

# COMMISSION

## COMMISSION DECISION

of 29 September 2000

**declaring a concentration to be compatible with the common market and the functioning of the EEA Agreement**

**(Case COMP/M.1879 — Boeing/Hughes)**

*(notified under document number C(2000) 2740)*

**(Only the English text is authentic)**

**(Text with EEA relevance)**

(2004/195/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57(2)(a) thereof,

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings <sup>(1)</sup>, as last amended by Regulation (EC) No 1310/97 <sup>(2)</sup>, and in particular Article 8(2) thereof,

Having regard to the Commission's decision of 26 May 2000 to initiate proceedings in this case,

Having regard to the opinion of the Advisory Committee on Concentrations <sup>(3)</sup>,

Whereas:

(2) By decision dated 26 May 2000, the Commission found that the notified operation raised serious doubts as to its compatibility with the common market and initiated proceedings pursuant to Article 6(1)(c) of the Merger Regulation and Article 57(2)(a) of the EEA Agreement.

### I. THE PARTIES

(3) Boeing is a Delaware corporation operating in the field of commercial aircraft, defence and space industries, including the production and launch of satellites. Boeing's satellite business involves primarily the manufacture of global positioning systems (GPS) navigation satellites for the United States Department of Defence. Boeing provides satellite launch services for commercial customers worldwide as well as for the United States Government through its wholly-owned Delta programme. Boeing is also a minority shareholder through a 40 % interest in another launch service provider named Sea Launch. The Sea Launch joint venture started operations in 1999.

(1) On 18 April 2000, the Commission received a notification pursuant to Article 4 of the Regulation (EEC) No 4064/89 (the Merger Regulation) by which the Boeing Company ('Boeing' or 'the notifying party') acquires control within the meaning of Article 3(1)(b) of the Merger Regulation the satellite prime contracting and equipment business of Hughes Electronics Corporation (Hughes).

(4) Hughes is a US-based subsidiary of General Motors, active in satellite-based services (including communications services and pay-TV), and satellite manufacturing. Hughes' satellite prime contracting and equipment business consists of Hughes Space and Communications Company (HSC), Spectrolab Inc. (Spectrolab) and Hughes Electron Dynamics (HED): HSC designs and manufactures communication satellites for commercial customers worldwide as well as for the US Department of Defence and NASA, while Spectrolab and HED produce components primarily for use in satellites (such as solar cells, solar panels, travelling wave tubes and batteries).

<sup>(1)</sup> OJ L 395, 30.12.1989, p. 1 (corrected version in OJ L 257, 21.9.1990, p. 13).

<sup>(2)</sup> OJ L 180, 9.7.1997, p. 1.

<sup>(3)</sup> OJ C 53, 28.2.2004.

## II. THE OPERATION

- (5) On 13 January 2000, Boeing, Hughes and HSC entered into a Stock Purchase Agreement, according to which Boeing will acquire: (a) all outstanding shares of HSC; (b) all outstanding shares of Spectrolab; (c) the assets of HED; (d) 2,69 % of the issued and outstanding shares of common stock of ICO Global Communications (Holdings) Ltd, currently held by Hughes; and (e) 2 % of the issued and outstanding shares of common stock of Thuraya Satellite Telecommunications Private Joint Stock Co. currently held by Hughes.
- (6) In addition, the shares of the Hughes group in a research joint venture with Raytheon (HRL) will be transferred to Boeing, if the consent of Raytheon is obtained. If not, Hughes and Boeing intend to form a joint venture to enable Boeing to benefit from the research and development activities of HRL.
- (7) The Hughes Group will retain its ownership in all its other businesses, in particular, Hughes Network Systems, PanAmSat and DirecTV.
- (8) In the light of the foregoing, the proposed transaction constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

## III. COMMUNITY DIMENSION

- (9) The notifying party considers that the present transaction does not have a Community dimension and therefore falls outside the jurisdiction of the Commission because HSC does not meet the EEA turnover thresholds laid down in the Merger Regulation. According to the notifying party, HSC's Community-wide turnover amounted to EUR [...] (\*) million in 1999 and EUR [...] \* million in 1998.
- (10) However, HSC had significant turnover (approximately EUR [...] \* million in 1999) with ICO Global Communications (Holdings) Ltd (ICO). ICO was established to provide global mobile personal communication services by satellite. The ICO company filed for Chapter 11 protection (US procedure for companies facing bankruptcy) in August 1999 and has recently been reorganised. Boeing submits that the only way that HSC might be considered to exceed the EEA turnover threshold would be if its sales to ICO were to be included in its EEA turnover.

(\*) Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

- (11) Given that ICO is registered in the Cayman Islands but is actually managed in London, whether ICO should be seen as a Community company is decisive in determining whether or not the proposed transaction has a Community dimension. If HSC's turnover with ICO is allocated to the EEA, then the transaction falls under the Merger Regulation. The notifying party however maintains that HSC's turnover with ICO should be allocated to the Cayman Islands.
- (12) On that basis, the Commission requested further information from ICO, which replied on 29 February 2000. It appears that ICO was formed as a result of a project established by Inmarsat (an international organisation based in London, which has now become a UK-listed company) to offer worldwide data and voice communication services through the use of a satellite-based telecommunication network. For that purpose, ICO was incorporated in 1994 in England and Wales. This company was subsequently liquidated and the assets were transferred to a Cayman Island company, which itself was changed into a Bermuda company. However, these changes, which seem to have primarily been made for tax purposes, have not altered the management structure of the company. As ICO has formally stated, its principal place of business is in London, where all ICO's day-to-day management is carried out and where 73 % of ICO's personnel is located, the remainder being spread in several locations around the world. In the light of the foregoing, it appears that, formally speaking, the parties are correct in claiming that ICO is a Cayman Islands (or more precisely a Bermuda Islands) registered company but that, economically speaking, ICO is still clearly a United Kingdom based company.
- (13) In the calculation of turnover for the purposes of the Merger Regulation, it is the economic reality of a situation that should be taken into account. Indeed, paragraph 7 of the Commission Notice on calculation of turnover<sup>(1)</sup> states that 'the set of rules [concerning the calculation of turnover] are designed to ensure that the resulting figures are a true representation of economic reality'. In this case, therefore, HSC's turnover with ICO should be allocated to the United Kingdom.
- (14) Furthermore, it appears that, although the satellite contract between HSC and ICO is formally placed with the Cayman Islands company, it was finally negotiated by ICO's London staff, and that any important modifications to this contract would be negotiated in London. If account is also taken of the place where the transaction was in reality carried out, and therefore where competition between HSC and other satellite prime contractors took place, it clearly points to the United Kingdom.

