

***Case No COMP/M.4608 -  
SIEMENS / UGS  
CORPORATION***

Only the English text is available and authentic.

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

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Article 6(1)(b) NON-OPPOSITION  
Date: 27/04/2007

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 27/04/2007

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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 Where possible the information omitted has been replaced by ranges of figures or a general description.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 party:

Dear Sir/Madam,

**Subject: Case No COMP/M.4608 – SIEMENS / UGS  
Notification of 21/03/2007 pursuant to Article 4 of Council Regulation  
No 139/2004<sup>1</sup>**

1. On 21 March 2007, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 ("Merger Regulation") by which the undertaking Siemens Aktiengesellschaft ("Siemens", Germany) acquires within the meaning of Article 3(1)(b) of the Council Regulation control of the whole of the undertaking UGS Capital Corp. ("UGS", USA) by way of purchase of shares.

**I. THE PARTIES**

2. Siemens is active on a worldwide basis in information and communication technologies, automation and control, power generation and power transmission equipment, medical solutions, transportation systems, lighting solutions and financial and real estate services.
3. UGS designs, manufactures and sells product life cycle management software and it has, to a lesser extent, activities with respect to automation and control devices.

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<sup>1</sup> OJ L 24, 29.1.2004 p. 1.

## **II. THE OPERATION AND THE CONCENTRATION**

4. Siemens will acquire sole control of UGS by way of purchase of shares.
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. The aggregate Community-wide turnover of each of the two undertakings exceeds €250 million. Neither Siemens nor UGS 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.

## **IV. RELEVANT MARKETS**

### **Introduction**

7. The proposed transaction involves potentially the overall market for product life cycle management ("PLM") solutions ("virtual" automation) and two sub-categories of automation and control ("A&C") products ("real-world" automation). While horizontal overlaps only occur in respect of some of the A&C segments, an assessment of the impact of the transaction as regards the supply of PLM solutions is necessary due to the possible close link between virtual automation and real-world automation.

### **A. PLM software and solutions**

8. According to the parties, PLM software and solutions constitute a distinct product market comprising business software applications that support the end user in managing the life cycle of its products. It comprises various different software applications: digital product development ("DPD") (encompassing computer-aided design ("CAD"), computer-aided engineering ("CAE") and computer-aided manufacturing ("CAM"), digital manufacturing ("DM")<sup>2</sup>, and product data management ("PDM"). The parties include in the proposed PLM solutions market the provision of services such as maintenance, technical support and upgrades, and contend that also other related PLM services, i.e. so-called "professional services" (mostly engineering and training services) would have to be comprised in the PLM solutions market.
9. The parties submit that while, on the one hand, the market for PLM software and solutions can be considered to be part of the overall business software category Enterprise Application Software ("EAS"), on the other hand, PLM solutions would have all the elements of a distinct market within the overall category EAS, given its specific features and functionalities. Furthermore, the parties argue that no further subdivision within the PLM software and solutions market would be necessary in the present case. They refer to previous decisions in which the Commission took a broad

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<sup>2</sup> DM is sometimes also referred to by industry analysts as the "digital plant".

approach in the software markets<sup>3</sup>. Actual patterns from the demand and supply side would appear to favour such a wide market definition.

10. The Commission carried out a market investigation among competitors, customers and information technology (“IT”) service providers. A clear majority of these third parties consider PLM software and solutions to be a stand-alone product with its own specific product characteristics which makes it distinct from other kinds of software and solutions. Furthermore, third parties also take the view that PLM solutions are not part of a wider enterprise application software (“EAS”) market because PLM software and solutions must be distinguished from the more general EAS software: PLM solutions manage specific information about the products of the company, rather than general information about a company’s resources like personnel or finance. Only some respondents consider PLM solutions to be potentially part of a wider EAS category although providing a specific function. With respect to the question whether the various software applications and segments within the PLM software and solutions would constitute distinct product markets (i.e. DPD, CAD, CAE, CAM, DM, and PDM), many respondents view the individual application product as specific to the function it provides, while at the same time they together can form an integral part for an overall PLM solution. For the purpose of the present case, however, the precise delineation of the product market can be left open since even on the basis of a narrower definition no serious competition concern would arise from the proposed transaction.
11. With respect to the relevant geographic scope, the parties submit that the market for PLM solutions is worldwide or at the very least EEA-wide in scope. On the basis of previous Commission decisions<sup>4</sup> the parties’ view appears to be appropriate. Also, the market investigation largely confirmed that PLM solutions are traded homogeneously in most world regions or at least within the EEA. Furthermore, none of the competitors considered that their PLM solutions were specifically tailored for the EEA market. Since the competitive assessment would not be different under a narrower definition, i.e. EEA-wide, the precise definition of the geographic scope of the market can be left open.
12. Thus, for the competitive assessment of the proposed transaction, the relevant markets to be considered will be both the worldwide and the EEA-wide market for PLM solutions, but also the potential PLM sub-categories.

