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**Datasheet for the decision
of 20 January 2026**

Case Number: T 1191/23 - 3.5.01

Application Number: 18708256.5

Publication Number: 3580707

IPC: G06Q10/08, H04N7/18, B25H3/00

Language of the proceedings: EN

Title of invention:
AUTOMATED TOOL DATA GENERATION IN AUTOMATED ASSET MANAGEMENT
SYSTEMS

Applicant:
Snap-On Incorporated

Headword:
Automated tool data generation in automated asset management
systems/SNAP-ON

Relevant legal provisions:
EPC Art. 56, 111(1)
RPBA 2020 Art. 11

Keyword:

Inventive step - distinguishing features are non-technical (no)
- claim requires a new assessment in view of prior art
Appealed decision - remittal to the department of first
instance (yes)



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Case Number: T 1191/23 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 20 January 2026

Appellant: Snap-On Incorporated
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 26 January 2023
refusing European patent application No.
18708256.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Höhn
Members: N. Glaser
E. Mille

Summary of Facts and Submissions

- I. This appeal is against the decision of the examining division to refuse the European patent application No. 18708256.5 pursuant to Article 97(2) EPC on the ground of lack of inventive step (Article 56 EPC).
- II. In this decision reference is made *inter alia* to the following document :

US 9 041 508 B2 (D1)
- III. In the statement setting out the grounds of appeal, dated 23 May 2023, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main, first or second auxiliary request, filed therewith.
- IV. In a communication accompanying the summons to oral proceedings, the Board set out its preliminary opinion that the invention did not involve an inventive step (Article 56 EPC).
- V. In a reply, dated 18 December 2025, the appellant filed a new second auxiliary request, together with arguments in favour of inventive step.
- VI. At the oral proceedings, the Board discussed the main request, in particular claim 1 with regard to inventive step (Article 56 EPC) in view of D1, on which the contested decision was based. The Board came to the conclusion that claim 1 wasn't obvious in view of D1 and that the reasons in the appealed decision were not convincing, however that a final decision could not be

taken, because the remaining prior art wasn't considered at the first instance.

After due consideration of the appellant's arguments the Chairman announced the decision.

VII. Independent claim 1 of the main request reads as follows, the feature numbering (not part of the claim) is according to the appellant :

1. An automated asset management system comprising:

1.1 a plurality of storage locations for storing objects;

1.2 an image-based sensing system (351) configured to generate images used to determine presence or absence of objects configured to be stored in the plurality of storage locations;

1.3 a database (357) storing data relating to the objects configured to be stored in the plurality of storage locations,

1.4 wherein the database (357) stores data sufficient to enable the asset management system to determine the presence or absence of the objects from the storage locations based on the images generated by the image-based sensing system (351);

1.5 a processor (355); and

1.6 a non-transitory machine readable recording medium storing program instructions which, when executed by the processor (355), cause the processor to

1.7 perform a tool training process including a silhouette training for automatically storing in the database a unique identifier encoded on a tag (401a) of an object by:

1.8 performing using the image-based sensing system (351) a first scan of the storage locations while a particular storage location associated with a particular object subject to the tool training is empty, and storing an image attribute of the particular storage location while the particular storage location is empty,

1.9 wherein the processor (355) is further configured to, based on a first image generated by the image-based sensing system (351) during the first scan, identify silhouettes of storage locations in the first image and determine an alignment between the identified silhouettes and locations of silhouettes stored in the automated asset management system,

1.10 wherein the determined alignment is stored in the database storing data relating to the objects configured to be stored in the plurality of storage locations of the asset management system,

1.11 performing using the image-based sensing system (351) a second scan of the storage locations while the particular storage location associated with the particular object subject to the tool training is occupied by the particular object, and storing an image attribute of the particular storage location while the particular object is present,

1.12 determining, based on an image captured during the second scan including a location of the tag (401a),

whether the tag encoding a unique identifier is present on the particular object,

1.13 wherein if a tag (401a) is determined to be present, an association in the database (357) is created associating an identified code provided on the tag with the data relating to the objects stored in the database based on the location of the tag (401a),

1.14 wherein the location of the tag (401a) is compared with positions of identified silhouettes of the storage locations to identify a silhouette with which to associate the identified code provided on the tag, and

1.15 updating the database storing data relating to the objects configured to be stored in the plurality of storage locations of the asset management system to include, in association with stored data relating to the particular object, the unique identifier of the tag determined to be present on the particular object.

Reasons for the Decision

1. Background of the invention
 - 1.1 The invention concerns automated tool control systems and techniques and equipment to automatically generate and update a database of tool data for use in tracking tools stored in automated tool control systems, see [0002] of the application as filed.
 - 1.2 Automated tool control systems provide toolboxes, tool lockers or secure enclosed areas where tools can be returned. Toolboxes may include built-in inventory determination features to track inventory conditions of

tools stored in those toolboxes, such as sensors which are able to detect whether a tool is placed in each tool storage location. Based on the sensed data and the stored tool data an inventory condition of a tool can be determined, see [0003] to [0005].

- 1.3 The invention addresses the problem of providing accurate and up-to-date inventory information which requires that tool data is generated and updated as tools, sensors, and the tools' sensed characteristics change, see [0006] and [0052] to [0055].

- 1.4 The solution is an inventory control system that utilizes an image-based sensing system for capturing images of contents or storage locations, such as the drawers or shelves of a toolbox, see [0024] to [0028], and Figures 1A to 1C. As shown in Figure 5, the system is trained to identify the silhouette of empty storage locations (505), to record image and color attributes of empty storage locations (507) and image and color attributes of storage locations with objects (tools) present (509). As part of the tools presence training (509) the system detects/recognizes tags on objects encoding each a unique identifier. It then creates for validated tags an association in a database of tools data, thereby associating the identifier provided on the tag with the tool's object data previously entered in the database, see [0021][0059]. A tag may include color-coded stripes or bands, [0043] to [0049], [0063] and Figure 4A. A database stores data sufficient to determine the presence or absence of the objects from the storage locations based on the images generated by the image-based sensing-system, [0031][0051] to [0052].

2. Main request - Article 56 EPC

2.1 The examining division was of the opinion that claim 1 was distinguished from D1 (US 9041508B2), the closest prior art, by features 1.12 to 1.15.

D1 disclosed, see impugned decision point 3.4, the idea to equip tools with unique attached identifiers, column 18, line 54, used to determine the presence/absence of them in the tool storage system. Object identifiers were also associated with storage locations of the tools, column 19, line 35, the latter including silhouette information, column 12, lines 25-55. These associations between objects and storage locations were "pre-stored" in D1, column 18, line 54, which the examining division assumed to be done manually by a human operator.

The examining division then argued that such kind of identifier associations was an administrative decision which did not involve any technical considerations and concluded, see impugned decision, points 3.5 to 3.8, a lack of inventive step, because the distinguishing features simply automate, as part of the tool training process, an administrative decision.

2.2 The appellant in summary argued that the distinguishing features achieve a technical effect which is to improve the ergonomics and usability of the automatic inventory control system. When the system identifies that a tag is present on an object (1.12) an association between the identified code provided on the tag and the data relating to the object stored in the database is created based on the location of the tag (1.13). The location of the tag is compared with positions of identified silhouettes of the storage locations to

identify a silhouette (1.14) and the database is then updated with these associations (1.15).

These distinguishing features allow the system to automatically enter the identifying information from the tag on an object into the tool database and automatically associates tag information with pre-existing object/tool related data stored in the database. This automatic creating and/or updating of associations between tag information and tool data is aimed at the end user of the inventory control system. It provides an efficient, accurate and quick way of improving the registration process of tools.

The pre-existing object/tool related data is usually provided by a manufacturer of the tool storage system. It does not include information on tags or on unique identifiers encoded therein, because the tags may be applied by an end user based on the particular tools to be used in the tool storage system, see [0052]-[0052] of the application. As a result, the tag information generally needs to be provided to and loaded into the database separately from the pre-existing data files.