<sup>(1)</sup> OJ C 66, 2.3.1998, p. 25.

- (15) Following the guidelines in paragraph 7 of the Notice on the calculation of turnover, HSC's turnover with ICO should therefore be allocated to the United Kingdom and included in its EEA turnover.
- (16) Boeing and HSC have a combined aggregate worldwide turnover of more than EUR 5 000 million <sup>(1)</sup> (EUR 53 403 million for Boeing in 1999 and EUR 2 136 million for Hughes in 1999). They each have an aggregate Community-wide turnover in excess of EUR 250 million (EUR [...] million for Boeing in 1999 and EUR [...] million for Hughes in 1999) and neither of the undertakings concerned achieves more than two-thirds of its aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension within the meaning of Article 1(2) of the Merger Regulation.
- (20) The notifying party submits that satellite product markets are distinguishable on the basis of two characteristics: (i) the type of customer, and (ii) the satellite orbit.
- (21) Boeing considers that civil satellites sold to commercial customers, civil satellites sold to government, and military satellites, constitute each a distinct product market. First, government satellites belong to a different product market than commercial satellites since they are typically specialised products, in contrast to commercial satellites which are often derivatives of previous satellites. These differences create different conditions of competition between commercial satellites and government satellites: competition in the commercial arena is focussed on 'mass production techniques', while competition in government markets is based on a higher degree of specialisation and customer involvement. Secondly, military satellites form a specific product market because they have uniquely rigorous equipment requirements, resulting in tighter product specifications, tougher test programmes and specialised components not used in other satellites.

#### IV. COMPATIBILITY WITH THE COMMON MARKET

- (17) The merged entity will be active in the manufacture of satellites and equipment, and the provision of satellite launch services. In its decision of 26 May 2000, the Commission identified serious doubts that the operation would create or strengthen a dominant position by HSC on the market for commercial GEO communication satellites, and could create a dominant position on a market for commercial satellite launches.
- (18) However, the results of the detailed investigation carried out by the Commission demonstrate that, for the reasons indicated in sections A and B below, there are no competition concerns about these markets.
- (22) Boeing also submits that geosynchronous orbit (GEO) satellites and non-geosynchronous orbit (NGSO, i.e. low earth orbit (LEO) and medium earth orbit (MEO)) satellites belong to different product markets, because, from a demand side perspective, each type of orbit has distinct advantages and disadvantages making each type inherently better suited for different use (for example, being closer to the earth makes a LEO satellite more appropriate for high resolution sensing uses). Also, on the supply side, the time necessary to prove the technical capability to build a satellite with a different orbit may be three to five years. In particular, GEO satellites are much more expensive (USD 100 million for GEO satellites, as compared to USD 10 million for LEO satellites), complex, heavy and long-lasting than NGSO satellites.

##### A. Satellites

###### *Relevant product markets*

- (19) Satellites are complex spacecraft orbiting or revolving around a celestial body. Satellites may be used for various applications (communications, navigation, observation and scientific purposes), for civilian as well as military customers.

- (23) In previous decisions <sup>(2)</sup>, the Commission primarily segmented the satellite sector by application, establishing a distinction between communication (and possibly navigation) satellites on the one hand, and observation and scientific satellites on the other hand, because of differences in the technological skills and know-how required for these various applications. The Commission also suggested that there could be distinct product markets for military satellites and civil satellites (essentially because the conditions of competition are different between military and civil applications), and that a further segmentation by orbit type could be taken into account. A further distinction by customer type (commercial operator or government) was also taken into account, albeit for the purposes of the geographic market definitions.

<sup>(1)</sup> Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C 66, 2.3.1998, p. 25). To the extent that figures include turnover for the period before 1 January 1999, they are calculated on the basis of average ECU exchange rates and translated into EUR on a one-for-one basis.

<sup>(2)</sup> See, for example, Case COMP/M.1636-MMS/DASA/Astrium, Commission Decision of 21 March 2000 — not yet published.

- (24) The results of the Commission enquiry generally confirm (a) that satellites used for communications, navigation, and observation and scientific purposes belong to distinct product markets; (b) that the conditions of competition for commercial satellites, civil government satellites and military satellites are different; and (c) that a distinction should be made between GEO and NGSO satellites, although this segmentation may be more relevant in the case of communication satellites than in observation or scientific satellites (because most observation and scientific satellites are NGSO, and also probably because, in view of the specificity of each observation and scientific satellite, having existing designs or past experience within a given orbit type may be less important than in 'mass produced' communication products).

- (25) However, it appears from the parties' estimates that all commercial GEO satellites are communication satellites, and that nearly all commercial NGSO satellites also are communication satellites. Accordingly, whether commercial satellites are further segmented by application (for example, communication, navigation, observation and scientific satellites) does not affect the competitive assessment of the proposed concentration.

- (26) Furthermore, for the purposes of this case, it is not necessary to further delineate the relevant product markets for satellites because, in all alternative market definitions considered, effective competition would not be significantly impeded in the EEA or any substantial part of that area.

#### *Relevant geographic markets*

- (27) The notifying party submits that the markets for commercial satellites are worldwide. This is in line with previous Commission decisions<sup>(1)</sup> [for example], and has been broadly confirmed by the results of the Commission enquiry.

- (28) Boeing also submits that the geographic markets for government (civil and military) satellites are national or at most regional. In the Astrium decision<sup>(2)</sup>, the Commission concluded that there is a western European<sup>(3)</sup> market for satellites procured by space agencies, because, in that area, institutional satellites are primarily purchased by the European Space Agency (ESA), whose procurement is subject to a geographic 'juste retour' principle. Furthermore, the Commission indicated that there might also be national markets for institutional satellites in those Member States where national space agencies apply similar procurement procedures. Finally,

the Commission suggested that there could be a worldwide market for military satellites procured through competitive processes involving prime contractors in the Community and the United States, but that there appeared to remain national markets in those Member States where satellites are procured from domestic prime contractors only. However, for the purposes of this case, it is not necessary to further delineate the geographic markets for government (civil and military) satellites because, in all geographic market definitions considered, effective competition would not be significantly impeded in the EEA or any substantial part of that area.

#### *Competitive assessment*

- (29) HSC and Boeing both operate as satellite prime contractors. However, the operation will not lead to direct overlaps between the parties, since only HSC is active in the commercial area, and neither HSC nor Boeing has supplied government GEO or NGSO satellites to European customers. In addition, it should be noted that the satellites of Boeing and HSC are used for different applications (respectively communication for HSC, and navigation for Boeing) and have different sizes and orbits (respectively GEO and MEO satellites for HSC, and LEO satellites for Boeing).

