II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION DECISION
of 14 September 1999
relating to a proceeding pursuant to Article 81 of the EC Treaty
(Case IV/36.213/F2 — GEAE/P & W)

(notified under document number C(1999) 2901)

(Only the English text is authentic)

(Text with EEA relevance)

(2000/182/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,

Having regard to Council Regulation No 17 of 6 February 1962, First Regulation implementing Articles 85 and 86 of the Treaty [1], as last amended by Regulation (EC) No 1216/1999 [2], and in particular Articles 6 and 8 thereof,

Having regard to the application for negative clearance and the notification for exemption submitted, pursuant to Articles 2 and 4 of Regulation No 17, on 26 September 1996,

Having published a summary of the application and notification pursuant to Article 19(3) of Regulation No 17 [3],

After consulting the Advisory Committee for Restrictive Practices and Dominant Positions,

Whereas:

I. THE FACTS

A. INTRODUCTION

(1) On 26 September 1996, General Electric Aircraft Engines (GEAE) and Pratt & Whitney (P & W) notified three agreements to the Commission regarding the creation of a joint venture formed by the two companies, the GE-P & W Engine Alliance LLC ('the Engine Alliance'). The Engine Alliance was formed to develop, manufacture, sell and support a new aircraft engine, known as the GP7000 engine ('the new engine'). The new engine is intended for future, very large commercial aircraft, namely the envisaged Airbus A3XX aircraft and possible Stretch versions of the Boeing B747-400 aircraft. There are only three full-capacity manufacturers on the market for jet engines intended for such aircraft: GEAE, P & W and Rolls-Royce plc ('Rolls-Royce').

B. BACKGROUND

(2) The Engine Alliance was initially formed to develop a new jet engine for the Growth version of the B747-400 aircraft that the Boeing company ('Boeing') planned to develop, known as the Growth 747. The Growth 747 was intended to be a long-range, four-engine, aircraft with 450-550 seats, scheduled to enter into service at the end of the year 2000. The Growth 747 required a technically advanced engine with a thrust of 70 000 to 85 000 lbs fulfilling very stringent requirements regarding size, weight, noise level, emissions and operating costs. None of the three engine manufacturers

[1] OJ 13, 21.2.1962, p. 204/62.
[2] OJ L 148, 15.6.1999, p. 5.
[3] OJ C 339, 7.11.1998, p. 3.

could offer an existing engine fulfilling all these criteria. Rolls-Royce did not, however, have to develop a completely new engine, but could offer a derivative of an existing engine. After several unsuccessful attempts to develop derivatives of their existing engines, P & W and GEAE decided to create the Engine Alliance. Boeing announced in January 1997 that it would not pursue its Growth 747 project, due to insufficient and uncertain demand and high development costs. Airbus Industrie ('Airbus'), the other manufacturer of large commercial aircraft, announced that it would pursue its plans to develop a new long-range, four-engine aircraft, known as the A3XX.

(3) On 6 November 1997, the Engine Alliance amended the notification and declared that, following Boeing's decision to abandon the Growth 747 project, the Engine Alliance would instead develop a new engine for the envisaged A3XX aircraft. The A3XX is intended to carry 480-650 passengers and scheduled to enter into service in the year 2004. It will require engines with approximately the same technical requirements as the Boeing Growth 747. The thrust range was extended to cover 70 000 to 85 000 lbs ± 10 %, i.e. 63 000 to 93 500 lbs. Airbus has signed Memoranda of Understanding for an engine to equip the A3XX with the Engine Alliance as well as with Rolls-Royce. Instead of developing the Growth 747, Boeing is currently considering launching Stretch versions of its B747-400 aircraft, but has not yet taken a definite decision. The new engine may also be suitable for certain Stretch versions.

(4) The Engine Alliance was notified to the US Federal Trade Commission, which declared on 22 November 1996 that it had closed its investigation. This decision was confirmed in October 1997. The parties have undertaken to inform the Federal Trade Commission of any change in scope of the Engine Alliance.

C. THE PARTIES

1. **General Electric Aircraft Engines**

(5) General Electric Aircraft Engines (GEAE) is one of 11 businesses of the General Electric Company of Fairfield, Connecticut, United States of America. GEAE manufactures aircraft engines and related services, in the commercial as well as in the military field. The General Electric Company is active in the field of aircraft leasing through GE Capital Aviation Services (GECAS) which is a unit of its finance business GE Capital Services.

(6) In 1998, the total turnover of the General Electric Company was USD 100 469 million. The turnover of GEAE in 1998 was USD 10 294 million.

2. **Pratt & Whitney**

(7) Pratt & Whitney (P & W) is a division of United Technologies Corporation (UTC) of Hartford, Connecticut, United States of America. P & W produces large commercial aircraft engines. Other activities include military aircraft engines, propulsion systems for missiles and industrial turbines.

(8) In 1998, the total turnover of UTC was USD 25 715 million. The turnover of P & W in 1998 was USD 7 876 million.

D. THE NOTIFIED AGREEMENTS

1. **The agreements**

(9) Three agreements were originally notified on 26 September 1996:

— the Memorandum of Understanding of 16 August 1996 concluded between the Engine Alliance and Boeing concerning an engine for the larger versions of the 747-400 aircraft including the commitment to cooperate, the list price for the new engine and the technical requirements to be fulfilled,

— the Transaction Agreement of 28 August 1996 including the general framework for the cooperation describing the legal representations, warranties and covenants made by the parties, grounds and conditions for termination, and

— the Limited Liability Company Agreement of 28 August 1996 (LLC Agreement) between GEAE, P & W and the Engine Alliance containing the terms of the functioning of the Engine Alliance.

(10) The Memorandum of Understanding concluded with Boeing on 16 August 1996 concerning the Growth 747 is no longer valid following Boeing's decision not to develop the Growth 747 aircraft. It has been replaced by a Memorandum of Understanding of 27 May 1998 between the Engine Alliance and Airbus concerning the envisaged A3XX aircraft. The Transaction Agreement and the Limited Liability Company Agreement remain in force.

2. **Contractual provisions**

a) *Management structure of the Engine Alliance*

(11) The Engine Alliance is a joint venture between GEAE and P & W, created for an unlimited period, with the following management structure.

