

**Commission Decision
of 18 October 1995**

**on the compatibility of a concentration with the common market
and with the operation of the EEA Agreement**

**in a proceeding
pursuant to Council Regulation (EEC) No 4064/89**

(Case No IV/M.580 - ABB/Daimler-Benz)

(Only the German text is authentic)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings (hereinafter called "the Merger Regulation"),¹ and in particular Article 8(2) thereof,

Having regard to the EEA Agreement, and in particular Article 57 thereof,

Having regard to the Commission decision of 23 June 1995 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections of the Commission,

Having regard to the opinion of the Advisory Committee on Concentrations,²

Whereas:

1. The notification under consideration, which was made on 8 May 1995, concerns the proposed setting-up, by Asea Brown Boveri AG (ABB), Zurich, and Daimler-Benz Aktiengesellschaft (Daimler-Benz), of a joint venture, ABB Daimler-Benz Transportation, to which the two parent companies wish to transfer their worldwide activities in the sphere of rail technology.
2. By decision of 31 May 1995, the Commission ordered the suspension of the notified concentration, pursuant to Articles 7(2) and 18(2) of the Merger Regulation, until it takes a final decision.
3. Having examined the notification, the Commission found that the project falls within the scope of the Merger Regulation and raises serious doubts as to its compatibility with the common market. By decision of 23 June 1995, the Commission accordingly initiated proceedings pursuant to Article 6(1)(c) of the Merger Regulation.

¹

OJ No L 395, 30.12.1989, p.1; corrigendum: OJ No L 257, 21.9.1990, p.13.

²

4. By letter dated 2 June 1995, the Federal Republic of Germany informed the Commission, pursuant to Article 9(2) of the Merger Regulation, that the concentration threatened to create or strengthen a dominant position as a result of which effective competition would be significantly impeded on seven markets within the Federal Republic of Germany each of which was a separate geographic market within the meaning of Article 9(7). On 7 August 1995 the Commission sent a communication pursuant to Article 18 of the Merger Regulation with a view to further elucidating the facts. On 6 September 1995 a hearing took place to which the parties to the concentration were invited. On 28 September 1995 the Works Councils of AEG Austria and Kiepe Electric, Vienna, were heard by the Commission. The Advisory Committee discussed the draft of this Decision on 4 October 1995.

I. THE PARTIES

5. ABB is a holding company with interests primarily in the design, development, production, manufacture and maintenance of products, plants and systems relating to electricity generation, transmission and distribution, and in industry, building technology and rail-borne transport.
6. Daimler-Benz is also a holding company which through its affiliated undertakings is active in the following fields:
- Mercedes-Benz AG: the manufacture and distribution of cars and utility vehicles;
 - AEG AG: the manufacture and distribution of equipment and systems in the fields of automation technology, rail systems, electrical-engineering equipment and components, microelectronics and diesel engines;
 - Daimler-Benz Aerospace AG (DASA): the manufacture and distribution of equipment and systems in the fields of aerospace, defence technology, medical technology, propulsion systems, radar, radio and sensor systems and electrical energy systems;
 - Daimler-Benz InterServices (debis) AG: services relating to information systems, financing, insurance and marketing.

II. THE CONCENTRATION

7. The operation is a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.
- (a) Joint control
Daimler-Benz and ABB will acquire joint control of the joint venture ABB Daimler-Benz Transportation. ABB and Daimler-Benz will each have a 50% stake in the joint venture. In line with this share ratio, the controlling rights of the two parent companies are also equal.
- (b) Full-function joint venture
The joint venture will perform on a lasting basis all the functions of an autonomous economic entity and will not simply take over entirely or predominantly auxiliary functions for the parent companies. ABB and Daimler-Benz will transfer their worldwide rail technology activities to it. The joint venture will accordingly have sufficient capital available to be able to act independently on the market. Although it may be gathered from the notification that the joint venture will in future acquire certain electronic and

mechanical components from its parent companies, this does not alter the assessment given the small share of such supplies in relation to the total turnover of the joint venture as forecast by the parties.

(c) Absence of risk of coordination

The joint venture does not have as its object or effect the coordination of the competitive behaviour of undertakings that remain independent of each other such as would result in a restriction of competition within the meaning of Article 85(1) of the EC Treaty. The parent companies wish to transfer their worldwide activities in the sphere of rail technology to the joint venture. In view of the investment and resources required in the field of rail technology, it is not to be expected that the parent companies will themselves in future still be active on the market.

III. COMMUNITY DIMENSION

8. The combined aggregate worldwide turnover of Daimler-Benz and ABB amounts to more than ECU 5 billion. The combined aggregate worldwide turnover of Daimler-Benz amounts to over ECU 50 billion and that of ABB to over ECU 20 billion. Each of the two undertakings has an aggregate Community-wide turnover of more than ECU 250 million. The aggregate Community-wide turnover of Daimler-Benz amounts to over ECU 30 billion and that of ABB to over ECU 10 billion. Neither of the two undertakings concerned achieves more than two thirds of its aggregate Community-wide turnover within one and the same Member State. The concentration therefore has a Community dimension within the meaning of Article 1 of the Merger Regulation.

IV. APPRAISAL UNDER ARTICLE 2 OF THE MERGER REGULATION

A. Relevant product markets

9. Basically, the product markets affected by the proposed concentration may be divided into four levels:

Level I: rail technology as a whole,

Level II: distinction between "rolling stock" and "stationary equipment",

Level III: further division into product categories:

- "rolling stock" divided into mainline trains, regional trains and local trains and systems,
- "stationary equipment" divided into wayside systems and miscellaneous,

Level IV: further subdivision of these product categories into individual product groups:

- mainline trains subdivided into electrical and diesel locomotives, train sets for mainline transportation, passenger coaches and freight wagons,
- regional trains subdivided into electrical multiple units and diesel multiple units,
- local trains and systems subdivided into trams (including light rail vehicles and electrical equipment for trolley buses), metro vehicles and automatic guided transportation,

- wayside systems subdivided into catenary systems, traction power supply, including dispatching and remote control, and train control and protection systems,
 - miscellaneous subdivided into maintenance and refurbishment of track vehicles (without distinction as to vehicle type) and passenger information systems and ticketing.
10. The parties started primarily from the assumption of an overall market for rail technology.
 11. The Federal Cartel Office, by contrast, takes the view that the rail technology sector has to be divided initially into the subsectors "rolling stock" and "stationary equipment". It believes that, within the "rolling stock" category, a distinction must then be made between stand-alone locomotives, passenger transport vehicles without locomotives, and freight wagons. The question of whether a subdivision of locomotives into electrical and diesel locomotives is necessary was left open. The Federal Cartel Office believes that passenger transport vehicles have to be divided as between markets for mainline transport and regional and urban local transport. In mainline transport, it makes a distinction between locomotives, multiple-unit train sets and passenger carriages. The Federal Cartel Office also tends to view vehicles for regional and local transport as separate markets. In regional transport, the Federal Cartel Office is considering a distinction between electrical multiple units and diesel multiple units. In the local transport category, it distinguishes between trams, metros and AGTs (People Mover). In the "stationary equipment" category, the Federal Cartel Office considers it appropriate to draw a distinction between catenary systems and power supply on the one hand and signalling and security systems on the other.
 12. A survey of competitors of the parties in the rail technology sphere and of German customers for the relevant products showed a tendency towards levels III or IV. Whereas the great majority of larger German customers consider level IV appropriate, competitors specified both level III and level IV.
 13. The Commission's established practice in defining the relevant product markets is to consider the functional substitutability of the relevant products in relation to a specific use from the customer's point of view. The key criteria here are the properties, prices and intended use of the products.
 14. It is not appropriate, in the light of these criteria, to lump the entire rail technology sector into only one product market. Of course, "rolling stock" and "stationary equipment" must obviously be matched to one another. However, there are neither any grounds for arguing that both must be acquired jointly or from the same supplier, nor do the products meet identical demand-side requirements as regards their use, their properties and their price. Rather, the products differ distinctly in nature from one another. Procuring the products as an overall package is possible only if a completely new transport system is being set up. This is, in the first place, not the main business in Europe. Secondly, even if that were the case, procurement of some of the products but not others cannot be ruled out, so that it must not necessarily be assumed that there is an autonomous market for entire systems. In its decision of 26 May 1992 (Case No IV/M.221 ABB/BREL), the Commission not only tended to divide the sphere of rail technology at least into "rolling stock" and "stationary equipment", but also felt that a further subdivision

was worth considering. The categories "rolling stock" and "stationary equipment" likewise comprise very different products.

15. For example, the mainline trains, regional trains and local trains and systems classified as "rolling stock" are used for rail transport over different distances with different requirements, and demand for them emanates as a rule from different customers. For example, mainline trains are acquired by national railway companies, whereas local vehicles are purchased by municipal transport companies. Although it is conceivable that suppliers operating in one of these three spheres could also in principle, on the basis of the know-how acquired, supply products falling within the other two categories, the different technical specifications in the three areas require development costs which are initially separate, and these may from the outset represent an obstacle to supply.
16. Similarly, the product areas grouped together under the heading "stationary equipment" differ widely in terms of their properties, prices and uses. All they have in common is that they form part of a rail transport system. Beyond that, the products lumped together under the heading of wayside system, i.e. catenary systems and traction power supply, including dispatching and remote control technology, and train control and protection systems, are in every respect intended to meet different demand requirements than the maintenance and refurbishment of rail vehicles and passenger information systems and ticketing.
17. A further subdivision of these product categories is also appropriate on the basis of the criteria governing the definition of the product market. Thus, from the demand viewpoint, passenger coaches and freight wagons fulfil very different requirements than locomotives and train sets for mainline transportation. The first types of products, which must be included predominantly in the mechanical-engineering branch of rail technology, do not themselves contain any traction, but are used only in combination with a locomotive. The second category of products travel under their own power. Although their purpose is, together with passenger coaches or freight wagons, to form a complete train set, passenger coaches and freight wagons can be procured separately from the acquisition of a locomotive. The reverse is true for the purchase of locomotives. Train sets for mainline transportation are complete train sets which as such may be distinguished from individual passenger coaches and locomotives. There are also substantial arguments for making a distinction between electrical and diesel locomotives, in view of the different types of traction. Whereas on non-electrified lines only diesel-powered rail vehicles may be used, there might be economic arguments militating in favour of preferring the use of electrically powered rail vehicles on electrified lines. There are also differences between trams, metro vehicles and local passenger transport systems. In wayside systems, a distinction must be made between catenary systems, traction power supply and train control and protection systems, each of which serves a distinct purpose. Similarly, the refurbishment of rail vehicles and passenger information systems and ticketing fulfil different functions.
18. Furthermore, there are grounds for drawing a distinction between the mechanical element and the electrical element of rail vehicles. According to estimates, the electrical element accounts for on average some 55-60% of value added. Only firms which have sufficient know-how in both areas can offer their own vehicle system without depending on cooperation with other firms. This creates problems for purely mechanical-engineering suppliers in particular. In order to be able to supply a locomotive or other product with electrical components, they must find a partner to

work with in respect of the electrical equipment, so as to be able to supply an appropriate product to meet the demands of their customers. However, this does not lead to a subdivision into different markets because of the overwhelming preference of customers for acquiring a rail vehicle as a complete system. Rather, this aspect justifies only an appropriate weighting of the shares acquired in the overall relevant product market. This distinction is necessary for a proper analysis of the relevant product markets.