- (30) In that context, the notifying party maintains that there are no horizontally affected markets. However, given HSC's market share in commercial communication satellites, it is necessary to examine whether the addition of Boeing's satellite business will strengthen HSC's present strong position, in particular on the market for commercial GEO satellites.

#### *Market characteristics*

- (31) Commercial GEO communication satellites are large satellites (over half GEO payloads exceed 9 000 lbs.) placed in geosynchronous orbit, where they support various services such as telephony, data transmission, broadcast and cable television, and direct broadcast services.

- (32) Demand is generated by commercial satellite operators, which may be large international institutions such as Intelsat or Inmarsat or private companies, and which either provide the end services themselves or lease satellite capacity to service operators such as television broadcasting corporations, telecommunication companies, etc.

<sup>(1)</sup> See Case IV/M.437-Matra Marconi Space/British Aerospace Systems, paragraph 22, Commission Decision of 22 August 1994 and Case COMP/M.1636-MMS/DASA/Astrium.

<sup>(2)</sup> See Case COMP/M.1636-MMS/DASA/Astrium.

<sup>(3)</sup> For the purpose of this case, western Europe means the EEA and Switzerland (and therefore includes all the Member States of the European Space Agency).



- (33) It appears from the Commission investigation that satellites are almost always procured through international competitive bidding procedures involving several satellite prime contractors, such as HSC, Space Systems/Loral (SS/Loral), Lockheed Martin, Alcatel Space Industries (Alcatel) or Astrium. In view of the considerable losses of revenue (up to one million dollars per day) caused by a satellite failure, it also appears that the selection of the satellite prime contractor is primarily based on its proven reliability and price, with the satellite durability and the manufacturing lead times also playing an important role.
- (34) In view of the advent of smaller, NGSO satellite constellations also offering communication services (such as mobile telephony, paging, data transmission and remote messaging), and of the filling-up of spots and orbital slots used by GEO satellites, the GEO satellite market is expected to evolve in the following three directions: (i) levelling, or even reduction in the number of satellites ordered; (ii) increase in satellite average mass and power; and (iii) focus on broadband services (not economically supported by smaller satellites).

#### Market players

- (35) GEO communication satellites are primarily offered by five satellite prime contractors in the United States or in Europe, namely HSC, SS/Loral, Lockheed Martin, Alcatel and Astrium. All five producers appear to manufacture GEO as well as NGSO communication satellites, for use by both government and commercial customers.
- (36) Based on the average commercial GEO communication satellite orders since 1997, HSC has a market share of [between 35 % and 45 %]\* followed by Lockheed Martin [between 25 % and 35 %]\*, Alcatel [between 10 % and 20 %]\*, SS/Loral [between 10 % and 20 %]\* and Astrium [between 0 % and 10 %]\*.

#### Impact of the operation

- (37) In its decision of 26 May 2000, the Commission found indications that HSC's market share could underestimate its actual position on the market. First, third parties had indicated that HSC benefited from a number of competitive advantages over other satellite prime contractors, primarily a reputation of excellence and reliability superior to that of its competitors, and lower costs due to higher sale volumes (both in the commercial and military sectors). Secondly, it appeared that HSC's success could be limited by the fact that, because it belongs to the Hughes group which is vertically integrated into the downstream sector of satellite operation (through

PanAmSat, DirecTV and Hughes Network Systems), HSC could be viewed both as a major supplier and a major competitor of its customers. Internal documents from the parties suggested that this led a significant proportion of satellite operators not to purchase from HSC.

- (38) Consequently, it was considered that HSC's competitive position was better indicated by its success rate when bidding for contracts, which is [between 40 % and 60 %]\*. Third parties explicitly indicated that they viewed HSC as having a dominant position on the commercial GEO communication satellite market.
- (39) Despite the absence of overlaps between Boeing and HSC in the satellite markets, the Commission also found indications that the operation could strengthen HSC's market position. First, it was concluded that the elimination of the link between HSC and the Hughes group would enable HSC to address the whole market, and so lead HSC to win market share (possibly up to its [between 40 % and 60 %]\* success rate).
- (40) Secondly, it was indicated that satellite prime contractors currently procured certain satellite equipment (namely solar cells, battery cells and travelling wave tube amplifiers) from Hughes (especially Spectrolab and HED). In that context, third parties expressed concerns that, after the proposed transaction, the equipment concerned could be procured by Boeing for its own satellites, which would reduce the capacity available to third parties to such an extent as to weaken them with regard to HSC.
- (41) In the light of the above, the Commission therefore considered that the operation might further enlarge the gap between HSC and its competitors. In view of the apparent presence of economies of scale in satellite manufacturing (due to the fact that the amortisation of sunk costs accounts for a significant share of the satellite costs), it was feared that this could create or strengthen a dominant position by HSC in the GEO satellite market.
- (42) However, the results of the Commission's detailed investigation indicate that the operation will not create or strengthen a dominant position. First, it should be noted that satellite markets are bidding markets, where the conditions of competition are determined by the presence of credible alternatives to HSC's products. In that context, and given the market positions of Lockheed Martin [between 20 % and 40 %]\*, SS/Loral [between 10 % and 20 %]\* and Alcatel [between 10 % and 20 %]\*, it would appear that HSC remains subject to competition from other large and credible prime contractors.

(43) Secondly, it appears from the results of the Commission's investigation that HSC's alleged competitive advantages have probably been overestimated. For instance, most customers indicated that they did not view HSC satellites as being more reliable than those of other satellite prime contractors, and a number of third parties specified that, although HSC satellites historically enjoyed a superior reputation of excellence and reliability, they too have experienced a number of failures in recent years. Similarly, most customers indicated that they did not consider HSC to have any substantial cost advantage over its competitors. Finally, taking into account the main evaluation criteria used by customers, HSC seems not to be considered the best offer in a majority of cases. The presence of credible alternatives to HSC's satellites is further confirmed by the fact that HSC only won [...] of the 29 satellites ordered since the beginning of 2000. In the light of the foregoing, it can therefore be concluded that HSC does not have a dominant position in the commercial GEO satellite market.