(12) Each party will have a 50 % equity interest, 'membership interest', in the joint venture and will share programme revenues and responsibilities [...] (*). The parties will establish a Committee consisting of six representatives, three from each party. The Committee will have the authority to conduct the affairs of the Engine Alliance and be responsible for the establishment of general policy, approval of major projects, contracts, purchase orders and product and service distribution decisions. The Committee will hold regular meetings. All six representatives constitute a quorum. Unanimous consent of the Committee is necessary for organisational matters of importance, such as any amendment to the LLC Agreement or any change in the scope of the company's business or transactions, such as the acquisition of another person or of assets outside the ordinary course of the company's business.

(13) The President will serve for a term of three years. The members will select the assembly site and principal offices/headquarters of the company with the intention of achieving the lowest cost and best integration for the new engine. The member not having the assembly site and principal offices/headquarters will nominate the first President. Thereafter the Presidency will alternate between the parties. The President will be responsible for the general management of the company's business and affairs, in particular for overseeing the company's sales and marketing of the new engine.

(14) The sale of the new engine will be the responsibility of the Engine Alliance. Officers and company personnel with responsibility for the new engine will not participate in the sale or marketing of any of the party's other engine programmes.

(15) The company will maintain proper and complete books and records with all transactions and other matters relating to the company's business entered fully and accurately. The financial statements will be kept on an accrual basis and in accordance with 'GAAP' (United States' generally accepted accounting principles) consistently applied. The financial statements will be audited annually by independent public accountants.

(*) Business secret.

b) *The functioning of the Engine Alliance*

(16) The Engine Alliance will not itself produce the new engine, but coordinate the parent companies' activities for the design and production of the new engine. Each party will bear all production costs relating to its manufacture of parts and modules. The party who produces a module is responsible for the design of such module. The design responsibilities have been allocated as follows: GEAE will be responsible for the design of the core system, and P & W for the design of the low-pressure system. The parties will perform an equal amount of the development programme. If it is not possible to balance the development programme, one party may be required to make cash payments to the other party.

(17) The parties may subcontract any portion of its membership interest to any supplier who meets the source approval requirements. The parties may also transfer a portion of its new engine programme and related risk and revenues to any third party provided that the other party is consulted and informed of the party's identity and responsibilities [...] (*).

(18) The parties will establish an integrated product support services programme to provide the customers with low-cost service and maintenance. The overhaul and repair of the new engine will be coordinated by and performed in the name of the Engine Alliance by utilising the existing capabilities of the parties. Customers for the new engine who want to invest in the overhaul and repair of the product can be granted non-exclusive licenses for an agreed fee.

c) *Intellectual property*

(19) The proprietary information disclosed under the LLC Agreement is and will remain the property of the disclosing party. Each party will establish reasonable procedures to ensure that the other party's employees located in its facility will not have access to its undisclosed proprietary information located at its facility. The parties will establish appropriate procedures and training to ensure that these procedures are met.

(20) The parties agree to grant each other a free, worldwide, non-exclusive licence to use the existing technology (background technology) for the purpose of: (i) the joint interface of the components, (ii) the operation and review of the new engine, and (iii) obtaining certification

or performing maintenance, overhaul and repair of the new engine. The parties may only disclose such background technology to third parties with the permission of the owning party, to the extent necessary for the parties to carry out of their duties under the LLC Agreement and provided that third parties agree in writing not to disclose such information.

d) *The use of parts or components*

(21) [...] (*).

(22) Notwithstanding the above, the parties may use the technology developed or acquired either in the course of its participation in the Engine Alliance or in rendering performance under the LLC Agreement at their discretion, including on any other engine programme.

E. THE MARKETS CONCERNED

1. **The relevant product market**

The market for jet engines developed for the envisaged Airbus A3XX aircraft and possible Stretch versions of the Boeing B747-400 aircraft

(23) The parties have identified the relevant market as the market for jet engines with a thrust power of 70 000 to 85 000 lbs ± 10 % (i.e. 63 000 to 93 500 lbs) intended to equip the envisaged Airbus A3XX aircraft and possible future Stretch versions of Boeing's B747-400 aircraft.

(24) Certain third parties have submitted that this market definition is too narrow and that it does not take account of the fact that the new engine could be adapted also for use on other aircraft. According to them, the relevant product market is wider and should be defined as the market for jet engines with a thrust power of 63 000 to 93 500 lbs able to equip existing commercial wide-body aircraft.

(25) From the point of view of the demand side, the Commission takes account of the intended use of the new engine. Jet engines are specifically designed and developed to fit the requirements of a specific aircraft model. The requirements, which relate to the engine's thrust power, size, weight, noise level, emission, fuel consumption and operational costs, differ depending on the type and size of aircraft. Those requirements are set by the airframe manufacturers in cooperation with the airlines.

(26) The envisaged A3XX four-engine aircraft, for which the new engine is intended, will be the first twin-aisle, twin-deck aircraft on the market with a bigger passenger capacity (480-650 passengers) than any aircraft currently operating. It will be available in both passenger and cargo versions as well as in combi versions carrying both passengers and cargo. Airbus plans to first launch the A3XX-100 (550 seats) followed by the A3XX-200 (656 seats), both with a range of 7 650 to 8 750 nautical miles. Airbus is also studying the possibility of launching a reduced version, the A3XX-50 (481 seats). Airbus' current estimate is that the A3XX-100 version will require engines with a thrust of 67 000 lbs and the A3XX-200 version engines with a thrust of 75 000 lbs. According to Airbus's preliminary plans, a smaller derivative A3XX-50R would need engines with a thrust of 67 000 lbs. The thrust requirements have not yet been finally determined by Airbus. The possible Stretch versions of the Boeing B747-400 aircraft will, according to Boeing's current estimates, require engines with a thrust of 67 000 lbs.

(27) The envisaged A3XX aircraft, as well as possible Stretch versions of the B747-400 aircraft, will require jet engines with very specific and demanding technical characteristics relating to thrust power, size, weight, noise level, emission, fuel consumption and operational costs. Because of the specific characteristics, the new engine cannot, from the point of view of the demand side, be substituted by any existing engine.