19. On the abovementioned product markets, a distinction must be made between the components supplied by subcontractors and those manufactured by the product suppliers themselves. The trend is towards a reduction in the vertical range of manufacture by rail vehicle producers, associated with an increase in the purchased supply of components from outside companies. However, the ability to supply the components to be incorporated by the main contractor or subcontractor into the electrical or mechanical subsystem of a rail vehicle does not in itself mean that it is possible to participate on the market for the product as a system. There is, as the parties rightly point out, an increasing tendency to have a main contractor for the system as a whole, so that the ability to supply a subsystem does not necessarily go hand in hand with market participation at the level of the system suppliers. This applies particularly to the purchased supply of components. The surveys of German customers predominantly confirmed this. Only the ability to supply a total product, alone or with subcontractors, in a way that is acceptable for customers makes it possible to participate in the market for product systems. 80% of the customers asked indicated that they had awarded contracts for rail vehicles on a total system basis. Only 4% responded that they had not done so. Furthermore, 92% of customers confirmed that there was an increasing tendency for contract award to a main contractor.
20. In summary, it may be said that the relevant product markets must be defined in accordance with level IV as described above. This distinction also corresponds to the purchasing behaviour of customers as established by the Commission.
21. In the light of this clear finding, considerations to do with some suppliers' flexibility in switching products cannot justify lumping the abovementioned product markets together into uniform markets. On the one hand, the ability to switch production is accessible only to those market participants who already produce a wide range of products in the rail technology sector and possess the necessary know-how for switching production. On the other hand, the size of the rail technology undertakings active in Germany and their market presence vary enormously. Only the full-line suppliers are present on all the product markets. From the standpoint of customers, other European suppliers serve only specific product markets, in which they are specialists. It is not possible for them to simply switch production, rather they need to develop the necessary products for the appropriate market.

B. Relevant geographic markets

22. The markets for rail technology have in the past been national. The reasons for this, alongside the tendency to prefer national suppliers, include particular national product specifications (e.g. different mains voltages and frequencies, track widths and safety systems) which have in the past made it difficult for suppliers in the rail technology sphere to supply products in other Member States. This has resulted in demand-side requirements being essentially covered by domestic firms. Conversely,

this purchasing policy encouraged the development of different standards by rail operators, differences which still exist today.

23. Under Article 9(7) of the Merger Regulation, national markets are to be taken as the relevant geographic markets in particular where the conditions of competition in a Member State are sufficiently homogeneous and differ distinctly from those in neighbouring Member States. Assessment of this has to take account in particular of the nature and characteristics of the products or services concerned, of the existence of entry barriers, of consumer preferences, of appreciable differences in the undertakings' market shares between the area concerned and neighbouring areas or of substantial price differences.
24. The Commission's investigations have confirmed that customers have in the past tended to prefer suppliers established in the same region or in the same Member State, partly because of their proximity, and partly because of their familiarity with the customers' precise requirements. Although foreign suppliers are to be found on the German markets for rail technology, their market participation is still essentially based on production facilities situated in Germany. Imports into Germany are an exception, the share of the rail vehicle market currently accounted for by imports being some 2 - 5%.
25. Orders for rail vehicles in Germany have hitherto gone, on a direct or subcontracting basis, almost exclusively to electrical and mechanical engineering prime contractors or main suppliers which are established in Germany. As a rule, foreign firms get a look-in only through any domestic subsidiaries they may have. In the area of rail vehicles as a whole, the Commission is aware of only two cases in which a firm not established in Germany was appointed the prime contractor for the construction of rail vehicles. The two cases in point involved contracts awarded by the cities of Cologne and Saarbrücken for city railways in which the Canadian firm Bombardier, whose European head office is in Belgium, was appointed the prime contractor. However, the subcontractors for the electrical equipment for the city railways was, in the case of both contracts, the Düsseldorf-based Daimler-Benz/AEG subsidiary Kiepe. An article in issue 6/94 of the periodical "Der Nahverkehr" reports that, despite the fact that Bombardier was the prime contractor, the German share of the overall work was still 71%, of which 46% was accounted for by electrical equipment and 25% by coachbuilding work carried out in Germany.
26. A particularly significant aspect is the awarding of contracts for the electrical equipment of rail vehicles to national firms. The parties have not been able to inform the Commission of any project in which, as regards the electrical equipment of a rail vehicle, a German customer awarded a contract to a foreign firm as prime contractor or subcontractor for the electrical subsystem.
27. The familiarity of suppliers with customers' specific requirements, and in particular with the requirements of general product specifications in the relevant Member States, is of considerable importance.
28. The Commission's investigations have confirmed that at all events, in broad sections of rail technology, national or regional specifications currently still act as entry barriers for exports outside the home region. Where products are supplied for an existing system, they must match up with the existing infrastructure, for example with the mains voltage used in the relevant Member States. National rules and regulations governing safety requirements and authorization conditions may also act

as a technical obstacle. Lastly, because of the traditionally national or indeed local award of contracts, there are a number of specifications which have in the past developed from the relevant suppliers' wishes and which still apply today. Although, according to the information obtained by the Commission, the resulting requirements placed on foreign suppliers can technically speaking be overcome, they do give rise to additional costs which impede market entry.

29. In Germany it has hitherto been the case that firms established there have been almost exclusively the ones awarded contracts. The economies of scale achievable by these suppliers make it more difficult for non-domestic firms which have not hitherto been successful to supply competitive products, and these economies of scale thus have the effect of partitioning markets. As a result, where only limited quantities are involved in the contract, market entry for undertakings which previously have not been awarded any significant contracts in Germany will make only limited economic sense if changes have to be made to products hitherto manufactured by them for other geographic markets. Such technical modifications are as a rule profitable only where fairly large numbers of items are involved.
30. In the "stationary equipment" sphere too, market access for foreign firms in Germany is impeded by technical specifications. In Germany, mains voltage and frequency, for example, are based on 15 000 volts and 16 \ominus hertz, while the equivalent figures are 25 000 volts and 50 hertz in northern and eastern France, the United Kingdom, Spain (high-speed train lines) and the Nordic countries, 3 000 volts dc in Italy, Belgium and Spain (broad gauge) and 1 500 volts dc in the Netherlands and southern and western France. The awarding of contracts to foreign firms is at any rate still the exception in Germany on these markets too. Although the existing differences can be overcome technically, successful market entry is in practice made more difficult without the relevant know-how and the necessary experience with the relevant mains voltages. According to the information provided by the parties, relating to the period 1992 to 1994, the parties, Siemens and the German firm Elpro had a market share of 100% in Germany in the case of new orders for catenary systems and a market share of 80% in the case of traction power supply. Conversely, according to the information provided by the parties, these firms did not receive any orders during the same period in France for the two types of products. In Italy, in the period from 1992 to 1994, of these firms only ABB won orders for catenary systems, giving it a share of about 24%. In the case of traction power supply, ABB's share in Italy was some 2% and that of Siemens around 5%.
31. The current efforts to align technical conditions in rail technology throughout the Community suggest that the situation may change in the future. However, the prospects of any specific impact on the situation are at present not sufficient to warrant the assumption that there is a uniform Europe-wide market. In view of the considerable cost of changing the existing railway infrastructure, the existing infrastructure with its technical specifications will continue to exist for a long time to come. It is therefore doubtful whether the tendencies for national markets to open up and for a European market to be created will, within the forecasting periods relevant for merger control purposes, reach a level that would allow any broader definition of the geographic market.
32. As a result of the directives on the award of public contracts, and in particular Council Directive 90/531/EEC of 17 September 1990 on public procurement, as amended by Directive 93/38/EEC of 14 June 1993, the privatization policy in certain Member States, tight public resources and the basic competitive pressure to develop

an efficient rail transport system, there is today, despite the existing product specifications, at any rate a tendency towards an easing of this national pattern in the award of contracts.

33. Attempts are also being made by the European Communities to standardize technical specifications in the rail technology sphere and to create trans-European rail networks. Council Directive 91/440/EEC of 21 July 1991 requires Member States to separate the provision of rail transport services and the management of rail infrastructure. As a result it will in future be possible for the rail infrastructure of the Member States to be opened up to the supra-regional rail transport undertakings of other Member States. In order to remove obstacles to international rail transport stemming from the existence of non-uniform signalling and train control systems, attempts are being made to introduce a standardized, Europe-wide automatic train control system (ECTS - European Train Control System) as part of the EURET transport development programme. The Commission has also presented proposals for Community guidelines on the setting-up of a trans-European transport network, which the Council has approved. The Council has also called upon the Commission to take further steps to set up a trans-European network and to ensure the interoperability of national networks. All these steps are likely to contribute in future to greater standardization of rail technology products and hence remove technical barriers to market entry.
34. However, on the basis of the information in the Commission's possession, it is doubtful whether it can already be said that European markets exist, since demand-side behaviour is still shaped by national factors and present conditions are set to continue. For example, there still exists today a tendency to opt for domestic suppliers that cannot be explained solely by general familiarity based on long-term customer relations and the sharing of a common language. Familiarity with the relevant specific requirements of customers is just as important.
35. A further factor in local transport in particular, but also in regional and mainline transport, is that customers are endeavouring to reduce their stocks of spare parts and are also tending to contract larger servicing and repair jobs out to other firms. Geographical proximity to a plant or at least to a warehouse owned by the supplier is useful in this respect.
36. The Commission asked the parties' competitors to assess the importance of certain parameters when it came to successfully bidding for a contract, by awarding a value between 1 (unimportant) and 5 (very important). A long-term relationship with customers scored an average of 4.1 and familiarity with customers' requirements 4.4. Both scores show that suppliers' experience with certain purchasers gained from past contracts can confer a considerable subsequent competitive advantage and hence can play an important part in the future award of contracts. Gaining access to the market is therefore a medium- to long-term process whereby producing a standard-setting product makes it possible to gradually acquire a foothold. Any future initial market successes by individual suppliers can thus have more substantial competitive effects only in the medium to long term. This analysis is borne out by the answers regarding the importance of a regional or domestic presence in the production sphere. This scored an average of 4.1. Where such a presence is lacking, the importance of local or domestic partners scored 4.0.
37. The Commission also carried out a survey among purchasers of rail technology products in Germany to determine the importance of certain competition parameters

when it came to awarding contracts. Existing business relations scored an average of 2.7, and suppliers' familiarity with the purchaser's requirements 3.6. Local/regional proximity was awarded a score of only 2.4, while costs scored 4.9 and dependability 4.6. These results show above all that purchasers attach less importance to the proximity of a supplier than suppliers do. This difference may be due *inter alia* to the fact that, owing to their interest in keeping costs down to a minimum, purchasers also consider suppliers who are further afield, although in effect they award contracts on an almost exclusively national basis. Since the cost of submitting a tender is not inconsiderable, competitors' assessment of their prospects of being awarded a contract will colour their attitude when they make their offer. The considerable importance of the competition parameter of dependability shows, moreover, in conjunction with the assessment of the importance of suppliers' familiarity with purchasers' requirements, that suppliers who have already had dealings with a purchaser and whose products are sufficiently reliable are at an advantage. The primary aim of purchasers is to provide their customers with a transport system that works.

38. Undertakings not established in Germany have hitherto submitted bids in response to calls for tenders by German purchasers to only a very limited extent. The number of bids by undertakings not established in Germany has tended to be larger in the case of calls for tenders from Deutsche Bahn AG than in that of calls for tenders from municipal transport companies. This bears out the Commission's view that, especially in the light of existing product specifications, access by foreign undertakings to the German market makes economic sense only where fairly large orders are involved. Not only may the tendency to "buy German" be stronger on the whole among municipal undertakings, but Deutsche Bahn AG is in a much better position than municipal transport companies, owing to the larger orders it places, to encourage foreign suppliers to submit tenders.
39. The market situation in Germany thus differs fundamentally from that in other Member States such as France and Italy, since in such countries the market strength of German firms is substantially smaller and firms established there have high market shares. The comparison with the position in France and Italy is important since in both these Member States, as in Germany, there is a substantial domestic rail equipment industry with suppliers who could in principle be of importance in the other Member States. Taking the overall rail equipment market, Siemens, ABB, AEG and DWA attain a combined market share of about 70% in Germany. Most of the other contracts are awarded to smaller German suppliers. The share of foreign companies is small. On the other hand, the abovementioned German companies attain a market share of only about 1% in France and about 10% in Italy in the overall rail equipment market. French companies, in particular GEC-Alsthom, and Bombardier satisfy the bulk of demand for rail equipment in France. The main Italian companies do not attain significant market shares in France. On the other hand, in Italy most contracts are awarded to Italian companies. Also, the French company GEC-Alsthom has not yet been successful in Italy.
40. Prices can be used as an indicator to only a limited extent. Since quality is a major factor in rail technology products and since the products involved are often very heterogeneous, a comparison of prices between individual Member States is not an appropriate means of establishing satisfactory information on comparable competitive relationships.