## **B. A&C Products**

13. The parties submit that automation and control (A&C) in general terms represents a collection of real-world machinery and electronic process control that replace human operation in industrial production. According to industry reports, the overall sector of A&C products can be grouped into four levels of the automation hierarchy. Both Siemens and UGS offer products that are classified as level 2 and level 3 in the automation hierarchy. Level 2 products concern automation processing, whereby the human machine interface (“HMI”) products visualise the automated process on a screen which enables the operational personnel to interact with the automated plant floor; level 3 products concern the automation of the production process and this level

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<sup>3</sup> M.3216 – ORACLE/PEOPLESOFT, M.3978 – ORACLE/SIEBEL

<sup>4</sup> M.3216 – ORACLE/PEOPLESOFT, M.3978 – ORACLE/SIEBEL

mainly consists of manufacturing execution systems (“MES”) products. Only Siemens manufactures products that are classified as level 1 in the automation hierarchy, which consists of programmable logic controllers (“PLC”) and computerised numerical controllers (“CNC”). The other levels of the automation hierarchy are not relevant for the assessment of the present transaction.

14. According to the parties, within level 1 automation products, PLC constitutes a separate product market and in this regard they make reference to a previous Commission decision<sup>5</sup>. Furthermore, the parties submit that the corresponding geographic scope is worldwide, or at the very least EEA-wide in scope.
15. Like for PLC, the parties also consider CNC to be a distinct product market with reference to a previous Commission decision<sup>6</sup>. Again, the parties argue in their notification for a worldwide market, or at the very least an EEA-wide market.
16. Since, as regards these level 1 automation products, PLC and CNC, no serious competition concern would arise from the proposed transaction under any alternative definition, the precise market definitions can be left open.
17. As regards level 2 automation products, while the parties consider the market for HMI software solutions (including professional services) to be the relevant product market, they also elaborate on a possibly narrower delineation which includes HMI software only (i.e. excluding associated services consisting of maintenance and professional services). They consider the geographic scope of this market to be worldwide, or at least EEA-wide.
18. Like for HMI, as regards level 3 automation products, the parties suggest the market for MES software solutions (including professional services) to be the relevant market and they also, alternatively, consider a narrower delineation involving MES software only. As regards the geographic scope, they consider the market to be worldwide or at least EEA-wide.
19. The market investigation has largely confirmed the parties’ delineation of the markets mentioned above. For the purpose of the assessment of the present case, the relevant markets to be considered will be both the worldwide and the EEA market for HMI software solutions and the worldwide and the EEA market for MES software solutions. In addition, the assessment would not change whether or not professional services are included in each product market at stake.

## **V. ASSESSMENT**

### **A. PLM Solutions**

20. Only UGS is active in this market. Siemens has at present no PLM products offering. However, the company is active in the provision of some (professional) services for PLM applications. This activity, from which Siemens achieved a turnover in 2006 of approximately [...], concentrates mainly on third party PLM solutions which use at the

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<sup>5</sup> IV/M.447 – SCHNEIDER/AEG

<sup>6</sup> IV/M.447 – SCHNEIDER/AEG

same time A&C products sold by Siemens<sup>7</sup>. It would represent a negligible market share [0-10]%) of the overall EEA-wide PLM solutions market.

