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**Datasheet for the decision
of 25 July 2025**

Case Number: T 0412/24 - 3.5.05

Application Number: 19000421.8

Publication Number: 3611581

IPC: G05B19/05, G05B19/042

Language of the proceedings: EN

Title of invention:

Industrial controller and method configured to control an industrial activity

Patent Proprietor:

Siemens Aktiengesellschaft

Opponents:

Cabinet Nübold
Festo SE & Co. KG

Headword:

Cloud-based analytics/SIEMENS

Relevant legal provisions:

EPC Art. 56, 76(1), 84, 100(a), 100(c), 125, 133, 134

EPC R. 76(2)(a), 76(2)(d), 152

French Civil Code Art. 1161

UPCA Art. 48(1)

UPCA R. 8(1)

Keywords:

Admissibility of first opposition - (yes): no "circumvention of the law by abuse of process"

Added subject-matter - main request and 3rd to 9th auxiliary requests (yes): unallowable intermediate generalisation

Inventive step - main request and 1st auxiliary request (no)

Clarity - 2nd and 10th to 12th auxiliary requests (no)

Decisions cited:

G 0003/97, G 0001/24, J 0015/86, T 1893/22, T 2027/23

UPC_CoA_563/2024

Catchword:

As to the different objectives of legal representation under the EPC and the UPCA, see point 2.2.10 of the Reasons.



Beschwerdekammern

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Case Number: T 0412/24 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 25 July 2025

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 3 January 2024
revoking European patent No. 3611581 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chair	K. Bengi-Akyürek
Members:	P. Tabery
	R. Romandini

Summary of Facts and Submissions

- I. The appeal is directed against the opposition division's decision to revoke the European patent.
- II. The opposition division found that the opposition of opponent 1 ("the first opposition") was admissible and that the claimed subject-matter of the opposed patent either extended beyond the content of the earlier application (main request, auxiliary requests 3 to 12) or did not involve an inventive step (auxiliary request 1) or was not clear (auxiliary request 2).
- III. The prior-art documents referred to by the opposition division included:
- D1:** EP 2 924 572 A2.
- IV. Oral proceedings before the board were held on 25 July 2025. The final requests of the parties were as follows:
- The appellant-proprietor ("the proprietor") requested that the appealed decision be set aside and that the oppositions be rejected (**main request**). Alternatively, it was requested that the opposed patent be maintained in accordance with one of **auxiliary requests 1 to 12**, re-submitted with the statement of grounds of appeal. It also requested that the opposition of opponent 1 be rejected as inadmissible.
 - Both, respondent-opponent 1 ("opponent 1") and respondent-opponent 2 ("opponent 2") requested that

the appeal be dismissed.

At the end of the oral proceedings, the board's decision was announced.

V. Claim 1 of the **main request** reads as follows (feature labelling according to the decision under appeal):

1. "An industrial controller (20) configured to control at least one industrial activity (30),
2. the industrial controller (20) comprising:
 - 2.1 a control program (22) hosted by the industrial controller (20), configured to control the industrial activity (30);
 - 2.2 a cloud agent (21) configured for:
sending cloud variables to analytics application (70) from the control program (22);
and
3. the control program (22) configured for:
controlling the industrial activity (30) using updated optimized cloud variables generated by the analytics application (70),
4. wherein the updated optimized cloud variables are generated based on the cloud variables received from the cloud agent (21),
5. wherein the control program (22) is configured
 - 5.1 to include cloud constructs which request the updated optimized cloud variables on runtime
and
 - 5.2 to reload the updated optimized cloud variables in the control program,
 - 5.3 wherein the cloud constructs define the cloud variables that are to be updated by the cloud analytics application (70)."

- VI. Claim 1 of **auxiliary request 1** differs from claim 1 of the main request in that feature 2.2 is amended as follows (proprietor's highlighting):
- 2.2' "a cloud agent (21) configured for collecting cloud variables and sending the cloud variables to a cloud-based analytics application (70) from the control program (22); and to reload updated optimised cloud variables generated by the cloud-based application and to notify the control program with the updated optimised cloud variables".
- Moreover, instead of a "(cloud) analytics application", features 3. and 5.3 now recite a "cloud-based analytics application".
- VII. Claim 1 of **auxiliary request 2** differs from claim 1 of auxiliary request 1 in that feature 5.1 is amended as follows (proprietor's highlighting):
- 5.1' "to include cloud constructs which request the updated optimised cloud variables on runtime at the beginning of a new scan cycle".
- VIII. Claim 1 of **auxiliary request 3** differs from claim 1 of the main request in that, instead of a "(cloud) analytics application", features 2.2 and 5.3 recite a "cloud-based analytics application". Moreover, the "control program" is now defined throughout claim 1 as being a "user defined control program".
- IX. Claim 1 of **auxiliary request 4** differs from claim 1 of of auxiliary request 3 in that, after feature 2.2, the following feature is inserted:

2.3 "wherein the cloud-based analytics application analyses the cloud variables and determines the optimal values of the cloud variables for the industrial process, and thereby generates updated optimised cloud variables".

- X. Claim 1 of **auxiliary request 5** differs from claim 1 of auxiliary request 4 in that feature 2.2 defines "a cloud-based analytics application received/generated by the user-defined control program".
- XI. Claim 1 of **auxiliary request 6** differs from claim 1 of auxiliary request 3 in that the term "industrial activity" is replaced by the term "industrial process". Moreover, feature 2.2 defines "a cloud-based analytics application received/generated by the user-defined control program".
- XII. Claim 1 of **auxiliary request 7** differs from claim 1 of auxiliary request 6 in that feature 2.2 additionally defines that "the cloud variables are declared by cloud constructs".
- XIII. Claim 1 of **auxiliary request 8** differs from claim 1 of auxiliary request 7 in that feature 2.2 now includes, before the "sending" step, the following step:
- "aggregating continuously cloud variables from the control program, wherein the cloud variables are declared by cloud constructs".
- XIV. Claim 1 of **auxiliary request 9** differs from claim 1 of auxiliary request 8 in that feature 2.2 further specifies that "the cloud agent includes a unique identity number for identifying the control program, from which the cloud variables are received and on

which the updated optimized cloud variables are reloaded".

XV. Claim 1 of **auxiliary request 10** differs from claim 1 of auxiliary request 6 in that it contains the amendment according to feature 5.1' of auxiliary request 2.

XVI. Claim 1 of **auxiliary request 11** differs from claim 1 of auxiliary request 10 in that it further specifies that (board's labelling):

6. "wherein a compiler for the user-defined control program is designed to understand the cloud constructs and make provisions to update the cloud variables in the control program dynamically on runtime."

XVII. Claim 1 of **auxiliary request 12** differs from claim 1 of auxiliary request 11 in that feature 6 is amended as follows (board's labelling and markup):

6' "wherein a compiler for the user-defined control program is designed to understand the cloud constructs and make provisions to update the cloud variables in the user-defined control program dynamically on runtime, at the beginning of a scan cycle of the user-defined control program (22)."

Reasons for the Decision

1. The opposed patent concerns a control program for an industrial process. The configurable control parameters of the control program are updated during runtime using cloud-based optimisations.

2. Admissibility of the first opposition

2.1 The proprietor has contested the admissibility of the first opposition. The contestation relies on the following points:

- (i) Opponent 1's professional representative cannot represent the company since he is simultaneously managing the legal entity he represents;
- (ii) the identity of opponent 1 could not be unequivocally determined either at the end of the opposition period or during the appeal proceedings;
- (iii) opponent 1 cannot act as such because carrying out activities typically carried out by professional representatives without the necessary qualifications circumvents the principles of representation;
- (iv) opponent 1's change of name affects the admissibility of the first opposition.

However, none of these arguments or objections convinces the board for the reasons set out below.

2.2 *Representation*

2.2.1 The proprietor argued that Articles 133 and 134 EPC, together with Rule 152 EPC and the Decision of the President of the EPO of 12 July 2007, did not constitute a complete and self-contained set of rules on representation in proceedings established by the EPC. National laws governing representation were also relevant.

2.2.2 The relevance of national laws appears to be invoked in two ways. In the statement of grounds of appeal, the proprietor referred to both **German law** (§ 181 BGB) and **French law** (Article 1161 of the French Civil Code) without mentioning Article 125 EPC. The board has considered those references as suggesting that either German law or French law would apply to the question whether *Mr Nübold* could actually represent opponent 1 in the present proceedings. In its letter of 17 May 2024, the proprietor apparently refined its approach: it contended the existence under Article 125 EPC of a procedural principle that prevented opponent 1 from appointing *Mr Henrik Nübold* as representative, since such an authorisation formed a "self-dealing" situation in which *Mr Henrik Nübold*, in his function as the president of a "société simplifiée unipersonnelle", appointed himself as a professional representative in this case. Yet, such a self-dealing, also known as "Insichgeschäft" under German law or "transactions intéressées" under French law, was illegitimate and rendered the appointment null and void.

