Internal distribution code:

(A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

Datasheet for the decision
of 15 October 2024

Case Number:	T 1663/21 - 3.4.03
Application Number:	19163018.5
Publication Number:	3540666
IPC:	G06Q10/08, G06Q10/00
Language of the proceedings:	EN

Title of invention:
LIFECYCLE MANAGEMENT OF INDUSTRIAL AUTOMATION DEVICES

Applicant:
Rockwell Automation Technologies, Inc.

Headword:

Relevant legal provisions:
EPC Art. 52(1), 56

Keyword:
Inventive step - all requests (no)

Decisions cited:
T 0528/07

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

Case Number: **T 1663/21 - 3.4.03**

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 15 October 2024

Appellant: (Applicant)	Rockwell Automation Technologies, Inc. 1 Allen-Bradley Drive Mayfield Heights, OH 44124 (US)
Representative:	Grünecker Patent- und Rechtsanwälte PartG mbB Leopoldstraße 4 80802 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 10 May 2021 refusing European patent application No. 19163018.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	T. Häusser
Members:	M. Papastefanou
	E. Mille

Summary of Facts and Submissions

I.   The appeal is against the decision of the examining
        division refusing European patent application
        No. 19 163 018 on the ground that none of the requests
        then on file involved an inventive step within the
        meaning of Article 56 EPC.

II.   Reference is made to the following document, cited in
        the decision under appeal:

        D1: EP 2 302 478 A2

III.   The appellant (applicant) requested that the decision
        under appeal be set aside and that a patent be granted
        on the basis of the main request or one of the
        auxiliary requests 1 to 5 underlying the impugned
        decision.

IV.   Claim 1 of the **main request** is worded as follows:

        *A method (200) for managing device lifecycles within an
        industrial automation environment comprising a
        plurality of industrial machines, each machine
        comprising one or more industrial devices, the method
        comprising:*
        *receiving (202) a request for lifecycle management data
        and a scanning configuration through a user interface,
        wherein the scanning configuration is selected from
        different types of scanning configurations in order to
        specify which of the industrial devices within the
        industrial automation environment are to be scanned;
        based on the selected scanning configuration, scanning
        (204) a plurality of industrial devices within the
        industrial automation environment using a protocol of*

*the selected scanning configuration to produce
configuration data for the industrial automation
environment;*

*transferring (206) the configuration data and the
request for lifecycle management data to a product
compatibility and download center (180) through a
communication interface;*

*receiving (208) lifecycle management data from the
product compatibility and download center through the
communication interface, wherein the lifecycle
management data is determined based on the
configuration data; and*

*displaying (210) the lifecycle management data to a
user through the user interface.*

V.   Claim 1 of **auxiliary request 1** has the same wording as
       claim 1 of the main request with the additional
       specifications that
       -   *the selected scanning configuration specifies a
           scan using a protocol, the protocol being one of
           CIP, SNMP and WMI;*
       -   *the configuration data includes a product name, a
           firmware version number and a serial number.*

VI.   Claim 1 of **auxiliary request 2** has the same wording as
       claim 1 of auxiliary request 1 with the additional
       specification that the user interface is *of a customer
       environment (110).*

VII.   Claim 1 of **auxiliary request 3** has the same wording as
       claim 1 of the main request with the following
       additional specification at the end of the claim:

       *wherein the lifecycle management data includes
       replacement data for one or more industrial device*

[sic] *found to be "discontinued" or "end of life".*

VIII.   Claim 1 of **auxiliary request 4** has the same wording as
        claim 1 of the first auxiliary request with the
        following additional specification, related to the
        selected protocols:

        wherein, upon selecting one of the protocols, a user is
        prompted to configure the scan with the user interface
        wherein
            when the selected protocol is CIP, the user is
            prompted to select a device as a starting point and
            to set a maximum scanning depth,
            when the selected protocol is SNMP or WMI, the user
            is prompted to enter an Internet Protocol, IP,
            address range and a maximum number of hops.