(44) Furthermore, there is no indication that, after the proposed concentration, Boeing's purchases from Spectrolab and HED would reduce these suppliers' incentives to supply solar cells, battery cells and travelling wave tube amplifiers to other prime contractors. This is clear for travelling wave tube amplifiers, since Boeing does not purchase those products. This is also true for solar cells and battery cells, because HSC seems to have substantial overcapacity for most of the equipment concerned, which would not be filled even taking into account all of Boeing's potential demand, particularly as Boeing already purchases most of its solar cells from Spectrolab and does not buy travelling wave tube amplifiers. Secondly, solar cells and battery cells are essentially standardised products, which could competitively be procured from alternative sources of supply. Thirdly, most (including the largest) prime contractors currently do not purchase equipment from HSC, so that even a reduction of HSC's supplies to third parties would not create competition concerns.

(45) The Commission investigation also shows that, despite Hughes' ownership of satellite operators (namely PanAmSat, DirecTV and Hughes Network Systems), the fact that HSC could be viewed as both a competitor and a supplier of third party satellite operators did not lead most customers to refuse procuring satellites from HSC. It follows that the operation should not substantially bring new business to HSC satellites, and therefore should not substantially create new opportunities for HSC.

(46) Instead, it appears that, by severing the link between HSC and Hughes' satellite operating companies (PanAmSat, DirecTV and Hughes Network Systems), the transaction would probably make these satellite operators more open to other prime contractors. Given that

the purchases of Hughes' satellite companies have represented approximately [35 % to 45 %]\* of HSC's satellite orders between 1997 and 1999, the proposed operation could therefore substantially weaken HSC's competitive position rather than strengthen it.

(47) In the light of the foregoing, it is concluded that the operation will not create or strengthen a dominant position on the satellite markets as a result of which effective competition would be significantly impeded in the EEA or any substantial part of that area.

## B. Launch services

### *Relevant product markets*

(48) Launch vehicles are used to deliver satellites to space orbit. The services involved in launching satellites into orbit are referred to as satellite launch services. In general, two types of launchers can be distinguished: expendable launch vehicles which are consumed during the launch process, and partially or fully reusable launchers. However, in practice, launch services are conducted almost exclusively by expendable launch vehicles.

(49) Expendable launch vehicles may be categorised into various product groups, depending on the payload mass that the launcher is able to deliver in orbit. In particular, Boeing submits that LEO and MEO satellites can be and are launched on a wide range of launch vehicles (including larger and smaller launchers), but that intermediate/heavy GEO satellites (that is, those with a mass in excess of 4 000 pounds or approximately 1 800 kg) can only be launched by certain, larger launch vehicles (hereinafter referred to as heavy lift launchers). Accordingly, Boeing suggests that there are two product markets: an overall market for launch services comprising all satellite launches, and a 'nested' market for intermediate/heavy GEO satellite launch services (only performed by heavy lift launchers).

(50) The Commission enquiry broadly supports the view that heavy lift launchers are part of a specific product market, because only they are capable of launching larger satellites into GEO. This is in line with the conclusions of the Commission in previous decisions<sup>(1)</sup>, where it was suggested that a segmentation of the launch service sector according to the size of the satellite launched or the capability of the launcher may be appropriate for the purposes of product market definition.

<sup>(1)</sup> See Case IV/M.1564 — Astrolink, Commission Decision of 25 June 1999 and Case COMP/M.1636-MMS/DASA/Astrium.

(51) However, first, there appears to be a contradiction in Boeing's proposed market definitions. If one accepts that intermediate/heavy GEO satellites can only be launched by heavy lift launchers, then the launch of these intermediate/heavy GEO satellites is not substitutable with any other launch service, and therefore cannot be included in a broader product market. In that context, there cannot be an overall product market comprising all satellite launches. A more consistent approach would consist in considering the following two product markets: a market for launch services of all satellites but intermediate/heavy GEO satellites, and a market for intermediate/heavy GEO satellite launch services.

(52) Furthermore, third parties have expressed criticisms over the notifying party's proposed product market definition for intermediate/heavy GEO satellite launch services. According to them, contrary to Boeing's proposal, the product market segmentation should not be based on the satellite size and orbit, but on the launch vehicle category. These third parties consider that the services offered by heavy lift launch vehicles are not substitutable with those offered by other launch vehicles, whatever the size and orbit of the satellite concerned. For instance, it would appear that certain NGSO satellites are capable of being launched by the larger launch vehicles only.

(53) In that case, the 'nested' product market should refer to the launch services offered by large/intermediate launch vehicles. This alternative market would comprise all satellite launches performed by heavy lift launchers, and would therefore be broader in scope than the large/intermediate GEO satellite launch services as proposed by Boeing (which does not include the NGSO satellite or smaller GEO satellite launches performed by heavy lift launchers). This alternative market definition would have the advantage of providing a more accurate picture of the competitive stance of the different launchers, because it would include all of the launches performed by these launchers. On the other hand, it would mean that the heavy lift launch vehicles are not in competition with smaller vehicles even for smaller satellite launches, which has not been demonstrated.

(54) Other third parties accepted Boeing's proposal for a specific product market for intermediate/heavy GEO satellite launch services, but criticised the dividing line for intermediate/heavy GEO satellites (4 000 lbs.). In particular, it was suggested that there is no strict limit between 'small' and 'large' satellites, and that the borderline could have been defined specifically for the purpose of excluding Boeing's Delta II launcher from the nested product market. However, it is doubtful whether the selection of another borderline would have much effect

on the competition assessment, since it would appear that the average mass of GEO satellites is 6 000 lbs. (and rising), and that 75 % to 90 % of all GEO satellites fall within the intermediate/heavy category.

(55) However, for the purposes of this decision, it is not necessary to further delineate the relevant product markets for launch services, since, in none of the alternative market definitions considered, would effective competition be significantly impeded in the EEA or any substantial part of that area.

#### *Relevant geographic markets*

(56) Boeing submits that government and commercial launches belong to different geographic markets. The geographic markets for launch services are worldwide in the case of commercial applications, but are national or regional in the case of government (civil or military) launches. This difference is due to the fact that, as is the case with satellites, governments tend to give strong preference to national or at least regional launch service providers where applicable.

(57) This is in line with the Astrolink decision where the Commission concluded that commercial launches had to be distinguished from captive military or other governmental launches (which are ordinarily not available for open competition, even though the vehicles used are similar). These definitions have also been broadly confirmed by the results of the Commission investigation.

#### *Competitive assessment*

(58) Boeing is active in launch services, where it operates the Delta range of launchers (Delta II, Delta III and, as of 2001, Delta IV). The Delta II launcher has been reported to be the commercial launch vehicle with the longest heritage and the highest number of flights. It enjoys an excellent reputation of reliability, but is limited by its lift-off capacity (4 000 lbs.) which is insufficient for most commercial GEO satellite missions. The new Delta III and the future Delta IV will support much higher payload capacity, but Delta III is currently handicapped because it has only had one successful flight out of its three first launches, while Delta IV is still at development stage, and therefore has never flown to date.