41. In summary, it must be assumed that the relevant product markets in Member States having a very large, domestic rail technology industry are still national, provided that domestic rail technology industry can supply the relevant products. Especially in the case of Germany, the existence of a very large domestic rail technology industry in conjunction with the other mentioned above facts results in a considerable deterrent to competitive market entry by new suppliers. Therefore, in Germany at least, there are still at present national markets for these products, even though the changes in overall conditions could after a transitional period result in markets being opened up. In view of the existing rail infrastructure, this transition process will, however, be a lengthy one. In addition to the above more general considerations, the geographical reference markets for freight wagons and passenger information systems require specific mention. In view of the minimal technology needed for the production of the former and the wider field of application of the latter, broader geographical reference markets are possible. However, it is not necessary to determine this, since even on the narrowest basis, ie a geographical reference market limited to Germany, the concentration will not give rise to any cause for concern. Lastly, in a global context, it could be argued that for the establishment of completely new tram and metro systems, a wider geographical reference market merits consideration. But in Germany, which is the main focus for the proposed operation, there are well-developed tram and metro systems and the establishment of a completely new system with no regard to the existing infrastructure is rare, particularly in comparison to the normal flow of orders generated by improvements and additions to the existing networks. Therefore, for the purposes of this decision the geographical reference market for trams and metro systems must be deemed to be national.
42. Furthermore it cannot be considered that some potential competition in the German market arising from firms not located in Germany is such as to allow a broader geographical reference market for Germany. In any event the currently identifiable elements do not yet warrant this. The Commission will consider potential competition within the framework of its competitive assessment.
43. The parties' contention that, in view of the tendency towards a later opening-up of markets, the relevant forecast period should be extended way beyond the usual two to three years cannot be accepted. Apart from the fact that the forecast period is used first and foremost to assess potential competition and not so much to define the geographic market, owing to the peculiarities of rail technology the Commission bases the competition-law analysis of the present case on a forecast period of five years. When it asked market participants to assess future developments, the Commission laid down such a five-year time-scale. A further extension is out of the question here. It generally has to be borne in mind in this connection that the purpose of merger control is to prevent market-dominating structures. Too long an extension of the relevant forecast period would not only lead to greater uncertainty in the forecast itself but would also be tantamount to accepting market dominance over a considerable period. That would be at variance with the purpose of merger control, which is to safeguard competitive structures on the Community's markets. What is more, in the case of dominant positions which are accepted in the medium term, the forecasts about any opening-up of markets are unreliable. It cannot be ruled out that dominant undertakings might avail themselves of their market position to successfully partition markets using economic means, thereby countering the Community's attempts to open up markets.

C. Effects of the merger

1. General

44. Following the concentration, ABB Daimler-Benz Transportation will become the leading rail-technology supplier worldwide ahead of Siemens and GEC-Alsthom. Within the EEA as a whole too, the joint venture can be expected to become the leading supplier ahead of Siemens and GEC-Alsthom. EEA-wide, there will be only three remaining clear "full-line" suppliers, namely ABB/AEG (turnover of some ECU 2.3 billion in the EEA), Siemens (turnover of some ECU 1.8 billion in the EEA) and GEC-Alsthom (turnover of some ECU 1.7 billion in the EEA). On specific product markets, the parties together with Siemens and GEC-Alsthom had, on a Europe-wide basis, from 1992 to 1994, market shares of well over 70%, particularly in the case of trams, metros and electrical locomotives.
45. However, the proposed joint venture will substantially increase the level of concentration in the rail technology sector in Germany in particular. Germany is the only Member State in which the result will be a substantial addition of turnover shares by the parties. Some two thirds of the turnover brought in to the joint venture by Daimler-Benz via AEG and some one third of the turnover brought in by ABB are achieved in Germany (some ECU 0.6 billion + some ECU 0.8 billion). In Germany, the joint venture will become one of the two leading suppliers along with Siemens, while GEC-Alsthom (some ECU 0.3 billion), mainly through its subsidiary Linke-Hoffmann-Busch (LHB), is of much lesser market significance.
46. The parties also have high market shares in the Scandinavian area. However, these are based almost exclusively on orders awarded to ABB. According to the information provided by the parties, ABB's share of orders for electrical locomotives in the period from 1992 to 1994 was 73% in Norway. In the case of mainline train sets and regional electrical multiple units, ABB has a share of 100% in Sweden, and in the case of regional multiple units 67% in Denmark and 89% in Norway. In the case of regional diesel multiple units, ABB's share is 100% both in Sweden and in Denmark. In these Member States, Daimler-Benz did not receive any orders during this period. Only on the market for traction power supply in Sweden will there be a slight addition of ABB's 50% share and a share of some 0.5% on the part of Daimler-Benz, while during this period Daimler-Benz achieved a share of some 20% in Denmark and ABB a share of 13% in Norway, no addition of shares being involved here. There are also additions of market shares in the case of train control and protection systems in Norway (ABB 17%, Daimler-Benz 3%).
47. According to the information provided by the parties, Daimler-Benz/AEG also won an order in Norway in 1991 for 12 electrical equipment items for Metro T 2 000 in Oslo, with an order volume of ECU 8.7 million. In Bergen, Daimler-Benz/AEG won orders in 1990/1993 for five electrical equipment items for trolley buses, with a total volume of ECU 1.3 million. On both product markets, no orders were awarded in Norway from 1992 to 1994. For the Oslo tram system, ABB/Strommens Verksted had supplied 15 vehicles in 1989/90. In 1995, according to the information provided by the parties, orders for a total of 32 vehicles are to be placed for the Oslo tram system. The suppliers are ABB, AEG, Siemens, GEC-Alsthom and Deutsche Waggonbau Aktiengesellschaft (DWA).
48. All told, it is not evident that the concentration would, over and above ABB's existing market position, lead to a substantial change in the competitive situation in Scandinavia. If Daimler-Benz/AEG has, as a non-Scandinavian undertaking, been

able to acquire orders in Oslo, it cannot be ruled out that the other major European suppliers might also be successful in similar moves.

49. The proposed concentration leads to no market share addition in Belgium, France, Ireland, Italy, Luxembourg, the Netherlands, Iceland, Portugal and the United Kingdom. In Finland (AEG only 1% market share in overall rail equipment), Greece (ABB only 2% market share in overall rail equipment), Austria (AEG only 1% market share in overall rail equipment) and Spain (AEG only 1% market share in overall rail equipment), there is only very marginal market share addition. The same considerations apply for these Member States as for Norway. In view of the absence of a very large domestic rail equipment industry, it cannot be considered under the indicated criteria that in these Member States national geographical reference markets exist within the meaning of Article 9(7) of the Merger Regulation.

50. In order to determine whether the proposed transaction is incompatible with the common market, it is therefore appropriate to focus primarily on the competitive situation in Germany as a substantial part of the common market. Only if on a relevant German market the proposed concentration was found to be incompatible with the common market should thought be given to a similar assessment on other geographic markets as well. However, in so far as the proposed concentration is compatible with the common market on a relevant German market, it is inconceivable that there could be any incompatibility with the common market on other geographic markets.

II. Effects of the concentration on the competitive structure of the relevant product markets in Germany.

1. General features of rail technology markets and demand structure

51. Whereas in the past the design, development and production of rail technology products took place in close collaboration between suppliers and customers, with customers having a direct influence on the products to be manufactured and the selection of the firms producing them, the trend now is for suppliers to offer their own set products from which customers can choose. Consequently, a key factor in the competitive strength of an undertaking nowadays is the ability to offer a complete product alone or in cooperation with other firms.

52. The customers for rail technology products in Germany are Deutsche Bahn AG, the national railway company, and a fairly large number of regional and local transport companies operating at municipal level. Deutsche Bahn AG is a buyer of "stationary equipment" for mainline and regional transport and for the associated rail vehicles. With the regionalization of local-level rail passenger transport scheduled for 1 January 1996, responsibility for this will be transferred from the Federal Government to the Länder, thereby having an impact on demand structure in regional transport. "Stationary equipment" for regional transport and the associated rail vehicles are also purchased by regional transport companies. "Stationary equipment" for local transport and the associated rail vehicles are purchased by the municipal transport companies.

2. Present supply structure on the German rail technology markets

53. In Germany, there are at present three "full-line" suppliers in the rail technology sector. Although, in addition to the parties and Siemens, GEC-Alsthom also operates on certain product markets, it has done so only via its subsidiary LHB, which was acquired by GEC-Alsthom only a few years ago and, as a purely mechanical-engineering supplier, has available only part of the capacity necessary for the production of rail vehicles. Talbot, the German subsidiary acquired some time ago by Bombardier is, like Bombardier itself, a supplier of purely mechanical-engineering equipment. There are no subsidiaries of other large European rail technology suppliers in Germany. Possible market participation by other foreign firms in Germany can therefore take place only through imports, which have not hitherto been on any significant scale. However, there are signs that foreign firms are beginning to supply equipment, mainly in response to invitations to tender issued by Deutsche Bahn AG. The only other fairly large company in Germany is Deutsche Waggonbau Aktiengesellschaft (DWA), which is, however, as a supplier of mechanical-engineering equipment, also not present on all the markets, although it is in the process of setting up its own electrical engineering business. In addition to the abovementioned firms, there are in Germany a few other suppliers, but they are involved only in certain rail technology products and often manufacture only parts of such products themselves.

3. Impact of the concentration on supply structure

(a) General considerations

54. The concentration will leave only two undertakings, ABB/Daimler-Benz and Siemens, present as "full-line" suppliers in Germany.

55. In determining the market strength of the firms, account must be taken of the fact that demand for rail technology products and services varies over time. Consequently, in order to assess the parties' market strength correctly, a fairly long period must be applied. The parties have suggested that calculation of market shares should be based on the average for the last three years (i.e. 1992-94). This appears appropriate. The market shares are calculated by reference to the flow of new orders, since these are the direct result of competition between the various suppliers in the relevant period.

56. The combined 1992-94 market shares of the parties concerned in the concentration do not pose any problems in the following 7 of the 15 product markets:

- diesel locomotives (0%, market not of major importance in Germany and the EEA),
- passenger coaches (about 4% in Germany, about 3% in the EEA),
- freight wagons (about 14% in Germany, about 9% in the EEA),
- automatic guided transportation (0%),
- train control and protection systems (about 1% in Germany, about 10% in the EEA),
- maintenance and refurbishment of rail vehicles (about 4% in Germany, about 7% in the EEA),
- passenger information systems and ticketing (about 55% turnover of Daimler-Benz in Germany and in the EEA, but no market share additions, an extremely small market and potential competition from other sizeable companies with computer system experience).

57. The activities of Daimler-Benz and ABB, together with those of Siemens, result in very high shares on the German market for electrical locomotives, train sets for mainline transportation, electrical and diesel multiple units for regional transportation, trams, metro vehicles, catenary systems and traction power supply, the latter including dispatching and remote control. The concentration will give the parties substantial combined market shares on eight product markets (approximate figures based on the figures given by the parties by reference to order inflows):

	ABB	+	DB	=	JV
- electrical locomotives	37%	+	17%	=	54%
- train sets for mainline transportation	5%	+	26%	=	31%
- regional electrical multiple units	18%	+	26%	=	44%
- regional diesel multiple units	0%	+	49%	=	49%
- trams	15%	+	29%	=	44%
- metro vehicles	42%	+	22%	=	64%
- catenary systems	30%	+	31%	=	61%
- traction power supply	6%	+	26%	=	32%

58. Despite the in many cases very strong position of the parties on the German market, there is no question of any individual dominant position, since on the relevant markets Siemens is also present as a supplier and in most cases also has substantial market shares.

59. The parties and Siemens have the following combined market shares (based on information provided by the parties by reference to order intakes) in the abovementioned product markets:

	ABB/DB + Siemens
- Electrical locomotives	54% + 46% = 100%
- Train sets for mainline transportation	31% + 46% = 77%
- Regional electrical multiple units	44% + 25% = 69%
- Regional diesel multiple units	49% + 23% = 72%
- Trams	44% + 41% = 85%
- Metro vehicles	64% + 19% = 83%
- Catenary systems	61% + 33% = 94%
- Traction power supply	32% + 35% = 67%

60. The market shares indicated by the parties correspond essentially to the market strength of the undertakings determined by the Commission in its investigations. In view of the competitive strength of Siemens in key technologies, its established position on the German market and its great financial strength, it cannot be assumed that the parties will manage to achieve a dominant position vis-à-vis Siemens on the relevant markets.