21. According to industry analyst reports, in the overall PLM solutions market UGS enjoys a market share of approximately [10-20]% worldwide and slightly less than [10-20]% at EEA-level. Competitors are Dassault Systèmes with a market share of approximately [10-20]% worldwide and [10-20]% in the EEA, PTC with [10-20]% and [0-10]% respectively, Autodesk with [0-10]% and [0-10]% respectively. The remainder is held by a large number of other competitors. As regards the relevant sub-categories of PLM solutions (i.e. DPD, CAD, CAE, CAM, DP, PDM), UGS' market share reaches a maximum of [10-20]% in CAD and PDM while as regards DM software (the so-called "digital factory"), UGS enjoys a market share of approximately [30-40]% worldwide and approximately [30-40]% EEA-wide. In respect of these PLM sub-categories, the principal competitor appears to be again Dassault Systèmes with similar or higher levels of market share compared to UGS (in DPD, CAD, CAE, CAM and PDM). As regards DM, Dassault Systèmes is credited with a market share of [20-30]% worldwide and [30-40]% EEA-wide. Other competitors have generally smaller market shares, representing a range of 5% to 15%. As such, the merger does not bring about adverse effects on competition on the various alternative PLM markets considered.
22. The parties submit that Siemens plans to enter the PLM space within the next [...]. Siemens is developing a new product in co-operation with UGS which will target the sub-category of DM software, for which UGS also has product offerings. The new product is aimed at bridging the gap between the planning/digital factory and the real-world automation area. According to Siemens, its new product will have an open interface and will have to function seamlessly with some A&C solutions, from Siemens as well as from some of Siemens' competitors [...]; its range of functions will be different from UGS' DM product. In view of the fact that Siemens expects annual sales of about [...] in 2010<sup>8</sup>, its sales would represent a market share of approximately [0-10]% under the assumption of today's total market volume in the EEA. On the basis of the above, and in particular given the presence of a number of strong competitors, the proposed concentration would not lead to a significant impediment of effective competition in the supply of PLM solutions.

## **B. A&C Products**

23. In respect of HMI products (level 2 in the automation hierarchy) the merger gives rise to a horizontal overlap. Applying the wider product market definition, i.e. HMI software and solutions (i.e. including professional services), the combined market share of Siemens/UGS would amount to [0-10]% worldwide and [10-20]% EEA-wide whereby UGS contributes with a small share of [0-10]% and [0-10]% respectively. With respect to the narrower market definition, i.e. HMI software only, the aggregate worldwide market share of Siemens/UGS would be approximately [10-20]%, whereby UGS contributes approximately [0-10]%. In the EEA, the combined share would amount to approximately [20-30]%, to which UGS contributes approximately [0-10]%. A number of competitors are present on this market, including Wonderware with a market share of approximately [20-30]% both world-wide and EEA-wide, GE Fanuc

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<sup>7</sup> UGS also provides PLM-related services. However, UGS only offers them for its own software products.

<sup>8</sup> [...]

with [20-30]% worldwide and [10-20]% EEA-wide, Rockwell with [10-20]% and [0-10]% respectively, Citect (Schneider) with [0-10]% and [10-20]% respectively, and Iconics with [0-10]% and [0-10]%. The remainder of the market is fragmented among smaller competitors.

24. In view of the presence of a number of strong competitors which are active on a worldwide and EEA-wide scale, and absent particular IP rights and interoperability issues as regards the supply of HMI software solutions, it can be concluded that the proposed transaction would not give rise to a significant impediment of effective competition in this area of A&C products.
25. With respect to MES products (level 3 in the automation hierarchy) the merger also gives rise to a horizontal overlap. Considering the wider product market definition, i.e. that for MES software and solutions, (i.e. including professional services), the combined market share of Siemens/UGS would amount to less than [0-10]% both worldwide and EEA-wide. With respect to the narrower market definition, i.e. MES software only, the aggregate worldwide market share of Siemens/UGS would be approximately [0-10]% and in the EEA approximately [0-10]%. In view of the small market shares that the parties enjoy, it can be concluded that the proposed transaction would not lead to a significant impediment of effective competition in the provision of MES software solutions.