(28) From the point of view of the supply side, the manufacturers cannot offer their existing engines for the above-mentioned aircraft, nor can they adapt their engines in the short term to fulfil the specific characteristics. The three manufacturers can only develop an engine fulfilling the characteristics in the medium term, either by developing a derivative of an existing engine (Rolls-Royce) or by developing a new engine (P & W and GEAE).

(29) The Commission concludes, in the light of the above, that the relevant product market is the market for jet engines intended for the envisaged Airbus A3XX aircraft and possible Stretch versions of Boeing B747-400 aircraft.

2. **Neighbouring product market**

The market for jet engines for existing commercial wide-body aircraft

(30) It would not be possible to offer the new engine for use on any other aircraft than the envisaged A3XX aircraft and possible Stretch versions of the B747-400 aircraft without adaptation. However, the notifying parties, as well as Rolls-Royce, have confirmed that it would be possible to adapt the new engine, in the medium term,

(*) Business secret.

for use on other commercial wide-body aircraft, but that it would entail high costs and be time-consuming (at least 36 months). The market for jet engines for existing commercial wide-body aircraft is therefore a neighbouring market to the market for jet engines developed for the envisaged A3XX aircraft and possible Stretch versions of the B747-400 aircraft. It could be argued that there are different sub-markets within the market for jet engines for existing commercial wide-body aircraft. However, this question can be left open for the assessment of the notified arrangement.

(31) Commercial wide-body aircraft are usually defined as commercial aircraft with more than 200 seats ([4]). Commercial wide-body aircraft require more powerful engines than commercial narrow-body aircraft. The latter are usually defined as commercial aircraft with 100-200 seats. The jet engines that equip existing narrow-body aircraft have a thrust of less than 45 000 lbs and are not substitutable with engines for wide-body aircraft, all of which require engines with a minimum thrust power of approximately 60 000 lbs.

(32) The wide-body commercial aircraft currently in production can be divided into twin-engine and four-engine aircraft. The only three-engine commercial aircraft still in production is the freighter version of the MD-11.

Existing commercial wide-body aircraft

Type of aircraft	Twin-engine	Four-engine
Boeing	B767 B777	B747
Airbus	A300 A310 A330	A340

(33) The indicated thrust range of the new engine is 63 000 to 93 500 lbs. All of the abovementioned commercial wide-body aircraft are equipped with engines, which have a thrust capacity within this thrust range. The thrust required of an engine depends not only on the size of the aircraft which it equips, but also on the number of engines. A twin-engine aircraft requires, for example, engines with a higher thrust than a four-engine aircraft of equivalent size.

([4]) Commission Decision 97/816/EC, Case IV/M.887 — Boeing/McDonnell Douglas (OJ L 336, 8.12.1997, p. 16, paragraphs 16 and 38).

(34) Experience in the aero-engine industry shows that jet engines for commercial wide-body aircraft are often modified to provide additional characteristics or performance to be fitted on other aircraft than originally intended. In this respect, engines developed for a specific four-engine aircraft cannot only be modified to fit on another four-engine aircraft, but also for use on a twin-engine aircraft. The three manufacturers have in the past developed such derivatives by adapting engines originally intended for the B747-400 aircraft for use on a twin-engine aircraft. Therefore, although the new engine will be developed, in the first place, for a four-engine wide-body aircraft, this does not exclude the possibility of later adapting it for use on a twin-engine wide-body aircraft.

(35) The market for jet engines for existing commercial wide-body aircraft is characterised by the development of 'families' of engines with a number of derivatives. Examples of such 'families' of engines are the Rolls-Royce's Trent engine, P & W's PW4000 engine GEAE's CFM56 and CF6 engines which are developed in cooperation with the French manufacturer Snecma. These 'families' include engines for the whole range of existing commercial wide-body aircraft.

Engine family	Applications
PW4000	B747-400 B767 B777 A300/A310 A330
CF-6	B747-400 B767 A310 A330
Trent	B767 B777 A330 A340

(36) The fact that all three manufacturers have developed 'families' of engines which can power the whole range of existing commercial wide-body aircraft suggests that also the new engine could, in the medium term, be adapted for use on other commercial wide-body aircraft than the envisaged A3XX aircraft and possible Stretch versions of the B747-400 aircraft.

(37) The Commission considers that the market for jet engines intended for existing commercial wide-body aircraft is a neighbouring market, since it follows from the above that derivatives of the new engine could, in the medium term, be adapted for use on existing commercial wide-body aircraft for which it was not initially intended.

3. **The relevant geographic market**

(38) The Engine Alliance will market, sell and support the new engine on a worldwide basis. The transportation costs of delivery will be negligible. The Commission therefore considers the geographic market for jet engines intended for the envisaged A3XX aircraft and possible Stretch versions of the B747-400 aircraft to be worldwide.

(39) This applies also to the market for jet engines for existing commercial wide-body aircraft which are sold on a worldwide basis under similar conditions of competition. Relative transportation costs of delivery are negligible. All three manufacturers, GEAE, P & W and Rolls-Royce, are active on this market on a worldwide basis. The market for jet engines for existing commercial wide-body aircraft is therefore worldwide.

4. **Market shares**

(40) There are no market-share figures available for the market for jet engines intended to equip the envisaged A3XX aircraft or possible Stretch versions of the B747-400 aircraft, since there are currently not engines on this market. The market shares shown below concern the neighbouring market for jet engines for existing commercial wide-body aircraft.

(41) Market shares can be calculated either on the basis of the number of engines installed, on the order backlog or on the number of orders received. The number of engines installed shows the existing situation in the sector as a whole. The yearly backlog numbers reflect the development of net orders (number of new firm orders minus number of cancelled orders) over a certain period and thus show the development. The number of orders received reflects the situation at a certain time.

a) *Jet engines installed on existing commercial wide-body aircraft*

(42) The market shares by units of the world market for engines installed on existing commercial wide-body aircraft delivered between January 1996 and March 1999 are the following.

(%)

	1996-1999
GEAE	34
P & W	29
Rolls-Royce	16
CFMI [1]	20

[1] CFMI is a 50/50 cooperation between GEAE and Snecma.
Source: Airbus Industrie and Boeing.

b) *Backlog for jet engines for existing commercial wide-body aircraft*

(43) The worldwide market shares in the market for jet engines for existing commercial wide-body aircraft in terms of order backlog (by units) are the following.

