible to the attainment of those objectives

100. The Parties submit that the above mentioned benefits cannot be achieved from other forms of cooperation such as non-immunised codesharing or interlining agreements.

#### Joint pricing

101. To achieve the benefits listed above, the Parties submit that they must be "metal neutral," or become indifferent as to which Party transports any particular passenger. Joint pricing is essential to achieve metal neutrality and helps to ensure that each Party contributes to the revenue pool in an equitable manner, preventing any Party from taking independent pricing actions that could disrupt the cooperation under the JV agreement. Joint pricing also allows the Parties to jointly develop innovative fare products as part of the JV agreement.

#### Carve outs and consumer benefits

102. The Parties submit that any carve-out restriction on Singapore for either the local SIN-Tokyo route or for both the local SIN-Tokyo and the connecting Transpacific SIN-Tokyo-U.S. routes will impede significantly or preclude entirely the achievement of customer benefits that the JV will otherwise bring to Singapore.

103. For the reasons set out below, the Parties submit that any carve-out restriction will result in the Parties remaining full competitors on any affected Singapore O&Ds, with significant limitations on the customer benefits generated.

## Carve outs are technically feasible but commercially complex, and not contractually provided for under the JV agreement.

- 104. On the request of CCS, the Parties made further submissions about whether either or both SIN-Tokyo and SIN-Transpacific routes could be carved out of the JV agreement.
- 105. The Parties submit that carve-outs for [%].
- 106. The Parties submit that, although it is technically possible to carve these routes out of the JV agreement, the Parties stress that the key benefits of the JV agreement to any Singapore passengers will almost entirely be lost.

### JV agreement is indispensable for accrual of benefits

- 107. The Parties submit that the double marginalisation savings identified at paragraphs 66 68 above, are calculated on the assumption that the JV will achieve the level of pricing efficiency realised by the full internalisation of the double marginalisation externality. The Parties claim that if Singapore transpacific routes were carved out of the JV agreement, they will be unable to realise these benefits because the Parties will be unable to mimic the pricing decision that can be made by a single carrier.
- 108. The Parties will be unable to coordinate pricing on any portion of a SIN-U.S. itinerary. Therefore, a passenger buying a SIN-U.S. itinerary will effectively be purchasing a separately priced SIN-NRT leg and separately priced JV-coordinated leg for NRT-U.S., which, by definition, will encounter a double markup on Singapore-Transpacific O&Ds.
- 109. The parties also submit that any carve out restriction on Singapore would lead to:
  - a. fewer new passengers via more efficient pricing because of the inability to eliminate double marginalization;
  - b. fewer travel choices due to resultant limits on fare combinability;
  - c. elimination or reduction of benefits from schedule and gauge optimisation for consumers; and

d. limited frequent flier benefits for Star Alliance customers in Singapore.

## <u>Consumers will not benefit from JV capacity increases or from stability and</u> <u>capacity maintenance\_under difficult industry conditions</u>

- 110. The Parties submit that any benefits from increased capacity will be substantially reduced (and potentially eliminated altogether) in a full Singapore-Transpacific carve out scenario. This is because increased capacity arising from the JV is a direct result of the increase in passenger demand, which in turn results from lower fares and more convenient scheduling. However, under the JV agreement, the Parties will be incentivised to increase capacity on spoke routes that experience the greatest increase in flow passengers because of metal neutral pricing and the elimination of double marginalisation. For example, if SIN-NRT is excluded from the JV agreement, it will end up with less stimulated flow traffic than that at other spokes enjoying full metal neutrality and joint pricing  $[\aleph]$ . which in turn will mean that the Parties will be less incentivisied to increase capacity on SIN-NRT compared to other behind NRT routes.
- 111. Furthermore, given industry variable such as the current high costs of jet fuel and natural disasters such as the recent earthquake in Japan, carving out Singapore from the JV agreement may in fact result in other adverse implications for capacity on the Singapore routes. Since high fuel prices put enormous pressure on airline profit margins, it is critical for the Parties to be able to realise 100% of the benfits from reduced double marginalisation, fare combinality and schedule coordination to grow and maintain services.
- In difficult operating environments, the JV-stimulated flow traffic can affect significantly the Parties' ability not only to increase service, but to maintain it. [≫].