(59) Boeing also has a 40 % stake in Sea Launch, a multinational partnership with the Russian company RSC-Energia (25 %), as well as with Norwegian-based Kvaerner Maritime (20 %) and the Ukrainian company Yuzhnoye/PO Yuzhmash (15 %). Sea Launch operates

the Ukrainian-built Zenit 2 vehicle (using the Block DM upper stage manufactured by Energia), which it launches from a marine platform that travels from California to equatorial waters. Sea Launch had its first launch in March 1999. Its reliability is also questioned by the failure of its third flight.

- (60) Boeing submits that its 40 % interest in Sea Launch does not confer control over Sea Launch, on the grounds that there is no common marketing or management of the Delta and Sea Launch programmes. However, it appears that Boeing has veto rights over a number of strategic decisions by Sea Launch, including amendments to business plans (which require unanimity of the partners), the appointment of officers and contracts with third-party customers and major suppliers (which require a 67 % majority). In addition, Boeing has nominated three of the five Sea Launch officers (namely the President and General Manager, the Vice-President for Corporate Affairs and Secretary, and the Vice-President for the Launch Segment). Consequently, it is concluded that Boeing has joint control over Sea Launch.
- (61) HSC is not active in launch services, but, as indicated in paragraph 36, it is the largest supplier of those commercial GEO satellites to be delivered into orbit by launch vehicles. It is therefore necessary to examine whether the combination of HSC' and Boeing's positions on these complementary markets could create or strengthen a dominant position in launch services.
- (62) The investigation carried out by the Commission confirms that nearly all customers attach a great deal of importance to the selection of the launch vehicle that will eventually send their satellite into space. Reliability and proven performance are the most important criteria in the eyes of the customers when it comes to judging and rating potential launch service operators. According to the results of the customer survey, price is always taken into account by customers when making their final choice. However, customers also clearly indicate that securing their launch is paramount and, for that reason, they are ready to pay more in order to avoid any failure that would harm their company both financially and commercially. Eventually, the size of the launch service provider does not appear to be a critical factor based upon which the satellite customers will make their final decision.

#### Market characteristics

##### Procurement process

- (63) Launch services are usually purchased separately from the satellite concerned. In that type of situation (known as Delivery on the Ground or 'DOG'), the satellite

operator places two contracts: one contract (with the satellite prime contractor) for the supply of the satellite, and one contract (with the launch service operator) for the provision of the associated launch service.

- (64) However, in recent years, satellite prime contractors have increasingly offered (and customers have increasingly accepted or requested) a new type of contract known as Delivery In Orbit (DIO). In that type of situation, the customer orders a complete package from the satellite manufacturer who, under the terms of a single contract, is required to supply both the satellite and the launch service. The DIO provider consequently bears responsibility for the arrangement of the satellite launch.
- (65) The advantage of DIO procurement is that it simplifies the relationships with the prime contractor. Insofar as, in a DIO contract, the responsibility of the satellite delivery and launch is transferred to the satellite prime contractor, DIO procurement also avoids the customers having to deal with a number of risks such as delays, satellite/launcher interfaces or compatibility issues etc. linked to the interrelationships between the satellite and the launch service contracts. Conversely, DIO contracts appear to reduce the customer's visibility on the contract progress and on the choices performed by the satellite prime contractor (including those for the launch operations). Customers have indicated that DIO procurement may be more expensive than DOG. As a result, DIO seems to be primarily chosen by those smaller customers lacking the internal resources necessary for the management of the DOG process.
- (66) In either procurement process, the selection of the launch service operator is carried out through an international competitive bidding procedure involving the main launch service operators worldwide. Insofar as any delay or failure would lead to considerable losses of revenues (up to one million dollars per day) for the satellite operator, and as no insurance seems to cover such risks, it appears from the Commission investigation that the selection of the launch vehicle is primarily based on reliability and price, with launch schedule flexibility also playing an important role.

#### Integration between the satellite and the launch vehicle

- (67) In order to be successfully launched into space, the compatibility of a satellite with a chosen launch vehicle has to be ensured. This can be achieved on a case-by-case basis, but can also be secured either by the outcome of previous launches or by compatibility agreements.



- (68) In the context of DOG procurement, customers generally send out requests for proposals to both satellite prime contractors and launch service operators. These requests may be in parallel or phased, depending upon the customer. At that stage, customers generally select the satellite manufacturer, and pre-select several possible launch vehicles. In general, the selection of the satellite is made 24 to 36 months before the launch date, and the satellite contract is signed before the final selection of the launch service supplier. In that context, and in order to keep their options open for the ultimate selection of the launch vehicle, customers usually require the satellite manufacturer to maintain compatibility with several launch vehicles (which may or may not be identified).
- (69) After contract award, and although in principle it is the satellite that needs to be made compatible with the launcher and not the reverse, both the launcher and satellite manufacturers need to cooperate in order to have the satellite integrated to the selected launch vehicle. In that context, a broad variety of tests and analyses need to be carried out both by the satellite manufacturer and the launcher, so as to ensure, *inter alia*, the mechanical, thermal, electrical, radio frequency and electromagnetic compatibility between the satellite and the launcher environment.
- (70) Those tasks are performed on a case-by-case basis, for each individual satellite. However, given that satellite manufacturers usually design their commercial communication satellite around a limited number of 'standard platforms', it is also possible to provide for the general compatibility of families of satellites. This is secured through broader 'compatibility agreements' between the satellite manufacturer and the launch service provider, covering a whole family of satellites. In practice, satellite manufacturers and launch service providers agree on a generic 'envelope' platform, the compatibility of which with the launch vehicle concerned is ensured. It is then considered that satellites falling within that platform will generally be compatible with the launch vehicle concerned. Compatibility agreements therefore reduce the risks, workload and time required for the integration of specific satellites belonging to a broader family with a given launch vehicle.
- (71) The closer to the anticipated launch, the more expensive it may be to make the necessary technical changes to accommodate a different launch vehicle. Subject to contract arrangements between the parties, customers can be liable to pay termination fees in an increasing amount as the launch date draws closer. Although some of the customers who answered the Commission's investigation argue that they have complete freedom to change either element of the chosen combination, customers, in general, confirm that the earlier modifications are brought to the programme, the better it is for all parties involved.

