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**Datasheet for the decision
of 21 October 2021**

Case Number: T 1428/17 - 3.5.03

Application Number: 11157128.7

Publication Number: 2498373

IPC: H02J13/00

Language of the proceedings: EN

Title of invention:
IEC 61850 substation gateway

Patent Proprietor:
ABB Power Grids Switzerland AG

Opponent:
Siemens Aktiengesellschaft

Headword:
Power substation gateway/ABB

Relevant legal provisions:
EPC Art. 100(c), 123(2)
RPBA Art. 12(4)

Keyword:

Added subject-matter - main request and auxiliary requests 1, 2, 4, 5, 6, 7, 7a, 7b and 8 (yes): unallowable intermediate generalisation

Admittance of late-filed requests - auxiliary requests 3 and 3a (no): "fresh case"

Decisions cited:

T 1067/97



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1428/17 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 21 October 2021

Appellant: ABB Power Grids Switzerland AG
(Patent Proprietor) Bruggerstrasse 72
5400 Baden (CH)

Representative: Vossius & Partner
Patentanwälte Rechtsanwälte mbB
P.O. Box 86 07 67
81634 München (DE)

Respondent: Siemens Aktiengesellschaft
(Opponent) Werner-von-Siemens-Straße 1
80333 München (DE)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
24 April 2017 concerning maintenance of the
European Patent No. 2498373 in amended form.**

Composition of the Board:

Chair K. Bengi-Akyürek
Members: K. Schenkel
C. Almberg

Summary of Facts and Submissions

I. The appeal by the patent proprietor lies from the interlocutory decision of the opposition division maintaining the present European patent in amended form on the basis of a ninth auxiliary request filed during the oral proceedings before the opposition division on 24 January 2017.

Oral proceedings were held before the board on 21 October 2021 by videoconference.

- The proprietor requested that the appealed decision be set aside and that the opposition be rejected, i.e. that the patent be maintained as granted (**main request**), or that the patent be maintained as amended on the basis of one of **auxiliary requests 1 to 8** filed during the opposition proceedings or **auxiliary requests 3a, 7a and 7b** filed with the statement of grounds of appeal.
- The respondent requested that the appeal be dismissed.

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

II. Claim 1 of the **main request** reads as follows (labelling by the board):

- (a) "A gateway IED (20) for a Substation Automation SA system automating an electric power substation, adapted to communicate according to IEC 61850,
- (b) via a substation communication network (15), with a substation Intelligent Electronic Device IED (12)

hosting a substation Logical Node LN instance (13) with a substation IED related name (Ctr19LD1/Q0CSWI2), and,

- (c) via an NCC server (21) of the gateway IED (20), with a Network Control Centre NCC (30),
- (d) characterized in that the NCC server (21) hosts a gateway LN instance (23)
- (e) corresponding to the substation LN instance (13) and
- (f) having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that is
- (g) automatically translatable into the substation IED related name."

III. Claim 1 of **auxiliary request 1** differs from claim 1 of the main request in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that is automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture."

IV. Claim 1 of **auxiliary request 2** differs from claim 1 of auxiliary request 1 in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC

related name (AA1E1Q3/QA1CSWI1) based on a functional name that is devoid of any reference to the substation IED related name but automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture."

- V. Claim 1 of **auxiliary request 3** differs from claim 1 of auxiliary request 2 in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that is devoid of any reference to the substation IED related name, with exception of a generic LN class, but automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture."

- VI. Claim 1 of **auxiliary request 3a** differs from claim 1 of auxiliary request 3 in that the word "generic" has been deleted in the characterising portion.

- VII. Claim 1 of **auxiliary request 4** differs from claim 1 of auxiliary request 1 in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that

is automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture, wherein the NCC related name has no substation IED specific name parts."

VIII. Claim 1 of **auxiliary request 5** differs from claim 1 of auxiliary request 4 in that the characterising portion reads as follows (amendments indicated by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) ~~based on~~ determined from a functional name without any knowledge about the substation IED name, in that the functional name ~~that~~ is automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture, and in that the NCC related name has no substation IED specific name parts."