61. For the purposes of competition-law analysis it is also of relevance that, in the case of electrical and electronic equipment for rail vehicles, the parties and Siemens jointly have an even greater market strength than is reflected in the above market shares. The main remaining competitors of the parties in Germany supply only the mechanical part of rail vehicles, and they are therefore dependent on collaboration with a firm having the necessary electrical and electronic know-how to be able to make a viable response to an invitation to tender for a rail vehicle system. The parties and Siemens are the only major potential partners available for such cooperation.

62. In the light of the market shares indicated by the parties, there is at present no other undertaking which comes close to either them or Siemens in terms of overall importance on the German market. On the eight product markets in question, the parties combined and Siemens are the largest undertakings in terms of market shares.

The next most successful competitors are:

- in the case of electrical locomotives, on account of a lack of orders to other undertakings, nobody,
- in the case of train sets for mainline transportation, DWA with an 18% market share,
- in the case of regional electrical multiple units, DWA with a 17% market share and LHB with a 14% market share,
- in the case of regional diesel multiple units, LHB with a 19% market share,
- in the case of trams, LHB with an 8% market share,
- in the case of metro vehicles, LHB with an 11% market share,
- in the case of catenary systems, Elpro with a 6% market share,
- in the case of traction power supply, Elpro with a 13% market share.

The orders placed with LHB predate that firm's acquisition by GEC-Alsthom and are therefore to be ascribed to the latter only conditionally.

(b) Impact in terms of the creation or strengthening of a dominant oligopoly

(1) General considerations

63. Because of the high combined market shares of the parties and Siemens in Germany, it should be considered whether a dominant duopoly will be created or an existing oligopoly strengthened on all eight product markets. Although the competitive strength of the remaining competitors cannot be measured solely in terms of their market shares, the strength of the parties and Siemens in relation to them is significant. Market shares of 67% to 100% achieved by only two undertakings are an indication of a dominant position on the part of both undertakings together vis-à-vis those outside the duopoly.

64. Similarly, the superior size and financial strength of ABB/Daimler-Benz and Siemens vis-à-vis the competitors which have hitherto faced them in Germany also indicate that both undertakings have a considerable competitive lead on all the relevant product markets. In terms of turnover, Daimler-Benz and Siemens are the second and third largest companies in Europe. ABB is amongst the 30 largest European undertakings in terms of turnover (figures based on statistics from the archives of the Frankfurter Allgemeine Zeitung). Even if the financial strength of the undertakings is not such on its own as to allow sufficient conclusions to be drawn as to their competitive achievement potential, the economic strength underlying the size of the undertakings in conjunction with the current market position and the investment necessary on rail technology markets, on which research and development are important, is a general indication of a considerable competitive lead over other suppliers.

65. In particular, the full range of rail technology products manufactured by the parties and Siemens as "full-line" suppliers and their ability to handle large orders as well give them a competitive edge. They can successfully pursue orders which, because of their size, are out of reach of smaller suppliers. They can as a result achieve better and, above all, higher-level capacity utilization. Only GEC-Alsthom has in Europe, apart from the parties, similar advantages of a "full line" supplier with corresponding corporate size. Daimler-Benz and Siemens have advantages over GEC-Alsthom on

the German product markets since their rail technology products are already established on the market and they have considerable capacities in Germany. In addition, it must be asked to what extent, as the dominant undertaking in France, GEC-Alsthom can have any interest in triggering competitive counter reactions by German firms in France in response to competitive forays into Germany. Nevertheless, GEC-Alsthom has, particularly through the acquisition of LHB, shown a clear interest in the German market, and through the acquisition has improved its prospects of success on that market.

(2) Rail vehicles

66. On the product markets for rail vehicles, ABB/Daimler-Benz and Siemens possess particular know-how in electrical and electronic components. Both Bombardier through Talbot, GEC-Alsthom through LHB and, up till now, DWA have plants in Germany that can produce only the mechanical components of a rail vehicle system. Thus, in acquiring its only two rail vehicle orders so far on the German market, for the production of the electrical components of the vehicles Bombardier entered into a cooperative arrangement with the Daimler-Benz/AEG subsidiary Kiepe. Only GEC-Alsthom has sufficient capability in-house to produce the necessary electrical components itself, while DWA and Bombardier have to depend on cooperation arrangements mainly with the duopolists. Although DWA is trying to create its own electrical engineering capacity through its subsidiary FAGA, it is too early to evaluate sufficiently the results of these efforts. The parties have stated that, at the insistence of Deutsche Bahn AG, AEG had to transfer free of charge to FAGA in connection with a contract for the Berlin light rail vehicle system essential know-how in the field of traction technology, thereby enabling FAGA to supply complete traction units for regional electrical trains. As regards GEC-Alsthom, there is substantial evidence to suggest that, in view of the different specifications, participation on the German market poses difficulties where German production facilities are lacking.
67. The present trend for a shift in demand away from individual parts of a rail vehicle and towards a complete rail vehicle system, with the contract being coordinated by an overall lead contractor, supports these points. It is the task of the lead contractor to award any subcontracts that may be required. However, the lead contractor alone remains responsible to the company placing the order. Suppliers must therefore be in a position not only to be able to offer a viable solution as regards the electrical components of a rail vehicle system, but also, on the basis of their financial strength and any experience they have, to be seen as a sufficiently appropriate partner. The financially strong "full-line" suppliers Siemens, AEG and ABB are fully capable of this. The other companies operating on the German market must first find a suitable partner if they do not have their own electrical production capacities available.
68. There are in Germany no other available companies apart from the parties and Siemens that would be suitable partners for the electrical components of a rail vehicle. Apart from GEC-Alsthom, other potential companies are the Dutch firm Holec, the British firm Brush and the Austrian firm Elin. However, these three firms are very small, particularly compared with the above-mentioned "full-line" suppliers, and have not so far obtained any orders in Germany. Consequently, they also lack important reference products. The Italian firms Fiat and Ansaldo are also potential partners for electrical components, but so far they have no reference products in this field in Germany. For example, although Fiat is supplying the tilt technology as part

of an inter-city contract for Deutsche Bahn AG, the electrical components are being made by Siemens.

69. Although GEC-Alsthom is a "full-line" supplier, it has hitherto focused mainly on the French and also the British market, whereas in Germany it has not as yet, as GEC-Alsthom, obtained any orders as prime contractor or subcontractor for electrical components. The existing technical specifications also mean that market entry by GEC-Alsthom is economically feasible only where fairly large numbers of units are involved. There are, for example, different mains voltages in Germany and France. In Germany, 15 000 volts and 16 \ominus hertz are the norm in mainline transportation, whereas France uses 25 000 volts and 50 hertz. These differences, which also apply in relation to other Member States of the Community, still often mean today that locomotives must be changed at frontiers. Although it is technically possible to produce locomotives that can operate on several systems, they are considerably more expensive to produce.
70. The parties have submitted that, in the case of the orders performed by the Daimler-Benz/AEG subsidiary Kiepe for the cities of Cologne, Saarbrücken and Düsseldorf, motors from the French company GEC-Alsthom, which acquired Kiepe a few years ago before selling it to Daimler-Benz, were used for the electrical parts of the products. However, this example relates in the first place only to the product market for trams. In addition, however, even if this example were transposed to other markets for rail vehicles, it is not in itself such as to provide evidence of significant competition. Since the parties themselves, in line with the basic results of the Commission's investigations so far, submit that in future it will no longer be possible to offer individual components of a rail vehicle, but that the trend is towards the supply of a complete rail vehicle, any such supply of components to a prime contractor or subcontractor cannot be regarded as participation in the relevant product markets for rail vehicles. The supply of components by subcontractors involves another market than the supply of a rail vehicle. Furthermore, it can to only a very limited extent be used as evidence of the possibility of market participation, based on the argument that it is technically possible to incorporate components and that the customer accepts the supply of a motor manufactured abroad. Rather, a distinction must be made between the different levels of the market. Clearly, the markets for components are essentially more international than those for rail vehicles. Above all, the purchased supply of components no longer involves contracts which will in future still be concluded by the customers, as the parties submit. Responsibility to the customers is borne only by the prime contractor. Customers may still have some influence over the selection of the subcontractors. It has not been established, however, that the influence of customers in most cases goes so far as to cover control of the supply of components, and this is in any case doubtful in view of the parties' submission that customers attach importance to placing their orders with a prime contractor who designs and supplies a product system and who is solely responsible. In addition, although technical differences in rail technology between individual Member States can be overcome from a technical point of view, this generates costs. It is extremely doubtful whether, in view of higher costs, a competitive tender for the electrical subsystem can be made by a foreign supplier. At all events, foreign electrical component suppliers have yet to win an order in Germany despite the fact that it is and has been in the past technically possible to overcome any differences. Technical specifications may differ in the case of individual components and result in differing obstacles to market access. Lastly, foreign suppliers wishing for the first time to overcome such

obstacles do not as a rule have any reference project available that can generate confidence in the products they have on offer.

(a) Mainline trains

71. The level of concentration is particularly high on the markets for electrical locomotives and train sets for mainline transportation. Thus, according to the information they themselves have provided, the parties together with Siemens have a market share of 100% in the case of electrical locomotives and a market share of 77% in the case of train sets for mainline transportation. The next largest competitor in Germany in the case of train sets for mainline transportation is DWA, with a market share of 18%. In assessing the competitive strength of DWA, account must be taken of the fact that, as a supplier - at least so far - of purely mechanical-engineering products, it does not yet have at its disposal the necessary key technologies in the electrical engineering field. For this reason, but also in view of its much smaller size compared with the parties, DWA does not seem likely as yet to be able to offer its own independent supply of products in competition with the parties and Siemens. Similarly, the German mechanical-engineering suppliers LHB, as a GEC-Alsthom subsidiary, and Talbot, as a Bombardier subsidiary, are not in a position as mechanical engineering suppliers, either on their own or jointly, to provide the parties and Siemens with any substantial competition external to the duopoly.
72. In the case of train sets for mainline transportation, AEG has so far at any rate been unable on its own to compete head-on with Siemens. In view of Siemens's strength in the key technologies, it is currently to be assumed that even AEG is capable of supplying products only in cooperation with Siemens. Accordingly, as far as the Commission is aware, the cooperation between Siemens, AEG and ABB for the ICE 1 and between Siemens and AEG for the ICE 2 was not objected to on competition grounds. According to the information supplied by the undertakings, the cooperation with Siemens on which AEG relies here will no longer be necessary after the concentration because AEG and ABB will jointly be able to compete with Siemens or a Siemens-led consortium.
73. Only GEC-Alsthom has so far been in a position to offer the parties and Siemens any significant competition on these two product markets. However, leaving aside its subsidiary LHB, GEC-Alsthom has not so far obtained any orders in these areas. GEC-Alsthom does, it is true, produce a high-speed train (the TGV) with which it has in the past competed very actively worldwide with the ICE high-speed train produced by German companies, essentially Siemens and Daimler-Benz/AEG. Account must be taken, however, in this connection of the fact that the production of train sets for mainline transportation is a matter of prestige for full-line suppliers and that especially here it is unlikely that a national railway company will place an order with an undertaking which is not primarily established in that Member State because domestic suppliers would be deprived of an internationally indispensable reference product and their market participation might in future be called entirely into question. In view of the strictly national award of contracts so far and the question of safeguarding jobs that is of national relevance in the awarding of contracts of this size, it cannot be assumed that the mere fact that the TGV exists provides a basis for significant competition to the parties and Siemens. Nevertheless, Deutsche Bahn AG succeeded in securing a distinctly lower price for the ICE 2 compared with the ICE 1.

74. In the case of electrical locomotives, Deutsche Bahn AG has since 1992 invited tenders only once (in 1994) for the construction of three types of locomotive. Besides the parties and Siemens, GEC-Alsthom, Ansaldo and Skoda submitted tenders. In addition to the bids from the parties and Siemens, which were each awarded the contract for one type of locomotive, Deutsche Bahn AG also (so it has indicated) shortlisted GEC-Alsthom's bid. In the opinion of Deutsche Bahn AG, the only customer in Germany, even after the concentration there will be a sufficient number of suppliers on the market.