D1 only discloses the process of determining which identifier(s) are present in a captured image, see column 18, lines 64, to column 19, line 5, compares these identifier(s) with the list of tools and their corresponding unique identifiers to determine which tools are in the system and which ones are not. The location of the identifier (in the captured image) is irrelevant for the purpose of determining which identifier(s) are present in the captured image. Furthermore, D1 does not teach a comparison between location of the tag and positions of identified silhouettes of the storage locations, wherein such a comparison is used to

identify a silhouette with which to associate the identified code provided on the tag and, then, to update the database to include, in association with stored data relating to the particular object, the unique identifier of the tag and the tag determined to be present on the particular object. D1 may teach the updating of "inventory conditions", that is to update which tools are present or not in the tool storage system, but this does not include to create and/or update the association within the database was defined by feature 1.15.

2.3 The Board does not agree with the examining division that the distinguishing features merely automate an administrative decision. The "*location of a tag*" in features 1.12 to 1.15, which is obtained with respect to a captured image, see also [0063] of the application as filed, is a technical feature, and associating it with "*positions of identified silhouettes of the storage locations*" and updating the database with this kind of reference data has technical character. The distinguishing features therefore achieve a technical effect which goes beyond a mere automation. They provide an efficient, accurate and quick way of improving the registration process of tools.

2.4 D1 discloses the use of unique identifiers for determining which tools are in the system (e.g. storage locations) and which ones are not, see column 18, line 54, to column 19, line 6. Each tool has an unique identifier attached and the system keeps a list of tools stored in the tool storage system in a database together with their corresponding unique identifiers. A processor determines which identifiers are present in a captured image, compares the identifiers appearing in an image with the list of identifiers stored and is

able to determine which tools are present and which ones are not. However, there is no disclosure that the location of a tag in the captured image is obtained as part of the image processing. D1 determines which identifiers are present in the image, irrespective of the location of the identifier within the captured image. The location of the identifier is irrelevant for the purpose of determining which identifiers are present in the captured image.

Tools are placed in tool specific foam cut-out locations, column 4, third paragraph, and a database with tool silhouettes is used for creating foam layouts (by a technician) for drawers, see column 11, third paragraph, including positional information, such as coordinate information of each cut-out in each drawer. These foam layout files are then used as reference data in an inventory training process, see column 12, line 9 and follows. The purpose of this training is to adapt the cut-out files into reference data in general. Reference image signature files are acquired, as part of a setup procedure, in order words, as part of a training phase, for each tool cut-out when the correct tool is present and when it is absent. These files are stored in the database, column 15, 3rd paragraph, and are incorporated into the inventory management system. While D1 mentions to store coordinate information of each cut-out in each drawer, there is no disclosure of using this information in combination with the location of a tag. The Board therefore agrees with the appellant that comparing the tag location with positions of identified silhouettes of the storage locations to identify a silhouette with which to associate the identified code provided on the tag is not taught or suggested by D1 in an obvious way.

Inventory conditions are stored in the database of the tool storage system, column 6, line 54, to column 7, line 5, as well as in a database on a network server, which are updated, column 30, lines 39 to 46. D1 also generates the reference data in a highly automated manner, column 11, second paragraph, but there is no specific disclosure of updating the database with such kind of associations, as defined in feature 1.15.

- 2.5 The Board has at its disposal only the general statement, see point 3.4 to 3.8 of the impugned decision, that these features are non-technical and that their automation would be obvious. In their argumentation the examining division referred to the identifiers, cited in column 18, line 54, to column 19, line 5, which are associated with the tools, and at the same time to the identifiers, cited in column 19, lines 6 to 47, which are, however, associated with storage locations. These are two types of identifiers. Only the second type is associated with silhouette information. The mapping between the features of claim 1 and D1 made by the examining division is therefore not correct.
- 2.6 The search report cites further documents which were not studied by the examining division, most likely because it considered the distinguishing features as non-technical, which is not correct. The Board is therefore not able to assess the appellant's aforementioned argument regarding that these features achieve an efficient, accurate and quick way of improving the registration process of tools. The Board is therefore not in a position to take a final decision with regard to inventive step.
- 2.7 As a result, after considering all the relevant circumstances of the case at hand, the Board, noting that

Article 11 RPBA cannot be seen as limiting the discretionary power of the Board provided by Article 111(1) EPC, considers it appropriate to remit the case to the examining division for further prosecution.

Order

For these reasons it is decided that:

- 1. The decision under appeal is set aside.**
- 2. The case is remitted to the examination division for further prosecution.**

The Registrar:

The Chairman:



T. Buschek

M. Höhn

Decision electronically authenticated