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Datasheet for the decision of 5 June 2025

Case Number: T 1443/23 - 3.2.07

Application Number: 15713476.8

Publication Number: 3277467

IPC: B25J9/16, G05B19/423

Language of the proceedings: EN

Title of invention:
A METHOD FOR CONTROLLING AN INDUSTRIAL ROBOT BY TOUCH

Patent Proprietor:
ABB Schweiz AG

Opponent:
Festo SE & Co. KG

Headword:

Relevant legal provisions:
EPC Art. 54(1), 54(2), 56, 84, 123(2)
RPBA 2020 Art. 12(3), 12(6)

Keyword:

Novelty - main request (no) - auxiliary request (no)
Inventive step - auxiliary request (no) - obvious modification
Claims - clarity - auxiliary request (no)
Amendments - added subject-matter (yes)
Discretion not to admit submission - requirements of Art. 12(3) RPBA 2020 met (no)
Late-filed request - admitted in first-instance proceedings (no) - admitted (no)

Decisions cited:

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 1443/23 - 3.2.07

D E C I S I O N
of Technical Board of Appeal 3.2.07
of 5 June 2025

Appellant: (Patent Proprietor)	ABB Schweiz AG Brown Boveri Strasse 6 5400 Baden (CH)
Representative:	Kransell & Wennborg KB P.O. Box 27834 115 93 Stockholm (SE)
Opposition withdrawn: (Opponent)	Festo SE & Co. KG Ruiter Straße 82 73734 Esslingen (DE)
Representative:	Patentanwälte Magenbauer & Kollegen Partnerschaft mbB Plochinger Straße 109 73730 Esslingen (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 15 June 2023 revoking European patent No. 3277467 pursuant to Article 101(3)(b) EPC.**

Composition of the Board:

Chairman	G. Patton
Members:	V. Bevilacqua
	Y. Podbielski

Summary of Facts and Submissions

I. The patent proprietor (appellant) duly filed an appeal against the decision of the opposition division revoking European patent No. 3 277 467, requesting:

that the decision under appeal be set aside and that the patent be maintained as granted (main request),
or, alternatively,
that the patent be maintained according to one of auxiliary requests 1, 1a, 2, 2a, 3, 4, 4a, 5, 5a, 6, 6a, 7, 8 and 9,
which were the requests on which the decision was based.

II. The opponent withdrew its opposition on 29 December 2023 such that it is no longer party to the proceedings.

III. In preparation for the oral proceedings the board gave its preliminary opinion in a communication pursuant to Article 15(1) RPBA, according to which the appeal was likely to be dismissed.

IV. The appellant responded to the board's preliminary opinion with written submissions dated 14 March 2025.

V. Oral proceedings before the board took place on 5 June 2025.

At the conclusion of the oral proceedings the appellant confirmed its initial requests as final and the decision was announced.

Further details of the oral proceedings can be found in the minutes.

VI. Independent claim 1 of the **main request** reads as follows (the feature numbering used in the appealed decision has been added by the board):

1.1 "A method for controlling an industrial robot (10),
1.2 the robot (10) comprising a first robot arm (20), a second robot arm (30), a joint (40) defining a kinematic pair between the first and second robot arms (20, 30), an actuator (50) for generating relative movement between the first and second robot arms (20, 30),
1.3 and a robot controller (60) for controlling the movements of the actuator (50), the method comprising the steps of:
1.4 -determining a presence of a first torque indication at the actuator (50) to be interpreted as a first command to the robot controller (60);
1.5 -repeatedly obtaining an external torque value (τ_{ext}) to thereby obtain an external torque behaviour (140),
1.6 the obtained external torque behaviour (140) depending on a reference torque value (τ_{ref}) obtained from a dynamic model (80) of the robot (10);
1.7 - comparing the external torque behaviour (140) with the first torque indication; and
1.8 - executing, on the condition that no second command overruling the first command is provided to the robot controller (60),
1.9 a robot function corresponding to the first command upon detecting that the external torque behaviour (140) corresponds to the first torque indication;

characterized by

1.10 - determining a presence of a second torque indication at the actuator (50) to be interpreted as a second command to the robot controller (60);
1.11 - comparing the external torque behaviour (140) with the second torque indication; and
1.12 - executing a robot function corresponding to the second command upon detecting that the external torque behaviour (140) corresponds to the second torque indication,
1.13 wherein the second command overrules the first command."