(b) Regional trains

75. The markets for regional electrical and diesel multiple units are markets which are at least very closely linked to one another. The question of whether the different types of traction justify the assumption of separate markets cannot be conclusively evaluated. In so far as the assumption is made of a separate market for diesel-powered regional trains, there will be no addition of market shares on such market, since ABB did not obtain any orders in Germany during the relevant period. However, since ABB did obtain orders for diesel-powered regional trains during this period in Denmark and Sweden in particular, it must be considered to be a potential competitor on the German markets because of its strong presence elsewhere.

76. According to the information obtained by the Commission there has not as yet been any instance, in regional transportation as in mainline transportation, of an order for a rail vehicle going to a company not established in Germany, either on a prime contractor or subcontractor basis, in respect of the electrical or mechanical components. There is only one instance of tenders having been made for regional electrical multiple units; the tenders were made by Talbot/GEC-Alsthom and Bombardier/Brush and were not successful. A survey of German customers has provided evidence to suggest that GEC-Alsthom at any rate is regarded by some customers as a potentially suitable partner for mechanical component suppliers for regional trains.

(c) Local trains

77. On the markets for trams (including light rail vehicles and electrical equipment for trolleybuses) and metro vehicles, there are at present, apart from the parties and Siemens, no other competitors with sizeable market shares. Contracts have so far been awarded almost exclusively to undertakings established in Germany. On the market for trams, Bombardier did win two orders as prime contractor for the manufacture of trams for Cologne and Saarbrücken. However, Bombardier can manufacture only the mechanical parts of rail vehicles itself and entered into a cooperative arrangement with the Daimler-Benz/AEG subsidiary Kiepe as subcontractor for the electrical components. The two companies also tendered jointly in other, unsuccessful, bids on the tram market.

78. The Commission asked the larger German local transport companies to provide it with information on contracts awarded from 1992. From the replies received, it appears that, of the eighteen awards so far notified to the Commission for contracts placed by fourteen fairly large municipal transport companies for products relating to the tram market, Bombardier, apart from the Cologne tender, submitted unsuccessful tenders for six other contracts. In one case, a tender was also submitted by the firm Breda. In one instance, the Czech firm Tatra submitted a tender, in two instances tenders were submitted by the Swiss firm Vevey and in three instances Fiat

submitted tenders, but in none of these cases, on the basis of the information available to the Commission, did the companies awarding the contracts take the tenders into account in the subsequent stages of the selection procedure. In addition, Vevey is a mechanical-engineering supplier which once again had to enter into cooperative arrangements.

79. Of the six awards of contracts for metro vehicles by four German customers that have been communicated to the Commission, there were, according to the information in the Commission's possession, tenders by GEC-Alsthom and Bombardier in two cases and tenders by Ansaldo, Vevey and CAF in one case. However, to the Commission's knowledge, these tenders did not get beyond the initial stage. One contract was, however, awarded to LHB and ABB. Whether LHB could also have tendered successfully with an electrical-engineering partner not established in Germany is doubtful, because there has not so far been any tender by a potential partner regarded as sufficiently suitable in the award of a contract. For supply from LHB to be independent of the parties and Siemens, it is important that a corresponding electrical partner be available. In addition, the misgivings stemming from the fact of a firm not being established on the German market apply here as well. In one case, no prime contractor was sought, but contracts were awarded for parts of the total order. In this instance, a tender was also submitted by the Swiss firm Schindler for the coach-construction part of the metro vehicles.

(3) Catenary systems and traction power supply

80. In the "stationary equipment" sphere, the suppliers of the mechanical components of rail vehicle systems do not play any role.
81. The 94% combined market share of the parties and Siemens on the market for catenary systems provides a substantial indication of a lack of any significant outside competition. According to the submission of the parties, only the German company Elpro has otherwise obtained any orders on this market. Elpro cannot be compared with the duopolists either in terms of its market strength or in terms of its capacities.
82. The customers for catenary systems are Deutsche Bahn AG and the municipal transport companies. Demand volume in recent years has emanated predominantly from Deutsche Bahn AG. The volumes of the orders placed by Deutsche Bahn AG and the municipal transport companies differ in nature to a considerable extent. Particularly in the case of larger orders placed by Deutsche Bahn AG, it is necessary for any firm carrying out the order on its own to be of a size which only the parties and Siemens have on the German market. This limits the market significance of other suppliers from the outset.
83. According to the information obtained by the Commission, orders on the market for catenary systems have to a limited extent been awarded to the German company SAG and the French company Spie Enertrans.
84. It is evident from the pattern on this market that other suppliers have some competitive potential. However, there is at present a lack of sufficient domestic production capacities outside the duopoly formed by ABB/Daimler Benz and Siemens. Deutsche Bahn AG, as the only customer in the mainline train field, where the problems for smaller suppliers are particularly acute, takes the view, however, that in the past two years the conditions for an increase in competition outside the

duopoly have been created with European suppliers now qualifying for tenders as they meet the requisite product specifications.

85. On the market for traction power supply, the combined market share of the parties and Siemens is about 67%. The main competitor on this market, according to the information provided by the parties, is the firm Elpro (whose turnover in rail technology is some ECU 0.032 billion according to the figures provided by the parties), and this company's market share is, according to the parties, 13%. On this market too, smaller orders have been awarded to SAG, Spie Enertrans and the Austrian firm Elin. According to the information provided by the parties, all the other suppliers together achieve a market share of 20%. With respect to the mainline train field, Deutsche Bahn AG is again of the opinion here that European suppliers can provide more competition.

(4) Conclusion

86. In the light of these market structure data, the object of the competition assessment must be to establish whether, on the relevant market, Germany, the proposed concentration will result in the creation of a market-dominating duopoly or the strengthening of an existing market-dominating oligopoly through its becoming a narrower duopoly. For there to be an oligopoly, two conditions must be met: first, the oligopolists must not compete to a significant extent with one another; and second, they must no longer be faced with any significant outside competition.

4. Creation or strengthening of a dominant position

(a) Competition between the parties and Siemens: general

87. An assessment of the scale of internal competition between the parties and Siemens before and after the venture has to take account both of considerations of market structure and price trends which apply across the board to all the relevant product markets, and of special considerations regarding cooperation between companies and the influence of the demand side which apply on certain specific markets. The intensity of competition inside the duopoly will also be affected by the intensity of competition outside it: if there is a structural basis for significant internal competition, that competition may be strengthened by outside competition which would not itself be considered significant, making anticompetitive parallel conduct on the part of the duopolists economically impossible, or at least so unlikely that a lack of competition inside the duopoly can no longer be predicted with the requisite degree of probability.

(1) Structure of supply

88. The symmetry of the duopoly tends to suggest that the duopolists would not engage in significant competition in the future. Since the competitive strength of each is more or less equally great, the incentives for competitive incursions are rather limited. In terms of the products supplied as well, the two undertakings will after any concentration be similar in structure, although the parties might argue that products will not be fully identical, in the first place at least, and that even after the transaction the parties will retain specific strengths by comparison with Siemens, and *vice versa*. But given the capacity of the full-line suppliers to operate on any market, and especially the economic strength of Siemens, which prevents the parties from

dominating any of the relevant product markets by themselves, the planned joint venture and Siemens do remain fundamentally comparable despite these distinctions.

89. Parallel conduct on the part of ABB/Daimler-Benz and Siemens might also be encouraged by the openness of public procurement in rail technology markets. The number of competitors is small, and public invitations to tender have to be issued. Openness in public procurement does indeed help to promote competition, being intended to ensure that tenders will be submitted by as many firms as possible. But the suppliers do obtain further information, both in the course of negotiations following the submission of tenders and as a result of the fact that of the parties and Siemens at least one has hitherto been associated with almost every rail technology contract in Germany. The better market overview which this gives them will greatly facilitate non-competitive parallel conduct within a duopoly.
90. The supposition that there will not in future be any significant competition between the parties and Siemens is further supported in the case of the rail vehicle markets by the overcapacities which exist, particularly as regards mechanical components. If they are to utilize their own production capacities, it does not appear reasonable for the two groups to cooperate with outsiders, and especially mechanical-engineering suppliers, by supplying electrical components, thus encouraging new competition. This means that it is in their joint interest to avoid cooperating with other suppliers, if possible, where those suppliers would thereby be enabled to obtain orders.
91. This structural danger of the curtailment of internal competition on the markets for rail technology is mitigated by the fact that rail technology products are not uniform mass-produced goods, but heterogeneous products in which research and development play a major role. There is therefore as a rule less direct scope for reactions to competitive advances by a duopolist in so far as innovative competitive forays are involved.

(2) Price trends

92. The fall in prices in recent years, at any rate in the case of rail vehicles, may be an indication of significant competition hitherto. According to the Commission's enquiries, most customers confirm that prices for rail vehicles have fallen in recent years. There are several reasons for this trend. It is based firstly on a reduction in the equipment which customers wish to see in rail vehicles and on greater reliance on series production. The main reason for this is the increased cost pressure to which customers are exposed. As, for example, in the case of the ICE, the technical requirements to be met by products are now increasingly being subjected to cost-efficiency control. For the award of the ICE 2.2 contract Deutsche Bahn AG achieved a price reduction of 35%. Buyers tend to define what is wanted in terms of performance rather than technical specifications. Another reason which must be taken into account is developing competition from foreign firms. On the market for trams, the award of contracts by the cities of Cologne and Saarbrücken to Bombardier, in each case in cooperation with the Daimler-Benz/AEG subsidiary, Kiepe, for the electrical part of the rail vehicle, led to a considerable fall in prices on the market.
93. It cannot be assumed, however, that these causes underlying the price decreases will continue in future to ensure significant competition on all the relevant product markets. Any cost advantages on the production side would as a rule be passed on to customers only if significant competition exists. This link is illustrated in particular

by the example of the contract awards to Bombardier. Without competitive pressure from European suppliers, the duopolists would no longer be forced to make such price cuts. In so far as the concentration may entail the danger of further partitioning-off of the German market, particularly as a result of the lack of an appropriate electrical-engineering partner for any mechanical-engineering supplier with an active approach to prices, there can be no prediction of a continuation of this trend following a concentration. Nor are the cost reductions brought about by customers dispensing with more costly equipment for rail vehicles likely in themselves to provide an evidential basis for assuming the future existence of significant competition. Without sufficient outside competition, the existence of overcapacities would if anything encourage non-competitive behaviour and a refusal on the part of the duopolists to enter into cooperative arrangements with mechanical-engineering firms.

94. According to the Commission's enquiries the fall in prices observed in the case of rail vehicles applies to only a limited extent in the case of catenary systems and traction power supply. Where customers have observed a fall in prices, they attribute it mainly to an opening-up of markets and the competition which this gives rise to.

(3) Cooperative arrangements

95. A further factor is the cooperation between the parties and Siemens in the past. There is a web of cooperative relationships in the rail technology sphere. This applies in particular to the rail vehicle markets. However, the nature and extent of the cooperative arrangements differ on the individual markets for rail vehicles.
96. It must be borne in mind that cooperative arrangements may also be prompted by customers. In particular, the special importance which customers can be seen to attach to the geographical proximity of suppliers may, where this results in several suppliers being close together, result in a desire for cooperation on the part of the customer, and while this does not invalidate the evidential value of cooperative arrangements, it may limit it in individual instances.

(d) Other factors

97. Lastly, internal competition within the oligopoly cannot be assessed without considering outside competition, since, if there is outside competition, the behavioural links within a duopoly are restricted.
98. However, the pointers to residual internal competition continuing on the product markets vary. The intensity of the residual competition between the companies is, on present information, crucially dependent on the intensity of the external competition that continues to exist. The stronger the competitive pressures outside the duopoly are, the smaller will be the incentives for the duopolists to pursue anticompetitive parallel behaviour.
99. In assessing the signs of a lack of internal competition within the duopoly, account must also be taken of the fact that the only customer in Germany for the parties' products, as far as products for mainline transportation are concerned, is Deutsche Bahn. Similarly in the market for regional trains the vast majority of demand in the last few years stemmed from Deutsche Bahn AG. It is only in local transportation that the suppliers are at present faced with a fairly large number of customers, namely the German municipal local transport companies. The

Commission's enquiries have established that there are currently 54 German municipal transport companies as customers for trams (including light rail vehicles and electrical equipment for trolley buses) and 4 as customers for metro systems. Consequently, a lesser degree of competition intensity from outsiders is necessary in mainline and regional transportation to give the monopsonist, Deutsche Bahn, sufficient competitive room for manoeuvre. By contrast, the municipal transport companies are not in a position to exert influence on the suppliers in the same way that Deutsche Bahn can, so that they are to a much greater extent dependent on already existing competitive alternatives.