IX.   Claim 1 of **auxiliary request 5** has the same wording as
        claim 1 of the main request and includes all the
        additional features of respective claim 1 of auxiliary
        requests 1 to 4.

X.   The appellant argued essentially that the claimed
        method produced technical effects. A first technical
        effect was obtained by displaying the lifecycle
        management data, which provided information about the
        state of the machines and devices in the industrial
        environment. The displayed lifecycle management data
        prompted the user to take action (e.g. to replace an
        obsolete model of a machine) in order to assure the
        continuous operation of the installation.

        A second technical effect was obtained by the way in
        which the lifecycle management data were obtained. The
        user had only to select a scanning configuration and
        did not need to know any details about the identity or

the topology of the machines and devices in the
industrial environment. The claimed method scanned the
machines and devices according to the selected
configuration, obtained the configuration data which
was used to obtain the lifecycle management data from
the product compatibility and download center. The user
did not have to enter any information themselves,
avoiding thus any errors.

Reasons for the Decision

1.   The claimed invention

1.1   In an industrial automation environment, several
        industrial machines and devices are installed which
        have normally a certain "lifecycle". For example, a
        certain model may be discontinued and replaced by
        another, newer model. Another model may become obsolete
        and not be supported by the manufacturer any more. As
        the application describes, a lifecycle of such machines
        may have distinct phases, such as "active", "active
        mature", "discontinued" or "end of life". For the
        operator/owner of the machines and devices it is
        important to have an overview at which lifecycle phase
        each machine and device is, in order to be able to
        schedule a replacement or to get a supply of spare
        parts, e.g. for a discontinued model (see e.g.
        paragraph [0003] of the published application).

1.2   The claimed method scans the machines and devices in
        the specific automation environment (a network) and
        obtains information such as product name, serial number
        or version number for each machine/device
        ("configuration data"; see e.g. paragraph [0035]).

These data are then transferred to a "product
compatibility and download center" where, on the basis
of the configuration data, the corresponding "lifecycle
management data" are retrieved and displayed to a user.

A machine's "lifecycle management data" include
information about the specific phase in the lifecycle
the machine is currently in (e.g. "discontinued") and
possibly the identity of a suggested replacement
machine (see e.g. paragraph [0013]).

2.   Main request - inventive step

2.1   It is uncontested that document D1 represents a
        suitable starting point for the skilled person.

        D1 describes a diagnostic module for a distributed
        industrial network. In an industrial network
        architecture, a diagnostic agent module collects
        diagnostic information from the industrial machines of
        the network (see D1, Figure 1 and paragraphs [0009] to
        [0011], and [0016]).

        The diagnostic agent scans (polls) the industrial
        machines of the network and collects their respective
        diagnostic information (e.g. error messages and other
        feedback). The scanning is carried out on the basis of
        a predetermined configuration, such as a preconfigured
        list of devices attached to the network. Alternatively,
        the scanning protocol is provided by the industrial
        protocol used (paragraph [0031]).

        The collected information is stored in a data
        repository (260) (see Figure 2) and can be accessed by
        the user via a diagnostic information management
        station (140) (see Figures 1 and 3; paragraphs [0033]

to [0038]).

2.2   A first point of discussion relates to whether the
         claimed method provides any technical effect.

2.2.1   The appellant referred to decision T 528/07 of the
         Boards of Appeal and argued that providing indications
         about the condition (state) of a machine was a
         technical feature. The lifecycle management data
         provided by the claimed method informed the user about
         the state of the machines/devices and prompted them to
         take action, if necessary (e.g. to replace an obsolete
         model). The lifecycle management data were thus to be
         considered as technical data. Moreover, prompted by the
         displayed lifecycle data, the user was able to e.g.
         replace an obsolete machine/device in time, ensuring
         thus the continuous operation of the industrial
         installation. Therefore, the claimed method produced
         the technical effect of ensuring the operation of the
         industrial installation.