Claim 1 of **auxiliary request 1** corresponds to claim 1 of the main request, with the following feature incorporated at the end of the characterising portion (feature 1.13):

"such that an execution of a robot function corresponding to the first command is interrupted".

Claim 1 of **auxiliary request 1a** corresponds to claim 1 of the main request, with the following feature incorporated at the end of the characterising portion (feature 1.13):

"such that an execution of the robot function corresponding to the first command is interrupted".

Claim 1 of **auxiliary request 2** has been amended, with respect to claim 1 of the main request, by incorporating the following feature at the end of feature 1.4:

", wherein the first command is a command to continue or to stop a work cycle of the robot (10)".

Claim 1 of **auxiliary request 2a** corresponds to claim 1 of the main request, with the following feature incorporated at the end of feature 1.4:

", wherein the first command is a command to stop a work cycle of the robot (10)".

It is not necessary to reproduce claim 1 of **auxiliary requests 3, 4a, 5, 5a and 7** here, because the present decision, in so far as it concerns these requests, was not based on the text thereof, but instead on issues of admittance and lack of substantiation.

Claim 1 of **auxiliary request 4** corresponds to claim 1 of the main request, with the following feature incorporated at the end of feature 1.9:

", wherein the execution of the robot function corresponding to the first command is carried out after a predetermined delay after detecting that the external torque behaviour (140) corresponds to the first torque indication".

Claim 1 of **auxiliary request 6** corresponds to claim 1 of the main request, with the following feature incorporated at the end of feature 1.4:

", wherein the first command is a command to continue or to stop a work cycle of the robot (10), which work cycle is executed without external torques being present".

Claim 1 of **auxiliary request 6a** corresponds to claim 1 of the main request, with the following feature incorporated at the end of feature 1.4:

", wherein the first command is a command to stop a work cycle of the robot (10), which work cycle is executed without external torques being present".

Claim 1 of **auxiliary request 8** is based upon claim 1 of auxiliary request 1, with the following feature incorporated at the end of feature 1.6 :

", wherein the first torque indication defines a minimum duration above a minimum magnitude of the external torque behaviour (140)".

Claim 1 of **auxiliary request 9** is also based upon claim 1 of auxiliary request 1, with the following feature incorporated at the end of feature 1.9:

", wherein the execution of the robot function corresponding to the first command is carried out after a predetermined delay after detecting that the external torque behaviour (140) corresponds to the first torque indication".

VII. The following documents, mentioned in the appealed decision, are referred to in the present decision:

D6: Ryosuke Hanyu et al., "Command Recognition Based on Haptic Information for a Robot Arm", The 2010 IEEE/RSJ International Conference on Intelligent Robots and Systems, 18-22 October 2010, Taipei, Taiwan, pages 4662-4667

D10: DE 10 2008 027 008 A1.

VIII. The parties' arguments relevant to the present decision are discussed in detail in the reasons below.

Reasons for the Decision

1. Novelty - claim 1 of the main request

1.1 The main request was not allowed by the opposition division due to lack of novelty of claim 1 over the content of the disclosure of document D10.

The opposition division considered that the expressions "command", "robot function", "overruling" and "overrules", used in claim 1, together with the features containing them should be interpreted broadly (decision under appeal, point II.3.6.3).

The opposition division concluded that in paragraph [0040] of D10, defining a first direction is a first command, which is overruled (i.e. replaced) by a new command when the user gives a new direction. This interpretation was also based on paragraphs preceding paragraph [0040] and on paragraphs [0050] and [0067] of D10, which describe how an operator can define direction and length of movement by touching the robot.

1.2 According to the appellant the subject-matter of claim 1 of the main request is not disclosed in document D10.

In the statement setting out the grounds of appeal the appellant argued that D10 fails to disclose features 1.8 and 1.13, arguing that the opposition division interpreted these features in an excessively broad way and therefore failed to acknowledge that claim 1 is directed towards a system where a second command can

overrule a first command before the latter is carried out.

This is because claim 1 specifies executing a function "on the condition that no second command overruling the first command is provided", whereas no conditional aspect is present in the description of changing directions in D10.