(b) Effects on the product markets

100. These general considerations lead to varying conclusions regarding the effects of the concentration on competition on the product markets studied.
101. In mainline and regional trains and in catenary systems and traction power supply Deutsche Bahn is easily the largest or indeed the only buyer on the German market. Subsequent to the change resulting from the incorporation of Deutsche Bundesbahn and the Reichsbahn, Deutsche Bahn has been established as a limited company and is wholly owned by the public sector. According to the Commission's findings, Deutsche Bahn, as a monopsonist, is in a position to influence the structure of supply to a far greater extent than the municipal transport companies. Deutsche Bahn will be able to obtain competitive offers from the parties and Siemens, even after the concentration, if there is still residual competition from outside the duopoly, even though that competition might not ordinarily qualify as significant for purposes of merger control. By inviting tenders for large orders, for example, Deutsche Bahn can make its orders well-nigh indispensable to the German full-line suppliers, and thus incite them to bid low. This will be insufficient only if in the event of anticompetitive parallel conduct on the part of the two German full-line suppliers Deutsche Bahn cannot economically turn to other competitors. And where technical specifications differ between Member States, the differences are not as a rule insurmountable technically; by inviting tenders for large orders, Deutsche Bahn can make the technical differences surmountable in economic terms as well. It is Deutsche Bahn's large-volume orders which interest foreign suppliers. An example is the order for catenary systems which Deutsche Bahn placed with Spie Enertrans.
102. It cannot be maintained that Deutsche Bahn will not in fact make use of the margin of manoeuvre open to it here in the future. It is true, certainly, that because of its great importance as the only buyer of mainline rail technology products in Germany it may come under some general pressure to take proper account of the two German-based suppliers when it is awarding contracts, so as to enable them to exploit their economic potential. And the mere fact that two of the three full-line suppliers in Europe will be based in Germany makes it probable that substantial orders will continue to go to German manufacturers in any event, even if they are awarded on purely competitive considerations. But the decisive point is that in the changed context which will now obtain Deutsche Bahn cannot be expected to follow anything other than an economically oriented procurement policy. There are indeed indications from past performance which might seem to make this argument less than evident. Given the new framework, however, no conclusions can be drawn from past performance with the degree of probability needed in forecasting of this kind. The conversion of Deutsche Bundesbahn into the private-law company Deutsche Bahn AG is not the only factor which has to be borne in mind here. That conversion reflects a general desire to see Deutsche Bahn run as a commercial operation. Other

transport companies whose finances were not hitherto independent of the budgets of their regional or local authorities have been forced to take the same approach by the shortage of public funds. But there is also the fact that the railways are in competition with other forms of transport, which forces them to offer their customers advantageous terms. Whether the legislation will once again give the railways more room for manoeuvre in future, for example by making other forms of transport dearer, is something which cannot be foreseen at this stage. Lastly, to give preference to domestic firms would be a breach of the Public Procurement Directives.

103. Municipal transport companies do not have the same freedom of manoeuvre in their purchases as Deutsche Bahn has. They are much smaller than Deutsche Bahn, not only in turnover but also in terms of the size of their orders, and so far they have seldom or never mounted joint procurement operations. The parties' contention that larger transport companies play a role as market leaders is valid only up to a point, if at all. The parties estimate that Deutsche Bahn's orders of regional trains alone may total about ECU 5 billion by the year 2000. According to their estimates the total volume of orders of local trains over the same period will be about ECU 4 billion. In any event the assessment of the importance of buyer bargaining power on the markets for trams and metro systems must be different. Whilst the buyer bargaining power of the 54 municipal transport companies is limited, that of the 4 customers on the market for metro systems must be regarded as greater. In this market, the vast majority of demand can be attributed to the Berlin Transport Authority which as such is able to play to a certain extent a leadership role. Nevertheless, in particular because of its lower purchasing volume, the buyer bargaining power of the Berlin Transport Authority cannot match that of Deutsche Bahn AG.
104. It is true that individual orders at prices favourable to the customer may significantly lower the overall price level. But as the Commission's enquiries have shown, this effect will not necessarily be felt by all local transport undertakings, even where average market prices have undoubtedly fallen. And there are still substantial differences between the products sought by local transport undertakings, even where they belong to the same product category. Together with any differences in the infrastructure to be used, these distinctions help to make joint purchasing difficult.
105. The parties have argued that the transaction would provide a basis for competition with Siemens, or at least facilitate it; but this argument holds good only for mainline trains, and then only to a limited extent. It does not apply to the case of local trains, where the parties themselves have emphasized the scope for competition on the part of smaller suppliers.
106. Lastly, the cooperation between suppliers which the Commission has identified has been particularly noteworthy in the case of local trains, the area in which according to the Commission's findings cooperation was least needed. This suggests that precisely on the markets for local trains there is a special need for the control exerted by competition from suppliers outside a duopoly.
107. These distinctions are supported by the conduct of foreign firms with regard to tenders so far. From the answers given to the Commission's questions by Deutsche Bahn and local railways, it emerges that foreign competitors compete more often in Deutsche Bahn's tendering procedures than on average in the local railways' tendering procedures.

108. The validity of these distinctions is also borne out by the Commission's enquiries into estimates of the likely effects of the transaction. Deutsche Bahn does not expect any negative consequences for itself, but there is a strong view among local railways that the venture would weaken competition.
109. These differing situations mean that the assessment of the effects of the transaction on the markets in rail technology products has to be different for mainline and regional railways on the one hand and local railways on the other.
- (1) Mainline trains and regional trains
110. On the markets for mainline and regional train sets, for a series of reasons it cannot be established with sufficient likelihood that the proposed concentration will lead to the creation or strengthening of a market dominant duopoly. As we have seen, the supply-side power of ABB/Daimler-Benz and Siemens is greatly weakened by the monopsonistic demand-side power of Deutsche Bahn. While the heterogeneous nature of the products and the need for research and development do not rule out the possibility of anticompetitive parallel conduct, nevertheless the possibility of interdependency is generally a great deal more restricted than it is on markets where the products are homogeneous and the intensity of research and development is lower. Again for these product markets it is partly the case that orders are particularly large and generally awarded at irregular intervals, which also substantially reduces interdependency.
- (a) Mainline trains
111. On the market in mainline train sets, orders for the production of high-speed trains at least have in the past been placed with domestic consortia in which it was difficult to discern any internal competitive relationship. Thus Siemens, AEG and ABB collaborated on Deutsche Bahn's ICE 1. Siemens and AEG are currently collaborating on the ICE 2. ABB is working on its own competing train set, and is taking no further part in the development of the ICE 2. ABB's X 2000 is a mainline train set which would operate below the high-speed category proper but which would use a tilting system to enable it to reach high velocities even on less developed stretches of line. Following the concentration all this competitive potential would be merged.
112. But the transaction will not worsen the situation; structurally speaking it will tend to improve it. It can be assumed that the cooperative arrangements entered into in the past were the result of the lack of capacity of competitors, or at least German competitors other than Siemens, to make an independent tender for the manufacture of mainline train sets. It may be that significant competition internal to the duopoly will arise after the transaction because cooperation between Siemens and AEG on the ICE project will come to a stop, but that cannot not yet be said with sufficient certainty. The fact that Siemens and GEC-Alsthom have announced that they will be cooperating on the marketing of the ICE and TGV high-speed trains outside Europe may be an indication that there will indeed be more competition inside the duopoly on this market. But at present it cannot be ruled out either that the cooperation which has been announced between Siemens and GEC-Alsthom outside Europe will be without effect on the competitive situation inside the EEA.
113. It has also to be borne in mind that practice in the past made it unlikely that a contract would be awarded to a foreign firm. This means that within the duopoly

formed by the parties and Siemens it is only with the merging of the parties' potential that an undertaking will have arisen which is capable of competing with Siemens. According to the Commission's enquiries Siemens would be in a position to offer a mainline train set even without the cooperation of Daimler-Benz; it might also work together with other companies.

114. Lastly, the products sold on the market in mainline train sets are very heterogeneous. They include not only the high-speed trains just discussed but also intercity tilt trains, which have to be taken to include the X 2000 developed by ABB. Deutsche Bahn invited tenders in this market segment in 1994; ABB, Fiat and DWA/Fiat/Siemens all tendered. It was the DWA/Fiat/Siemens consortium that won the contract; Fiat is to supply the tilt technology.
115. Even if we assume that there is already an oligopoly which dominates the German market, consisting of Siemens and AEG, therefore, this oligopoly will not necessarily be strengthened by the transaction. The chances of competitive offers against Siemens will in fact be improved, so that the competitive structure inside the duopoly will be improved too. In view of the basis this provides for competition, it is impossible to say with sufficient certainty that the symmetry it would establish would worsen the state of competition inside the duopoly.
116. On the market in electrical locomotives the Commission's enquiries have not established that there has been any cooperation on procurement by Deutsche Bahn between the parties and Siemens/Krauss-Maffai, even though the three undertakings did each secure one of the three contracts awarded. The competition which exists here may be attenuated if there is not enough outside competition to ensure significant competition inside the duopoly between the parties and Siemens.
117. By grouping its orders, as it did in the case of electrical locomotives, Deutsche Bahn can increase the volume put out to tender, and thus make it worth a foreign firm's while to make a bid. In the case of the electrical locomotives GEC-Alsthom's offer was one of the small number considered at the final stage. Deutsche Bahn here succeeded in securing independent tenders from AEG, ABB, and Siemens, all calculating their prices on the total volume asked for. It is true that Deutsche Bahn then divided the order between the three tenderers, with each of them producing one type of locomotive. But Deutsche Bahn itself says that it suffered no disadvantage as a result of this division. Given the lack of cooperation on the market in electrical locomotives in the past, and particularly in view of the structural factors present, which include the growing competition from outside and especially from GEC-Alsthom, it cannot be assumed that there would be a lack of significant competition between AEG, ABB and Siemens in the absence of the concentration.
118. Nor can it be said with sufficient certainty, however, that there would be no significant competition between ABB/AEG and Siemens after the transaction. The market structure will indeed change, because Deutsche Bahn will now have only two German-based full-line suppliers. But on the basis of the general market structure which has been outlined it cannot be said with sufficient certainty that this reduction in the number of players on the supply side will lead to a reduction in competition between ABB/AEG and Siemens. Deutsche Bahn itself says that it will have enough alternative competitors to deal with. This is supported by the fact that GEC-Alsthom will have better market access in future, via LHB. Talbot, acquired as a German subsidiary by Bombardier, would be a candidate for the mechanical component of an electrical locomotive. Talbot would still need to cooperate with an electrical

engineering firm. But given the buying power of Deutsche Bahn, and bearing in mind that if there were no significant competition between ABB/AEG and Siemens part of the contract at least could be given to a cooperative arrangement set up between GEC-Alsthom and German mechanical-engineering firms, it cannot in any event be said with sufficient certainty that there are structural reasons which would in future prevent AEG/ABB and Siemens from being forced to enter into competition with one another by pressure from Deutsche Bahn, itself under pressure to cut costs.

