

***Case No COMP/M.4395 -
BOEING / C-MAP***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION

Date: 16/01/2007

***In electronic form on the EUR-Lex website under document
number 32007M4395***



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 16-01-2007

SG-Greffe(2006) D/200156

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying parties

Dear Sir/Madam,

**Subject: Case No COMP/M.4395 – BOEING / C-MAP
Notification of 01/12/2006 pursuant to Article 4 of Council Regulation
No 139/2004¹**

1. On 1 December 2006, the Commission received a notification of a proposed concentration pursuant to Article 4 and following a referral pursuant to Article 4(5) of Council Regulation (EC) No 139/2004 ("Merger Regulation") by which the undertaking Boeing ("Boeing", USA) acquires within the meaning of Article 3(1)(b) of the Council Regulation control of the whole of the undertaking C-Map ("C-Map", Italy) by way of purchase of shares.

I. THE PARTIES

2. Boeing is active in the commercial aircraft, defence and space industries and related services.
3. C-Map is active in the production and supply of electronic marine charts, PC navigational software and marine hardware devices.

II. THE OPERATION AND THE CONCENTRATION

4. Boeing will acquire sole control of C-Map by way of purchase of shares.

¹ OJ L 24, 29.1.2004 p. 1.

5. The operation therefore constitutes a concentration for the purposes of Article 3(1)(b) of the Merger Regulation.

III. COMMUNITY DIMENSION

6. The parties have a combined worldwide turnover of more than €5,000 million (€44,100 million for Boeing, €[...] million for C-Map; all figures relate to turnover achieved in 2005). However, the aggregate Community-wide turnover of only one of the undertakings exceeds €250 million ([...] for Boeing; [...] million for C-Map). In addition, C-Map does not have a turnover of more than €25 million in any Member State. The concentration therefore does not have a Community dimension.
7. On 13 October 2006, Boeing requested a referral of the case to the Commission in accordance with Article 4 (5) of the Merger Regulation, which was transmitted to all Member States. None of the three Member States competent to review the concentration ([...]) or any other Member State objected to the request for referral and the fifteen working day waiting period provided for under Article 4 (5) of the Merger Regulation expired on 7 November 2006. Therefore, the concentration shall be deemed to have a Community dimension.

IV. RELEVANT MARKETS

8. The Parties' activities overlap in a number of markets. With respect to the horizontal overlaps, both companies carry out activities in the overall market for electronic marine charts and in the markets for PC navigational software and for marine hardware devices. With regard to the vertical relationship, C-Map is a major player in the upstream market for the manufacture of marine navigational charts which are used on both C-Map's and Boeing's marine hardware devices using both Parties' PC navigational software.

A. *Electronic marine charts*

9. The Parties submit that the relevant product markets in the field of electronic marine charts are the distinct markets for electronic marine charts for light marine use on the one hand and for electronic marine charts for heavy commercial marine use on the other. These terms comprise navigational charts which have been produced in electronic format to allow them to be displayed on an electronic navigational device on board a marine vessel in order to plot the vessel's location and course. According to the Parties, these charts have to be distinguished from other charts such as aeronautical charts. Furthermore, in the Parties' view, it is appropriate to distinguish the market for electronic charts for light marine use from the market for electronic charts for heavy commercial use due to a number of factors, including different types of corresponding hardware and end-users², different technical characteristics, price differences, regulatory differences and different distribution channels.

² According to the Parties, the most sophisticated hardware, so-called Electronic Chart Display and Information Systems (ECDIS), is designed to comply with International Maritime Organisation (IMO) standards and is generally only used in heavier commercial marine vessels (e.g., container ships, tankers, ocean-going cruise liners, large passenger ferries). On the other side of the spectrum, marine plotters, i.e. smaller, less powerful and less expensive navigational computers, are generally only used in recreational vessels like yachts, recreational fishing boats, etc.