2.2.3 The board, however, follows the analysis of the decision under appeal and the arguments provided therein. In summary,

- Articles 133 and 134 EPC together with Rule 152 EPC and the Decision of the President of the EPO of 12 July 2007 on the filing of authorisations (OJ SE 3/2007, 128) indeed constitute a complete and self-contained set of rules on representation in proceedings established by the EPC.
- According to these rules, a legal person having their seat in an EPC Contracting State is not obliged to be represented by a professional

representative (Article 133(1) EPC). Furthermore, persons whose names appear on the list of professional representatives are entitled to act in all proceedings established by the EPC (Article 134 EPC).

- In the present case, opponent 1 is a French company. According to the available evidence, *Mr Nübold* is not an employee, but the president of a "société simplifiée unipersonnelle" (SASU) under French law (cf. Article L227-1 of the French Commercial Code). In this capacity, he was entitled to represent "SASU Cabinet NÜ" at the time the first opposition was filed. Indeed, a legal person having their seat in an EPC Contracting State can therefore act in proceedings before the EPO through their legal representatives. As correctly pointed out by the opposition division, the fact that *Mr Nübold* is a professional representative cannot have a negative impact on his competence and ability to represent opponent 1 as the president of the SASU, since under French law he is entitled to act on behalf of the legal person in all circumstances (cf. Article L227 and L227-6 of the French Commercial Code). The fact that *Mr Nübold* is a professional representative can only mean that he would be entitled to act in proceedings before the EPO not only as the president of the SASU, but also as a professional representative appointed by that legal person. Therefore, even if national law were to apply and would prevent the company from appointing *Mr Nübold* as its professional representative and attorney, still it would not prevent him from representing the company as its president.

2.2.4 In view of the above considerations, it is only for the sake of completeness that the board notes that neither the references to French and German law nor the reference to general principles under Article 125 EPC could, in its view, lead to the conclusion that the company was prevented from appointing *Mr Nübold* as a professional representative before the EPO.

2.2.5 If one considers the reference to **French law** to be intended as the law potentially applicable to the present case, given that the company is based in France, the following observations can be made:

The wording of Article 1161 of the French Civil Code shows that it would not apply, even in national proceedings, to a situation like the one before the board. The article states:

"En matière de représentation des personnes physiques, un représentant ne peut agir pour le compte de plusieurs parties au contrat en opposition d'intérêts ni contracter pour son propre compte avec le représenté.

En ces cas, l'acte accompli est nul à moins que la loi ne l'autorise ou que le représenté ne l'ait autorisé ou ratifié."

The conflict of interest that this provision aims to prevent is limited to cases where a representative (agent) acts on behalf of a *natural* person, not a company. Even if the board were to consider this provision relevant to the authorisation of legal proceedings – an assumption that is doubtful – and even if *Mr Nübold* acted as the professional representative of the SASU when filing the notice of opposition,

Article 1161 of the French Civil Code would not be relevant, as the SASU, although a simplified legal entity, is still a company.

2.2.6 Concerning the reference to **German law**, the board could not see how this law would directly apply to the question whether a French company could appoint a person as a representative for proceedings before the EPO. No argument was provided in support of such an application.

2.2.7 If one considers the second approach using **French, German and Swiss law** as evidence of a general principle under national law prohibiting the concept of "self-dealing", and claiming that this principle is relevant in EPO proceedings under Article 125 EPC, the following observations apply:

- It is unclear what legal (procedural) gap exists that would need to be filled under Article 125 EPC, which is a prerequisite for its application.
- It is at least questionable whether invoking provisions from only three countries would be sufficient to establish the existence of a general principle of procedural law applicable under Article 125 EPC.
- Even if these provisions were considered sufficient, they pertain to *substantive* law rather than to *procedural* matters. These provisions in fact address conflicts of interest in private legal transactions, not the granting of an authorisation from a company to a representative for legal or court proceedings. According to the established case law of the Boards of Appeal, principles of

procedural law generally recognised in the EPC Contracting States within the meaning of Article 125 EPC do not include specific rules of *substantive* law of any Contracting State (cf. **J 15/86**, Reasons 11).