(b) Regional trains

119. Four invitations to tender were issued for regional electrical trains in 1992; two options have been exercised on the basis of the contracts awarded, and one additional order of identical goods was made without tenders being invited. Following the four tendering procedures a total of five lots of work were handled on a cooperative basis: one went to Siemens and MAN (AEG), two to LHB and ABB, each acting once as lead contractor, one to DWA and AEG, and one to AEG, Siemens and DWA. There were two awards for regional diesel trains, one of which went to AEG alone and one to AEG and Siemens together, with MAN as subcontractor. One option was taken up involving Siemens, LHB and AEG.
120. Demand for regional electrical and diesel trains emanates from Deutsche Bahn AG and to some extent also from regional transport companies. To that extent, the demand structure is not wholly the same as that for mainline transportation. Further changes in demand structure may be brought about by the regionalization of local passenger transport. In view of the possibility of Deutsche Bahn AG taking over a certain leading function, it can be assumed, in the regional transport area too, that it will have demand-side power which will curtail supply-side power, though, because of the existence of a number of smaller regional transport companies with significantly smaller demand-side power than Deutsche Bahn AG, demand-side power cannot be considered as great as in the case of mainline transportation.
121. Because of the importance of the electrical and electronic components, however, the effects of demand-side power are liable to restore or maintain outside competition within the period of relevance for merger control purposes only if adequate supply-side alternatives exist for other components as well as for the mechanical components. It has to be borne in mind here that in regional train markets cooperation between the parties and Siemens has not been especially well-developed. The relatively limited importance of cooperative arrangements in the past tends to relativize the evidence suggesting that there will be a lack of internal competition in future.
122. Given LHB's previous role in cooperative arrangements with ABB, a decisive factor in its future strength on the market will be the extent of its success in bidding in Germany, perhaps along with its parent GEC-Alsthom. LHB is a very strong company, particularly in its home region. This regional base makes it impossible to assume that LHB will have no important role on regional train markets in the future. According to the information supplied by the parties, LHB's share of the market in regional electrical trains is currently about 14%, and its share of the market in regional diesel trains is about 19%. The parties submit in particular that DWA has acquired the know-how needed to be able to bid in its own right from its cooperation with AEG on a contract with Deutsche Bahn for urban trains for Berlin. This transfer of skills, together with DWA's efforts to establish its own electrical capability, must

in any event be seen as one factor which makes it possible for competition independent of the parties and Siemens to be exerted in future. According to the parties' figures DWA's share of the market in electrical regional trains is currently about 17% and its share of the market in diesel regional trains is about 9%.

123. Given this basis for competition outside the duopoly, therefore, and the demand-side power of Deutsche Bahn and the other structural factors making for competitive conduct, it cannot be established that the planned concentration will create a market-dominant duopoly.

(2) Local trains

124. The planned concentration does create a market-dominant duopoly, consisting of the parties and Siemens, on the markets in trams (including light rail vehicles and electrical equipment for trolley buses) and metro vehicles. As far as the forecast needed for merger control purposes is concerned, it has to be assumed that in the absence of the concentration there would be significant future competition between Daimler-Benz, ABB and Siemens. This assumption is based, in addition to the fundamental considerations described, on the competitive pressure stemming from other suppliers such as Bombardier, which is such as to hinder anti-competitive parallel behaviour. Leaving aside the lower degree of market concentration, it cannot be assumed with sufficient probability that without the concentration market access would be closed for companies such as Bombardier because of the lack of a cooperation partner. This is demonstrated by the existing cooperation between Bombardier and the Daimler-Benz/ AEG subsidiary, Kiepe. The same forecast cannot be made for these two product markets in the relevant period if the concentration does take place.

125. There is a web of cooperative arrangements of various forms on the markets for rail vehicles used in local transport. In line with the increasing tendency to award the contract to a prime contractor, cooperation often takes the form of subcontracting. Of the eighteen contract awards on the market for trams notified to the Commission by municipal transport companies in response to its enquiries, the following pattern emerges:

- Siemens and Daimler-Benz each won only one order on their own,
- in two cases, Siemens and AEG cooperated directly,
- in two cases, Siemens and the Daimler-Benz/AEG subsidiary Kiepe cooperated,
- in one case, Siemens, AEG and ABB cooperated,
- in one case, Siemens, AEG and MAN cooperated,
- in three cases, Siemens and ABB cooperated,
- in four cases, Siemens, ABB and DWA cooperated.

Of the six contract awards so far notified to the Commission by the four German customers on the market for metro vehicles, ABB, AEG and Siemens cooperated in three instances.

126. Here, in contrast to the markets in other rail vehicles, there is sufficient evidence of a lack of structurally generated competition between the parties and Siemens, in any event after the concentration. This conclusion is supported primarily by the far-reaching cooperation which has existed between the parties and Siemens in the past; the lack of any plausible need for cooperation on these markets between the full-line suppliers AEG, ABB and Siemens, which is clear among other things from the parties' own submissions; and the fact that the demand-side power of local

transport companies is limited compared with that of Deutsche Bahn. This assessment holds good at any rate as long as uncompetitive parallel conduct is not structurally prevented by competition from other suppliers. Such competitive efforts would have to be stronger than on the other rail vehicle markets, given the weight of the structural evidence against the existence of significant internal competition. Furthermore, the large number of contracts awarded in the local transport market means that the incentive to suppliers to compete for every single contract is substantially less than on those markets where Deutsche Bahn, as the only purchaser, is in a position to put work out to tender in much larger lots than has hitherto been the practice in local transport.

127. The decisive question is accordingly to what extent other suppliers will in future be in a position to tender successfully.
128. In determining to what extent the geographical proximity of a supplier will play a role in the award of a contract, the mechanical elements of a vehicle will no doubt be of particular importance, since the mechanical-engineering work is relatively labour-intensive compared with the electrical-engineering work, even though most of the value added is at present accounted for by the electrical element of a rail vehicle. However, to the extent that such considerations may play a role in the award of a contract for a rail vehicle, they are in principle relevant to all parts of the contract.
129. In local rail transport in particular, the geographical proximity of suppliers plays a role which is important in economic terms as well. At present, the maintenance, repair and necessary spare parts of a rail vehicle are increasingly no longer retained by the local transport company itself, but the tendency is for stocks to be kept down and larger maintenance and repair contracts to be awarded externally. The closer the workshop of the rail vehicle supplier being considered as a partner for these purposes is to the relevant customer, the better the customer's requirements in this area can be satisfied. Because of the particular importance of ensuring the optimum readiness for use of rail vehicles, domestic competitors stand better chances of supplying them. This factor acts as a further obstacle to foreign firms which have not hitherto been involved on the German market and which do not have their own production facilities there. Another aspect that is of significance in underlining the importance of domestic workshops is the fact that companies such as GEC-Alsthom and Bombardier obviously consider it important to acquire German plants so as to be able to participate in the German market process.
130. In addition, customers primarily wish to acquire rail vehicles that operate in as trouble-free a manner as possible. Because of strong national demand, it is advantageous to have a reference product already established on the German market. Even Bombardier, which is so far the only foreign company which has been appointed prime contractor for a rail vehicle in Germany, still lacks an established reference product on the German market, since the product must first be manufactured and prove itself in operation. Since the important competition parameter of reliability can be assessed only after a certain period of time, the effects of the award of the contracts to Bombardier on the German market cannot yet at present be fully assessed. In particular, the possible withdrawal of Bombardier's present cooperation partner, Kiepe, will doubtless cancel out the market-opening effects of the award of the contracts in Cologne and Saarbrücken. Since Kiepe is part of the planned joint venture, the parties are in a position to have a say in the market

entry and market success of a competitor. The market power which this creates is liable to prevent significant competition.

131. Market dominance tendencies on the part of the duopolists are significantly more likely after a concentration than before. The mere fact of the oligopoly being narrowed to a duopoly will increase the structural danger of a joint blocking strategy by the duopolists. In addition, with the joint venture, there will alongside Siemens be a second undertaking of a quite similar structure which will initially attempt, for business policy reasons, to win orders as far as possible on its own and not in cooperation with a mechanical-engineering supplier. Since the duopolists' electrical-engineering know-how makes any such blocking strategy on the German market following a concentration seem likely to be successful, it is not possible to forecast any significant outside competition from Bombardier following a concentration. The same applies to the two German companies DWA and the GEC-Alsthom subsidiary LHB. In fact the shares held by both of these companies on the markets in local trains are currently smaller than their shares of the regional train markets. According to the parties, DWA's share of the trams market is about 3% at present, and its share of the market in metro vehicles is approximately 5%. LHB has about 8% of the trams market and 11% of the metro vehicles market. In this respect the position on the market for metro systems is to be assessed as more positive than on the market for trams, as the new parent of LHB, GEC-Alsthom, is the largest producer of metro equipment in Europe. An increase in the market strength of LHB can be expected through this acquisition.
132. These factors have not only meant that, with the abovementioned exceptions, no orders have in the past been awarded in Germany to foreign firms. There has also hitherto been a lack of any significant tendering activity by foreign-based firms in Germany. It is not possible to determine conclusively whether this is attributable to a lack of competitiveness on the part of these firms on the German markets or also to discouragement because of a lack of orders. What is certain, however, is that it has not hitherto been possible for any significant competitive pressure to be exerted on the German market for trams by any companies other than Bombardier in cooperation with Kiepe.
133. GEC-Alsthom is regarded as a potential supplier by some customers. However, in view of its lack of competitive success and its relatively limited tendering activity, this assessment provides only very limited grounds to warrant the assumption that potential competition will develop into actual competitive pressure on the parties and Siemens. The acquisition of LHB gives rise to some prospect of future market success. It cannot be excluded that in the medium term customers in the region where LHB is strong will also accept tenders from LHB with GEC-Alsthom as electrical partner. However, in the short run this is less likely. The Dutch firm Holec too has not so far been active on these markets. Although Fiat has submitted tenders in three instances in Germany, none of the tenders was regarded as viable, and no significant competition can therefore be assumed here either.
134. An assessment of the possibility of outside structural competition has also to take account of the fact that in the EEA as a whole the parties and Siemens likewise hold such strong competitive positions that they are vulnerable only to outside competition with a sufficient structural basis. According to the information the parties have supplied, the parties together and Siemens both hold about 39% of the EEA market in trams, while GEC-Alsthom has only about 11%. On the market in metro vehicles the parties have only about 25% and Siemens only about 12%, while

here GEC-Alsthom has some 45%. The parties' much weaker position on the EEA market in metro vehicles as compared with GEC-Alsthom's is doubtless partly due to the fact that only four local transport undertakings are currently using metro vehicles in Germany, and since 1992 only Berlin has placed large orders. These market shares support the assumption that it will be easier for GEC-Alsthom with LHB to enter the market for metro systems than that for trams and to submit successful bids independent of the parties and Siemens.

135. In summary, it is evident that the companies which, apart from the parties concerned in the concentration and Siemens, have so far won orders in Germany on the markets for trams and metro vehicles are purely mechanical-engineering suppliers which, in order to be able to supply products on the markets for rail vehicles used in local transportation, have to enter into a cooperative arrangement with an electrical-engineering supplier. The pattern on these markets hitherto does not permit the conclusion that there would at present for these companies be any realistic alternative to cooperation with the parties or Siemens. Buyer bargaining power is limited, although it is to be considered greater for metro systems. For this reason less competitive alternatives are in principle necessary on this market to limit sufficiently the supply-side power of the parties and Siemens. The market strength of the duopolists does not suggest that any significant competition to the duopoly can be expected from outsiders. Nor is there any reason to expect that the intensity of the residual external competition continuing after the concentration would aggravate the points of friction existing in the duopoly as a result of the fundamental structural context and the heterogeneous nature of the products, and of the research and development being carried on, in such a way as to make parallel competitive conduct between the parties and Siemens sufficiently unlikely.

(3) Catenary systems and traction power supply

136. As regards cooperative arrangements, the situation on the markets for catenary systems and traction power supply is different in that no significant cooperation between suppliers has been established. In these two product markets, the Commission has so far been informed by municipal customers of a total of nineteen contract awards. Only in two projects was there any cooperation, involving Siemens and ABB on the one hand and Siemens, ABB and AEG on the other. In the case of four other projects, the contracts were awarded to a variety of suppliers. In the case of contracts awarded by Deutsche Bahn, the Commission has not so far learnt of any significant cooperation arrangements. However, with regard to the construction of catenary systems for the ICE high-speed train in particular, there is a joint licensing agreement between Deutsche Bahn, the parties and Siemens. This licensing agreement is the result of joint research and development. The market-partitioning effect of the concentration is, on the Commission's information, smaller on these two markets to the extent that cooperative arrangements are not so essential in order to be able to supply the product at all. And in fact the Commission has observed that very few cooperative arrangements have been concluded on these markets in the last few years. However, they are of substantial importance to the extent that the competitors of the parties and Siemens will, because of much smaller available production capacities, be much less able to supply products, in the case of larger contract awards as well, without a cooperative arrangement with a sizeable supplier. To this extent, the reduction in the number of possible cooperation partners from three to two means that the situation is exacerbated for smaller suppliers.