10. The Parties acknowledge that two further distinctions of the relevant markets could possibly be made. Firstly, the Parties submit that it is usual to distinguish between official charts which are issued by National Hydrographical Offices (NHOs)³, and unofficial electronic marine charts, which are produced by commercial companies. However, the Parties submit that it is not appropriate to distinguish between different markets accordingly, given the high degree of demand-side substitutability between official and unofficial electronic marine charts. Secondly, the Parties acknowledge that it seems possible to distinguish between vector charts, based on electronic marine survey database, which comprises all the information necessary for safe navigation (geographical and hydrographic features) as well as certain additional information (such as sailing directions), and raster charts, which are derived from paper charts by converting them into digital format by scanning. The Parties submit that a differentiation of markets according to these features is not feasible given that, despite certain differences in terms of their versatility, both types of charts are considered fully substitutable from the perspective of an end-user.
11. The respondents to the Commission's market investigation have only partially confirmed the Parties' claims regarding the relevant product market(s). A vast majority of respondents agreed with the Parties' submission that electronic marine charts should be distinguished from aeronautical charts⁴. Similarly, most respondents confirmed that charts for light marine use should be distinguished from charts for heavy commercial marine use, though both are essentially used for the same activity (shipping), because they largely vary in prices and with regard to the respective sales channels. Also, it appears that the hardware used to display the charts is essentially different. Charts for heavy commercial marine use, on the one hand, rely on Electronic Chart Display and Information Systems (ECDISs)⁵ or at least on sophisticated Electronic Charting Systems (ECSs)⁶. Light marine charts, on the other hand, mostly use marine plotters or other less powerful and substantially less expensive hardware devices, which read electronic charts from some form of solid-state media, such as removable memory chips. These different types of hardware and the corresponding varying price levels and distribution channels led a majority of respondents to the conclusion that a market differentiation should be made according to the navigational hardware the electronic charts are designed for. This differentiation, however, forms the basis for the Parties' identification of separate markets for heavy commercial marine electronic charts and light marine electronic charts. Thus, the Commission concludes that the overall market for marine electronic charts should be sub-divided into the two categories of heavy commercial marine electronic charts and light marine electronic charts.

³ These are governmental offices responsible for the surveying and charting of waters for which the respective state has responsibility under international law.

⁴ Only few respondents, both competitors and customers, disagreed with that differentiation, and some respondents have not expressed their view on this issue.

⁵ ECDISs are computer-based navigation devices, which run dedicated navigation software stored on hard disks, CDs or DVDs and which are designed to comply with International Maritime Organisation (IMO) standards. This may allow official electronic charts to be used instead of paper charts for the purposes of primary navigation.

⁶ ECSs are navigation devices ranging from sophisticated hardware platforms with dedicated software comparable to an ECDIS (except for the fact that they are not approved under IMO standards) to a laptop PC on which navigational software has been installed.

12. With regard to possible further sub-segments of these product markets according to the characteristics official/unofficial and sector/raster, however, the market investigation revealed no clear view from competitors and customers. While a considerable number of respondents agreed with the Parties' submission that both official and unofficial charts serve the same end and are used by the same type of end-users and thus should not be regarded as constituting separated markets, an equally considerable number suggested a corresponding market-segmentation due to the fact that heavy marine users only demand official charts and international and national legislation covering both types of charts is very different. Similarly, with regard to the differentiation between vector and raster charts, some respondents agreed with the Parties that due to the substitutability from the end user's perspective there should be no separate markets, while others regarded the differences with regard to their versatility as sufficient ground for further market segmentation. For the purpose of the present case, however, the precise definition as regards the product categories can be left open since even with the narrower definitions the proposed transaction would give rise to no competition concern.
13. With respect to the geographic scope, the Parties submit that the market for electronic marine charts for light marine use is at least EEA-wide and that the market for electronic marine charts for heavy commercial marine use is world-wide. With regard to light marine electronic charts, the Parties state in their notification that these charts typically cover the waters of several EEA Member States, the products offered within the EEA are the same and are priced in a similar manner, supply by producers is usually undertaken through pan-European sales subsidiaries and the distribution model is centred around distributors who typically purchase charts covering the waters of several EEA Member States. With regard to electronic marine charts for heavy commercial marine use, the Parties submit that the products are offered worldwide and are priced on a worldwide basis, purchasers tend to be large, globally active shipping lines and there is a substantial degree of direct sales to these end-users.
14. The market investigation confirmed that, due to the reasons put forward by the Parties, the market for heavy commercial marine electronic charts is indeed worldwide⁷. With regard to light marine electronic charts, however, the result of the market investigation is less clear. Most respondents agreed that even in light marine shipping, end-users demand electronic charts that cover more than only one Member State and that therefore the market should be defined as EEA-wide in accordance with the Parties' submission. However, some respondents considered the relevant geographic market for light marine electronic charts to be rather national, as many end-users tend to be local users shipping only within the waters of their respective Member State. However, it appears that, despite this limited use made of some end-users, the vast majority of light marine electronic charts, particularly those relating to European waters, cover more than only one Member State⁸. Taking this into account together with the arguments abovementioned (at paragraph 13.), which have been widely supported by the results of the market investigation, the Commission concludes that the relevant geographic market for light marine electronic charts is EEA-wide.