**C. Assessment on the possible effects arising from the transaction with respect to the link between PLM solutions and A&C products (conglomerate aspects)**

26. Reports prepared by industry analysts that were filed with the notification<sup>9</sup>, indicate a trend that suppliers of PLM solutions may team up with IT service providers and, furthermore, possibly closely co-operate with suppliers of A&C products. This would be *inter alia* borne out by the increasing tendency towards bridging the gap between virtual automation and real-world automation. As an actual example of such a tendency, the analysts mention Dassault Systèmes and their partnership with [...] <sup>10</sup>. Of importance would be the fact that Siemens is already active in both business areas, namely IT service provision and A&C products, whereas [...] is only active in IT services. Another example would be the existing co-operation between the parties as regards Siemens' new PLM products which are in the pipeline (see paragraph 22. above).
27. In this respect, the market investigation revealed that co-operation between vendors of automation products and IT service providers can occur through different business models *inter alia* simply the distribution of automation products by the IT service provider, partnerships limited to an industry sector in which the IT service provider has its focus and many other forms of co-operation. Furthermore, customers appear to choose themselves to whom and through which kind of co-operation they would prefer to be serviced for the automation installations. Hence, the overwhelming majority of customers did not generally perceive the above mentioned combination of expertise

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<sup>9</sup> CIMdata, PLM Market Analysis Reports; CIMdata, NC Software and Related Services Market Assessment; IDC, World-wide Product Life-cycle Management Applications

<sup>10</sup> [...]

that might arise from the proposed transaction as a particular competitive advantage, or if anything as something which would risk foreclosing the parties' competitors.

28. In relation to the above, in any event, a few respondents to the market investigation expressed concerns regarding potential foreclosure effects following the merger. Although open and standardised interfaces appear to be a common feature of this industry (even as regards emerging combined PLM and A&C solutions), a stronger focus on fully integrated solutions may create the ability and incentive for the merging parties to drive the standard-setting process as regards the integration of some of the products within virtual automation and real-world automation, thereby favouring their own products over those of their competitors. In particular, one competitor raised the concern that proprietary data interfaces between both PLM solutions and A&C products would close-off other market participants on either side. A limited number of customers expressed the concern that they would risk becoming locked-in with the merging parties' products once a decision is made in favour of the merged entity's products since a switch to alternative vendor's products would involve high integration and transaction costs. In this respect, a few competitors (notably providers of best-of-breed products or point solutions) shared this customers' view that they would risk being prevented from effectively address these converging markets in the future. .
29. On the basis of information collected in the market investigation, it appears that the notifying party has been promoting and actively developing open and standardised interfaces for its product portfolios that facilitate the data exchange between PLM and A&C products from different vendors<sup>11</sup>. Since entirely new installations of PLM and/or automation products are not very common, any new installation or upgrade of an automation product that a customer chooses would have to work with the installed base. Furthermore, customers generally prefer to "cherry-pick" the best product for their needs and they often have a multiple-source policy. It therefore appears unlikely that, supposed that they would have the ability, the merging parties would have a strong incentive to alter their present approach of "open and standard" product interfaces in the future as regards these converging PLM and A&C products. Apart from the fact that the merging parties would have to re-engineer their product portfolios towards proprietary interfaces - which would represent a significant investment in terms of money and time - the purchase patterns of customers would likely continue to represent a significant disincentive for the merging parties against possible attempts in this respect.
30. In any event, the combined market's position of the merging parties as regards either converging product markets (PLM and A&C), as presented above, is not such as to make credible any foreclosure claims as regards the situation of competitors on both markets of either side.
31. Therefore, in the light of the above, it can be concluded that the proposed transaction will not give rise to a significant impediment of effective competition stemming from the link between PLM solutions and A&C products.

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<sup>11</sup> UGS, for instance, licenses core PLM components even to its competitors in order for their products to collaboratively work with competing systems. Furthermore, both UGS and Siemens are participating as active members together with other vendors in the standard-setting body "OPC Foundation" ([www.opcfoundation.org](http://www.opcfoundation.org)) with respect to the development of an open standard for communication within the automation world.



## **VI. CONCLUSION**

32. 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  
Vladimir ŠPIDLA  
Member of the Commission