#### Consumers will not benefit from joint product sales and convenience

113. The Parties submit that in a metal neutral JV, parties generally cooperate to present a single sales contract to corportate and travel agency customers. In a SIN-Tokyo carve-out scenerio, the Parties will have to offer these types of Singapore customers three separate contracts: separate United Continental and ANA contracts for Singapore-Tokyo travel; and a joint contract for Transpacific travel. In a SIN-Transpacific carve-out scenario, the Parties will similarly have to offer multiple contracts to Singapore customers, only in this context would they be unable to offer a joint contract involving Singapore O&D travel on affected routes.

114. The Parties submit that corporate and travel agency customers generally prefer a single contract to multiple contracts, and that stand-alone individual agreements are unattractive to customers and are often too burdensome to develop and administer.

## 4.4.1.3 Not affording the possibility of eliminating competition in respect of a substantial part of the products in question

- 115. The Parties submit that competition issues relating to airlines are typically considered on a city-pair basis. The Parties' initial submissions focused on SIN-HKG, SIN-NRT and SIN-HND. The Parties then provided further submissions on transpacific O&D city-pairs between Singapore and cities in Americas. In particular, the Singapore-Washington and Singapore Chicago O&D markets.<sup>40</sup>
- 116. The Parties submit that for long-haul connecting services such as the transpacific route, prices are disciplined by a multiple of carriers, who compete over a variety of hubs. This is the case even for carriers with relatively small passenger shares, since those carriers can expand service in response to a price increase.

#### SIN-NRT route specific arguments

#### Singapore-Tokyo O&D market

- 117. CCS' assessment of the Singapore-Tokyo O&D market will focus on the SIN-NRT O&D route since the SIN-HND intra-asia O&D route is *not* a part of the JV agreement.
- 118. In respect of the SIN-NRT route, the Parties submit that Continental and United code-share on ANA's flights while Continental and ANA code-share on United's flights. Prior to October 2010, ANA had 19% of the total share of seats and 24% of the total share of passengers. United had 11% of the total share of seats and 4% of the total share of passengers.<sup>41</sup> In this regard, the Parties had a combined market share of 30% (seats) and 28% (passengers).
- 119. The Parties similarly face strong competition from competitors such as Japan Airlines (market share of 22% (seats) and 25% (passengers)) and Singapore Airlines (market share of 36% (seats) and 37% (passengers)). Delta Air Lines

<sup>&</sup>lt;sup>40</sup> Due to CCS' definition of the relevant market, this section has only focused on the Parties' submissions in relation to SIN-NRT and and Transpacific O&D city-pairs between Singapore and cities in America.

<sup>&</sup>lt;sup>41</sup> Percentages as of September 2010. Additional Information provided show that over the last year, there has not been a significant change to the relevant percentages.

also has a significant amount of capacity on this route (12% seats) and a sizeable market share (7% passengers). A review of the market share figures shows that Singapore Airlines is aggressively gaining market share at the expense of ANA. Given the presence of credible competitors on the SIN-NRT route, the Parties similarly submit that the implementation of the JV agreement will not result in the elimination of competition in respect of a substantial part of the SIN-NRT route.

- 120. Additionally, the Parties consider that competition for passengers travelling between Singapore and Tokyo may in fact be intensified due to the recent start of international flight operations at Haneda's Tokyo International Airport which serves as a good alternative to Narita International Airport for travellers between Singapore and Tokyo as it is well connected by domestic flights and is nearer to Tokyo's business district. Indeed, together, Singapore Airlines and Japan Airlines operate the majority of flights between Singapore and Tokyo, having market shares of 46% (seats) and 50% (passengers), and 16% (seats) and 17% (passengers) respectively, while the Parties have a combined market share of 30% (seats) and 25% (passengers).
- 121. The Parties submit that the net effect of the recent addition of the SIN-HND route increases the market capacity and frequency by 33% and 38% respectively for flights serving Singapore and Tokyo, of which more than 70% of capacity belongs to the Parties' competitors.
- 122. In addition, the Parties submit that airline landing and take-off slots in Singapore Changi Airport and Hong Kong International Airport are accessible to airlines that are interested to operate out of these airports. Further, Singapore's liberal aviation policy of open skies also helps to lower barriers to entry/expansion of other airlines seeking to operate on these two routes. The Parties submit that it will be increasingly easier for carriers to fly these two routes between Singapore and Tokyo, although it is important to note that the ability for carriers to operate on these routes and/or add additional flights will depend on the air rights agreements between Singapore, Japan and the carriers' home countries. Following talks between Singapore and Japan in January 2011, it was decided that direct flights between NRT and SIN would be fully liberalised when the slots at NRT have been expanded to 270,000; this is expected to happen for the 2013 Summer Schedule. Furthermore, there is a planned gradual increase in annual slots from 220,000 to 300,000 at Narita International Airport over the next four years. Additionally, slots for SIN-TPE-NRT (passenger) and SIN-HKG-NRT (cargo) were increased from five flights per week to seven flights per week.