⁷ A clear majority agreed with that view, while few stated that the market should be defined as being national and few others regarded it to be EEA-wide in scope.

⁸ [..].

15. Thus, for the competitive assessment of the proposed transaction, the relevant markets to be considered will be the global market for heavy commercial marine electronic charts and both the global and the EEA-wide market for light marine electronic charts, but also the potential sub-markets for official and unofficial and for raster and vector charts respectively.

B. PC navigational software

16. The parties submit that a further horizontal overlap occurs in the market for PC navigational software. PC navigational software allows electronic charts to be used on a PC or on a variety of other electronic devices. The Parties submit that the relevant market for PC navigational software covers marine software only, setting it apart from navigational software used in the aeronautical field.
17. The market investigation confirmed the Parties' claims regarding the relevant product market. One respondent expressed the view that it might be possible to use the same software with both marine and aeronautical digital navigational data and that therefore there are no separate markets for software used with digital marine navigational charts and for software used with digital aeronautical navigational charts. This view, however, could not be ascertained by the market investigation.
18. Above all, it appears to be the fundamental differences in the charting information that marine navigational software and aeronautical navigational software each has to process, that render both types of software incompatible with one another⁹. Thus, though it cannot be excluded that future technological developments might lead to a convergence of the relevant data, the Commission at this point regards both types of software to comprise separate product markets.
19. With regard to the relevant geographic market for PC navigational software, the Parties submit that it is likely to be worldwide in scope, as the software sold is the same worldwide and there are no appreciable regional variations in product composition or pricing. However, as the competitive assessment would not vary significantly with a change in the definition of the geographic market, it appears that the question does not have to be finally resolved in this case.

C. Marine hardware

20. The parties submit that a third horizontal overlap occurs in the market for marine hardware, however due to the small market share of the parties it would not give rise to horizontal competition concern. According to the Parties, marine hardware comprises all devices capable of reading the electronic marine charts, including, inter alia, radar boards, radar boxes or fish finders.
21. The Parties' market definition was not put into question by the respondents to the market investigation. Though it appears that a further separation of the market for

⁹ Aeronautical software must deal mainly with information on the height of real-world objects (mountains, buildings) and on a large number of artificial objects (routes, airspace), the nature of which is easy to store in relational databases and with very reasonable memory occupation. Marine navigational software, on the other hand, is much more focused on the natural environment itself, making the data significantly denser in terms of the actual data structures required to encode it and consequently in terms of the memory it occupies.

marine hardware according to the technical characteristics, price and typical end-use applications of the different devices might be feasible, this question does not have to be finally resolved in this case as the competitive assessment would not change significantly with a change in the definition of the relevant product market(s).

22. The Parties submit that the relevant geographic market for marine hardware is likely to be worldwide in scope, as the products sold are the same worldwide and there are no appreciable regional variations in product composition or pricing. However, as the competitive assessment would not vary significantly with a change in the definition of the geographic market, it appears that the question does not have to be finally resolved in this case.

V. ASSESSMENT

A. *Electronic marine charts*

23. As Boeing is not currently active in the market for heavy commercial marine electronic charts, the only horizontal overlap between the Parties' businesses is in the production and supply of light marine electronic charts. While C-Map has a worldwide market share of approximately [20-30]%¹⁰ and an EEA-wide market share of approximately [20-30]%, Boeing¹¹ only has a market share of around [0-10]% worldwide and around [0-10]% EEA-wide. Thus, the combined market share of Boeing and C-Map on the market for light marine electronic charts would be around [20-30]% worldwide and approximately [20-30]% EEA-wide, resulting from the small increase contributed by Boeing. Taking into account the potential sub-markets for vector and raster charts, both C-Map and Boeing are active solely on the market for vector marine electronic charts, where they would have a combined market share of approximately [20-30]%¹² worldwide and [30-40]%¹³ EEA-wide. Similarly, while the Parties' combined market share on the potential sub-market for official marine electronic charts is minimal¹⁴, their combined share of the potential sub-market for unofficial marine electronic charts would amount to [30-40]%¹⁵ worldwide and [30-40]%¹⁶ EEA-wide.
24. The new combined entity continues to face sufficiently strong competition from their competitors. On the market for light marine electronic charts, both at EEA-level and worldwide, Navionics enjoys a market share of approximately [20-30]%, Garmin of [10-20]%, Lowrance of [0-10]%, Transas of [0-10]% and Maptech of [0-10]%. The

¹⁰ Lacking reliable independent third party data on the size of the markets for electronic marine charts and the market shares of competitors, the data included in this Decision is based on the Parties' own best estimates and which have largely been confirmed by the market investigation.