IX. Claim 1 of **auxiliary request 6** differs from claim 1 of auxiliary request 1 in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that is automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture, and the gateway LN instance (23) comprises only data objects which are relevant to NCC applications."

- X. Claim 1 of **auxiliary request 7** differs from claim 1 of auxiliary request 1 in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that is automatically translatable into the substation IED related name in case of changing SA communication and substation IED architecture, and the functional name is retrieved from a substation section of System Specification Description SSD file or a System Configuration Language SCL file."

- XI. Claim 1 of **auxiliary request 7a** differs from claim 1 of auxiliary request 7 in that, at the end, the wording "or a System Configuration Language SCL file" has been deleted.

- XII. Claim 1 of **auxiliary request 7b** differs from claim 1 of auxiliary request 7 in that, in the last section, the wording "file or a" has been deleted.

- XIII. Claim 1 of **auxiliary request 8** differs from claim 1 of the main request in that the characterising portion reads as follows (the added wording has been underlined by the board):

"characterized in that the NCC server (21) hosts a gateway LN instance (23) corresponding to the substation LN instance (13) and having an NCC related name (AA1E1Q3/QA1CSWI1) based on a functional name that is automatically translatable into the substation IED related name in case of changing SA communication and

substation IED related name, in that the LN instances providing data objects relevant to NCC applications are identified from a System Specification Description SSD file of the SA system, and in that for each identified LN a functional name is retrieved from the substation section of the SSD file."

Reasons for the Decision

1. *Main request - added subject-matter (Article 100(c) and 123(2) EPC)*

1.1 **Feature (g)** of claim 1 refers to the automatic translatability of the functional name into the "substation IED related name". This automatic translatability is not further specified in claim 1.

1.2 The original application underlying the opposed patent refers in its description to an automatic translation of functional names into "IED related names" only on page 3, lines 22 to 25. The corresponding sentence is reproduced below:

"With the exception of the generic LN class, the functional names are devoid of any reference to a substation IED related name as defined in IEC 61850-6, but can be automatically translated to substation IED related names in case of changing SA communication and substation IED architecture."

In this sentence, the automatic translatability of the functional names ("but can be automatically translated to substation IED related names") is linked to the following sub-features:

- (i) Except for the generic LN class (henceforth the "exception feature"),
- (ii) the functional names are devoid of any reference to a "substation IED related name" as defined in IEC 61850-6 (henceforth the "no reference feature").
- (iii) In case of changing SA communication and substation IED architecture (henceforth the "changing feature").

1.3 It is apparent to the board that the above-mentioned sentence does not indicate that any of these sub-features is optional. Hence, **features (i) to (iii)** cumulatively specify the overall "automatic translatability". However, the automatic translatability of the functional names has been added to claim 1 without any of these three sub-features. This, however, constitutes an *unallowable intermediate generalisation* of the original disclosure.

1.4 According to the jurisprudence of the boards of appeal, if a claim is restricted to a preferred embodiment, under Article 123(2) EPC it is normally not permitted to extract *isolated* features from a set of features which have originally been disclosed in combination for that embodiment. Such an amendment (intermediate generalisation) would only be justified in the absence of a clearly recognisable functional or structural relationship among said features (cf. T 1067/97, Reasons 2.1.3).

1.5 In the present case, the "no reference feature" together with the "exception feature" specify the functional names which are automatically translatable and the "changing feature" specifies the circumstances under which those functional names are automatically

translatable. Each of these three features has an undeniable functional relationship with the automatic translatability of the functional names. Omitting any of these three sub-features consequently leads to an unallowable intermediate generalisation.

- 1.5.1 The appellant argued that, in the sentence quoted above, **features (i) to (iii)** would be understood as statements which were *independent* of each other and of the automatic translatability of the functional names. The sentence was a "nested sentence" in which the single statements were not understood as being *directly* linked to the automatic translatability of the functional names. The skilled person would have recognised that the situation defined by the "changing feature" was only given as an example and that the automatic translatability of the functional names was not limited to this specific case.