#### Excess capacity

- (72) It is generally considered that the commercial launch service industry is currently suffering from excess capacity. This situation appears to result from the over-investment into launch vehicle capacity which took place in the second half of the 1990s following optimistic anticipations of the launch market volume. In particular, it was generally expected that the development of NGSO satellite constellations would result in a soaring demand for launch services. For instance, in 1997, Boeing forecast that around [...] satellites would be launched in 2002. Given that such demand could hardly be met by the existing capacity, launch service operators actively invested into new facilities and often new launch vehicles. However, now that the first systems launched (such as Iridium or ICO) have met financial difficulties, the projects for satellite constellations have been substantially reduced or delayed, and launch forecasts have therefore become far more conservative. For instance, in the autumn of 1999, the revised predictions for launch services in 2002 were brought down to just [...] satellites.
- (73) The considerable difference between the initial forecasts and the actual situation, combined with the important investments into new facilities and launch vehicles, has resulted in a situation of substantial excess capacity in the launch service industry. For instance, the combined capacity of the three main launch vehicles (Delta, Atlas and Ariane) is expected to exceed 50 units per year. That is to say potentially up to twice the current commercial market volume. Taking into account the presence of other launch vehicles (such as Proton, Sea Launch, Great Wall (China) and Starsem), and despite the presence of additional launches for government satellites, these figures suggest that capacity may be twice as high as total demand.
- (74) The industry's excess capacity affects the cost structure of most launch service operators as their lower than expected actual sales volumes approach their operations' break-even points. The high level of fixed costs that characterises the industry requires a significant number of launches in order to be amortised. This makes launch providers very dependent on winning commercial launch contracts as each individual contract is of importance when it comes to price competitiveness. Losing two contracts can amount to a loss of 20 % to 25 % of the annual sales volume of some launch service providers and therefore seriously jeopardise their profitability.

#### Market players

- (75) The market leaders in commercial launch services have traditionally been Arianespace and International Launch Services (ILS), which have respectively represented around [between 30 % and 50 %]\* and [between 30 %

and 50 %]\* of commercial intermediate/heavy GEO satellite launches over the last three years. Boeing's Delta III launches, the first two of which failed, Great Wall and Sea Launch account for the remaining few launches.

- (76) ILS is a joint venture between Lockheed Martin and Khrunichev, responsible for the marketing of the Atlas and the Proton ranges of launch vehicles to customers other than the US Government. The Atlas launchers are designed and built by Lockheed Martin. The Atlas range currently includes two families, the Atlas II launchers and the new Atlas III vehicle (which made its first commercial launch in May 2000). A newer launch vehicle (to be called Atlas V) is also currently being developed. The Proton vehicles are designed, developed and manufactured by the Russian firms Khrunichev and Energia.
- (77) Arianespace was created in 1980 as the first commercial space transportation company. It is responsible for the production, marketing and launch of the Ariane launch vehicles, which are designed and developed through programmes under the auspices of the European Space Agency. Arianespace is held by 53 shareholders from 12 European countries. The current range of vehicles on offer includes the Ariane IV launcher and the recent Ariane V launcher, with newer, heavier versions of Ariane V currently being developed.
- (78) Boeing and Sea Launch currently hold relatively limited positions on the satellite launch services market. This is due to a series of factors, but essentially stems from the fact that Boeing's main launcher, Delta II, is not capable of launching large satellites into space, and that the reliability of Boeing's and Sea Launch's new and larger launchers remains in doubt after recent failures. Customers confirm this situation in their responses to the investigation conducted by the Commission. Although Delta II is generally considered to be one of the most reliable launchers, proven reliability of the other Boeing launch vehicles are severely downrated by most of the customers. In 1999, Boeing and Sea Launch collectively accounted for 17 % of commercial launches, behind Lockheed Martin (25 %) and Arianespace (22 %). On the market for intermediate/heavy GEO satellite launch services, Boeing's position was lower, at 12 %, behind Arianespace (44 %) and Lockheed Martin (44 %).
- (79) Despite the apparent drawbacks affecting Boeing's present market position, it seems quite clear that Boeing will become a major contender in launch services in the next few years. This is further indicated by the success of Delta III and Sea Launch's latest flights. Furthermore, Boeing's next launch vehicle, Delta IV, which is due to start operating in 2001, is expected to be the world's largest launcher, and will probably have the possibility to establish itself as a well-reputed and cost effective

launcher through its existing contract of around 20 guaranteed launches with the United States Government. Boeing's capacity as a launch provider for commercial satellites is also reflected by the fact that Delta III and Sea Launch together already represent [between 25 % and 40 %]\* of commercial launches ordered from heavy lift launchers since 1997, compared with [between 25 % and 40 %]\* for Arianespace and [between 15 % and 25 %]\* for ILS.

- (80) Other launchers, such as Japan's H2 vehicle, or China's Long March programme, are also able to deliver large GEO satellites into orbit. However, these vehicles do not seem to constitute credible alternatives to the other market players: the H2 launcher is severely disadvantaged by its launch failures, while Long March suffers from both technological and export difficulties (it does not appear to be able to launch US-based satellites, because of the restrictions arising from the US satellite export regime). It therefore appears that the only main launchers capable of influencing the functioning of the market for the launch of commercial intermediate/heavy GEO satellites are Boeing, Sea Launch, ILS and Arianespace.

#### Impact of the operation

- (81) Despite the absence of any overlap between Boeing and HSC in launch services, the Commission has identified, in its decision to initiate proceedings in this case, several potential adverse effects that could result from the proposed transaction. Given that satellite manufacturing and launch services are complementary goods, which are both necessary for the satellite operators to have satellites into orbit, and given HSC's strong position on the market for commercial GEO satellites, it was feared that the merged entity could induce satellite operators to obtain their launch services on Boeing's launchers, and consequently give Boeing a dominant position on the market for larger satellite launches.
- (82) In particular, six potentially adverse effects of the transaction were identified:
  - (a) Satellite makers seem to bid to customers with a mass margin. After the operation, HSC might design this mass margin so as to optimally fit with the payload capacity of Boeing's launchers. This might make the offers of other launch service operators less competitive than Boeing's.
  - (b) Some DIO contracts give the satellite prime contractor a certain flexibility as to the launch vehicle to be used. After the merger, HSC might try to have all those satellites launched on Boeing or Sea Launch vehicles.