¹¹ Boeing is active on the market through the Nobeltec business of its subsidiary Jeppesen Sanderson, Inc.

¹² This comprises around [20-30]% for C-Map and around [0-10]% for Boeing.

¹³ This comprises around [30-40]% for C-Map and around [0-10]% for Boeing.

¹⁴ Worldwide, their combined share would be around [0-10]%, EEA-wide it would be around [0-10]%.

¹⁵ Around [30-40]% for C-Map and approximately [0-10]% for Boeing.

¹⁶ Around [30-40]% for C-Map and approximately [0-10]% for Boeing.

remainder in terms of market share is held by smaller competitors. Competitors in the sub-market for heavy commercial marine electronic charts are the United Kingdom Hydrographic Office (UKHO) with a market share of approximately [10-20]%¹⁷, Transas with around [20-30]% and Primar Stavanger with approximately [0-10]%.

25. Over the past three years the market volumes on the market for light marine electronic charts have increased by roughly [10-20]% overall. Most of the Parties' competitors that are active on the relevant market have seen benefits from this development and have even increased their individual market share, and in particular those mentioned above. [...]¹⁸. Expectations of both the Parties and of the vast majority of their competitors and customers for the future growth of the market for light marine electronic charts see the market volume increase considerably throughout the next five years¹⁹. Thus, taking into consideration the recent developments [...], it can reasonably be expected that other players on the market will continue to profit from the overall market development and that their position vis-à-vis the new entity will not be significantly affected by the proposed transaction.
26. Another factor likely to constrain the new entity's competitive behaviour in the future appears to be a potential market entry of new competitors. Above all, it appears that NHOs will most likely become active on the relevant markets or strengthen their current position. While they are currently not very present on the market for light marine electronic charts, the market investigation revealed that they are considered to be present in the near future, and as regards the UKHO it is already present. In any event, as outlined in paragraph 24., they are already major competitors on the market for heavy commercial marine electronic charts. Given their traditionally unrivalled access to charting information and their experience in the charting industry, it appears that they represent significant potential entrants to the market for light marine electronic charts with the ability to establish them on this market within the timeframe relevant to forecast the likely competitive effects of this transaction. Accordingly, most respondents to the market investigation expect the role of NHOs on the overall market for electronic marine charting to be growing in the future.
27. Finally, the new entity, like any other private commercial competitor on the market for marine navigational charts, will continue to depend on NHOs for the licensing and supply of the navigational data (paper or electronic) on which their marine charts are based. This fact appears to further reduce the possibility that the proposed transaction could give rise to a significant change in the competitive structure of the market for light marine electronic charts post-transaction.
28. In view of the foregoing, it can be concluded that the proposed operation would not, in any of the markets considered, give rise to serious doubts as to its compatibility with the common market.

¹⁷ Again, these figures relate both to EEA-wide and to worldwide market shares.

¹⁸ [...].

¹⁹ [...]. None of the respondents to the market investigation stated that it did not expect the market to grow, many respondents expect an annual worldwide growth of 5-10%, even more respondents expect it to be between 10 and 20% annually, and few respondents expect it to be even higher. On the EEA level, the responses were largely in line with that for the annual worldwide growth.

B. PC navigational software

29. It is submitted by the Parties that the new entity's combined market share in the segment for PC navigational software remains below 15%. The Parties estimate that their combined share worldwide in the market for PC navigational software would amount to approximately [0-10]%, comprising [0-10]% for C-Map and [0-10]% for Boeing. Similarly, on an EEA-level, the Parties estimate that their combined market share would be around [0-10]%, comprising [0-10]% for C-Map and [0-10]% for Boeing. Thus, irrespective of the exact definition of the geographic scope of the market for PC navigational software, the transaction will not technically give rise to an affected market. Accordingly, none of the respondents to the market investigation (be they competitors or customers) expressed any concerns as to the impact of the concentration on the market for PC navigational software. Thus, from the outset, it appears unlikely that the proposed transaction would give rise to any competition concerns on this market.
30. In any event, the new entity will continue to face competition from a large number of competitors in the market for PC navigational software, which is highly fragmented. More specifically, it will face competition from the largest player on the market, which is Maxsea with an estimated worldwide market share of around [0-10]%, but also from other strong competitors like Maptech and Raymarine, both with an estimated worldwide market share of approximately [0-10]%, and a large number of smaller competitors. In the view of the foregoing, the Commission concludes that on the market for PC navigational software the proposed operation would not give rise to serious doubts as to its compatibility with the common market.

C. Marine hardware

31. Both Parties are active in the manufacture and supply of marine hardware to a very minor extent. It is submitted by the Parties that the new entity's combined market share in the segment for marine hardware remains below 15%. In 2005, C-Map generated total revenues worldwide of around [...] from the sale of four categories of marine hardware, including radar boards, radars and radar boxes, fish finders and GPS antennas. Within the same period, Boeing's total sales amounted to around [...]. Thus, irrespective of the exact market definition for marine hardware and its potential sub-markets and its geographical scope, the Parties estimate that their combined market share of each of these markets would be well below [0-10]%. Therefore, the transaction will not give rise to an affected market in this regard. Accordingly, none of the respondents to the market investigation (be they competitors or customers) expressed any concerns as to the impact of the concentration on the market for marine hardware. In the view of the foregoing, the Commission concludes that on the market for marine hardware or its potential sub-segments the proposed operation would not give rise to serious doubts as to its compatibility with the common market.

D. Vertical effects

32. As the electronic marine charts produced by the Parties are (inter alia) used in connection with the PC navigational software and the marine hardware of both C-Map and Boeing the transaction will give rise to a vertical relationship. The potential risk of a foreclosure of competing producers of PC navigational software and marine hardware from the

supply in electronic marine charts appears however to be minimal. Some of the respondents to the market investigation have expressed their concern that the proposed transaction might negatively affect the interoperability of the new entity's electronic marine charts with other producers' software and hardware. However, the responses to the market investigation strongly suggest that these concerns do not render the proposed transaction a risk of market foreclosure²⁰.

33. It is true that an electronic navigation device's software is usually designed to read the proprietary format of a single electronic chart producer. Especially marine plotters and lower-end ECSs will generally only be operable with one unofficial light marine electronic chart format. However, this appears to be the case vis-à-vis all products on the market, not only the products of the Parties, and does not have any significant effects on the competitive analyses of the proposed transaction. Indeed, on the basis of the results of the market investigation, the Commission was not able to ascertain any merger specific aspects that would materially alter the competitive situation, as the use of proprietary chart formats is already a common feature of the industry as such.
34. In addition, as already explained above (at paragraph 23.), Boeing is only a very minor player on the market for electronic marine charts. Though C-Map is one of the stronger competitors on the market for electronic light marine charts, it could be shown at paragraph 24. that there are a sufficient number of alternative suppliers of electronic light marine charts. Some of them also produce and supply marine hardware incorporating their own chart format, thus further reducing the impact of the interoperability of C-Maps' chart formats.
35. Moreover, it must be recalled that both Parties' combined market shares on the downstream markets for PC navigational software and marine hardware are relatively low, with [0-10]% and below [0-10]% respectively on EEA-wide markets and [0-10]% and below [0-10]% respectively on worldwide markets. In this context, it is important to remember that, contrary to what appears to be the basis of some respondents' concerns, the relevant downstream market for navigational software does not comprise Boeing's potential activities on the market for aeronautical navigational software. It has been noted above (at paragraph 17.) that the market for software used with digital marine navigational charts and the market for software used with digital aeronautical navigational charts have to be distinguished due to the technological gap between these products. Thus, due to the Parties' relatively low market shares on the downstream markets, the vertical relationship is very unlikely to result in a significant change of the competitive situation post-merger.
36. Therefore, in the light of the above, the Commission concludes that the vertical effects stemming from the proposed transaction would not give rise to serious doubts as to its compatibility with the common market.

VI. CONCLUSION

²⁰ A clear minority of all respondents, both customers and competitors, saw any impacts of the proposed transaction on the vertical relationship at all. Some of these respondents even stated that the effects on the supply of electronic marine charts would rather be positive, e.g. in the form of a decrease in prices or the development of more sophisticated products.

37. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EC) No 139/2004.

For the Commission
signed
Neelie KROES
Member of the Commission