Still according to the appellant the interpretation of the verb "overrules" in feature 1.13 ought to take account of feature 1.8, with the result that the first command is not overruled in the sense that it is merely replaced by a new one after its execution, as disclosed in D10, but rather "overruled" in the sense that it is replaced before the execution of the corresponding robot function has been terminated.

Paragraph [0040] of D10 discloses that movement in a "frozen" first direction is repeated ("Die Wiederholung des Schrittes") if the operator taps on the robot, and is replaced by movement in a second direction if the operator pulls the manipulator in said second direction (see the last sentence of paragraph [0040]).

The opposition division wrongly interpreted this step of moving the manipulator in a different direction from that in which it was moved previously as "overruling" and found that D10 therefore discloses overruling a first command in the sense that this first command is replaced by a second command after the first command has been executed.

The subject-matter of claim 1 of the main request is therefore novel over the content of the disclosure of document D10.

1.3 The board is not convinced by the above arguments that features 1.8 and 1.13 of claim 1 are not disclosed in D10, because it sees no reason for considering that the rather restrictive interpretation of "overruling" and "overrules" proposed by the appellant would be the interpretation chosen by a skilled reader of claim 1 of the main request.

As established in the case law (see Case Law of the Boards of Appeal, 10th edition, 2022; "CLB" in the following, II.A.6.1), a broad term used in a claim is not to be construed narrowly, even if - as in the case at issue - such a narrower interpretation refers to a situation which is common, but not exclusive, in the technical field concerned.

When reading a broadly formulated claim, only technically illogical interpretations are to be excluded.

Paragraphs [0039] and [0040] of D10 disclose the indication of a first direction, which is equivalent to a first command.

As explained in paragraph [0040], and discussed at the oral proceedings before the board, this first command triggers the execution of a function which is used to monitor touch input on the robot manipulator.
This is because the claimed "robot function corresponding to the first command" (feature 1.9) corresponds to the robot's readiness to perform step movement in the first direction if tapped upon, and the "first torque indication" (feature 1.4) corresponds to the operator pulling the robot manipulator in the first direction while providing predefined input.

Such a function is overruled (in the sense of being replaced) whenever a new command (i.e. a new direction) is given by a user, as explained in the final sentence of paragraph [0040].

As a consequence of the above, the appellant failed to convincingly demonstrate that features 1.8 and 1.13 are not disclosed in D10.

1.4 With its letter of 14 March 2025 and, subsequently, during oral proceedings before the board, the appellant argued that features 1.4 and 1.10 are not disclosed in D10.

For the appellant, feature 1.4 is not disclosed because, according to paragraph [0040] of D10, the mere pulling of the robot manipulator, which constitutes the torque indication, according to the feature interpretation chosen by the board (see point 1.3 above) is insufficient to establish the command that places the robot in a state of readiness to perform step movements.

This is because paragraph [0040] explicitly requires a composite input comprising both the operator's pulling action and a separate "predefined input" provided through "an input device of a manipulator controller" ("Eingabe an einem Eingabegerät einer Manipulatorsteuerung").

This predefined input, being delivered through a separate input device rather than through torque applied to the actuator, cannot qualify as a "torque indication at the actuator" within the meaning of feature 1.4.

The appellant further developed this argument by noting that if the robot of D10 receives only torque indications, the system fails to establish any defined frozen direction, because it cannot distinguish between "tapping" and pulling forces on the manipulator.

The appellant applies the same reasoning to feature 1.10, arguing that the "second torque indication" similarly cannot be satisfied by the disclosure of D10 for identical reasons.

The systematic requirement in D10 for composite inputs (torque plus separate device input) fundamentally distinguishes the prior art from the claimed subject-matter.

1.5 The board is not persuaded by this second line of argument either.

While the appellant correctly identifies that the first part of paragraph [0040] describes an embodiment requiring a composite input, the appellant's analysis fails to account for the complete disclosure of this paragraph, particularly the final sentence beginning with "Gleichermaßen".

This sentence, properly construed, discloses an alternative embodiment to the "freezing" methodology described in the preceding text of said paragraph.

In this alternative embodiment disclosed in the final sentence of paragraph [0040], the system determines movement direction directly from the force applied without requiring the intermediate step of "freezing" a direction through separate input device activation.