- The purpose of the national civil provisions invoked is to prevent conflicts of interest and protect a person represented in a legal transaction carried out by their representative/agent. In the present situation, it is unclear what potential conflict of interest might exist. The company in question has only one shareholder - a fact that has not been contested. This individual also serves as the company's president and representative. Therefore, no apparent conflict of interest arises for the simple reason that there are no two centres of interest that can enter in conflict.

2.2.8 In conclusion, even if *Mr Nübold* were not entitled to represent opponent 1 as its president (which is not the case), no principle could be derived from national law that would prevent him from being appointed as opponent 1's professional representative.

2.2.9 At the oral proceedings before the board, and in reaction to the board's communication under Article 15(1) RPBA, the proprietor referred to the Order of the UPC Court of Appeal, UPC_CoA_563/2024, apparently to support its argument that general principles of national procedural law prevent *Mr Nübold* from acting in the present case. The Order itself was not submitted. Since it was published already on 11 February 2025, it could have been cited earlier, i.e. prior to the oral proceedings before the board. In any event, this reference cannot alter the board's analysis

in that regard.

2.2.10 The UPC Court of Appeal concluded in the mentioned Order (see Headnotes, first two bullet points) that:

"No corporate representative of a legal person or any other natural person who has extensive administrative and financial powers within the legal person, whether as a result of holding a high-level management or administrative position or holding a significant amount of shares in the legal person, may serve as a representative of that legal person, regardless of whether said corporate representative of the legal person or natural person is qualified to act as a UPC representative in accordance with Art. 48(1) or (2) UPCA.

One of the objectives of parties being represented by a lawyer is, among other things, to ensure that legal persons are defended by a representative who is sufficiently distant from the legal person which he or she represents."

This conclusion, however, rests on the specific provisions of the UPCA, in particular Article 48(1) UPCA and Rule 8(1) UPCA, which require that both *natural* and *legal* persons be represented. Article 48(1) UPCA mirrors Article 19 of the Statute of the Court of Justice of the European Union, which likewise provides for mandatory representation for private parties in proceedings before the CJEU. In particular, the CJEU has identified one of the objectives of this requirement as ensuring that the representative of a legal person is sufficiently distant from the party represented (CJEU, 4 February 2020, C-515/17 P and C-561/17 P, para. 61). Such distance was considered to

be lacking in the case of managers or other persons holding extensive administrative and financial powers within the company, on the one hand (*ibidem*, para. 65), and employees of that legal person, on the other hand (*ibidem*, para. 63). The UPC has followed this interpretation for the former category in construing Article 48 UPCA (cf. UPC_CoA_563/2024, Order of 11 February 2025, point 28).

The board holds that, even if this were regarded as a general principle of the EPC Contracting States within the meaning of Article 125 EPC, it could not be transposed to the EPC framework. The EPC follows the opposite principle: both *natural* and *legal* persons may represent themselves (see Article 133(1) EPC). The only exception concerns parties domiciled *outside* the EPC Contracting States (see Article 133(2) EPC). The rationale for this exception is not to ensure independence and distance from the parties. Instead, its purpose lies in ensuring that parties from legal systems and traditions *different* from those of the EPC Contracting States are properly represented. In such cases, a qualified representative can indeed contribute to a significant simplification of the underlying proceedings (see Benkard, EPÜ/Birken, 4th edition 2023, Art. 133 EPC, marginal number 7). Moreover, the rule ensures that the EPO is not burdened with notifications outside the EPC territory (*ibidem*). In that context, it is to be noted that principles of procedural law recognised in the EPC Contracting States may be invoked under Article 125 EPC to fill gaps, but not to modify the EPC framework. Introducing a corollary of the prohibition of self-representation into a system that expressly allows it would however amount to such a modification. Accordingly, the reference to UPC_CoA_563/2024 does not alter the board's conclusion

in the present case.