- (c) Launching a satellite requires prior integration work between the satellite and the launcher concerned. This integration may be performed on a case-by-case basis, but it appears to be also possible to develop general compatibility agreements between the launcher and the satellite family. After the proposed transaction, HSC might refuse to develop such compatibility agreements, which would increase the costs and time required for the integration of HSC satellites with launchers operated by third parties.
- (d) HSC may refuse to provide third-party launch service operators with information relating to its next satellites or to satellite updates, so that those launch service operators cannot easily make their launchers compatible with those satellites.
- (e) As a satellite manufacturer, HSC receives competitively sensitive information relating to the launch vehicles with which its satellites will be integrated. Although that information is usually protected by confidentiality clauses, HSC might use it to the detriment of third party launch service operators.
- (f) In the longer term, HSC might design its next generation of spacecraft so that they fit with Boeing's launchers better than with other launchers. For instance, HSC might impose unique and proprietary interfaces for its satellites, so as to favour Boeing launchers. HSC might also design its satellites so that they can be launched in such a way that they last longer than satellites usually do.

#### Effects of the identified behaviour

- (83) It appears that, although the behaviour described in paragraph 82 might theoretically lead HSC's customers to favour Boeing's launch vehicles, it could also undermine HSC's competitiveness on the satellite market. For instance, making HSC satellites less compatible with other launch vehicles, or increasing the cost of or delaying the integration between a HSC satellite and a third-party launch vehicle, could be a disadvantage for HSC in respect of those customers requiring their satellites to be integrated on other launch vehicles. In that context, it is necessary to examine whether the merged entity would gain more through additional launch service contracts than it would lose through lost satellite contracts, if it were to engage in such behaviour.
- (84) To this effect, the Commission conducted an extensive customer enquiry in order to check whether the various concerns raised by third parties were confirmed and could become a reality in the future. Both major and small satellite customers were contacted and invited to respond on their perception of the competitive situation of the market. The effects of the proposed transaction, not only on the market as a whole but also on customers' businesses, were also investigated in order to determine the likely impact of the competitive behaviour of the players active on the defined market.

(85) As indicated in paragraph 62, the results of the Commission's investigation show that customers devote a lot of attention and care to the selection of the launch vehicle, and usually consider reliability to be of paramount importance when selecting the launch service operator. This is so because of the risks incurred by customers in case of a launch failure. In such a case, the customers would not only lose a satellite (which they may insure), but also all the revenues related to the operation of the satellite until a new satellite is produced and launched (which no insurer is apparently willing to cover). For instance, customers indicated that a launch failure or delay would cost them more than USD 1 million per day in terms of lost revenue.

(86) In that context, customers usually will not accept being launched by a launch vehicle which they do not consider to be sufficiently reliable. That is confirmed by the fact that, after its first two failures, Boeing's Delta III launcher could not find a commercial customer for its third flight, and had to carry a dummy payload. More generally, customers usually try to reduce the launch risks to the minimum level possible, by requiring their satellite to be compatible with a series of launchers to enable them to switch launchers in case of doubts as to the reliability of their selected vehicle, or by having specific clauses in their contracts indicating, for instance, that their satellite will not be the first payload to be launched after a failure of any given launcher, or that the launcher will have to achieve a given success rate in a given period before it can be used for the delivery into space of the satellite concerned. Customers with fleets of satellites also usually spread their launches over a number of vehicles, and often require to be able to switch between launchers or add new launchers at their convenience.

(87) The results of the Commission's investigation therefore confirm that customers will not accept having the choice of launcher imposed on them, and that any attempt by HSC to design satellites compatible with only Delta or Sea Launch would meet with resistance from customers. They also confirm that it would not be profitable for HSC to try to persuade customers to switch to Boeing launchers through higher integration costs for other launchers. This is so because most customers indicated that, should the combination of an HSC satellite and their preferred launch be more expensive than other combinations, they would either choose both their preferred launcher and satellite and pay whatever is reasonable for that selected combination, or choose the cheapest combination of reliable launcher and satellite. In that context, making the integration between HSC satellites and non-Boeing launchers more difficult would either have no impact on the customer choice, or would make launcher combinations with HSC satellites relatively more expensive than with other satellites, thereby weakening HSC's competitive position in satellites.

- (88) Furthermore, it should be noted that most of the customers who responded to the Commission investigation indicated that they retain the capability to change launchers should they wish to do so. The costs of this change would obviously increase as the launch date approaches, but, in view of the losses incurred by customers in the event of a launch failure, it can be concluded that customers would probably make use of that provision should they become dissatisfied with the reliability or the service of their pre-selected launcher. Most customers also claimed to be in command of all steps of the launch vehicle selection process and that, in any case, the satellite manufacturer has either very little or no influence at all in the final choice. This would also seriously limit the possibility for the parties to lure customers away from their preferred choice.
- (89) Furthermore, it should be noted that DIO customers do not have a lower capability to independently select their launch service operator than DOG customers. First, there is no indication that DIO customers could not currently choose their DIO combination from other satellite manufacturers than HSC. And secondly, experience shows that even DIO customers included contractual provisions for them to be able to change launchers at their convenience.
- (90) It is true that, in the past, most customers procuring DIO services from HSC may have been launched on launchers with which HSC had bulk-buy agreements. However, it appears that the contracts concerned were established at a time when, in view of very high market volume anticipations, it was feared that the existing launch capacity would be insufficient to meet demand, and that therefore there would be a shortage of launch services available. This led HSC to enter into bulk-buy agreements with launch service operators, so as to secure available capacity, and this also made DIO offers based on those agreements both cheaper and safer than other contracts. That is probably why so many DIO contracts with HSC have been based on those launchers with which HSC had bulk-buy agreements. There is no indication that the same situation could be reproduced now: first, recent failures appear to have made customers reluctant to contract with those launchers; secondly, as indicated in paragraphs 72, 73 and 74 above, the launch service industry now suffers from substantial excess capacity, so that prices on the spot market are now lower than the prices previously obtained by HSC through its bulk-buy agreements, and launcher availability is no longer seen as a real concern.
- (91) Finally, it should also be noted that the risks related to a launch failure are relatively higher for the smaller satellite operators, which usually only have one or two satellites and might therefore risk bankruptcy in the event of a launch failure, than for large satellite operators with several satellites in orbit. This suggests that, while larger customers may have higher buying power than smaller customers, smaller customers have stronger incentives to carefully select their launch service operator and will therefore be even more cautious when selecting their launch vehicle and contracting their launch services.
- (92) In the light of the foregoing, it appears that, in the short term, there is very limited scope for HSC to induce customers to have their satellites launched by unproven launch vehicles like Delta III and Sea Launch. In the longer term, there is a high probability that Boeing's current problems of reliability in the launch service supply will be resolved, and therefore that Boeing and Sea Launch will be considered as suitable launchers by satellite operators. This is further indicated by the success of the latest flights of Sea Launch and Delta III. However, even in that case, it appears that the merged entity will not be in a position to lead a substantial number of customers to switch to Boeing or Sea Launch vehicles if that were not their initial intention.
- (93) This is further indicated by the fact that even launch service competitors who expressed concerns admit that, in the absence of substantial market power on the satellite markets, the effects identified in paragraph 82 could not profitably take place. In addition, the Commission's assessment of the satellite market is that HSC does not have a dominant position in that market. This is also confirmed by past experience. Indeed, although Lockheed Martin engages both in satellite prime contracting and in launch services operations, there is no indication that it has been able to behave in the manner described in paragraph 82 to its own advantage.
- (94) Consequently, it can be concluded that, should the parties engage in the above described behaviour, they would essentially risk losing satellite sales, and any possible effects would be insufficient to overturn the current market situation, characterised by very strong positions by both ILS and Arianespace. This is further confirmed by the fact that ILS is also integrated in satellite and launches, and could therefore reproduce any behaviour by the parties. It follows that the effects identified will not be sufficient in themselves to create or strengthen a dominant position.
- Possible snowball effects
- (95) Third parties have indicated that even a small number of launches won or lost could cause dramatic changes to their market positions, because of the importance of fixed costs in the launch service business and of the current excess capacity in that sector. In particular, these third parties argued that they already operated close to



