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Datasheet for the decision
of 2 October 2017

Case Number: T 0575/15 - 3.5.06

Application Number: 10186143.3

Publication Number: 2369469

IPC: G06F9/44, G06F9/445

Language of the proceedings: EN

Title of invention:
Supervisory process control and manufacturing information
system application having a layered architecture

Applicant:
Wonderware Corporation

Headword:
Process control configuration/WONDERWARE

Relevant legal provisions:
EPC Art. 56, 84, 111(2), 113(1)
EPC R. 137(3)

Keyword:
Inventive step (no) - all requests

Decisions cited:
T 0049/99, T 1630/11, T 1205/12, T 0820/14

Catchword:

Case Number: T 0575/15 - 3.5.06

D E C I S I O N
of Technical Board of Appeal 3.5.06
of 2 October 2017

Appellant: (Applicant)	Wonderware Corporation 100 Technology Drive Irvine, CA 92618 (US)
Representative:	Friese Goeden Patentanwälte PartGmbB Widenmayerstraße 49 80538 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 26 November 2014 refusing European patent application No. 10186143.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	W. Sekretaruk
Members:	M. Müller
	S. Krischer

Summary of Facts and Submissions

I.   The appeal lies against the decision of the examining
        division, with reasons dispatched on 26 November 2014,
        to refuse European patent application No. 10186143.3
        because claim 1 of the main request did not comply with
        the requirements of Article 84 and 123(2) EPC.
        Auxiliary requests 1-3 were not admitted pursuant to
        Rule 137(3) EPC because the said objections *prima facie*
        also applied to them. Auxiliary requests 4 and 5 were
        not admitted either, also under Rule 137(3) EPC,
        because *prima facie* they went beyond the contents of
        the application as originally filed. In a section
        entitled "FURTHER REMARKS", it was stated that claim 1
        of the main request lacked novelty over a document
        labelled D1, and inventive step over common general
        knowledge because its subject-matter did not solve a
        technical problem.

II.   Notice of appeal was filed on 26 January 2015, the
        appeal fee being paid on the same day. A statement of
        grounds of appeal was received on 9 February 2015. The
        appellant requested that the decision under appeal be
        set aside and that a patent be granted on the basis of
        claims 1-6 according to a main request or auxiliary
        requests 1 or 2, claims 1-5 according to auxiliary
        request 3 or claims 1-4 according to auxiliary
        request 4, all as filed with the grounds of appeal,
        apparently in combination with the following
        application documents:

        description, pages
        2-33   as originally filed
        1, 2a, 34   as received on 9 August 2012
        drawings, sheets
        1/11-11/11 as originally filed

The appellant also requested that the appeal fee be reimbursed because the examining division had infringed its right to be heard, Article 113(1) EPC.

III.   The sole independent claim 1 of the main request reads as follows:

"A configuration facility for specifying a deployment model for supervisory process control and manufacturing information applications for associating application objects (105, 107) to particular physical computing devices (100, 102) and providing a view of the distribution of the objects (105, 107) upon the physical computing devices (100, 102), the configuration facility comprising:
    platform definitions (204) specifying one or more physical computing device types (100, 102);
    engine definitions (206) specifying engines that execute upon the physical computing systems (100, 102) and thereby define types of services supported by the physical computing devices (100, 102);
    area definitions specifying areas comprising logical groupings of application objects (210);
    a set of hierarchical relationships specifying assignments of the engines (206) to particular ones of the physical computing systems (100, 102), and assignments of the areas to particular ones of the engines (206); and
    a deployment view generator depicting, in accordance with the set of hierarchical relationships, a hierarchy of physical computing devices (100, 102), engines (206), and areas."

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the "engine definitions" now read as follows:

"... engine definitions (206) specifying engines that
execute upon the physical computing systems (100, 102)
and thereby hosting execution of application objects
(210) in a run-time environment; ..."

Claim 1 of auxiliary request 2 differs from claim 1 of
auxiliary request 1 in that the preamble now reads as
follows (emphasis by the appellant):

"A system for configuring supervisory process control
and manufacturing information applications for
associating application objects to particular physical
computing devices (100, 102) and providing a view of
the distribution of the objects (206) upon the physical
computing devices (100, 102), **characterized by** the
system comprising: ..."

and that the reference to the application objects in
the "area definitions" has been amended to refer to
"said application objects".

Claim 1 of auxiliary request 3 reads as follows:

"A process control network comprising a plurality of
PCs (100, 102, 130, 132, 134), said PCs executing a set
of layered objects in a hierarchical arrangement
comprising an operating system, a bootstrap object, a
platform class object hosting an engine object, said
engine object hosting a set of application objects that
implement supervisory process control and/or
manufacturing information acquisition functions,
wherein said application objects are logically grouped
by area definitions, characterized by
    a deployment view generator being configured to
create a hierarchical view of the PCs, engines (206),

and areas in accordance with the set of hierarchical
relationships."

Claim 1 of auxiliary request 4 is identical to that of
auxiliary request 3, with the addition of the following
phrase at the end:

"... and the engine objects maintain a name binding
service that bind attribute references to a proper one
of the application objects."

IV.   In an annex to a summons to oral proceedings, the board
        informed the appellant of its decision not to remit,
        under Article 11 RPBA, the case immediately to the
        examining division for further prosecution, and of its
        preliminary opinion that claim 1 of all requests lacked
        clarity, Article 84 EPC, and technical character or
        inventive step, Articles 52 and 56 EPC.

V.   In response to the summons, the appellant did not file
        either amendments or arguments. Instead, it indicated
        in a letter of 13 September 2017 that neither the
        appellant nor the representative would attend the oral
        proceedings in Munich (Haar). On 25 September 2017, in
        response to the board's request for clarification, the
        appellant withdrew its request for oral proceedings,
        which were then cancelled.

Reasons for the Decision

The alleged substantial procedural violation
Article 11 RPBA and Rule 103(1)(a) EPC

1.   The appellant argued that the examining division had
        rushed through the oral proceedings in an attempt to
        finish them before noon. As a consequence, the

appellant had been unable to explain in detail its
auxiliary requests 4 and 5 before the examining
division decided not to admit them. The statement cited
in the minutes (see point 36), namely that the
appellant did not have any further comments on the
issue, was incorrect. The appellant also complained
that the examining division had cited T 49/99 "without
prior notice" and without giving it an "opportunity to
get knowledge of its content".

2.   According to the minutes (see points 32 to 38), the
        auxiliary requests 4 and 5 were filed between 10:58
        and 11:05 hours and considered by the examining divi-
        sion between 11:05 and 11:09 hours. The board accepts
        that this left little time for the appellant to explain
        the new requests. During its deliberation, however, the
        examining division had at its disposal a copy of the
        application with underlined passages meant to indicate
        the basis for the amendments (see the minutes,
        point 33). Hence, the board considers that the time
        frame was not *a priori* inappropriate, and the appellant
        has not convinced the board that it was not appropriate
        in the case to hand. Moreover, the examining division
        did not take its decision immediately after the
        deliberation from 11:05 to 11:09 hours (see points 34,
        35 and 38). The minutes report (see point 36) that, at
        that point, the representative was given an opportunity
        to provide further comments but did not use it. The
        appellant challenged the accuracy of the minutes in
        this regard (see the grounds of appeal, page 2, para-
        graph 2) but the file contains no indication that it
        had raised its concern vis-à-vis the examining divi-
        sion, let alone that it had requested that the minutes
        be corrected. Therefore, the board must treat the
        minutes as an accurate description of what happened.

3.   As regards decision T 49/99, it must first be noted
        that neither the reasons nor the further remarks in the
        decision under appeal mention or depend on it.

3.1   In the oral proceedings, the examining division
        expressed its opinion that a model could not, *per se*,
        provide a technical effect or solve a technical
        problem, even if the system being modelled was itself
        technical, and referred to T 49/99 (see the minutes
        point 32). This objection had already been raised in
        the communication annexed to the summons to oral
        proceedings, although without reference to T 49/99
        (see point 3.2).

3.2   The examining division had thus raised its objection in
        clear terms and early enough for the appellant to
        consider and comment on it, Article 113(1) EPC. Even
        though the examining division may, in the summons,
        already have endorsed considerations from T 49/99, it
        was not required to mention the decision itself. In
        fact, as an examining division is not bound by
        decisions issued on appeal in different cases (see
        Article 111(2) EPC) it cannot replace its own reasoning
        with a reference to earlier board of appeal decisions.
        Rather, it must endorse any reasoning that it wants to
        rely on (see also T 1205/12, catchword). In the present
        case, therefore, the examining division was not
        required to provide a copy of the decision mentioned,
        or give the appellant time to study it.

4.   The board concluded in the annex to its summons that no
        fundamental procedural deficiency was apparent which
        would have justified an immediate remittal of the case
        to the examining division under Article 11 RPBA.
        Although the board, by the same token, has no reason to
        believe that a substantial procedural violation has

occurred, this issue need not be decided because the
appeal is not allowed and a reimbursement of the appeal
fee is therefore not possible, see Rule 103(1)(a) EPC.

Article 123(2) EPC

5.   In the decision, several objections under
        Article 123(2) were raised against the main request. In
        the annex to its summons, the board expressed doubt
        regarding these objections. Although the board has no
        reason to deviate from its preliminary assessment, it
        is not relevant for the present decision and will
        therefore not be reproduced here.

The examining division's non-admission of auxiliary requests

6.   The then auxiliary requests 4 and 5 were not admitted
        by the examining division for two reasons: because
        their claim 1 *prima facie* violated Article 123(2) EPC
        and because they were "full[y] reword[ed]" and
        "completely different from the previous requests" and
        went "into a technically completely different
        direction" (see the decision, reasons 5).

7.   As regards the Article 123(2) EPC objection, the
        examining division merely argued that "The specific
        combination of different features extracted from
        different passages of the description, partly in a
        generalised way, can in no way be derived from the
        application as filed directly and unambiguously".

7.1   The board agrees with the appellant (see the grounds of
        appeal, page 4, central paragraph beginning with
        "However") that an amended claim may well comprise "a
        combination of different features extracted from

different passages of the description, partly in a
generalised way" without violating Article 123(2) EPC,
even if it has been substantially reworded.

7.2   Moreover, the examining division's finding that the
        claimed combination of features can "in no way be
        derived from the application as filed directly and
        unambiguously" is a mere assertion, because the
        examining division did not indicate which specific
        feature or feature combination it considered *prima
        facie* not to be originally disclosed and why. Moreover,
        the examining division made no reference at all to the
        annotated copy of the application which the the
        applicant had filed in order to argue why the
        amendments had to be considered as originally disclosed
        (see the minutes, point 33).

7.3   The board thus considers that the Article 123(2) EPC
        objection against claim 1 of auxiliary requests 4 and 5
        was insufficiently reasoned.

8.   Also the statement that the amended claims went "into a
        technically completely different direction" was made
        without any explanation as to what that "different
        direction" was or why it had to be considered as
        "completely different", and is therefore questionable.

9.   However, it is undisputable that auxiliary requests 4
        and 5 were filed at a very late stage and substantially
        reworded, and it was plausible to assume at that point
        that assessing their patentability could have required
        substantially different considerations than those that
        had been discussed up to that point.

10.   The board concludes that the last reason for the non-
        admission of auxiliary requests 4 and 5 was correct and

that, hence, the examining division exercised its
discretion correctly.

The board's admission of auxiliary requests 3 and 4

11.   Notwithstanding this conclusion, the board is of the
        opinion that it has discretion of its own to admit
        present auxiliary requests 3 and 4 (see T 820/14,
        reasons 10). Since at least some of the fundamental
        objections against the higher-ranking requests apply to
        these dependent claims as well, the board sees no
        reason not to admit them and hence takes them into
        account in the following.

The invention

12.   The application relates to the configuration and
        reconfiguration - and eventual "deployment" - of
        software for computerised industrial process control
        systems. The industrial processes of interest are only
        mentioned briefly and in little detail.

12.1   It is explained that the process control devices and
        processes may change during operation and require
        changes to the process control systems. In such
        situations, the configuration and reconfiguration of
        the system must be quick so as to limit disruption to
        the system as a whole (see page 2, lines 10 to 15).

12.2   Therefore a "supervisory process control and manufac-
        turing information system application architecture" is
        proposed that is said to "offer[] users the freedom to
        re-architect" supervisory process control "applica-
        tions, with minimal impact on the existing, underlying,
        process control system engineering" (see page 5, lines

19 to 23). The proposed architecture comprises three
layers, an "application" layer, an "engine" layer and a
"platform" layer (see page 6, lines 1-16). An
application layer comprises "application objects" which
are free of "constraints associated with the computing
system hardware" (see page 6, lines 1-6) and which are
"hosted by an engine object" (lines 6-7), engine
objects in turn being "hosted by a platform
object" (lines 7-8). The platform object "corresponds"
to a "physical computing system (including an operating
system) upon which application and engine objects
execute" (lines 9-11). The concept of an "area" is
introduced as a logical group of application objects
which must be deployed on the same application engine;
which one is up to the developer (page 6, lines 26-32).

12.3   It is further disclosed that the system may rely on
several "models": A "security model" stated to be
independent of the employed hardware (page 7,
lines 1-8), an "application model" introduced as a
"logical build of the plant relative to the physical
areas of the plant ..." which is configured before
deployment (page 7, lines 17-22), and a "deployment
model" comprising a "system view", i.e. reflecting the
physical components of the system on which the
application is to run (paragraph bridging pages 7
and 8). A variety of further "views" is also provided,
including a "model view", a "deployment view" and a
"derivation view" (see page 3, line 25, to page 4,
line 5, page 23, lines 20-23, and page 24,
lines 21-27).

Article 84 EPC

13.   The appellant argues that the claimed "facility" (see
the main request and auxiliary request 1) must,

according to Merriam-Webster, be construed as a "large
piece of equipment". The board is not convinced that
the definition of "facility" in the Merriam-Webster
dictionary is crucial to the construction of the
present claims, and rather considers that the term can,
in the computing field, also refer to a piece of
software. The board thus considers that the term
"facility" as used in the main request and auxiliary
request 1 does not unambiguously imply any physical
(i.e. "hardware") components. The same must however
also be said for the term "system" which, in the
computing context, can refer exclusively to software.

14.   The term "configuration" - used in claim 1 of the main
        request and auxiliary requests 1 and 2 but not in
        claim 1 of auxiliary requests 3 and 4 - is vague.

14.1   When a system is configured, its components and
        properties are determined. The aim may be to set the
        system up to match the specified configuration, but the
        board considers that the term "configuration" does not
        imply the actual modification of the configured system.
        Rather, the board takes it to be common in the art to
        refer as system "configuration" to the specification
        phase which precedes the actual system modification.
        The description appears to support that view, e.g.
        where it says that "views facilitate configuring and
        deploying [...] software" (see page 3, lines 27-28) and
        thus suggests that the configuration precedes
        deployment. In the annex to its summons, the board put
        this interpretation to the appellant, who has not
        challenged it.

14.2   From this perspective, both the "configuration
        facility" of the main request and auxiliary request 1
        and the "system for configuring" of auxiliary request 2

merely support the user in specifying software intended
for eventual deployment (i.e. upload) on a physical
computing system. Notably, the deployment itself is not
claimed in claim 1 of any request. Therefore, the
facility/system according to the main request and
auxiliary requests 1 and 2 must be construed as a
programming facility/system for the physical computing
devices mentioned.

14.3   The examining division considered that it was not clear
        "what [was] actually configured by the facility/system"
        because "nothing [was] actually configured in a
        technical sense" (see the decision, reasons 2.1). As
        explained, however, the board interprets the term
        "configuration" broadly as not implying any "physical"
        operations, so it is not a deficiency of the claims
        that they do not specify any.

15.   In view of the board's findings on inventive step, the
        board leaves open the question of whether the claims
        are unclear or merely broad.