(%)

	1997 (August)	1998 (April)
GEAE	32	29
P & W	30	27
CFMI	14	11
Rolls-Royce	17	25
Undecided [1]	6	8

[1] Aircraft for which an engine has not yet been selected.
Source: Air Transport Intelligence.

c) *Orders received for jet engines for existing commercial wide-body aircraft*

(44) The worldwide market shares for engines for commercial wide-body aircraft on the basis of orders received in terms of units are the following.

	1997	1998
GEAE	[...] (*)	[...] (*)
CFMI	[...] (*)	[...] (*)
P & W	[...] (*)	[...] (*)
Rolls-Royce	[...] (*)	[...] (*)

(*) Business secret.
Source: GEAE.

(45) The market shares show that the notifying parties have a very high combined market share on the market for jet engines for existing commercial wide-body aircraft, both in terms of backlog and in terms of engines installed and on order. However, the figures for orders received show that Rolls-Royce's market share is increasing.

5. **Estimated demand for the new engine**

(46) The demand forecast until the year 2020 for the envisaged A3XX aircraft is estimated to be approximately [...] (*) aircraft according to the Engine Alliance. The estimated demand will thus be at least [...] (*) engines excluding spare engines and parts. The demand for the A3XX aircraft and possible Stretch versions of the B747-400 aircraft is, however, uncertain and depends on a number of factors. Boeing currently makes a different market forecast from Airbus and considers the demand for a new 'super jumbo' aircraft to be too small to justify the very high development cost. The demand depends, *inter alia*, whether or not the airline traffic will go towards an increased 'fragmentation' of hubs. Such development could push airlines towards the purchase of smaller aircraft, such as the A340, instead of very large 'super jumbo' aircraft such as the A3XX.

(47) Boeing does not currently plan to build a new very large aircraft, but considers the possibility of developing Stretch versions of its existing B747-400 aircraft. The Engine Alliance is continuing to study engine configurations in cooperation with Boeing for the Stretch versions. Boeing is currently considering developing two larger versions of its 747-400 model, the 747-400X Stretch (approximately 485 passengers) and the 747-400Y Stretch (approximately 500 passengers), for which the new engine may be suitable. However, Boeing has not yet taken a definite decision whether or not to launch these models. Rolls-Royce is expected to be able to offer a derivative of its Trent 600 engine for the 747-400X/Y Stretch models.

(48) The potential customers for the new engine are Airbus and Boeing and ultimately certain airlines with extensive route networks operating long-distance flights. According to Airbus's estimates, over half of the projected deliveries (58 %) are expected to go to airlines in the Asia-Pacific region. Around 20 % of the projected deliveries are expected to go to North America and around 20 % to Europe. In terms of customers, 20 airlines are expected to purchase 72 % of the aircraft and 42 other airlines the remaining part. The potential customers for the A3XX are big airlines which typically have a strong bargaining position against airframe and aircraft engine manufacturers. The major routes for the envisaged A3XX are routes on which the B-747 fleet is currently employed, i.e. Transatlantic, Trans-Pacific, Asia-Europe and within Asia.

(*) Business secret.

6. **Structure of the market for the new engine and the neighbouring market for jet engines for existing commercial wide-body aircraft**

a) *Supply*

(49) The structure of the market for the new engine is very similar to that of the neighbouring market for jet engines for existing commercial wide-body aircraft. Currently, three engine manufacturers have the capability to develop independently jet engines intended for these markets: GEAE, P & W and Rolls Royce ([5]). Each of those three aircraft engine manufacturers offers a number of engine 'families' based on common elements and technology. Rolls-Royce has an increasing market share and a good capacity for developing new engines and derivatives of existing ones, as shown by the Trent family. The French manufacturer, Snecma, is active in the manufacture of jet engines in cooperation with GEAE through the CFMI, but does not produce such engines by itself. In the light of the above, no entries are foreseen on this market in the near future.

(50) The barriers to entry are very high to the abovementioned markets. The development of such jet engines entails very high costs (approximately USD 1 billion) on research and development, product design, testing, production tooling, and related marketing and after-sale service. A large part of these costs are incurred before any engines are sold. GEAE and P & W estimate the non-recurring costs of developing the new engine to exceed USD 800 million. Aircraft engine manufacturers typically do not recover their investment until after 15 to 20 years. The life cycle of an engine is approximately 40 years.

(51) Jet engines for existing commercial wide-body aircraft are usually manufactured by consortia including one manufacturer having a complete engine capability (GEAE, P & W or Rolls-Royce) and a number of engine component manufacturers which share the work, revenue and investment risks. These component manufacturers are called risk- and revenue-sharing participants (RSPs). In general, a 'programme share' percentage is negotiated with the RSP to reflect the scope of work provided by the latter during the programme. The engine manufacturer then compensates the RSP from revenues actually generated from sales of engines and

([5]) Snecma and BMW do not have the capacity to develop such jet engines independently, but can only do so in cooperation with one of the three manufacturers GEA, P & W and Rolls-Royce.

spare parts based on that RSP's programme-share percentage. Certain obligations and liabilities are also shared by the RSP based on the same percentage. RSPs may also be restricted in their ability to conclude agreements to participate in programmes led by competing prime manufacturers.

(52) The notified cooperation is an example of the increasing cooperation between manufacturers for the development of new jet engines. Other examples include Rolls-Royce and P & W who are shareholders in International Aero Engines (IAE), a project involving also Daimler Chrysler Aerospace Motoren- und Turbinen-Union (MTU) (Germany), Fiat Avio (Italy) and Japanese Aircraft Engines Corporation (JAEC) (Japan). IAE is active in the thrust range 22 000 to 33 000 lbs where it manufactures the engine V2500. Another example of cooperation is the joint venture CFMI between GEAE and Snecma, producer of the CMF56 engine which equips the Airbus 320 aircraft and, as a sole supplier, the Boeing B-737 and Airbus A340.

b) *Demand*

(53) The engine manufacturers must, at a first stage, compete to satisfy the requirements of the airframe manufacturer to be able to offer engines for a particular airframe. At this stage, the engine manufacturer typically deals 'principally with the airframe manufacturer, who collaborates closely with its prospective airline customers to define the airframe and engine requirements. The airframe manufacturers (Boeing and Airbus) set the engine requirements based on demand from the airline customers. The airframe manufacturer thus acts largely as a representative for the airlines. However, since engines typically take longer to develop than the corresponding airframes, the engine manufacturer must also anticipate airlines' needs when launching development work. The ultimate customers for jet engines for commercial wide-body aircraft are the airlines, which frequently purchase airframes and engines separately. Such aircraft are typically offered with more than one type of engine.

(54) The airlines have typically a strong bargaining power. Competition concerns life-cycle costs, i.e. price, performance, reliability and longevity of the competing engines as well as likely repair and maintenance costs. Competition is particularly intense in the early phases of an engine development programme, since it is important to have the engine selected for a new airframe by a substantial airline. However, even after airlines have selected an engine supplier, it sometimes occurs that they switch engine supplier. Airlines typically prefer a degree of engine manufacture commonality throughout their fleet. This gives the advantage of commonality of spare and replacement parts as well as advantages in technical training and general care and maintenance of the engines.

F. OBSERVATIONS FROM THIRD PARTIES

(55) A number of interested third parties submitted observations in response to the Notice published pursuant to Article 19(3) of Regulation No 17 ('the Notice') [6]. The submissions concern primarily the content and wording of the undertakings given by the parties and, in particular, the scope of the Engine Alliance. According to certain third parties, the increased thrust range of the new engine has become too wide and may reduce competition between the parties in engine segments where they currently compete. Other third parties have commented on the undertaking concerning the access of third parties to perform aircraft engine maintenance including repair and overhaul.

(56) Airbus has stated that it is in favour of the Engine Alliance, since this will increase its choice of engine for the envisaged A3XX aircraft from one supplier (Rolls-Royce) to two.

(57) The third engine manufacturer, Rolls-Royce, has on several occasions made observations concerning the Engine Alliance. Rolls-Royce also submitted comments in the form of a formal complaint pursuant to Article 3 of Regulation No 17. The complaint was subsequently withdrawn. Rolls-Royce believes that the Engine Alliance restricts both actual and potential competition between the parties and that the scope of the Engine Alliance, as described in the Notice, is so wide that its approval would restrict competition and affect trade between Member States to a significant degree. Rolls-Royce believes that the undertakings listed in the Notice are not sufficiently stringent and submits that the Engine Alliance should be permitted to exist only under certain additional conditions. '

(58) In this respect, Rolls-Royce believes that the scope of the Engine Alliance should be strictly limited to the development, manufacture, sales and marketing of a new engine with a minimum thrust of 67 000 lbs ± 15 % to allow for engine growth. The scope of the Engine Alliance should also exclude any joint design and development

[6] See footnote 3.

other than that necessary for module integration, application of the engine to the airframe, testing and validation. The application of the new engine should be strictly limited to aircraft carrying more than 475 passengers, which would accommodate Airbus' current specification for the A3XX. Finally, the Engine Alliance should be required to notify any change in scope to the Commission without delay and not to put into effect any such change prior to receiving Commission approval.

(59) Rolls-Royce further submits that the Engine Alliance should be required to trade at arm's length with its parents in order to preclude the Engine Alliance receiving any cross-subsidy from its parent companies. The Engine Alliance should be an independent, self standing entity without any direct or indirect subsidy or support from its parent companies. Moreover, the Engine Alliance should be obliged to adopt an accounting system separate from that of the parents which should also be audited every year by an independent auditor and published on an annual basis.

(60) Rolls-Royce also considers that the Engine Alliance should be prohibited from entering into any exclusive arrangements for the new engine with airframe manufacturers. Rolls-Royce fears that GEAE and P & W could exercise their combined market power and 'buy' exclusivity in an airframe, which would create a significant risk of foreclosure with regard to Rolls-Royce. Finally, Rolls-Royce suggests that GEAE and its leasing subsidiary, GECAS, should be obliged to offer prospective customers a genuine choice of engine and support services on non-preferential terms if it is to finance the purchase of any four-engine aircraft with more than 475 passengers. This would prevent GECAS from being able, due to its considerable strength and bargaining power, to commit its customers to leasing aircraft equipped with GEAE or Engine Alliance engines, which would restrict the choice of potential customers and distort competition between the Engine Alliance and Rolls-Royce.

G. UNDERTAKINGS OFFERED BY THE PARTIES

(61) The Commission has carefully reviewed all comments received and has concluded that they were not of such a nature so as to make it modify its preliminary favourable position as expressed in the Notice. Nevertheless, following further discussions, the parties have offered a number of undertakings concerning the possibility for third parties to perform service and maintenance of the new engine, exclusivity agreements with regard to the new engine and the activities of General Electric Company's leasing subsidiary GECAS. The undertakings, of which the Commission takes note, are the following.

(62) The Engine Alliance will make available to third parties, on terms customary in the industry, the engine manuals and related technical publications required in order to perform basic service and maintenance on the new engine.

(63) The Engine Alliance will not seek, solicit or impose conditions of exclusivity in its bids or contracts for the development or supply of the new engine to airframe manufacturers, except for campaigns in which another engine manufacturer has offered to enter into an exclusive agreement.

(64) GEAE will report to the Commission in writing of any purchase orders placed by its subsidiary General Electric Capital Aviation Services (GECAS) for any new aircraft powered by the new engine.

II. LEGAL ANALYSIS

A. ARTICLE 81(1) OF THE EC TREATY AND ARTICLE 53(1) OF THE EEA AGREEMENT

1. Cooperative joint venture

(65) The Engine Alliance must be assessed pursuant to the rules applicable at the time of the notification which was before Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings [7] was amended by Regulation (EC) No 1310/97 [8].

(66) The joint venture is under the joint control of the parent companies. The governing structure of the Engine Alliance implies that no single parent company is in a position to separately exercise a decisive influence on the decision-making of the joint venture. Unanimous consent of all members of the Committee is required for all organisational matters of importance.

(67) While the parent companies will remain responsible for the design and production of the components of the new engine, the Engine Alliance will be in charge of the final assembly, sales and marketing of the new engine independently from its parent companies. The new engine will be marketed under the name of the Engine Alliance. GEAE and P & W will sell to the Engine Alliance the parts for which they have the production responsibility at a price determined on the basis of a fixed formula. The Engine Alliance will have its own profit and loss accounts. The profits and losses will be allocated between the parent companies at the end of each fiscal year.

[7] OJ L 395, 30.12.1989, p. 1; corrected version in OJ L 257, 21.9.1990, p. 13.
[8] OJ L 180, 9.7.1997, p. 1.

(68) On the basis of the above elements, the Engine Alliance is considered to perform, on a lasting basis, all the functions of an autonomous undertaking. It is therefore a full-function joint venture within the meaning of Article 3(2) of Regulation (EEC) No 4064/89.

(69) However, since the creation of the Engine Alliance could give rise to coordination of the parent companies' behaviour on the neighbouring market for jet engines for existing commercial wide-body aircraft, on which the parties currently compete [9], it is excluded from the scope of Regulation (EEC) No 4064/89. In conclusion, the parties have, through the creation of the Engine Alliance, set up a cooperative joint venture over which they have joint control and which falls to be assessed under Article 81(1) of the Treaty.

2. **Applicability of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement to the creation and functioning of the Engine Alliance**

(70) An agreement to set up a joint venture does not, in itself constitute a restriction of competition, but can be caught by the prohibition in Article 81(1) (ex Article 85(1)) of the EC Treaty if all the prerequisites set out in that Article are fulfilled. Cooperative joint ventures may prevent, restrict or distort competition between the parent companies to the extent the parties are already actual or potential competitors.

(71) The parties claim that they are neither actual nor potential competitors for the new engine, since they can only develop it within the stipulated time schedule by combining their complementary technologies. However, the time pressure has considerably decreased since the time of the initial notification in 1996, where the aircraft engine had to be developed within a very short time. According to Airbus's current estimates, the envisaged A3XX aircraft will not enter into service before, at the earliest, the year 2004.

(72) Moreover, both parties are active on the neighbouring market for jet engines for existing commercial wide-body aircraft. On this market, both parties offer competing jet engines within the thrust range of the new engine, i.e. 63 000 to 93 500 lbs. The fact that both parties have succeeded in the past in developing new engines independently within the thrust range in question indicates that both parties possess the necessary technical know-how and production technique to be able to produce the new engine independently. The fact that they already are active on the neighbouring market means that they do not have to overcome any substantial barriers to entry.

(73) The parties further claim that they would not carry the financial risk of developing the new engine independently due to the high development costs and the uncertain and limited demand. The investment costs of individually developing a new engine would have been approximately USD 1 billion compared to the estimated cost of USD 800 million of jointly developing it. The parties claim that they would only make this investment individually if GEAE and P & W could expect to earn a sufficient profit to recoup its investment and obtain a sufficient return to compensate it for the significant risks involved. The parties estimate that the break-even point will not occur before the year 2020.

(74) Even though the development cost for the new engine is very high, this in itself would not be a fundamental obstacle to the parties developing the new engine independently of each other. The parties have, until now, separately undertaken substantial investment in respect of their current families of engines, some of which have been in the market for just a few years (e.g. the P & W 4000). Moreover, both parties belong to international companies with considerable financial resources. GEAE forms part of the General Electric Company, the world's largest company, and P & W belongs to the United Technologies Corporation, both of which are companies with considerable financial resources see recitals 5 to 8). Both parties could therefore, on their own, be reasonably expected to bear the technical and financial risks associated with the development and production of a new engine. It would also be possible for the parties to reduce the financial risk by sharing the cost with risk- and revenue-sharing participants (RSPs), who would act as suppliers and subcontractors.

(75) In the light of the above, the Commission considers that, while it may be economically more efficient for the parties to develop the new engine in cooperation, it would be technically and economically feasible for both parties to develop the new engine independently. The parties are thus potential competitors for the new engine in what would be a tight oligopoly containing, at most, three manufacturers. The creation and functioning of the Engine Alliance appreciably restricts competition for the new engine, since it reduces the choice of suppliers from three potential suppliers (GEAE, P & W and Rolls-Royce) to two (the Engine Alliance and Rolls-Royce).

[9] For a definition of the neighbouring market, see recitals 30-37.

3. **Effect on trade between Member States**

(76) Since the potential customers for the new engine are primarily airlines with extensive route networks operating on long-distance flights, mainly in the Asia-Pacific region, the effects of the Engine Alliance will mainly be felt in that region. However, jet aircraft are bought and used by airlines throughout the EEA and by airlines outside the EEA, carrying passengers between EEA countries. The potential customers for the new engine also include airlines based in the EEA as well as one of the airframe manufacturers, Airbus, which is based in France. Moreover, both GEAE and P & W market their products through sales representatives located in the EEA and maintain overhaul and repair facilities and spare-parts inventories there. The creation of the Engine Alliance may thus appreciably affect trade between Member States within the meaning of Article 81(1) of the EC Treaty.

B. ARTICLE 81(3) OF THE EC TREATY AND ARTICLE 53(3) OF THE EEA AGREEMENT

(77) The notified cooperation between GEAE and P & W is characterised by the following elements. It concerns the development of a new aircraft engine for envisaged aircraft, which are not yet launched, and for which the demand is uncertain. It involves high financial investments, which are not likely to be recovered before at least 15 years. Moreover, while it reduces the number of potential competitors, it offers a realistic alternative to the one, remaining engine supplier, Rolls-Royce, who will be able to offer a derivative of an existing engine.

(78) Taking account of those circumstances, the Commission finds that the notified arrangement between GEAE and P & W fulfil the four conditions for an exemption pursuant to Article 81(3) of the EC Treaty and Article 53(3) of the EEA Agreement.

1. **Technical and economic progress**

(79) The competitive pressure in the air transport sector results in stricter performance targets, especially with regard to operating costs and environmental standards. The performance targets apply to new aircraft operating long distance routes as well as for the engines for such aircraft. The new engine needs to fulfil stricter performance targets than any existing engine. The cooperation enables the parties to concentrate on the development of the specific elements of the engine in which they have a technological advantage, i.e. the fan-blade technology of P & W and the technology for the high pressure compressor of GEAE. The cooperation will enable the parties to develop an engine that is less expensive in maintenance and cost per passenger and per mile covered, has lower gas and noise emissions than the existing engines of the parties. There is no engine fulfilling these criteria on the market.

