Internal distribution code:

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

Datasheet for the decision
of 22 July 2022

Case Number:	T 0212/20 - 3.5.01
Application Number:	16751186.4
Publication Number:	3289537
IPC:	G06Q10/06
Language of the proceedings:	EN

Title of invention:
AUTOMATED CONFIGURATION OF FACTORIES BASED ON THE
CONFIGURATION OF PRODUCTS TO BE MANUFACTURED

Applicant:
Siemens AG Österreich

Headword:
Product and factory configuration/SIEMENS

Relevant legal provisions:
EPC Art. 54

Keyword:
Novelty (no)

Case Number: T 0212/20 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 22 July 2022

Appellant: (Applicant)	Siemens AG Österreich Siemensstraße 90 1210 Wien (AT)
Representative:	Maier, Daniel Oliver Siemens AG Postfach 22 16 34 80506 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 12 August 2019 refusing European patent application No. 16751186.4 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	N. Glaser
Members:	L. Falò
	E. Mille

Summary of Facts and Submissions

I.   This case concerns the applicant's appeal against the
        examining division's decision to refuse European patent
        application No. 16 751 186.4.

II.   The application was refused on the grounds of lack of
        clarity (Article 84 EPC) and lack of novelty (Article
        54 EPC) in view of US 2010/0138017 (D1).

III.   In the statement setting out the grounds of appeal, the
        appellant requested that the decision of the examining
        division be set aside and that a patent be granted on
        the basis of the refused sole request, comprising a
        single claim. The appellant also requested oral
        proceedings to be held before any adverse decision.

IV.   In the communication accompanying the summons to oral
        proceedings, the Board set out its preliminary view
        that claim 1 of the sole request lacked novelty.

V.   Oral proceedings were held as a videoconference on
        22 July 2022. Since nobody appeared for the appellant,
        the registrar contacted the representative by
        telephone. He indicated that he could not attend the
        oral proceedings due to technical problems, and that he
        relied on his written submissions without any further
        comment. A postponement of the oral proceedings was not
        requested.

VI.   Claim 1 of the sole request reads:

        "Method for integrated modeling of products and
        factories for smart configuration of a production

environment by use of a computer program comprising
steps of:
- configuration of products by end-user
- configuration of a product line in a factory
- configuration of a production process in a product
line
characterized in that the steps of configuration of
products, configuration of a product line and the
configuration of a production process are linked in a
manner, that the knowledge from one configuration
process is passed to the others."

VII.   The appellant's arguments can be summarised as follows:

        Since the control process of D1 starts with the
        reception of an order from an external source, it
        cannot include the configuration of the product by an
        end-user. D1 discloses neither configuring the product
        using a computer program, nor utilising the associated
        configuration parameters in the manufacturing process.

Reasons for the Decision

        Background

1.   The invention concerns the automated configuration of
        factories based on customer orders. The production of
        highly customisable products generally requires a
        continuous reorganisation of factory lines and
        processes, which can pose significant challenges for
        factory operators (see page 1, lines 4 to 27). The goal
        of the invention is to facilitate the reconfiguration
        through synchronised modelling of both product and
        factory. After a customer has configured a product to
        be ordered, the product configuration data are used by

a factory configuration process to automatically
reconfigure the physical factory set-up and the various
production processes, so that the required product
variant can be manufactured (see page 1, line 28 to
page 2, line 34).

Interpretation of claim 1

2.   The Board interprets the expression "*the steps of
       configuration of products, configuration of a product
       line and the configuration of a production process are
       linked in a manner, that the knowledge from one
       configuration process is passed to the others*" in the
       characterising portion of claim 1 as indicating that
       the portions of software implementing the various
       method steps are arranged to transmit configuration-
       related information to each other (for example, by
       means of suitable communication interfaces).

3.   The appellant did not contest this interpretation
       during the appeal proceedings.

Novelty

4.   Document D1 discloses an industrial control system
       adapted to automatically create and reconfigure a
       production line according to product orders (paragraphs
       [0008] to [0010], [0045]). Customers can specify the
       desired product characteristics by interacting with a
       product order system (paragraphs [0017], [0018],
       [0024], [0049]). The system then generates a logical
       representation of the ordered products (paragraphs
       [0019], [0025]), which is used by a plurality of agents
       to configure the assembly line. This includes selecting
       and configuring the workstations needed to produce the
       product and, within each workstation, the resources and

equipment to be used (paragraphs [0027], [0028], [0030] to [0033], [0036], [0037], Figure 1, claims 10 and 11). Knowledge is shared between information system and agents (paragraphs [0023] to [0025], [0037] and [0041]).

5.   The Board therefore agrees with the contested decision that D1 discloses the following features:

a method for integrated modeling of products and factories for smart configuration of a production environment by use of a computer program, (paragraphs [0008], [0021], [0102], [0104]), the method comprising:

configuration of products by end-user (paragraphs [0017] to [0019], [0024], [0025], [0049])

configuration of a product line in a factory (paragraphs [0017], [0027], [0028], [0032], [0033], [0036], [0037], Figure 1)

configuration of a production process in a product line (paragraphs [0028], [0030], [0037], [0045], Claims 10 and 11)

the steps of configuration of products, configuration of a product line and the configuration of a production process being linked in a manner that the knowledge from one configuration process is passed to the others (paragraphs [0023] to [0025], [0037], [0041]).

6.   The appellant essentially argued that the control process of D1 could not include the configuration of the product by an end-user because it started with the reception of an order from an external source, which logically followed the configuration step. The

appellant also argued that D1 did not disclose carrying out the product configuration by use of a computer program, nor using the associated configuration parameters in the manufacturing process.

7.   The Board does not agree with the appellant's arguments, for the following reasons:

7.1   According to D1, product orders are received at the order system "*from outside of the industrial control system 100 (again, for example, from human beings or machines)*" (paragraph [0024], see also Figure 1, 102). The order system is "*a conventional computer system (e.g., a personal computer) or a similar device, such as a human-machine interface (HMI), a graphical user interface (GUI) or other user interface that is capable of interacting with a plurality of users (or, alternatively, other HMI's) for receiving customer orders*" (paragraph [0018]). Based on the customer's order, the order system generates a logical representation of the product defining its attributes, such as size, colour and quantity (paragraphs [0008], [0018] and [0019]).

7.2   In the Board's view, the interaction of the user with the order system to define the product attributes corresponds to the claimed "configuration of products by end-user". It is immaterial whether the product configuration takes place internally or externally to the industrial control process system, as the claimed method provides no limitations in this respect.

7.3   Since in D1 the order system is implemented on a computer and/or a graphical user interface, the configuration step necessarily implies the use of a computer program.

7.4   The configuration of the manufacturing process
         according to user specifications and based on the
         parameters generated in the configuration step is
         derivable, for example, from paragraphs [0008] and
         [0009] of D1 (after receiving an order, the system
         generates a production plan instance so as to operate
         the industrial process to satisfy at least one portion
         of the order).

8.   Accordingly, the Board judges that D1 discloses all the
         features of claim 1, and therefore the appellant's sole
         request cannot be allowed for lack of novelty (Article
         54 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek   N. Glaser

Decision electronically authenticated