Inventive step, Article 56 EPC

16.   The central question to be decided in the present case
        is whether the claimed subject-matter has any technical
        effect and, if it does, what technical problem it
        solves.

17.   In the board's understanding, the facility or system
        according to the main request and auxiliary requests 1
        and 2 is one of producing and viewing a model
        comprising several kinds of "objects" which are meant
        for eventual deployment to and execution on a "physical
        computing system". No actual deployment or execution is

claimed or implied. Therefore, as already stated, the
board interprets the claimed system as a programming
system for developing and viewing the "configuration"
of the physical computing system or process control
network in question.

17.1   In the board's view, the activities of programming or
        modelling do not *per se* make a technical contribution
        to the art, and simplifying the mental effort of
        programming is not a technical problem (see e.g.
        T 1630/11 and the decisions cited in point 6; see esp.
        T 49/99 as referred to in the grounds of appeal).

17.2   Intrinsic to the development of a program or software-
        based model is that the data representing the program
        or the model are stored on a physical device, typically
        some sort of computer memory. This also applies to the
        claimed invention (see also the grounds of appeal,
        paragraph bridging pages 12 and 13). However, storing a
        model in a file or in a database does not confer
        technical character on the model itself or help to
        clarify what technical effect the model has. It is thus
        insufficient to establish an inventive step.

17.3   The description states that the invention "offers users
        the freedom to re-architect [...] applications with
        minimal impact on the existing, underlying, process
        control system engineering". The board is not convinced
        that the claimed facility or system, as it stands, can
        be said to have any impact on the underlying process
        control system, as long as the associations, defini-
        tions, specifications and views are not deployed or
        used for deployment. In contrast to the appellant's
        assertion, the board does not consider the claimed

invention to "influence[] directly a physical system"
(see page 13, paragraph 3).

17.4   This would remain the case even if it was assumed, for
the sake of argument, that a deployment took place,
because, in the board's understanding, the invention is
concerned with simplifying the process of configuring a
system without however changing the configuration
results themselves.

17.5   The appellant argues that the information presented by
the various views according to the claimed invention
should be considered technical because it relates to
the "technical state of a machine" or an "application
executed on a computer" (see grounds of appeal,
page 13, paragraph 2). As regards the former, the board
takes the view that the generated model may be
construed as prescriptive rather than descriptive, i.e.
the information being displayed might relate to how the
system should be (or: should be configured) rather than
how it actually looks, and thus does not necessarily
relate to the technical *state* of a machine. The board
also disputes that an invention has to be considered to
be technical merely because it "relates", in some
unspecified way, "to some technical application
executed on a computer", and also that such a sweeping
statement can be derived from the board of appeal
decisions cited by the appellant (see the grounds of
appeal, page 13).

17.6   The board thus concludes that claim 1 of the main
request and of auxiliary requests 1 and 2 lacks
inventive step, Article 56 EPC, because it does not
solve a technical problem.

18.   Claim 1 of <u>auxiliary requests 3 and 4</u> does not refer to
       the specification (programming) of a configuration to
       be deployed but, in the board's understanding, to the
       visualisation of a model of an existing system.

18.1   No feature is claimed which would make the view
       generator specific to the physical system being viewed.
       Nor is any feature claimed that would imply that the
       "deployment view" was produced from and in interaction
       with the underlying physical system. Alternatively, a
       deployment view could be generated from a system model
       which exists separately from the physical system to
       which said model may have been deployed; the resulting
       view would still be "in accordance with" the existing
       "hierarchical relationships". In this generality, the
       board considers that creating - and possibly displaying
       - a "view" of an existing physical computing system
       does not solve a technical problem.

18.2   Beyond that, the board considers it to be obviously
       desirable for the system architect or administrator to
       have a "view" of a given software architecture. It
       would further be evident that this view had to refer to
       the "objects" that happened to constitute that software
       architecture.

18.3   Furthermore, the board is unable to determine, due to
       the vague and broad language of claim 1, any property
       of the claimed "process control network" or the way it
       is viewed which could give rise to an inventive step,
       Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

B. Atienza Vivancos   W. Sekretaruk

Decision electronically authenticated