(80) The design and production responsibilities within the Engine Alliance will be allocated between the parties according to their technological advantages. This will allow the parties to develop the new engine within a shorter time-frame frame than would otherwise have been possible. The cooperation will also lead to substantial cost savings. The investment cost of individually developing the new engine would, according to the parties, have been approximately USD 1 billion compared to approximately USD 800 million for the joint development.

2. **Benefit for consumers**

(81) The new engine will offer both airframe manufacturers and airlines a technically advanced engine. In this respect, Airbus has declared that it is in favour of the Engine Alliance, which will provide it with an additional offer of engines for the envisaged A3XX aircraft.

(82) The new engine may also offer other benefits, since it will reduce operating costs, service longer routes on a non-stop basis and meet new airport noise restrictions. The reduced operating costs are likely to benefit airframe manufacturers and airlines and also, ultimately, airline passengers by means of lower prices, due to the strong competitive pressure on the market.

3. **Indispensability**

(83) Even though the parties would be technically and financially able to develop the new engine independently, that could not be achieved within the same time-frame and at the same cost as the Engine Alliance. There is currently no competing engine on the market, but Rolls-Royce is developing a derivative of its Trent engine for the envisaged A3XX aircraft. The cooperation is therefore necessary in order to have a competing engine on the market at an earlier stage than would otherwise be possible.

(84) The creation and functioning of the Engine Alliance can therefore be considered indispensable to achieve the abovementioned benefits. However, it is important to ensure that the cooperation does not extend beyond what has been notified and regarded as indispensable to achieve the abovementioned benefits.

(85) The Commission considers that there is a risk that the new engine could be adapted, at a later stage, for use on aircraft other than that for which it was originally intended. The parties have themselves confirmed that the new engine could be adapted for use on other aircraft, even though that such adaptation would be costly and time-consuming. As explained in recitals 34 and 35, jet engines are often modified to provide additional characteristics to be fitted on aircraft other than those for which they were originally intended. The three manufacturers have in the past developed 'families' of engines powering a range of different aircraft. Such development is often encouraged by airlines and airframe manufacturers who are looking for new and better-performing engines for new aircraft models and ask the engine manufacturers to develop derivatives of existing engines. The indicated thrust range of the new engine is finally sufficiently wide to make such developments possible.

(86) Assuming that the new engine, with its unique combination of features, is a success, the parties would have an incentive to adapt it for use on existing commercial wide-body aircraft instead of individually developing derivatives of their engines. The parties would have an incentive to develop such derivatives in order to recover their investments for the new engine. This would have the effect of reducing competition between the parties on the market for jet engines for commercial wide-body aircraft where the parties currently compete and have very high combined market shares (see recitals 42 to 45). It would also reduce the choice of the customers. The market for jet engines for existing commercial wide-body aircraft is characterised by very high barriers to entry and a very high concentration with only three manufacturers. It also represents a high financial value.

(87) In the light of the above, the Commission considers it necessary to impose a condition that the cooperation is strictly limited to a specific engine exclusively intended for the envisaged A3XX aircraft and possible Stretch versions of the B747-400 aircraft. In order to monitor that the cooperation does not extend beyond this, it is also necessary to impose a number of obligations on the parties.

4. **No elimination of competition**

(88) Competitive pressure in relation to the new engine will exist, since Rolls-Royce will offer its Trent 900 engine for the envisaged A3XX aircraft. A Memorandum of Understanding has already been signed between Airbus and Rolls-Royce to that effect. Rolls-Royce is also a potential competitor for an engine for possible Stretch versions of the B747-400 aircraft. The cooperation between the parties will therefore not eliminate competition for the supply of the new engine.

C. CONDITION TO BE ATTACHED TO THE DECISION

(89) Pursuant to Article 8 of Regulation No 17 and to Protocol 21 to the EEA Agreement, the Commission may attach conditions to a Decision pursuant to Article 81(3) of the EC Treaty and Article 53(3) of the EEA Agreement. For the reasons explained in recitals 85, 86 and 87, the Decision must be subject to a condition whereby the Engine Alliance is strictly devoted to a new engine for the envisaged A3XX aircraft and for possible future Stretch versions of the B747-400 aircraft. It must also be ensured that the parent companies independently develop the technology necessary to develop the components for which they are responsible.

(90) The scope of the Engine Alliance is described by reference to the specific future aircraft applications of the new engine. Another possibility would have been to define the scope by reference to the thrust of the new engine. However, such definition is difficult to make in the present case, since neither Airbus nor Boeing has, at this stage, taken a final decision as to the engine thrust required for their envisaged aircraft. Moreover, the thrust range of an engine is often increased at the request of the airframe manufacturer. The Engine Alliance must therefore enjoy sufficient flexibility to adapt the thrust range in accordance with the manufacturers' requirements.

(91) In order to ensure that the new engine will only be offered for very large, future commercial aircraft, it is also necessary to determine the possible applications for the new engine with reference to the number of passengers. The Commission therefore finds it appropriate to limit the application of the new engine to the A3XX aircraft and any possible Stretch versions of the Boeing B747-400 aircraft which are designed, in their standard configuration, for more than 450 passengers ([10]).

D. OBLIGATIONS TO BE ATTACHED TO THE DECISION

(92) In order to enable the Commission to monitor the parties' compliance with the above condition, the Decision must also be made subject to a number of obligations pursuant to Article 8 of Regulation No 17 and to Protocol 21 to the EEA Agreement. To allow the Commission to verify that the scope of the cooperation is not extended without its knowledge, the parties must notify the Commission of any proposed change of the scope of the Engine Alliance as soon as possible and in any event before implementing any such change.

([10]) Boeing's latest estimate for the B747-400X Stretch is approximately 485 passengers.

(93) In order to verify that the scope of the Engine Alliance remains limited to what is notified, the Engine Alliance should be a separate legal entity trading in its own right and at arm's length with its parents in the supply of aircraft engines. It shall also have separate accounts. The LLC Agreement provides that the Engine Alliance will be audited annually by independent auditors. In addition to this, the Engine Alliance should also be obliged to submit the audit reports to the Commission. On request of the Commission, the same obligation should also apply to the accounting records.