2.3 *Identity of opponent 1*

2.3.1 According to the proprietor, the identity of opponent 1 could not be unequivocally established either at the end of the opposition period or during the appeal proceedings. The uncertainty arises because it is unclear whether *Mr Nübold*, opponent 1's representative, lodged the first opposition on behalf of himself or in another capacity, such as the president, director, or company secretary of *SARL Cabinet NÜ* (see the letter of 17 May 2024, page 3). The proprietor points out that *Mr Nübold* signed documents using his status as a European patent attorney and included his representative number, which typically suggests he was acting on behalf of a third party (*ibidem*). The proprietor further argues that, if *Mr Nübold* had intended to act on behalf of himself or in his capacity as the president of *SARL Cabinet NÜ*, there would have been no need to reference his status as a European patent attorney. Since European patent attorneys usually act for third parties, this raises doubts as to whether *Mr Nübold* was acting in his personal capacity or as a representative of the company.

2.3.2 However, the board does not agree with this analysis. The first opposition was clearly filed on behalf of *SARL Cabinet NÜ* (see the respective notice of opposition). The only uncertainty, based on the submissions of the proprietor itself, would concern whether *Mr Nübold* is representing opponent 1 as a European patent attorney appointed by *SARL Cabinet NÜ* or in his capacity as the president of that company. Nonetheless, the board finds it difficult to understand how this alleged ambiguity could raise any doubt about

the identity of opponent 1 in the present proceedings.

2.4 *Circumvention of the law*

2.4.1 Concerning the reference to **G 3/97** and the argument that opponent 1 is a company that, by filing an opposition, is conducting activities that are reserved to professional representatives, the board makes the following observations.

2.4.2 The case law of the Boards of Appeal has established that if an opponent acts on behalf of a client in the context of activities typically associated with professional representatives - without possessing the necessary qualifications (as required by Article 134 EPC) - this could indeed constitute a "circumvention of the law". This would occur if a person not entitled to act as a professional representative performs all the activities typically carried out by professional representatives while assuming the role of a party, in order to circumvent the prohibition on unqualified representation.

2.4.3 In the present case, *Mr Nübold* is a qualified professional representative. There is no indication that an *unqualified* person is acting as a representative by filing oppositions on behalf of third parties. Therefore, and contrary to the proprietor's allegation, the involvement of opponent 1 cannot be regarded as "circumventing the law by abuse of process" within the meaning of Headnote 1(b) of **G 3/97**.

2.5 *Change of name of opponent 1*

2.5.1 The proprietor objected that the first opposition was (allegedly) filed by "Cabinet Nü SASU", which is no

longer existing. There was however currently no proof of the transfer of the corresponding business asset from the "Cabinet Nü SASU" to the "SARL Cabinet NÜBOLD".

2.5.2 The board observes that there was no change of the identity of opponent 1 in these proceedings. The first opposition was filed under the name of "SARL Cabinet NÜ", which the board understands to be an abbreviation of the name "SARL Cabinet NÜBOLD" used by opponent 1 on his letterhead during the appeal proceedings.

2.5.3 Therefore, the proprietor's respective objection is not not justified.

2.6 *Conclusion*

In conclusion, and in line with the reasons already indicated in case **T 1893/22** relating to the earlier application, the board agrees with the decision under appeal that the first opposition is admissible (Rule 76(2)(a) and (d) EPC).

3. Main request

3.1 Added subject-matter (Article 100(c)/76(1) EPC)

3.1.1 First objection - "analytics application"

Claim 1 specifies an "analytics application" (cf. **features 2.2 and 3**) as well as a "cloud analytics application" (cf. **feature 5.3**). However, the description of the earlier application as filed does not disclose such two distinct "applications". Hence, claim 1 extends beyond the content of the earlier application as filed (Article 76(1) EPC).

The board does not subscribe to the proprietor's argument that, in line with recent decision **G 1/24**, "consulting" the description necessarily leads the skilled reader towards interpreting claim 1 such that there was only one "application". Instead, the board holds that, besides the fact that G 1/24 was formally related to assessing the patentability of an invention under Articles 52 to 57 EPC (see its Order), rather than Article 76(1) EPC, it does not cast doubt on the established jurisprudence of the Boards of Appeal according to which a sensible claim construction cannot be reinterpreted on account of the description being "consulted" or "referred to".

In fact, the board consulted the present patent description and drawings to define the skilled reader from whose perspective or view point a claim is to be interpreted. As a consequence, in view of e.g. paragraphs [0002] to [0004] of the patent description, the technical field of that skilled reader is apparently "industrial automation". Moreover, a claim should not be interpreted, based on features set out in embodiments of an invention, as having a meaning narrower than the wording of the claim as understood by the person skilled in the art (see e.g. **T 2027/23**, Reasons 3.5). In the present case, this means that the limitation of the two "applications" mentioned in claim 1 being identical cannot be read into the claim, contrary to the proprietor's allegation.