2.2.2   The board notes at first that in decision T 528/07 the
         deciding board, after a brief review of the case law,
         came to the conclusion that visual indications
         concerning internal technical conditions of a system
         (e.g. error messages) were to be considered technical.
         In case the visual indications related to non-technical
         conditions of the system they rather related to
         presentations of information and were not technical
         (see point 3 and sub-points of the Reasons).

         In the present case, the configuration data obtained
         from the machines/devices relate rather to commercial
         information (product name, serial number, etc.) than to
         any operational parameters or diagnostic information,
         i.e. information related to the operation of the

machines. Similarly, the lifecycle management data, such as the information that a certain machine model has been discontinued or information about a possible replacement model, are also of a commercial/ administrative nature. Such data do not relate to internal technical conditions of the machine, since they do not convey any information about the operation of the machine or any malfunctions that may have occurred.

The information about whether a certain model has been discontinued, made obsolete or continues to be supported (i.e. remains "active") is not related to any technical state of the machine but rather to a commercial decision by the corresponding manufacturer.

The board, hence, does not agree with the appellant that the lifecycle management data are to be considered technical data. Their cognitive content relates only to information of a commercial nature.

2.2.3   In addition, the claimed method merely displays the obtained lifecycle management data to the user, who is free to take action or simply ignore them. The appellant's argument that the user is prompted by the displayed data to e.g. replace an obsolete machine, ensuring thus the continuous operation of the industrial installation cannot be seen as a technical effect of the claimed method.

Firstly, at the moment the lifecycle management data are displayed to the user, there is no malfunction of any machine in the industrial installation. Even if there were a malfunction in any of the machines, the lifecycle management data do not convey any related information. Secondly, replacing a machine in order to

avoid a possible malfunction cannot be considered as a technical solution to any technical problem related to a malfunction of the machine. In the board's view, this is rather an administrative decision avoiding the technical problem rather than solving it.

2.2.4   The board's conclusion is therefore that displaying the lifecycle management data to the user does not produce any technical effect.

2.3   The appellant argued also that the technical effect of the claimed method lied in the manner ("how") the lifecycle management data for the industrial machines and devices within the industrial automation environment were obtained (see also statement of the grounds of appeal, page 3, second paragraph).

2.3.1   The appellant pointed out that the configuration data of the industrial machines and devices were not provided by the user to the product compatibility and download center but they were provided automatically by the claimed method. Errors in the submitted configuration data were thus avoided.

2.3.2   Moreover, the configuration data of the industrial machines and devices were obtained by the claimed method on the basis of a predetermined scanning configuration, following a corresponding scanning protocol. As the application also described, there were several known industrial network protocols (see e.g. paragraph [0051] of the published application). The scanning configuration provided to the method was thus based on one of those known protocols (although no details were included in the claim wording). The user thus did not need to know the configuration data, the identity or the topology of the machines and devices in

the industrial environment; they only needed to select
a scanning protocol for the method to retrieve those
data automatically (see also page 4 of the statement of
the grounds of appeal).

According to the appellant, these constituted technical
features which distinguished claim 1 of the main
request from D1 and they should not have been
considered administrative features. In the absence of
any relevant disclosure or suggestion in D1, these
features were also inventive.

2.3.3   The board does not find these arguments persuasive.

2.3.4   Regarding the scanning configuration, the board notes
        that in D1 the industrial machines are polled (scanned)
        on the basis of a user pre-configured list (see e.g.
        D1, paragraph [0034]). This is taken to correspond to
        the scanning configuration of claim 1 of the main
        request. Moreover, D1 mentions the use of the known
        industrial network protocols in the industrial network,
        like CIP and SNMP (see e.g. paragraphs [0019] and
        [0030]).

        D1 thus discloses that the machines are scanned on the
        basis of a scanning configuration selected by the user,
        just like in the claimed method.