Furthermore, the disputed sentence was not to be read in isolation but together with the next three sentences which followed on page 3, lines 25 to 31, and which are reproduced below:

"In other words, functional names as defined by the substation section within a SCD file of the SA system are used for the communication link between the gateway IED and the NCC. The proposed NCC server naming method keeps the configuration of the substation function related data at the NCC-side of the gateway independent from the substation IED related structure or implementation inside the SA system. Hence, in case of changes or retrofit at the SA system, a reconfiguration of the SA-side of the gateway will be sufficient."

In particular, the last of these sentences provided a basis for the understanding that the cases of changes or retrofit at the SA system were only an example in which the automatic translatability was advantageous and that it was not limited to only these cases.

However, the board notes that the quoted sentence in lines 22 to 25 of page 3 leaves no room linguistically for understanding the three sub-features differently than the board did, namely as mandatorily characterising the automatic translatability. The other sentences referred to by the appellant do not support a different view. The *first* one describes the use of the functional names but not *how* they are converted into "substation IED related names". The *second* one only refers to the independence of the data configuration at the NCC side of the gateway with regard to the substation IED related structure but does not include any statement as to the conversion of the names itself. The *third* one only refers to a reconfiguration needed in case of changes to the SA system, again without referring to the name conversion itself.

- 1.5.2 As to the "no reference feature", the appellant submitted that, according to claim 1 as filed, the *NCC related name* was independent of the *IED related name*. Together with the statement that the *NCC related name* was also based on a functional name, this implied that the functional name was also independent of the *IED related name* or, in other words, devoid of any reference to it. Otherwise, the *NCC related name* would be over-defined. Hence, it was not necessary to incorporate the "no reference feature" into claim 1.

The board is not convinced by this argument since the *NCC related name* and the functional name are not

necessarily identical, as can be seen from the fact that functional names are actually mapped or, in other words, amended in order to become an *NCC related name* (cf. description as originally filed, page 5, lines 24 and 25). The independence of the *NCC related name* of the *IED related name* does not therefore imply that the functional name too is independent of the *IED related name*.

- 1.5.3 With respect to the "exception feature", the appellant argued that, according to claim 1 as filed, the *NCC related name* was already independent, which was similar to being devoid of any reference, of the *substation IED related name* and thus provided a basis for the "no reference feature" without any exception. Further, the description as filed also disclosed other exceptions for references to the *substation IED related name* (page 5, lines 9 to 13). Hence, the skilled person would have learned that the "exception feature" was not intrinsically linked to the "no reference feature".

The board however notes that the "no reference feature" refers to the lack of reference to the *substation IED related name* in the functional name which is different from the *NCC related name* (see again the mapping of the functional name to an *NCC related name*, description as filed, page 5, lines 24 and 25). As to the disclosure on page 5, lines 9 to 13, it is noted that it refers to the prior art ("Conventionally, ...") and therefore cannot be attributed to the claimed invention. Further, this disclosure does not refer to references to the *substation IED related name* in the functional name, but in the *NCC related name* which is a different name.

- 1.6 The board therefore concludes that Article 100(c), in conjunction with Article 123(2) EPC, prejudices the

maintenance of the patent as granted and that the main request is therefore not allowable.

2. *Auxiliary requests 1 and 2 - added subject-matter (Article 123(2) EPC)*

2.1 Claim 1 of **auxiliary request 1** lacks the "no reference feature" and the "exception feature", while claim 1 of **auxiliary request 2** lacks the "exception feature".

2.2 The board's considerations regarding claim 1 of the main request thus apply *mutatis mutandis* to claim 1 of auxiliary requests 1 and 2.

2.3 The board therefore concludes that auxiliary requests 1 and 2 are not allowable under Article 123(2) EPC either.

3. *Auxiliary requests 3 and 3a - admittance (Article 12(4) RPBA 2007)*

3.1 **Auxiliary request 3** corresponds to auxiliary request 3 underlying the appealed decision, which was not admitted by the opposition division into the proceedings on the ground that the term "generic" in the phrase "with exception of a generic LN class", i.e. the "exception feature", was *prima facie* not clear.

3.2 The board holds that the term "generic" is indeed unclear and does not allow it to be determined which LN forms the exception. The board therefore concludes that the opposition division correctly exercised its discretion not to admit auxiliary request 3.

3.3 The appellant argued that filing auxiliary request 3 was a fair attempt to overcome the objections raised by

the opposition division and that the term "generic" was in fact clear to the skilled person. In support of the second argument, the appellant referred to document **D2**, which allegedly used the term "generic LN class" (cf. page 48, left column, first two paragraphs).

The first of these two cited paragraphs refers to the classes "SERVER", "LOGICAL-DEVICE", "LOGICAL-NODE", "DATA" and "DataAttribute" and defines them as common classes ("allgemeine Klassen"). The second of the cited paragraphs refers to a "Common Logical Node" class as a common specialisation of the class "LOGICAL-NODE" in order to cope with data objects present in all logical nodes. All application-related logical nodes are specialisations of this "Common Logical Node". Thus, assuming that a "common general node" class was clear in the ambit of the IEC 61850 standard, the board notes that it is different from a "generic LN class". It is further noted that the terms "common" and "generic" have different meanings and cannot be understood to be synonyms. Document D2 therefore fails to prove that the term "generic LN class" is clear.

- 3.4 Thus, the appellant's arguments provide no reason to overrule the way in which the opposition division exercised its discretion not to admit auxiliary request 3.
- 3.5 Claim 1 of **auxiliary request 3a** differs from claim 1 of auxiliary request 3 in that the word "generic" has been deleted. Thus, the functional name, on which the *NCC related name* is based, is allowed to exceptionally comprise an LN class as a reference to the *substation IED-related name*.

3.6 However, the above limitation was not included in any independent claim of the claim requests admitted by the opposition division and thus - if admitted - would be examined for the first time in these appeal proceedings. A "fresh case" has therefore been created. This is not in line with the primary object of appeal proceedings, which is to review in a judicial manner the correctness of the impugned decision, i.e. not to provide an opportunity to continue the examination proceedings (cf. Article 12(2) RPBA 2020).

The board further notes that, during the oral proceedings before the opposition division, the opponent raised an objection regarding lack of clarity in respect of the wording "generic LN class" and that this objection was refuted by the patent proprietor (see points 3.4.2 and 3.4.3 of the minutes). Hence, the lack of clarity of the wording "generic LN class" was disputed and a request which remedied this objection thus could and *should* have been filed at that point.

3.7 In view of the above, the board, exercising its discretion under Article 12(4) RPBA 2007, did not admit **auxiliary requests 3 and 3a** into the appeal proceedings.

4. *Auxiliary requests 4 and 5 - added subject-matter (Article 123(2) EPC)*

4.1 Claim 1 of **auxiliary requests 4 and 5** lacks the "no reference feature" and the "exception feature".

4.2 The appellant argued that the added feature ("wherein the NCC related name has no substation IED specific name parts") was equivalent to both the "no reference feature" and the "exception feature".

4.3 The board, however, holds that the "no reference feature" refers to references to the *substation IED related name* in the functional name and not in the *NCC related name* and that the functional name and the NCC related name are apparently distinct. The added feature therefore cannot remedy the objection due to the lack of the "no reference feature".

4.4 The above considerations regarding claim 1 of the main request hence also apply *mutatis mutandis* to claim 1 of auxiliary requests 4 and 5.

4.5 The board therefore concludes that auxiliary requests 4 and 5 are not allowable under Article 123(2) EPC either.

5. *Auxiliary requests 6 to 8 - added subject-matter (Article 123(2) EPC)*

5.1 Claim 1 of each of **auxiliary requests 6, 7, 7a, 7b and 8** lacks the "no reference feature" and the "exception feature".

5.2 The respective features added to claim 1 of these requests do not refer to references to the *substation IED related name* in the functional name and do not remedy the objection of added subject-matter with regard to the "no reference feature" and the "exception feature".

The board's considerations regarding claim 1 of the main request therefore apply *mutatis mutandis* to claim 1 of auxiliary requests 6, 7, 7a, 7b and 8.

- 5.3 The board therefore concludes that auxiliary requests 6, 7, 7a, 7b and 8 are likewise not allowable under Article 123(2) EPC.
6. As there is no allowable set of claims ranking higher than auxiliary request 9 as maintained by the opposition division, it follows that the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



B. Brückner

K. Bengi-Akyürek

Decision electronically authenticated