- 123. The Parties submit that carriers are able to obtain new slots at Changi and Narita Airports, notwithstanding the fact that some slots are more readily available than others. While slot trades between carriers are not permitted at Changi Airport, slots are available at non-peak times, and the Parties have historically been able to obtain slots for all desired new times at Changi Airport. At Narita, slot trades are permitted, and new lots are available at certain times. More slots are expected to be made available due to the extension of a runway and taxiway. The Parties expect Narita to become essentially unconstrained by 2014.
- 124. Furthermore, the Parties submit that the SIN-NRT O&D passengers (i.e., those who do not continue on a transpacific route) will benefit from the cost savings brought about by the more efficient production of air services as a result of the JV agreement (e.g., economies of density, joint procurement and better utilization of airport facilities and ground personnel),<sup>42</sup> which will translate into more competitive air fares. Similarly, greater traffic flow over the NRT hub will incentivize the Parties to invest in airport facilities, such as their lounges, which would benefit SIN-NRT passengers. Service enhancements at NRT thus will benefit SIN-NRT passengers.
- 125. The Parties suggest that as the Parties realise efficiencies across their networks, they will maintain more capacity at Tokyo (and other hubs), than they would offer absent the JV agreement. In some instances, traffic growth resulting from the JV agreement may provide the incremental traffic needed to put certain routes over the "tipping point" for the Parties to launch first-time non-stop service. [3%].
- 126. Finally, because a key feature of the JV agreement is metal neutrality, the Parties submit that they will be incentivized to optimize the scheduling of their SIN-NRT flights, providing better service options for local passengers. Although the post-joint venture schedules have not yet been optimized, the Parties submit that there is ample evidence from prior joint ventures illustrating that added schedule convenience occurs when carriers can coordinate schedules in a metal neutral way. In addition, other competitors will be spurred into responding with improved product offerings.
- 127. Therefore, the Parties submit that competition will not be eliminated on the Singapore-Tokyo (SIN-NRT and SIN-HND) route, even after the JV agreement is implemented.

<sup>&</sup>lt;sup>42</sup> See LECG Report attached as Annex 5 to Form 1.

#### Chicago-Washington routes

#### Singapore-Washington and Singapore-Chicago

- 128. The Parties have a combined post-JV agreement market share for the Singapore-Washington O&D market of 72.2%, an incremental change of 24%. This market share takes into account routes from Singapore to Washington via Dulles International Airport and Regan International Airport. The Parties also have a combined post-JV agreement market share for the Singapore-Chicago O&D market of 70.3%, an incremental change of 13%. The market shares for both routes take into account transpacific routes (transit in Asia) and transatlantic routes (transit in Europe).
- 129. Given the high market shares of the Parties on both these routes, CCS requested further information relating to existing competition and barriers to entry and expansion for these routes.
- 130. The Parties claim that their high post-JV agreement market shares will not allow them to have any form of market power or pricing power, given that there is an abundance of competitive alternatives for both routes. The Parties provide evidence to show that there are a multitude of options on many other competing carriers for both Singapore-Washington and Singapore-Chicago O&D routes, via various transit points such as Dubai or Korea, and state that their competitors on these routes are well-established airlines which will continue to compete aggressively with the Parties. The Parties point out that CCS' recent positive decision<sup>43</sup> to the joint venture between American and JAL will ensure that this joint venture will serve as a strong competitor to the Parties along these two routes. In particular, the Parties' state that they expect American/ JAL's share between Singapore-Chicago to increase following the implementation of their joint venture as Chicago is the hub for American Airlines. Furthermore, the Parties argue that new entry for the Singapore-Chicago/ Washington route is likely, as there is the prospect for new one-stop or enhanced service to both cities from Singapore by well-funded and growing carriers from the Middle East such as Emirates and Etihad, with transit points in either Dubai or Abu Dhabi. Moreover, because of the longhaul nature of these O&Ds, connecting over Dubai or Abu Dhabi adds little distance vis-à-vis a connection over NRT.<sup>44</sup> These competing online, interline, codeshare, and/or alliance itineraries can be easily found and