2.3.5   According to D1, once the diagnostic information is
        collected from the industrial machines, it is stored in
        a data repository (see e.g. Figure 3, "330", and
        paragraph [0038]) and then displayed to the user via a
        diagnostic information management station (see Figure
        3, "340", and paragraph [0038]).

        In the claimed method, the collected configuration data

are transmitted to the product compatibility and
download center, the lifecycle management data are
received from the center in response and displayed to
the user.

The difference between the claimed method and D1 lies
thus in that in the claimed method the configuration
data collected from the machines/devices are not the
data which are displayed to the user, but they are used
to obtain the lifecycle management data from an
external product compatibility and download center. In
D1 it is the diagnostic information (data) collected
from the machines that is displayed to the user.

2.3.6   Although transmitting and receiving data are
        incontestably technical steps, the board takes the view
        that these steps are dictated by the nature of the
        processed information (i.e. the cognitive content of
        the information). In the board's opinion, the cognitive
        content of the collected information, i.e. what
        information will be collected from the industrial
        machines and displayed to the user, is a design
        decision, unrelated to any technical problem. The
        designer of the system (business person) decides which
        information is to be collected and displayed to the
        user and this decision is given to the skilled person
        for implementation. Hence, the type of information to
        be handled by the method would be given to the skilled
        person as a non-technical requirement for
        implementation and technical problems that may arise
        would relate to that implementation.

2.3.7   The lifecycle management data do not represent
        information related to the specific industrial
        automation environment but to information related to
        models of the machines and devices which are present in

this environment. Such information is provided normally by the corresponding manufacturers of the machines and devices. It is thus to be expected that such information would not be available within the specific industrial automation environment and would need to be obtained from external sources, e.g. the manufacturers.

In D1 the diagnostic information relates to the specific industrial machines in the specific industrial network and their operation. It is thus to be expected that no external information needs to be obtained in order to provide the user with the relevant diagnostic information.

2.3.8   In the board's opinion, the skilled person wishing to use the technical infrastructure of D1 to obtain lifecycle management data instead of diagnostic information for the industrial machines and devices in the industrial environment, would modify the method of Figure 3 (of D1) in order to include steps related to obtaining such information from an external source, if necessary. The board considers such a modification to be within the skilled person's common general knowledge and practice as it only involves transmitting and receiving data over a network. It would thus be obvious for the skilled person to implement the claimed method using the technical means known from D1.

2.3.9   The board thus agrees with the examining division that the subject-matter of claim 1 of the main request does not involve an inventive step in the sense of Articles 52(1) and 56 EPC.

3.   Auxiliary requests

3.1   Compared to claim 1 of the main request, claim 1 of
auxiliary request 1 specifies that:
- the scanning protocol is one of CIP, SNMP and WMI;
  and
- the configuration data include a product name, a
  firmware version number and a serial number.

3.1.1   Regarding the former added feature, the board notes
that all those protocols are known industrial protocols
as also the application mentions (see paragraph
[0051]). CIP and SNMP are also mentioned in D1, as
stated above.

As to the latter feature, the board takes the view that
the cognitive content of the collected and transmitted
data does not affect the technical operation of the
system underlying the claimed method in any way.

3.1.2   The board's conclusion is therefore that neither of
these features can support the presence of an inventive
step and, hence, the subject-matter of claim 1 of
auxiliary request 1 is not inventive for the same
reasons as the main request.

3.2   Compared to claim 1 of auxiliary request 1, claim 1 of
auxiliary request 2 specifies that the user interface
is part of a "customer environment".

3.2.1   The board cannot see any additional limitation of the
claimed subject-matter by this feature. In the board's
understanding, the industrial automation environment of
claim 1 of the main request (and auxiliary request 1)
is separate from the product compatibility and download
center. So, it can be understood that the industrial
automation environment, including the user interface,
corresponds to a customer (environment) requesting

lifecycle management data from the product
compatibility and download center.