(94) As concerns the parent companies' ability to give financial support to the Engine Alliance, the Commission does not consider it economically realistic to require that the Engine Alliance receive no direct or indirect subsidy or support from its parent companies. In view of the characteristics of the market, that would not be possible, due to the very high development costs and long development periods.

(95) The Engine Alliance must sell and market only the new engine. If the joint venture were allowed to sell and market also the parties' own engine programmes, this could have the effect of reducing competition between the parties with regard to their existing engine programmes. The notified LLC Agreement provides that the sale of the new engine is to be the responsibility of the Engine Alliance and that the Engine Alliance will not market any of the parties' other engine programmes. It is, in addition, necessary to specify the role of the sales and marketing personnel of P & W and GEAE. The parent companies may thus not market the new engine or be given access to the responses given to potential clients of the new engine. Moreover, if a customer requests a bid for multiple engines, including on the one hand, the new engine and, on the other hand, any of the parties' own engines, the discounts, rebates or other terms of sale of the new engine must be kept separately. The parent companies may not disclose to the Engine Alliance or each other the terms of their separate offerings.

(96) In order to maintain competition between the parties outside the Engine Alliance, it is further necessary that the exchange of confidential information be limited to what is necessary to ensure the proper functioning of the joint venture. According to the LLC Agreement, the Engine Alliance and the parties are to establish a number of safeguards to prevent the exchange of competitively sensitive information. This includes an obligation for all proprietary information not required to be disclosed for the purposes of the new engine to be kept separately in each party's facilities and for each party to train its staff to ensure that the confidentiality guarantees are respected. In addition, it is necessary to specify that proprietary information, including confidential technology, marketing strategies, quantities, prices, discounts, rebates or other terms of sales may not be exchanged between GEAE, P & W and the Engine Alliance with respect to GEAE and P & W's respective separate engine offerings. It is also necessary to impose an obligation on the Engine Alliance personnel to sign a confidentiality agreement to ensure the respect of those principles.

E. DURATION OF THE EXEMPTION

(97) In accordance with Article 8 of Regulation No 17 and Protocol 21 to the EEA Agreement, a decision in application of Article 81(3) of the Treaty must be issued for a specified period. Pursuant to Article 6 of Regulation No 17, the date from which such a decision takes effect may not be earlier than the date of notification.

(98) This Decision concerns a sector with long development periods in which investments are typically not recovered before a period of at least 15 years. In view of this and in accordance with Article 6 of Regulation No 17, this Decision should take effect from the date of notification, and for a period of 15 years. The exemption is granted until 26 September 2011.

(99) This Decision is without prejudice to the application of Article 82 (ex Article 86) of the EC Treaty and Article 54 of the EEA Agreement,

HAS ADOPTED THIS DECISION:

Article 1

In accordance with Article 81(3) of the EC Treaty and Article 53(3) of the EEA Agreement, the provisions of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement are hereby declared inapplicable to: (i) the Memorandum of Understanding of 27 May 1998 between the GE-P & W Engine Alliance LLC and Airbus Industrie, (ii) the Transaction Agreement of 28 August 1996, and (iii) the Limited Liability Company Agreement of 28 August 1996.

Article 2

This Decision shall be subject to the following condition:

the scope of the Engine Alliance will be limited to the design, development, marketing, sales, support and service of the notified new aircraft engine and its derivatives. The applications of this engine and its derivatives will be limited to the envisaged Airbus A3XX aircraft and any of its passenger or freighter derivatives and to any future four-engine aircraft of Boeing, which is, in its standard configuration, designed for more than 450 passengers. The joint development will be limited to development necessary for module integration and the application of the engine to the airframe. In particular, GEAE and P & W will independently develop the technology for the major

modules for which each is responsible, specifically, the high pressure compressor, the high pressure turbine, and the combustor of GEAE and the fan module, low pressure compressor, low pressure turbine, and turbine exhaust casing for P & W.

Article 3

This Decision will be subject to the following obligations:

1. the parties will notify the Commission of any proposed change in the scope of the Engine Alliance as soon as possible and in any case before implementation thereof;
2. the Engine Alliance will be a separate legal entity trading in its own right which will contract directly with its customers and at arm's length with its parents in the supply of aircraft engines. The Engine Alliance's accounting records and auditing records will be maintained in a separate accounting system from P & W and from GEAE. The auditing reports will be submitted to the Commission. The Engine Alliance will, on request, also make available its accounting records to the Commission. Information regarding actual P & W costs will not be shared with GEAE, and information regarding actual GEAE costs will not be shared with P & W;
3. the role of P & W and GEAE sales and marketing personnel will be limited to acting as client contacts and as a conduit for requests for and supply of general product and technical information relating to the new engine. P & W and GEAE personnel will not have access to the responses given to clients by the Engine Alliance;
4. if a customer requests a bid for multiple engines, including, on the one hand, engines manufactured by P & W and/or International Aero-Engines, or engines manufactured by GEAE and/or CFMI and, on the other hand, the new engine, the discounts, rebates or other terms of sale of the new engine will be stated separately and neither GEAE nor P & W will disclose to the Engine Alliance or to each other the nature of the terms that either of them elect to offer on their respective separate engine offerings;
5. with respect to GEAE and P & W's respective separate engine offerings, the Engine Alliance, P & W and GEAE will establish safeguards to prevent the exchange of competitively sensitive, non-public information including confidential technology, marketing strategies, quantities, prices or the matters mentioned in point 4 ('proprietary information') between them including a requirement that the Engine Alliance personnel sign a confidentiality agreement to ensure respect for these principles.

Article 4

This Decision shall apply from the date of notification of the agreements referred to in Article 1 until 26 September 2011.

Article 5

This Decision is addressed to the following undertakings:

1. General Electric Company
   1299 Pennsylvania Avenue, N.W.
   Suite 1100W
   Washington, D.C. 20004
   USA
2. United Technologies Corporation
   United Technologies Building
   Hartford, Connecticut 06101
   USA

Done at Brussels, 14 September 1999.

For the Commission

Karel VAN MIERT

Member of the Commission