This approach fundamentally differs from the composite input requirement that the appellant emphasises, as it establishes a direct relationship between the torque indication (applied force) and the resulting command interpretation.

According to this alternative embodiment, features 1.4 and 1.10 are realised because the system determines the presence of a torque indication (force applied by the operator) and interprets this directly as a command to the robot controller, without requiring additional input device activation.

As a consequence of the above, the appellant failed to convincingly demonstrate that the subject-matter of claim 1 of the main request is novel over the method disclosed in D10 (Article 54(1) and (2) EPC), and the main request cannot be allowed.

2. Auxiliary requests 1 and 1a

2.1 The opposition division found that the amendment in claim 1 of auxiliary request 1 introduced a lack of clarity (decision under appeal, point II.4.3), and that the amendment in claim 1 of auxiliary request 1a did not overcome the objection of lack of novelty over D10 (decision under appeal, point II.5.3).

2.2 The appellant argues that the expression "a robot function", i.e. including the use of the indefinite article, incorporated into claim 1 of auxiliary request 1 does not introduce any obscurity because this constitutes at most a minor inconsistency which would neither concern nor mislead the skilled reader.

2.3 The board concurs with the findings of the appealed decision.

Claim 1 of auxiliary request 1 lacks clarity due to the indefinite article in the wording "a robot function", which creates doubt as to whether reference is being made to the same "robot function" or to one that differs from the "robot function" previously defined in the claim (appealed decision, point II. 4.3).

2.4 The appellant then argues that claim 1 of auxiliary request 1a is new over D10. Indeed, according to the appellant, the mere replacement of a first robot function (the first direction) by a second robot function (the second direction) - which is what is disclosed in D10 - does not involve the interruption of the first robot function, because said first function has already been executed.

For the appellant, D10 only discloses that the release of the "frozen" direction may happen automatically ("nach einer gewisse [sic] Zeit der Inaktivität des Benutzers" - see paragraph [0040]).

D10 does not disclose actively instructing the robot to cease being ready to perform a step movement in the first direction when the manipulator is tapped on.

2.5 The board disagrees with the appellant and again concurs with the findings of the appealed decision (point II.5.3.2).

There is no apparent reason for considering that the restrictive interpretation of "command" and "function" proposed by the appellant would be the interpretation

chosen by a skilled reader of claim 1 of the main request (CLB, II.A.6.3.4).

For this reason, in D10 ([0040]) the indication of a direction is equivalent to a command which, in turn, triggers the execution of a function which is used to monitor touch input on the robot manipulator.

Such a function is interrupted whenever a new command (i.e. a new direction) is given by a user, again according to the alternative embodiment of the last sentence of paragraph [0040] of D10.

As a consequence of the above, the subject-matter of claim 1 of auxiliary request 1a lacks novelty over D10 (Article 54(1) and (2) EPC).

3. Auxiliary request 2

3.1 The opposition division found that the feature incorporated into claim 1 of auxiliary request 2 ("wherein the first command is a command to continue or to stop a work cycle of the robot (10)") did not establish novelty over the content of the disclosure of document D10. Indeed, this document discloses teaching a "work cycle" to a robot and, therefore, as long as a user continues to teach the robot, the work cycle is continued (decision under appeal, point II.6.2).

3.2 The appellant criticises the interpretation in the appealed decision that "work cycle" encompasses "the teaching of a work cycle", noting that all occurrences of "work cycle" in the patent in suit implicitly or explicitly refer to the execution and not to the teaching of a work cycle.

In this context the appellant refers to

- paragraph [0002] of the contested patent, which explains that "an operator may start and stop a work cycle of a robot by giving the robot a push",
- paragraph [0011] of the contested patent, which explicitly states that "the first command is a command to continue or to stop a work cycle of the robot", and
- paragraphs [0027] and [0028] of the contested patent, which describe the practical implementation of work cycle continuation and stopping based on robot operational state.

The appellant argues that this consistent usage throughout the specification establishes that "work cycle" refers to higher-level operational sequences rather than to the teaching of individual atomic movements.

3.3 The board is not convinced by the above arguments, and instead concurs with the findings of the opposition division that D10 also discloses that the first command is a command to continue or to stop a work cycle of the robot.