<sup>&</sup>lt;sup>43</sup> Notification for Decision by Japan Airlines International Co Ltd and American Airlines Inc, CCS case number 400-008-10

<sup>&</sup>lt;sup>44</sup> For example, SIN-NRT-IAD is 10,077 miles while SIN-DXB-IAD is 10,702 miles.

compared using popular Internet travel websites; in certain cases they require one connection, and in others multiple stops.

- 131. The Parties also point out that the JV agreement will help to reduce prices and increase service offerings along these two routes by other non-JV carriers, as the benefits from the reduction of double marginalization and increased capacity will spill over to other non-JV carriers that codeshare or interline with the Parties. These non-JV carriers will have access to any new flights or greater capacity to combine with their own services under their existing codeshare or interlining agreements with the Parties.
- 132. In relation to the Chicago and Washington, the Parties' submit that their collective market shares of the Singapore-Washington and Singapore-Chicago O&D markets are similar to Delta Airlines' individual share between Minneapolis and Singapore (75.5%), and only slightly higher than Singapore Airlines' share on New York-Singapore (63%). In addition, the Parties submit that the Chicago and Washington O&D routes both involve United and Continental hubs. The Parties submit that hub carriers may have higher average shares on routes to and from their hubs because they offer a broader range of services (i.e., more destinations, better flight frequencies and access to lounges, etc.) from their hub airports than do non-hub carriers. These improved options are a key component of hub-and-spoke carrier services, and are not unique to United Continental or ANA.
- 4.4.2 CCS' assessment<sup>45</sup>

## 4.4.2.1 Contribution to improving the production or distribution of goods, or to promoting technical or economic progress

133. CCS notes from the DOT Show Cause Order<sup>46</sup>, the DOT found that, in the context of this JV agreement, the claimed benefits were likely to accrue to consumers and the likelihood that the benefits will be realised is supported by both the DOT's historical experience reviewing antitrust immunity cases and several independent third party studies of immunised alliances. The DOT also referred to studies which show that immunised alliances are associated with higher passenger volumes and lower fares through reduction of double marginalisation. The DOT also observed that product quality improvements, expanded frequent flyer coordination and other benefits arise from immunized alliances in the transatlantic market, and saw no fundamental

<sup>&</sup>lt;sup>45</sup> See CCS Guidelines on the section 34 prohibition, Annex C.

<sup>&</sup>lt;sup>46</sup> U.S. DOT Show Cause Order Docket DOT-OST-2010-0059, issued 6 Oct 2010.

reason why these benefits would not also be achieved in the transpacific market as a result of granting immunity to the Parties.

- 134. CCS notes that the EC and the DOT also recognised that the following potential benefits would be generated under a metal neutral integrated JV in the Joint Alliance Report: lower costs and increased capacity through increased density; reduction of double marginalization; fare combinability; better schedules; more seamless customer experience; and frequent flyer program integration.<sup>47</sup>
- 135. In terms of CCS' analysis, CCS is of the view that the efficiencies claimed by the parties above are generally objective in nature. CCS agrees that the JV agreement could potentially lead to optimized scheduling options for customers, reduction in fares, and increases in capacity. The Parties substantiate their claims on efficiencies with evidence relating to the likelihood that these efficiencies will be realised, including:
  - a. specific examples of new Singapore O&Ds routes to be created;
  - b. specific examples of the reduction in transit and overall times and improved connectivity, and enhanced flight scheduling on current transpacific O&D flights;
  - c. empirical and theoretical studies; and
  - d. natural experiments of benefits arising from other similar airline JV agreements.
- 136. In evaluating the first criteria of the NEB test, it is necessary for the efficiencies claimed to be enough to outweigh the anti-competitive effects of the agreement.<sup>48</sup> CCS is of the view that the efficiencies generated by the JV agreement are likely to be substantial, and on balance, the JV agreement will improve the production and distribution of air passenger transport in Singapore.

## 4.4.2.2 Not imposing restrictions which are not indispensable to the attainment of these objectives

137. Under this criterion, CCS considers the indispensability of both the JV agreement as a whole and the individual restrictions, particularly the

<sup>&</sup>lt;sup>47</sup> Transatlantic Airline Alliances: Competitive Issues and Regulatory Approaches—A report by the European

Commission and the United States Department of Transportation, 16 November 2010. ("Joint Alliance Report") <sup>48</sup> Paragraph 10.4 of CCS Guidelines on the Section 34 Prohibition.

coordination of prices. The JV agreement or the individual restrictions are indispensable if their absence would eliminate or significantly reduce the efficiencies, or make them much less likely to materialise. The JV agreement/restrictions will not be regarded as indispensable if there are other economically practical and less restrictive means of achieving the efficiencies, or if the Parties are capable of achieving efficiencies on their own.<sup>49</sup>

- 138. CCS is of the view that some of the efficiencies the Parties claim may be achieved through code-sharing arrangements. For example, an expansion in the scope of current code-sharing arrangements between the Parties alone may potentially also expand the online network for Singapore consumers and reap economies of density.
- 139. However, in this case, CCS agrees with the Parties that more integrated cooperation, beyond mere code-sharing, will bring about significantly greater efficiencies for Singapore passengers, specifically in relation to better schedules, fare combinability, and FFP integration.

### **Better schedules**

- 140. In relation to scheduling, CCS notes that the Joint Alliance Report concludes that carriers in a deeper cooperation arrangement involving revenue sharing and other forms of integration may develop the incentive to schedule flights based on optimal traffic flows across the entire network. This can greatly increase the options available to consumers by spreading out of flights throughout the day instead of clustering of flights during peak demand timings.
- 141. CCS is of the view that the JV agreement is likely to provide the Parties with greater incentives, compared to a code-sharing arrangement, to coordinate their schedules to provide for improved connection times for Singapore passengers as well as to spread out their schedules throughout the day (rather than only at "peak" demand timing) to offer local as well as connecting passengers, including Singapore passengers more options.

#### Increase in capacity

142. In relation to the increase in capacity on transpacific routes, CCS agrees with the Parties that the JV agreement will strengthen the Parties' ability to maintain and expand their non-stop services on transpacific routes,

<sup>&</sup>lt;sup>49</sup> CCS Guidelines on the section 34 prohibition, Annex C, Paragraph 10.9

particularly given the high cost of providing international air service. Through the JV agreement, the Parties will gain feeder traffic from their expanded network, thereby allowing them to grow capacity on their transpacific flights.

## Fare combinability

143. In relation to fare combinability, the Parties submit that commercial and legal realities prevent airlines from offering combinable fares absent metal neutrality. In their Joint Alliance Report, the EC and the DOT note that fare combinability is unlikely to be achieved without a metal neutral agreement.<sup>50</sup> CCS is of the view that the Parties will not have the incentive to make the necessary changes to their individual sales process because outside the JV agreement, they will only be focused on selling their own flights.

## Joint pricing

- 144. In relation to the issue of whether joint-pricing on the SIN-Tokyo and SIN-US O&D city-pair markets is indispensible, CCS considered whether efficiencies that flow from the agreement will be eliminated or significantly reduced, or less likely to materialise<sup>51</sup> if the joint-pricing component is taken out. CCS accepts the Parties arguments that joint pricing is essential to achieve metal neutrality and that in turn metal neutrality is required to achieve the key benefits of the JV agreement. Pricing is not a stand-alone functionality it is central to the various activities that the alliance needs to perform in order to be effective. Without joint-pricing and revenue-sharing in respect of Singapore O&D markets, the Parties will not internalize their respective commercial interests.
- 145. Overall, CCS is of the view that the integrated cooperation between the Parties, including joint-pricing and revenue-sharing for O&D city pair markets between Singapore, Japan and the US, is necessary to attain the additional efficiencies beyond those that can be achieved through mere code-share arrangements. In attaining these efficiencies, the joint-pricing element is not isolatable from other aspects of the JV agreement.

## Carve out of Singapore O&D routes

146. Given the Parties' submission that a Singapore carve-out is not contractually provided for under the JV agreement, and commercially complex to

<sup>&</sup>lt;sup>50</sup> Ibid.

<sup>&</sup>lt;sup>51</sup> CCS Guidelines on the section 34 prohibition, Annex C, Paragraph 10.10.

implement, CCS is of the view that a carve-out will impede significantly or preclude entirely the efficiencies that the JV agreement will otherwise bring to Singapore. For instance, when the Parties optimize their flight schedules, the connection times and non-peak demand of Singapore passengers would not be taken into account. Fares for Singapore routes would not be as combinable as well.

### **Conclusion**

147. On account of the above, CCS is satisfied that the JV agreement will not impose restrictions which are not indispensable to the attainment of the benefits that the Parties submit would accrue.

## 4.4.2.3 Not affording the possibility of eliminating competition in respect of a substantial part of the products in question

148. Under this criterion, CCS takes into account the degree of competition prior to the JV agreement, and also the reduction in competition that the JV agreement brings about. Accordingly, in a market where competition is already relatively weak, the latter factor may be more important.

### Specific routes

149. CCS considers that the JV agreement does not eliminate competition in respect of a substantial part of the products in question. However, before reaching this conclusion, CCS considered that it was necessary to assess three specific O&D city pairs—Singapore-Tokyo, Singapore-Washington and Singapore-Chicago—where the Parties' services overlap and their combined market shares are high.

#### Singapore-Tokyo O&D market

- 150. United and ANA operate metal on this route. The Parties' combined market share is 28.2% and the incremental market shares for this O&D is 4.2%.
- 151. Given the existence of significant competition along this route, low incremental market shares, evidence of dynamic market shares and in the context of the airline industry, relatively low barriers to entry and expansion, CCS is of the view that there will not be a substantial reduction or elimination of competition in respect to this route.

#### Singapore-Chicago and Singapore-Washington routes

- 152. United and ANA operate metal on these routes via NRT. For Singapore-Washington, the Parties' combined market share is 76.9% with an incremental market share of 26.9%, and for Singapore-Chicago, the Parties' combined market share is 70.3%, with an incremental market share of 13.3%.
- 153. Due to the potentially significant incremental changes in these routes and high market shares of the Parties, CCS has also considered the importance of other potential competitive constraints for these two O&D city pairs. Given the long-haul nature of these two routes, all flights stop over at one or more intermediate points. In this regard, CCS notes that more than ten carriers currently provide services from Singapore to Chicago and Washington, via transit points in Asia, Europe and the Middle East. CCS is of the view that the competing carriers along these two routes are large and well-established airlines, such as BA, KLM and Air France, and that these competitors are able to offer a wide array of alternative flight options and competitive fares which would continue to place competitive constraints on the Parties post-JV.
- 154. Therefore, given the existence of many competitors along these routes, evidence of dynamic market shares and relatively low barriers to entry and expansion, CCS is of the view that the JV agreement will not result in a substantial reduction or elimination of competition on these routes.

#### 4.5 Conclusion on CCS' assessment

155. In conclusion, CCS takes the view that the JV agreement involves the joint determination and coordination of all commercial aspects of the Parties' transpacific operations, including pricing. Therefore, by their very nature, the JV agreement has the object of preventing, restricting and distorting competition between the parties with respect to their business on the Singapore O&D city-pair markets. However, CCS considers that the Parties have established that the JV agreement brings about a net economic benefit.

## 5 CCS' DECISION ON THE PARTIES' APPLICATION

- 156. Based on the foregoing, by operation of section 35 of the Act read with paragraph 9 of the Third Schedule, CCS concludes that the Parties' JV agreement is excluded from the section 34 prohibition in the Act.
- 157. For completeness, Section 46 of the Act provides that, if CCS has determined an application under section 44 by making a decision that the agreement has

not infringed the section 34 prohibition, CCS shall take no further action with respect to the notified agreement unless:

- a. It has reasonable grounds for believing that there has been a material change of circumstance since it gave its decision; or
- b. It has reasonable grounds for suspecting that the information on which it based its decision was incomplete, false or misleading in a material particular.
- 158. To this end, factors which CCS may consider as material changes of circumstance include, but are not limited to, the following:
  - a. A reduction in the number of competing carriers in the respective point-topoint routes for the scheduled passenger air transport market;
  - b. Significant changes to the scope of revenue sharing for example to include other Singapore O&D routes;
  - c. Changes in the operations of the Parties which have a significant impact on the Singapore market; and
  - d. Changes in parties to the JV agreement.