137. In view of the demand-side power which Deutsche Bahn can exert when it awards large contracts, the absence of cooperation between the parties in the past, and strengthening competition on the part of other suppliers and foreign suppliers in particular, which Deutsche Bahn itself already considers sufficient to provide competitive pressure, it cannot be forecast with sufficient certainty that there will not be significant competition between the parties and Siemens on these two product markets, either before or after the concentration. Where local transport undertakings award contracts on these markets the volumes involved are small, and can be supplied by small suppliers too. This has been confirmed by the Commission's enquiries. Many smaller contracts have in the past been placed in individual lots with several suppliers, some of them local, who were clearly not operating nationwide.

5. Summary

138. As a result of the planned concentration a duopoly consisting of the parties and Siemens would hold dominant positions on the German markets in trams (including light rail vehicles and electrical equipment for trolley buses) and metro vehicles, as a result of which significant competition would be significantly impeded in a substantial part of the Community. No dominant positions will be created or strengthened on the other markets affected by the concentration.

D. Parties' undertakings

1. Undertakings given

139. The parties have given the Commission the following undertaking for the purposes of averting any prohibition:
- (1) "The parties undertake to ensure that all the shares in Kiepe Elektrik GmbH, Düsseldorf ("Kiepe"), are sold by 31.7.1996 to acquirers who are neither associated with ABB nor with Daimler-Benz or their group companies through a shareholding of 5% or more. Efforts to sell the shares shall begin forthwith. Sale to Siemens AG or to a company associated with it is ruled out. This is without prejudice to the right of the parties to transfer the shares in Kiepe initially into the joint venture.
 - (2) The parties undertake to ensure that, until the time of sale, Kiepe continues to operate in accordance with the principles which have been applied since the acquisition of Kiepe by AEG Aktiengesellschaft. One of these principles is that Kiepe is available without restriction as a cooperation partner and/or supplier of components for rail technology undertakings which are associated neither with ABB nor with Daimler-Benz. The parties shall not give Kiepe's management any instructions regarding the choice of such contractual partners and shall not exercise any influence on the management in the context of the ordinary running of the business, in so far as this is not required for maintaining the corporate assets or productiveness of Kiepe. In addition, the parties undertake to ensure that Kiepe's business assets will not be reduced outside the context of the ordinary running of the business until sale. This also applies in particular to the maintenance of fixed assets, know-how and the technical and business skills of the staff.
 - (3) The object of the sale requirement in point 1 are the shares in Kiepe excluding its Austrian subsidiary, unless the sale would otherwise be impossible.

- (4) In the event that a sale has not taken place by 31.7.1996, the parties shall at the Commission's request transfer the shares irrevocably to a trustee to be appointed in consultation with the Commission; the trustee shall, within 6 months of transfer, carry out the sale independently and at the expense of the owner of the shares in accordance with proper business principles. The Commission shall not make use of this right before 31.12.1996, if the parties have, by 31.7.1996, agreed with a purchaser a binding letter of intent which provides for a sale by 31.12.1996 at the latest."

2. Assessment of the undertakings given

140. The undertakings given by the parties are such as to prevent the creation of a dominant duopoly by the parties and Siemens on the markets for trams and metro vehicles in Germany within the forecast period relevant for assessing the concentration.

(a) Effects on external competition

141. Through its divestiture Kiepe will continue as an electrical engineering supplier independent of the parties and Siemens in the area of rail vehicles for local transportation. In this area, Kiepe Germany has an annual turnover of some DM 100 million and has as a result to a considerable extent been a player in electrical engineering turnover relating to rail vehicles for local transportation. Kiepe is profitable and was acquired by Daimler-Benz in 1992. To date it has operated as an autonomous company and is well established on the market.
142. In the 18 awards of contracts for trams by large German local transport companies noted by the Commission, Kiepe has been the electrical engineering partner of a mechanical engineering supplier in four such awards. Moreover, Kiepe is active in one further contract award for electrical equipment. On the basis of the data compiled by the Commission for contract awards in the period 1992-1994, the contracts for which Kiepe supplies the electrical equipment of the rail vehicle represent about 30% of the total volume of the contracts awarded in this period for tram systems. The Commission also has knowledge of the contract award for Saarbrücken in a cooperative arrangement with Bombardier. In the light of the above Kiepe was probably, after Siemens, the second most successful electrical supplier in this period. Kiepe was clearly more successful than ABB and the rest of AEG. In total the combined market share of the residual part of AEG and ABB in this market was not significantly greater than that of Kiepe. In the market for metro systems Kiepe was involved in part of the contract for the construction of the metro system in Munich. Kiepe therefore has a considerable market significance as an electrical engineering partner, particularly for mechanical engineering suppliers, in the case of rail vehicles for local transportation.
143. In the tram market the divestiture of Kiepe will maintain a potential partner for mechanical suppliers active in this market, a partner which having regard to its market success to date is able to provide customers with a market-proven solution. Currently, Kiepe is of less importance in the market for metro systems. Nevertheless, the undertaking given is such as to remove existing misgivings on this market. There has been no incentive for the owners of Kiepe to date to allow the company to play a more prominent role in this market. If such a market need were to emerge, Kiepe appears in the medium term capable of acting as a cooperation partner. In any event

the necessary investment appears financially possible given the profitable results of Kiepe. To this extent, the divestiture of Kiepe creates an undertaking independent of the parties and Siemens capable of cooperating with mechanical suppliers if necessary. The undertaking given, together with the greater buyer bargaining power and the more favourable forecast for the market entry of LHB through the participation of GEC-Alsthom, no longer allow the absence of effective competition to be forecast with sufficient probability.

144. Therefore, the maintenance of Kiepe as an electrical engineering supplier that is independent of the parties and of Siemens is likely to ensure in future that competitive bids for rail vehicles for local transportation can be made against the parties and Siemens. In view of Kiepe's not unlimited production capacity, there may be limits to the volume of orders awarded to it in this respect. However, as a supplier that is independent of the parties and Siemens, Kiepe will, in connection with certain opportunities for using, through the intermediary of Kiepe, foreign production capacities available for the electrical element, make it possible for other, and in particular foreign, suppliers to have market access. Bombardier, LHB and DWA can use the resources of Kiepe independently of the parties and Siemens, and thus establish their market position and develop it in the future. Through the sale of Kiepe, it will thus be ensured that the emerging opening-up of the market in the local transportation sphere, evident particularly in the example of the award of contracts to Bombardier in cooperation with Kiepe, can continue.

(b) Effects on competition between the parties and Siemens

145. In addition, according to the Commission's findings, this structural competitive impetus is sufficient to promote future substantial internal competition between the parties and Siemens such that it can no longer be assumed that there will be a lack of internal competition. Rather, the competitive impetus made possible by the market structure will remain strong enough to prevent uncompetitive parallel behaviour by the parties and Siemens on these markets. If the parties and Siemens for their part should in future forgo competitive incursions, they would have to expect more orders to go for example to a cooperative arrangement between Bombardier and Kiepe or to other possible cooperative arrangements involving Kiepe. In view of the potential otherwise available, the competitive losses of the parties and Siemens in the event of uncompetitive parallel behaviour would as a result of this external competition be so great that the losses to be expected through the award of orders to other competitors would outweigh any advantages deriving from the uncompetitive parallel behaviour. Lastly, in view of such competitive tenders that would then be available, customers for their part would hardly be prepared in the case of other contract awards to accept possibly less competitive offers from the parties and Siemens, even if for capacity reasons the contracts did ultimately go to the parties and Siemens. Although customers would possibly have to accept this situation temporarily in view of the present market structure, the resulting dissatisfaction would only further encourage the opening up of German markets to other suppliers. This effect would once again hardly be in the interests of the parties and Siemens. Consequently, the sale of Kiepe will ensure that competition that is external to the parties and Siemens will be maintained to a sufficient extent, competition which is relevant in view of its importance to the competitive behaviour of the parties and Siemens amongst themselves as well.

(c) Reporting requirements

146. The Commission's experience has shown that, for the purposes of monitoring compliance with the undertakings given by the parties, it is necessary that the parties report to the Commission at three-monthly intervals on the progress made in efforts to sell the shares and on compliance with the undertakings given. The first report should be submitted three months after the adoption of this Decision.

The reports should contain a detailed description of the sales efforts so far, specifying the interested parties. The presentation must be such as to allow the Commission to check the information.

With regard to compliance with the undertaking given in (2) concerning the maintenance of the economic productive capacity of Kiepe until the time of sale, the reports must also contain the following information:

- basic confirmation that the parties are conducting themselves in accordance with the undertaking given,
 - any measures taken by the parties with respect to Kiepe,
 - changes in the workforce of Kiepe, and in particular the following changes: workforce at the beginning and end of the three-month period, number of staff leaving and recruited, specification of staff transferred by Kiepe to ABB or Daimler-Benz or to one of their group companies,
 - balance sheets, annual statements of accounts and quarterly statements of accounts drawn up during the reporting period for internal management purposes,
 - general report on the economic activity of Kiepe during the reporting period.
147. The Commission reserves the right to request further information from the parties in so far as this is necessary to check compliance with the undertakings given by them.

E. Hearing of Works Councils

148. The Works Councils of AEG Austria and Kiepe Electric Vienna have made known their wish that, in the event of a divestiture of Kiepe as a result of an undertaking given by the parties, there should be a common divestiture of the German company Kiepe in Düsseldorf with its Austrian subsidiary Kiepe Electric in Vienna. While it does deliver some components on a contract basis to Kiepe Düsseldorf, for the rest Kiepe Vienna is primarily an extended workshop of Kiepe Düsseldorf. Consequently, since the identified competition problems relate only to the German market, a divestiture of Kiepe Vienna is not necessary. However, the position is different, if the separate divestiture of Kiepe Düsseldorf and Kiepe Vienna proves impossible.
149. The Works Council of AEG Schienenfahrzeuge GmbH, Henningsdorf has requested in its submission dated 29 September 1995 that account be taken of the need to consider the provision of adequate information to employees by the undertakings concerning the planned restructuring and equally the question of involving a European Works Council when setting conditions. The information requested by the Works Councils and the involvement of a European Works Council, which can be required in certain circumstances under other legal provisions, cannot be ordered by the Commission within the field of merger control because of the lack of a legal basis.

F. Overall assessment

150. The Commission's investigations on the relevant product markets for rail technology in Germany have shown that, on the basis of the concentration between ABB and Daimler-Benz, in view of the competitive strength of Siemens alone, there will not be any creation of a margin of manoeuvre that is not sufficiently controlled competitively. Subject to the condition that the undertakings given by the parties are complied with, the concentration will similarly not lead to the creation or strengthening of a joint dominant position with Siemens on the relevant rail technology markets in Germany. On five of the eight product markets considered, it is to be assumed that the proposed concentration will not, even without the undertaking given by the parties, lead to the disappearance of significant internal competition between the parties and Siemens. On the market for train sets for mainline transportation, the proposed concentration will at least not result in any strengthening of any existing dominant duopoly. On the markets for trams and metro vehicles, the development of a dominant duopoly following a concentration will be prevented by the undertaking given by the parties, since it is to be assumed that there will continue to be significant competition between the parties and Siemens.
151. This decision is without prejudice to the application of the general EC competition rules to pre-existing contractual arrangements between the parties to the proposed concentration and third parties.

V. CONCLUSION

152. For the reasons set out above, subject to the condition that the undertakings given by the parties are complied with, it is to be assumed that the proposed concentration will not lead to the creation or strengthening of a dominant position as a result of which effective competition in a substantial part of the Community would be significantly impeded. The concentration must therefore, subject to this condition, be declared compatible with the common market and with the operation of the EEA Agreement in accordance with Article 2(2) of the Merger Regulation and Article 57 of the EEA Agreement,

HAS ADOPTED THIS DECISION:

Article 1

The notified concentration between ABB and Daimler-Benz AG is hereby declared compatible with the common market and with the operation of the EEA Agreement, subject to the condition that the undertakings given by the parties and set out in point 139 are fulfilled.

Article 2

The parties shall report to the Commission in accordance with point 146 of this Decision.

Article 3

This Decision is addressed to:

1. ABB Asea Brown Boveri AG
P.O. Box 8131
Affolternstraße 44
CH-8050 Zürich
2. Daimler-Benz AG
Epplestraße 225
D-70546 Stuttgart

Done at Brussels, 18 October 1995

For the Commission
Karel VAN MIERT