their break-even capacity, so that even a few losses could make them unprofitable. In that context, and taking into account the absence of any expected significant growth of the market in terms of volumes, those third parties argued that the possibility that the proposed transaction could deprive them of several contracts would considerably weaken their competitive position and increase their costs. By contrast, the same effect would strengthen Boeing's position and consequently lead to the creation of a dominant position for Boeing on the market for launch services.

(96) In short, the argument of those third parties is that the loss of even a limited number of launches would be sufficient to spur a snowball effect with devastating consequences for their cost structure (and, conversely, hugely beneficial consequences for that of Boeing), thereby undermining their competitive position, and enhancing Boeing's, to such an extent as to create a dominant position. In support of this theory, third parties insisted on the relative importance of the amortisation of fixed costs (as high as USD 30 million compared to an average price launch of around USD 100 million, according to certain third parties), and on the limited number of satellite launches taking place each year.

(97) However, this theory appears to be based on a number of questionable assumptions. First of all, it appears that competition in the launch service sector is not primarily based on price, but, rather, on reliability. Prices for launch services may already differ significantly from one launch service operator to another. In that context, a limited increase in costs would not seem to have the devastating consequences put forward by third parties.

(98) Secondly, the possibility for a snowball effect as identified by third parties crucially depends on the cost structure of those third party launch service operators remaining at its current position. However, it appears that competitors (essentially ILS and Arianespace) have engaged in cost reduction programmes, leading either to a reduction of capacity or an increase of launcher competitiveness.

(99) Thirdly, the identified effects are limited to the commercial sales of the undertakings concerned by the proposed transaction. However, commercial launches do not represent all of the launches, so that a loss of competitiveness on the commercial market could be more than offset by new contracts on the government side. This is particularly true in the United States, where government

launches account for a substantial proportion of Lockheed Martin and Boeing's launch business. In that context, and insofar as the launch service industry is usually considered as a critical sector to the governments concerned, which substantially contribute to the development of launchers<sup>(1)</sup>, it seems highly likely that, should Lockheed Martin or Arianespace become less competitive, the governments concerned would take steps to restore those companies' competitiveness.

(100) Fourthly, it is highly questionable whether the launch service sector would be monopolised in the way described by third parties, even HSC were to behave in the manner described in paragraph 82. Given that the price difference between a winning bid and a losing bid is much lower than the amortisation of fixed costs, it appears that, if a launch vehicle supplier were to become less cost-competitive, it would try to cut prices in order to salvage volume and recoup at least a part of its fixed costs rather than accept losing a contract and incur a higher loss. The most likely outcome would therefore be greater price competition rather than market monopolisation. In view of the governments' commitment in their respective space industry (the share of government funding for the development of new launchers is only one sign of this), this would not eliminate Boeing's immediate rivals as effective competitors, and would consequently not create a dominant position for Boeing.

(101) In the light of the foregoing, it appears that the notified operation will not create or strengthen a dominant position on the markets for launch services as a result of which effective competition would be significantly impeded in the EEA or any substantial part of that area.

(102) The Commission notes that, on 31 July 2000, the parties offered certain commitments ensuring (a) that any non-public information relative to launchers (or satellites) which HSC launchers (or Boeing or Sea Launch) could receive will not be provided or disclosed to Boeing or Sea Launch (or HSC); (b) that HSC will make information relating to its satellites available to other launch service operators at the same time as it makes such information available to Boeing or Sea Launch; (c) that HSC will cooperate with launch service operators other than Boeing or Sea Launch for the integration of its satellites with launch vehicles, without discriminating in favour of Boeing or Sea Launch; and (d) that there will be no 'preferred supplier' relationship between the merged entity and Hughes.

<sup>(1)</sup> For instance, Ariane launchers are usually developed in the context of ESA programmes, and the development of each of the Delta IV and Atlas V launchers appears to have been substantially funded by the United States Government through its Evolved Expendable Launch Vehicle programme.

**V. CONCLUSION**

(103) In the light of the foregoing, the proposed operation does not create or strengthen a dominant position as a result of which effective competition would be significantly impeded within the common market or in a substantial part of it. The operation is therefore to be declared compatible with the common market pursuant to Article 8(2) of the Merger Regulation and with the functioning of the EEA Agreement,

HAS ADOPTED THIS DECISION:

*Article 1*

The notified operation whereby the Boeing Company acquires control of the satellite prime contracting and equipment business of Hughes Electronics Corporation (consisting of all outstanding shares of Hughes Space and Communications Company (HSC), all outstanding shares of Spectrolab Inc., the assets of Hughes Electron Dynamics (HED), and the minority stakes held by Hughes in ICO Global Communications (Hold-

ings) Ltd and in Thuraya Satellite Telecommunications Private Joint Stock Co.) is hereby declared compatible with the common market and the functioning of the EEA Agreement.

*Article 2*

This Decision is addressed to:

The Boeing Company  
7755 East Marginal Way South  
Seattle, WE 98108  
USA

For the attention of Mr Theodore J Collins  
Senior Vice-President, Law and Contracts

Done at Brussels, 29 September 2000.

*For the Commission*

Mario MONTI

*Member of the Commission*