3.1.2 Second objection - "reload function"

Moreover, claim 1 fails to mention that the "reload function of the cloud agent" was necessary for reloading the "updated optimised variables" from the cloud-based application into the "control program", as

disclosed in the earlier application as filed. Notably, the board is not convinced that the step of "reload[ing] the updated cloud variables" according to **feature 5.2** is synonymous with the step of "updat[ing] the cloud variables for use in the next scan cycle" disclosed at page 11, second paragraph, of the earlier application as filed. Hence, the board concurs with the opponents that there is no basis for the "cloud agent" being optional when "reloading" updated optimised variables delivered from the cloud-based application to the "cloud agent" into the "control program". The passage at page 7, lines 19-26, of the original description cited by the proprietor does not teach otherwise. Omission of the "reload function of the cloud agent" thus constitutes an unallowable intermediate generalisation of the original content.

3.1.3 For these reasons, the subject-matter of claim 1 extends beyond the content of the earlier application as filed (Article 100(c)/76(1) EPC).

3.2 Inventive step (Article 100(a)/56 EPC)

Notwithstanding the above objections under Article 76(1) EPC, the board is in a position to also assess inventive step in the present case.

3.2.1 With respect to **features 2. and 2.1**, the board notes that paragraph [0022], third sentence, of document **D1** actually discloses that "[i]ndustrial devices 208 and 210 can include [...] industrial controllers (e.g., programmable logic controllers [...])". Moreover, paragraph [0023] of document D1 discloses a controller performing "automated decision-making", which in turn involves providing "parameters [...] directly to a controller" (see paragraph [0020] of D1).

3.2.2 The board is not convinced by the proprietor's argument that paragraphs [0022] and [0023] disclosing the claimed "industrial controllers" were merely relating to the state of the art and thus not to the present invention disclosed notably in paragraphs [0025] and [0026] of document D1. Rather, the board holds that, since paragraph [0024] of document D1 relates to "embodiments" and makes reference to "industrial devices 208 and 210" detailed in preceding paragraphs [0022] and [0023], the "industrial controller" disclosed therein is also present in the embodiments of document D1. Consequently, document D1 discloses the "industrial controller" in combination with the features of paragraphs [0025] and [0026]. Thus, features 2 and 2.1 are indeed anticipated by document D1.

3.2.3 As to **features 5.1 to 5.3**, document D1 discloses the "industrial automation device" (denoted in D1 as "industrial device 208, 210" and comprising an "industrial controller", see paragraphs [0022] and [0023]) providing data to the cloud. Variable data sets which are provided by the cloud for update purposes inherently qualify as "updated cloud variables". Moreover, it is implied that the variables need to adhere to predefined formatting conventions, since otherwise the system of document D1 could not work properly. Thus, the claimed "cloud constructs" (see **features 5.1 to 5.3**) are in fact implicitly disclosed in document D1.

3.2.4 For the sake of completeness, the board adds that the term "cloud constructs" is to be interpreted very broadly. **Feature 5.1** specifies that it is the cloud constructs "which request the updated optimised cloud variables", in line with page 5, lines 17-21, of the

present description as filed.

- 3.2.5 Lastly, the board is not convinced by the proprietor's argument that paragraph [0087] of document D1 mandates that the "updated variables" are manually applied to the boiler system. Rather, the board understands that this is only the case when the updated variables (denoted "resulting set point parameters" in D1) are provided to a client device. However, paragraph [0020] of D1 discloses "[providing] the calculated set point parameters to a user's client device, or directly to a controller". In the latter case, the manual intervention according to paragraph [0087] is not applicable.
- 3.2.6 On the other hand, the board is not convinced by the allegation of opponent 1 that the aspect of **feature 5.1** of requesting the "updated optimised cloud variables" on runtime was already implied in document D1. Although not excluded by the solution of document D1, the board cannot see any evidence to that effect.
- 3.2.7 Hence, the difference between the subject-matter of claim 1 and the disclosure of document D1 resides only in the aspect of **feature 5.1** that the "cloud constructs" are requesting the "updated optimised cloud variables" on runtime.
- 3.2.8 The proprietor argued that the major technical effect of the invention was mitigating costs and errors, as manually updating the control parameters was avoided.