This is because in D10 the aim is to teach a robot a "work cycle". Therefore, as long as a user continues to teach the robot, the work cycle, defined by the user, is continued.

Similarly to the situation with regard to the main request, the board sees no reason for considering that the rather restrictive interpretation of "work cycle" proposed by the appellant would be the only one

considered by a skilled reader of claim 1 of auxiliary request 2.

As a consequence of the above, auxiliary request 2 lacks novelty (Article 54(1) and (2) EPC) and cannot be allowed.

4. Auxiliary request 2a

4.1 The opposition division acknowledged the novelty of claim 1 of auxiliary request 2a, but found that the claim lacks inventive step based on a combination of D10 with D6 (appealed decision, point II.7.3).

This was because D6 teaches the use of a touch-based command to stop an ongoing work cycle in the case of an emergency (page 4664, right-hand column, last line).

4.2 The appellant contests the above findings of the opposition division, as follows.

4.2.1 In the statement setting out the grounds of appeal and in its letter dated 14 March 2025, the appellant argues that the emergency stop taught by D6 is not applicable in connection with the repetition functionality disclosed in D10, paragraph [0040].

The appellant contends that there is an inconsistency in the opposition division's approach, asserting that a different mapping of features has been employed for the inventive-step assessment in view of auxiliary request 2a from that employed in the novelty assessment when discussing the main request.

Specifically, the appellant argues that the opposition

division has, in effect, remapped the "robot function corresponding to the first command" (feature 1.9) to a predefined program executed between manual-teaching sessions, while the emergency-stop functionality of D6 has been equated to the "robot function corresponding to the second command" (feature 1.12).

The appellant concludes that, as there is nothing in D10 to suggest that the program execution is initiated by any kind of torque indication, the hypothetical combination of D10 with D6 lacks at least feature 1.4 modified in that the first command is a command to stop a work cycle of the robot (see point VI above).

4.2.2 During oral proceedings the appellant explained that the effect of the additional feature ("wherein the first command is a command to stop a work cycle of the robot") is that it allows a purely touch-based way of interacting with the robot and stated that the problem to be solved is to be formulated as how to achieve this effect.

Inventive step should be acknowledged, according to the appellant, because there is no reason for a skilled person to implement the emergency stop taught by D6 when teaching a working cycle to a robot, as is the case in the method according to D10, because the teaching activity is inherently safe.

4.3 The board disagrees with both lines of argument of the appellant.

4.3.1 The line of argument submitted in writing is not convincing because the opposition division did not, in fact, propose a fundamentally different interpretation of claim features to D10 when considering auxiliary

request 2a.

Instead, the opposition division made the observation that D6 teaches the use of a touch-based command to halt a work cycle in emergency situations. This observation was then considered in the context of the disclosure of D10.

4.4 The opposition division's reasoning is that a person skilled in the art would recognise the potential benefits of incorporating such an emergency-stop functionality into the system - and hence also the method - disclosed by D10.

This would not necessitate a re-assessment of the features with respect to the disclosure of D10 when considering the teaching of D6 ("remapping" in the words of the appellant), but is instead an obvious extension of the D10 system's capabilities in light of the teaching of D6.

Regarding the appellant's concern about feature 1.4 being absent from the combination, the board notes that D10 already discloses the interpretation of torque or force indications at the robot actuator as commands.

In essence, the opposition division's approach does not represent a departure from or a contradiction to its novelty analysis.

Instead, it reflects a consideration of how the skilled person would logically and obviously combine the general teaching of D6 with the overall system disclosed in D10, taking into account the full context

and capabilities of the D10 system.

4.4.1 The appellant's reasoning in support of inventive step , submitted during oral proceedings, is not convincing, because it is based on the assertion that robot teaching activities are "inherently safe".

This assertion is presented without any supporting evidence and also appears to contradict well-established safety principles, because it is generally recognised that industrial robots are powerful mechanical systems capable of causing injury, and that manual teaching involves human operators in close proximity to robot mechanisms.

Accordingly, the subject-matter of claim 1 of auxiliary request 2a lacks inventive step over the combination of the teachings of documents D10 and D6.

5. Auxiliary requests 3, 5, 5a and 7

The board notes that, with respect to auxiliary requests 3, 5, 5a and 7, the appellant has merely referred to arguments presented in the first-instance proceedings without providing any specific substantiation in the grounds of appeal (statement of grounds, points VIII, XI, XII, XIV, XV, XVI).

This approach is not in accordance with established case law of the Boards of Appeal, according to which (CLB, V.A.4.3.5.b (iii)), under Article 12(3) RPBA, an appellant has to set out clearly the reasons for requesting that the decision under appeal be reversed and specify expressly all facts, objections and evidence relied on. Attacking the decision by

referring generally to the case made in the opposition proceedings is not enough for this.

Consequently, in the absence of substantive arguments in favour of auxiliary requests 3, 5, 5a and 7, there can be no reason to depart from the findings of the opposition division that said requests are not allowable - see decision under appeal, points II.8, II.11, II.12 and II.15.

6. Auxiliary request 4

6.1 The opposition division did not allow auxiliary request 4 due to lack of novelty over D10.

6.2 The appellant disagrees with the opposition division's claim construction. It argues that the opposition division has read the additional feature as if it called for "a predetermined time" rather than "a predetermined delay".

The appellant points out, citing a dictionary definition of "delay", that while the patent may not contain an explicit definition of "delay", the opposition division's reading does not account for the ordinary sense of the word.

The appellant argues that neither the flowchart in Figure 2 of D10 nor the corresponding description suggests that the execution of the operations in the flowchart is to be delayed in such a manner that it takes longer than the normal execution time.

The appellant also argues that at the priority date, even on a simple consumer-grade processor, this conversion would be quasi-momentary, with a duration

that cannot be felt or even measured at the level of the robot manipulator.

Therefore, the processing time would be imperceptible and thus not qualify as a "delay" in the sense of the claim.

6.3 The board concurs with the opposition division's broader interpretation of "predetermined delay".

A "predetermined delay" merely indicates a delay that is determined beforehand, regardless of its duration or purpose. This interpretation is consistent with the ordinary meaning of the term and does not necessarily imply intentionality or adjustability as suggested by the appellant.

Turning to the disclosure of D10, the board notes that Figure 2 of this document clearly illustrates a sequence of steps in the control of the manipulator.

Of particular relevance are steps S10, S20 and S30. In step S10, the system determines whether an external force exceeding a threshold is applied to the manipulator (see paragraph [0050]). If so, the process moves to step S20, where a desired movement direction is determined based on the force applied. Finally, in step S30, the manipulator is moved in the determined direction by a predetermined distance (paragraph [0052]).

The very nature of this sequential process inherently involves a delay between the detection of the force (corresponding to "detecting that the external torque behaviour (140) corresponds to the first torque indication" in the claim) and the execution of the

movement (corresponding to "execution of the robot function corresponding to the first command" in the claim). This delay is predetermined by the processing time required to execute step S20 and the initial part of step S30 before the actual movement begins.

Therefore, the board finds that the feature "wherein the execution of the robot function corresponding to the first command is carried out after a predetermined delay after detecting that the external torque behaviour (140) corresponds to the first torque indication" is indeed disclosed in D10.

The delay is "predetermined" in the sense that it is an inherent and predictable consequence of the system's processing sequence.

Consequently, the board concludes that the appellant's arguments regarding auxiliary request 4 are not persuasive, and the opposition division's finding of lack of novelty for this request is to be upheld.

7. Auxiliary request 4a

7.1 The opposition division decided not to admit auxiliary request 4a into the proceedings because the request was filed very late in the opposition proceedings, specifically during the oral proceedings, and the incorporated feature was taken from the description.

The opposition division considered that the appellant had previous opportunities to file such a request, particularly in response to a novelty objection raised against auxiliary request 4 in a letter dated 21 January 2022.

The newly incorporated feature "such that an operator has time to overrule the first command" was deemed *prima facie* unclear, as the time required would depend on the type of operator.

7.2 The appellant, in the statement of grounds of appeal, argues that the circumstances of the appeal case justify the admittance of auxiliary request 4a, because the subject-matter of auxiliary request 4a has *de facto* been admitted into the proceedings already, in so far as the opposition division and the opponent have always read auxiliary request 4 with a correct understanding of the technical effect that the "predetermined delay" was to be achieved.

7.3 The board decides that auxiliary request 4a is not to be admitted into the appeal proceedings, based on Article 12(6), first sentence, RPBA.

This is because this article stipulates that a board is not to admit requests which were not admitted in the proceedings leading to the decision under appeal unless the decision not to admit them suffered from an error in the use of discretion or unless the circumstances of the appeal case justify their admittance.

In the present case the appellant did not criticise the use of discretion, in particular in relation to the *prima facie* clarity assessment, and the argument of the appellant that the subject-matter of auxiliary request 4a would correspond to the subject-matter of auxiliary request 4 does not prove that the circumstances of the appeal case justify the admittance of auxiliary request 4a.

8. Auxiliary requests 6 and 6a

8.1 Claim 1 of auxiliary request 6 and that of auxiliary request 6a both comprise the following feature incorporated at the end of feature 1.4:

"which work cycle is executed without external torques being present."

The opposition division found that this amendment infringes the requirements of Article 123(2) EPC (decision under appeal, point II.13.2.4), in spite of the fact that the incorporated wording
"the work cycle [of the robot] is executed without external torques being present"
had been taken from line 15 of paragraph 2 of the description.

8.2 The appellant asserts, in the statement of grounds of appeal (see also the submissions of 14 March 2025, pages 7 and 8), that the opposition division's assumption that external torques are always present is incorrect, for the following reasons.

Page 1, lines 18-19 contains a definition of the term "work cycle", which is applicable throughout the description and claims. It can thus be used to clarify "work cycle" on page 3, line 12.

The concept of "external torque" in feature 1.5 refers to the torque which is in addition to the reference torque value, i.e. the torque necessary to move the robot arm according to a command, in a loaded or unloaded state.

If the robot arm is not touched, the external torque is zero and there is no torque indication, as shown on page 6, lines 16-20 of the application as filed.

8.3 The board disagrees.

The application as originally filed (reference will be made to the PCT publication WO 2016/155787 A1) does not contain any explicit disclosure of a work cycle being executed without external torques being present.

The passage allegedly providing for a literal basis, which is to be found on page 1, lines 16 to 19 of the original description, despite mentioning a work cycle executed without external torques, does not provide sufficient basis for the amendment in auxiliary requests 6 and 6a.

Indeed, the board concurs with the opposition division that this passage is clearly describing prior-art systems ("It is previously known...") and not the invention itself.

This passage describes a method that uses external sensors and compares measured torque with an expected torque based on a reference measurement. This is fundamentally different from the method as originally described, which aims to avoid the use of such reference measurements (as mentioned on page 2, lines 4-7 of the application).

The application does not indicate that this specific feature of the prior art (executing a work cycle without external torques) is incorporated into the claimed invention. In fact, the invention is presented as an alternative to this prior-art approach.

The invention is primarily concerned with detecting and interpreting external torques as commands. A work cycle executed entirely without external torques would seem to contradict this core principle of the invention. The passage on page 6, lines 16-20 of the application refers to a push, i.e. an external torque, applied by an operator.

As a consequence of the above, the opposition division's decision that the amendment in auxiliary requests 6 and 6a lacks proper basis in the application as filed (Article 123(2) EPC) is correct and auxiliary requests 6 and 6a cannot be allowed.

9. Auxiliary requests 8 and 9

9.1 Claim 1 of auxiliary request 8 is a combination of the amendments in claim 1 of auxiliary request 1 and those in claim 1 of auxiliary request 3.

The amendments in claim 1 of auxiliary request 9 are a combination of those in claim 1 in auxiliary request 1 and those in claim 1 of auxiliary request 4.

Both claims thus contain the following feature:

"command such that an execution of a robot function corresponding to the first command is interrupted".

9.2 The only argument submitted in relation to these requests by the appellant reads as follows: "*The proprietor refers to its above arguments for AR1*".

9.3 Auxiliary requests 8 and 9 are not allowable, because the feature

"such that an execution of a robot function corresponding to the first command is interrupted"

lacks clarity (Article 84 EPC), as already discussed in point 2.3 above, due to the use of the indefinite article "a" before "robot function" (see also points II.4.3.1.b , II.4.3.4 and II.16.2 of the appealed decision).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Nachtigall G. Patton

Decision electronically authenticated