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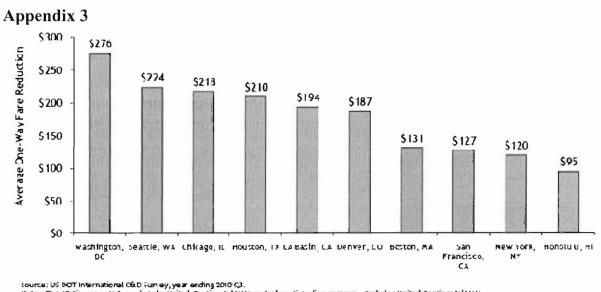
Yena Lim Chief Executive Competition Commission of Singapore

No.	Route	Name of Airport	Location
1.	[%]	[%]	[%]
2.	[≫]	[%]	[%]
3.	[%]	[※]	[%]
4.	[≫]	[%]	[%]
5.	[≫]	[≫]	[%]
6.	[≫]	[%]	[%]
7.	[※]	[%]	[%]
8.	[≫]	[%]	[%]
9.	[※]	[%]	[%]
10.	[%]	[≫]	[%]
11.	[※]	[%]	[≫]
12.	[%]	[%]	[≫]
13.	[≫]	[][]	[≫]
14.	[%]	[%]	[≫]
15.	[※]	[%]	[≫]
16.	[※]	[%]	[%]
17.	[≫]	[೫]	[≫]
18.	[%]	[%]	[≫]
19.	[೫]	[%]	[%]
20.	[※]	[≫]	[※]
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24.	[≫]	[%]	[≫]
25.	[%]	[%]	[≫]
26.	[%]	[%]	[]**]
27.	[೫]	[%]	[≫]
28.	[%]	[≫]	[≫]
29.	[※]	[≫]	[≫]
30.	[%]	[%]	[%]

## Appendix 1: Parties' submission of list of 30 new Singapore Origin & Destination routes expected to be created by the implementation of the JV agreement

# Appendix 2: Seven Singapore O&Ds will benefit from reduced stops as a result of the JV agreement

Route	Name of Airport	Location	Reduction in No. of Stops	Reduction in travel time (minutes)
[≫]	[≫]	[≫]	[≫]	[೫]
[※]	[≫]	[≫]	[≫]	[%]
[≫]	[Ж]	[≫]	[≫]	[≫]
[※]	[%]	[≫]	[≫]	[≫]
[≫]	[%]	[%]	[≫]	[≫]
[%]	[%]	[%]	[%]	[%]
[%]	[%]	[%]	[%]	[%]



Source: US DOT International OED Survey, year ending 2010 C3. Notes: Top 10 Singapore-U.S. markets by United-Continental/ANA codeshare/interline revenue. Includes United-Continental/ANA Lodeshare and United-Continental/ANA interline tickets. New York, NY Tick des Evik and United.

Figure 1: Estimated Average One-Way Fare Savings for Interline/Codeshare Passengers To/From Singapore Resulting From the Parties' JV agreement

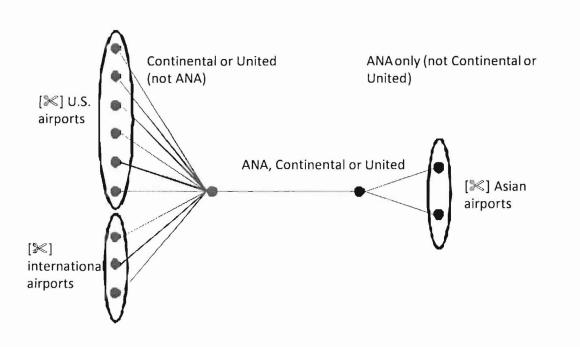


Figure 2 : Combination of networks creating new 'online' O&D pairs. Source: LECG

### Appendix 4: Academic papers cited by the Applicants in their submissions

Brueckner, J. (2003), 'International airfares in the age of alliances: The effects of codesharing and antitrust immunity', *Review of Economics and Statistics* **85**(1), 105--118.

Brueckner, J.; Lee, D. & Singer, E. (2011), 'Alliances, Codesharing, Antitrust Immunity and International Airfares: Do Previous Patterns Persist?' *Journal of Competition Law and Economics*.

Brueckner, J. & Whalen, W. (2000), 'Price Effects of International Airline Alliances, The', *Journal of Law and Economics*. **43**, 503.

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