3.2.2   Therefore, this additional feature cannot be seen as a
        basis for the presence of an inventive step and the
        subject-matter of claim 1 of auxiliary request 2 does
        is not inventive for the same reasons as auxiliary
        request 1.

3.3   With respect to claim 1 of the main request, claim 1 of
        auxiliary request 3 specifies additionally that the
        lifecycle management data include replacement data for
        one or more industrial device found to be
        "discontinued" or at the "end of life".

3.3.1   The appellant argued that the provided information
        about the replacement of one or more industrial devices
        prompted the user directly to take action and replace
        the concerned machine. This was a technical effect
        because it contributed to ensuring the continuous
        operation of the industrial installation.

3.3.2   As stated with regard to the main request (see points
        2.2.2 to 2.2.4 above) the board's view is that the
        lifecycle management data cannot be regarded as
        technical data and that replacing a machine in order to
        avoid a possible malfunction cannot be seen as a
        technical solution to any technical problem. The board
        remains thus of the opinion that, as with the
        configuration data in auxiliary request 1, the
        cognitive content of the lifecycle management data
        cannot contribute to an inventive step in the sense of
        Article 56. Therefore, the subject-matter of claim 1 of
        auxiliary request 3 does not involve an inventive step,
        either.

3.4   Compared to claim 1 auxiliary request 1, claim 1 of
         auxiliary request 4 defines additionally the following
         steps the user has to take in order to configure the
         scan according to the selected protocol:
         " ... *wherein, upon selecting one of the protocols, a*
         user is prompted to configure the scan with the user
         interface, wherein
              when the selected protocol is CIP, the user is
              prompted to select a device as a starting point and
              to set a maximum scanning depth,
              when the selected protocol is SNMP or WMI, the user
              is prompted to enter an Internet Protocol, IP,
              address range and a maximum number of hops.".

3.4.1   The appellant argued that, by setting the maximum
         scanning depth or the maximum number of hops, the user
         could limit the scanning only to a part of the
         machines/devices in the industrial environment. There
         were thus savings in the use of the used resources in
         comparison with scanning all of the machines of the
         automation environment.

         Although the protocols were known, the fact that the
         claimed method prompted the user to add a maximum
         scanning depth and a maximum number of hops, encouraged
         the user to set limitations, which resulted in less
         computational load and less data being transferred
         within the industrial automation environment and in
         particular to the product compatibility and download
         center.

3.4.2   The board does not follow this argument of the
         appellant. The claimed protocols are known and setting
         the necessary parameters for them to be used is
         considered part of the skilled person's common general
         knowledge. Moreover, there is nothing in the claim that

would prompt the user to limit the scanning only to some of the machines, as the user is always free to set the maximum scanning depth and the maximum number of hops so that the scanning would cover the whole network (environment). The fact that the user has the mere choice to enter a more limited scanning depth or number of hops cannot be considered as a technical effect, since in the end it all depends on the user's individual decision.

In any case, as mentioned earlier, these protocols are also mentioned in D1 and the same considerations regarding the setting of the parameters are also valid for the method of D1, i.e. they are considered to be implicitly disclosed in the prior art.

3.4.3   The board's conclusion is therefore that claim 1 of auxiliary request 4 does not involve an inventive step for the same reasons as auxiliary request 1.

3.5   Claim 1 of **auxiliary request 5** combines all the features of respective claim 1 of the main request and auxiliary requests 1 to 4.

As presented above, the board's opinion is that none of these features can support the presence of an inventive step. The same is valid for their combination, as they represent a combination of commonly known and essentially non-technical features.

The subject-matter of claim 1 of auxiliary request 5 does therefore not involve an inventive step, either.

4.   Since none of the requests on file is found to be allowable, the appeal must fail (Articles 97(2) and 111(1) EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Sánchez Chiquero   T. Häusser

Decision electronically authenticated