The board disagrees. This effect is already known from document D1 and achieved by those features of claim 1 which are disclosed in document D1. Hence, this technical effect is not an effect caused by the

distinguishing feature identified above. However, the problem-solution approach requires a technical effect caused by the *distinguishing* features.

- 3.2.9 In another line of argumentation, the proprietor argued that the distinguishing feature's technical effect and objective technical problem related to providing a more complex analysis of large amounts of data in the cloud, thus "keeping the industrial controller lean".

The board is not convinced, since document D1 already discloses cloud-based analytics for generating control instructions for industrial controllers. Thus, again, the alleged effect is already achieved by the features known from document D1 and therefore not caused by the distinguishing feature. On top of that, claim 1 does not contain any features as to the degree of complexity to be dealt with within the "cloud analytics application".

- 3.2.10 On balance, the board considers that the distinguishing feature of requesting the "updated optimised cloud variables" on runtime yields, at best, the technical effect of allowing for a speedy use of calculated variables. The objective technical problem may thus be formulated as "how to allow for a speedy use of calculated variables in the system of D1".

- 3.2.11 However, updating variables on runtime, rather than waiting for the control program to terminate, constitutes an obvious solution to this objective problem. Since the skilled person would thus have readily foreseen these features when implementing the system described in document D1, depending on the practical circumstances, they would have readily arrived at the subject-matter of claim 1 without

employing any inventive skill.

3.2.12 Consequently, irrespective of the added-matter issues, the subject-matter of claim 1 is not inventive over the disclosure of document D1 in combination with the skilled person's common general knowledge.

3.3 In view of the above, the main request is not allowable under Articles 100(c)/76(1) and 100(a)/56 EPC.

4. Auxiliary request 1

4.1 Inventive step (Article 56 EPC)

4.1.1 Having regard to **feature 2.2'** of claim 1 of **auxiliary request 1**, the board considers that paragraph [0026] of document D1 explicitly discloses that data communications originating from the cloud are performed via the "cloud agents". The formulation "directly to a controller" (see paragraph [0020], lines 52 and 53 of document D1) may only be understood, in its context, as meaning that the variables are not provided via the "user's client device". The board thus understands that document D1 discloses that the "cloud agent" is indeed located within the "industrial controller". Moreover, document D1 explicitly discloses "integrated cloud agents" (see paragraph [0025]). That these agents are "integrated" into the "industrial devices" is to be understood such that they are integrated with the "industrial controllers", since document D1 uses these terms interchangeably.

4.1.2 Moreover, as to **feature 2.2'**, the board understands that variable data provided to the cloud inherently consists of "cloud variables". In addition, claim 1 defines "cloud variables" and "updated optimised cloud

variables" as being distinct from each other. A relationship or correspondence between these two data items is thus defined as the latter is "generated based on" the former (see feature 4 of claim 1). Since this generation step as such is not claimed, the board concludes that this cannot limit the subject-matter of claim 1 beyond properties of the "cloud variables" which inevitably propagate to the "updated optimised cloud variables". However, since claim 1 fails to define any such properties, this feature is effectively not limiting the subject-matter of claim 1.

4.2 In view of the above, auxiliary request 1 is (at least) not allowable under Article 56 EPC.

5. Auxiliary request 2

5.1 Clarity (Article 84 EPC)

5.1.1 The board concurs with the opposition division that the formulation "*at the beginning of a new scan cycle*" does not enable the skilled reader to unambiguously determine the subject-matter of claim 1 of **auxiliary request 2**. Since claim 1 fails to define the "scan cycle", it cannot be determined at what time the request actually is supposed to be made.

5.1.2 Hence, claim 1 indeed lacks clarity.

5.2 In consequence, auxiliary request 2 is not allowable under Article 84 EPC.

6. Auxiliary requests 3 to 9

6.1 The subject-matter of claim 1 of each of **auxiliary requests 3 to 9** extends beyond the content of the

earlier application as filed for the same reasons as identified in point 3.1.2 above.

6.2 Hence, none of auxiliary requests 3 to 9 is allowable under Article 76(1) EPC.

7. Auxiliary requests 10 to 12

7.1 Claim 1 of each of **auxiliary requests 10 to 12** contains the formulation "*at the beginning of a new scan cycle*" which lacks clarity for the same reasons as identified in point 5.1.1 above.

7.2 Therefore, none of auxiliary requests 10 to 12 is allowable under Article 84 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated