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**Datasheet for the decision  
of 3 March 2017**

**Case Number:** T 0708/12 - 3.2.04

**Application Number:** 06117960.2

**Publication Number:** 1754405

**IPC:** A01B69/00, A01B79/00, G05D1/02

**Language of the proceedings:** EN

**Title of invention:**  
Mobile station in combination with an unmanned vehicle

**Patent Proprietor:**  
Deere & Company

**Opponent:**  
Octrooibureau Van der Lely N.V.

**Headword:**

**Relevant legal provisions:**  
EPC Art. 54, 56, 100(a)

**Keyword:**  
Novelty - new ground to be disregarded  
Inventive step of claim 1 as granted (main request) - yes

**Decisions cited:**

G 0010/91, G 0007/95

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 0708/12 - 3.2.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.04**  
**of 3 March 2017**

**Appellant:** Octrooibureau Van der Lely N.V.  
(Opponent) Weverskade 110  
3147 PA MAASSLUIS (NL)

**Representative:** Octrooibureau Van der Lely N.V.  
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**Respondent:** Deere & Company  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 20 February  
2012 rejecting the opposition filed against  
European patent No. 1754405 pursuant to Article  
101(2) EPC.**

**Composition of the Board:**

**Chairman** A. de Vries  
**Members:** E. Frank  
T. Bokor

## **Summary of Facts and Submissions**

- I. The appeal lies from the decision of the opposition division dated 25 January 2012 and posted on 20 February 2012, to reject the opposition against the European patent No. 1 754 405 pursuant to Article 101(2) EPC. The appellant (opponent) filed a notice of appeal on 29 March 2012, paying the appeal fee on the same day. The statement of grounds of appeal was submitted on 29 June 2012.
- II. The opposition was filed against the patent as a whole and based on Article 100(a) in conjunction with Articles 56 EPC and Article 100(b) EPC. The opposition division held that these grounds did not prejudice maintenance of the patent as granted. In its decision the division considered the following prior art, amongst others:
- D1 = US 5,959,423  
D2 = US 5,712,782
- III. The further following documents were cited in appeal:
- D14 = EP 1 686 521 A2  
D15 = US 2003/0187560 A1  
D16 = David Wettergreen et al.: "Operating Nomad during the Atacama Desert Trek", International Conference on Field and Service Robotics, Canberra, Australia, December 1997, 8 pages;  
D17 = US 5,884,224
- IV. A communication pursuant to Article 15(1) RPBA was issued after a summons to attend oral proceedings, which were duly held on 3 March 2017.

- V. The appellant requests that the decision under appeal be set aside, and that the patent be revoked.

The respondent (proprietor) requests that the appeal be dismissed (main request), or alternatively that the decision under appeal be set aside and the patent be maintained in an amended form on the basis of the sole auxiliary request filed with letter dated 12 October 2012. He further requests non-admission of documents D14 to D17, and optionally a remittal to the first instance if the Board would admit D14 to D17 in the proceedings.

- VI. The wording of claim 1 as granted (main request) reads as follows:

"A mobile station (11, 111) in combination with an unmanned vehicle (90), the mobile station (11, 111) comprising:

a vehicular storage area for storing the vehicle (90) during transit or at rest;

a wireless communications device (20, 66) for communicating a status or command between the vehicle (90) and the mobile station (11, 111) during at least one of vehicular deployment and rest; and

a station controller (16) for managing an integral management plan of the vehicle (11, 111) comprising at least one of retooling the vehicle (90), loading a payload (406) on the vehicle (90), and recharging or refueling of the vehicle (90),

characterized by further comprising:

at least one sensor for collecting agronomic data, the  
at least one sensor associated with the vehicle (90),  
and

a management planner for developing an agronomic management plan as a component of the integral management plan based on the collected agronomic data."

VII. As to the main request, the appellant argued as follows:

Claim 1 lacks novelty over D14 and D17, although novelty may not have been properly raised in the notice of opposition. As for inventive step, the subject-matter of claim 1 refers to an apparatus being merely suitable for agronomics, but not strictly limited for agronomics applications. Claim 1 is also not limited to measurements outside the unmanned vehicle. Moreover, the wording "agronomic management plan" of claim 1 is vague and it is left open what is to be done with such a plan. A computer can execute a program, but not a plan. Since the agronomic management plan is considered a non-technical feature, it cannot establish an inventive step over the prior art disclosure.

D1 is considered a good starting point, since it is also possible to use the system of D1 for agricultural purposes: the robot of D1 may be used indoor such as in greenhouses, barns or stables. Moreover, D1 describes two sensors of its mobile robot, a dust level sensor and a fluid level sensor. The fluid level sensor of D1 can also be used for agricultural purposes, e.g., for applying fertilizers in a liquid form. Finally, based on D1's sensor data, a control unit determines maintenance, and retooling is performed automatically, cf. D1. col.6, and fig. 8, step S101. Hence, starting from D1, the skilled person indeed would contemplate to modify the system of D1, and would arrive at an agronomic robot collecting agronomic data on which to base an agronomic management plan, either based on his

common general knowledge or in the light of documents D2, D15, D16 and D17. Therefore, claim 1 as granted (main request) does not involve an inventive step.

VIII. As to the main request, the respondent argued as follows:

Novelty constitutes a new ground, and its introduction into the proceedings is not agreed to. As to inventive step, the subject-matter of claim 1 clearly addresses a sensor to collect agronomic data and an agronomic management plan. Thus, it relates to data collection from outside the unmanned vehicle. This agronomic data is processed by a management plan of the station controller of claim 1 and thus has an effect on, e.g., retooling the unmanned vehicle. By contrast, the mobile robot of D1 is for cleaning purposes only, and its sensors are not suitably adapted to collect agricultural data. Nor is any plan addressed or developed in D1 on the basis of agronomic data. Therefore, starting from D1, the skilled person would not consider to change the mobile robot of D1 designed for cleaning building floors into an agronomic robot collecting agronomic data, much less to develop a management plan based on this data. Thus, claim 1 as granted (main request) is inventive starting from D1 in the light of common general knowledge or the cited prior art documents.

## **Reasons for the Decision**

1. The appeal is admissible.
2. New ground of opposition
  - 2.1 The appellant objects lack of novelty of claim 1 over D14 and D17, and the respondent requests that the late filed documents D14 and D17 should not be admitted into the proceedings for assessing novelty.
    - 2.1.1 Although lack of novelty is indicated as an opposition ground on form 2300, the original notice of opposition of 6 July 2009 contains no identifiable arguments why the claimed subject-matter might lack novelty, but rather includes arguments directed exclusively against inventive step. The ground of lack of novelty is therefore not substantiated in the appellant-opponent's notice of opposition. In the course of the appeal proceedings, the appellant conceded that novelty was not originally raised. Nor was it otherwise subject of the opposition proceedings, the issue neither being identified by the division in its communication annexed to the summons of 1 July 2011 nor discussed at the oral proceedings of 25 January 2012, see the minutes. Therefore, the ground of lack of novelty was not properly submitted and substantiated in opposition. Following G10/91 (OJ 1993, 420), see headnote II, and G7/95 (OJ 1996, 615), see headnote, it therefore constitutes a fresh ground of opposition, which may not be introduced into the appeal proceedings without the agreement of the respondent-proprietor.
    - 2.1.2 Since the respondent declared that he does not agree with its introduction, the ground of novelty was not



introduced into the proceedings. The Board therefore does not have the power to examine novelty of claim 1.

3. Interpretation of claim 1 as granted

3.1 Having regard to its preamble, claim 1 is directed to a mobile station in combination with an unmanned vehicle. In particular, the mobile station comprises *inter alia* a station controller for managing an integral management plan of the vehicle. This management plan comprises at least one of retooling the vehicle, loading a payload on the vehicle, and recharging or refueling of the vehicle.

3.2 With respect to the station controller, the appellant argues that a computer could execute a program, but not a plan. The non-technical feature "management plan" of claim 1 was thus vague and left open what had to be done by means of the station controller of claim 1.

However, the Board concurs with the respondent that the skilled reader would clearly understand from the wording of claim 1 that the integral management plan of the station controller serves to process managerial tasks such as retooling the unmanned vehicle. The management plan of claim 1 indeed constitutes a computer implemented program which causes when necessary a technical effect, namely one of retooling the vehicle, loading a payload on the vehicle, and recharging or refueling of the vehicle.

3.3 As to the characterising part of claim 1, at least one sensor for collecting agronomic data is foreseen. The sensor is associated with the unmanned vehicle. Moreover, a management planner for developing an agronomic management plan as a component of the

integral management plan of the (mobile) station controller is required. The agronomic management plan is developed on the basis of the (sensor) collected agronomic data.

In accordance with online dictionaries "agronomy" is defined as "the practice or (now chiefly) the science of crop production and soil management" (Oxford Online, 2017), and as "a branch of agriculture dealing with field-crop production and soil management" (Merriam-Webster Online, 2017).

3.4 Hence, the collection of agronomic data by means of the vehicle associated sensor of claim 1 unambiguously relates to soil management and crop production. This implies that, as argued by the respondent, the data must relate to conditions outside the unmanned vehicle, rather than inside the vehicle. Moreover, the procedure of an agronomic management plan is initiated in response to the sensor data signal transmitted to the station controller. As advanced by the respondent, since in claim 1 the agronomic management plan is referred to as being a component of the integral management plan, the agronomic data collected by the at least one sensor therefore flows into the integral management plan as a whole and thereby effects in one way or another the tasks defined thereby, for example retooling the vehicle, loading a payload and recharging or refueling etc.

3.5 In summary, the skilled person would readily glean from a contextual reading, that the mobile station together with its unmanned vehicle are not only suitable for agronomic purposes such as soil management and crop production. Rather, claim 1 invariably requires processing of agronomic data when collected and

transmitted from the at least one sensor of the vehicle by means of the (mobile) station controller and its implemented agronomic management plan. In other words, the robotic system of claim 1 is strictly limited to a field of application within agriculture dealing with agronomy and agronomic data.

This understanding of claim 1 is also consistently supported by the description, cf. patent, for example paragraphs 0007, 0037 and 0038 (agronomic management plan), and 0039, 0040 and 0080 (collecting agronomic data). The Board notes that this is irrespective of paragraph 0110, which apparently has not been properly adapted to the wording of claim 1 as granted. In the Board's view, claim 1 clearly excludes non-agronomic embodiments from protection.

4. Inventive step of claim 1 as granted

4.1 As for the assessment of inventive step of claim 1, the appellant argues that document D1 forms a suitable starting point.

However, D1 does not concern a robot and a separate station in the field of agronomic applications. Rather, D1 describes a mobile work robot system that is used in hospitals, clean rooms, etc. where micro-organisms, trash, dust, etc. are to be removed. The mobile robot is equipped to perform prescribed tasks such as cleaning building floors. The working unit of the robot is thus equipped with a dust collecting unit and a wiping unit. The separate station also comprises cleaning means to perform the cleaning and disinfection of the mobile work robot. Cf. D1, abstract, column 1, lines 5-10, column 3, line 3 to column 4, line 35, and figure 1.

- 4.2 The robot of D1 is provided with two types of internally arranged sensors, namely with dust collection sensors and solution level sensors, cf. D1, column 3, lines 39-43 and 56-58. In both cases the amount of trash and dust inside a dust container and the amount of solution inside a tank, respectively, is measured solely inside of the robotic device representing operation conditions of the robot itself, namely fill level. When a signal is received from the robot's internal sensors by the control unit 24 of the separate station (cf. control section 2), the control unit determines to replace the dust unit or to replenish the solution inside the robot, cf. D1, column 6, lines 35-62, and figures 1 and 9.
- 4.3 Contrary to the appellant's view, therefore, the sensors on board the robot of D1 do not collect agronomic data, nor are they considered suitably adapted to collect agronomic data within the meaning of claim 1 as granted, see point 3.4 above. Even less does D1 disclose or address an agronomic management plan to be implemented in the control unit of the separate station and which is developed based on collected agronomic sensor data.
- 4.4 Following from the above, the Board concurs with the respondent that D1 consistently and primarily discloses a mobile robot and separate station that is specifically and exclusively designed for cleaning purposes, in which the fill level sensors collect data only relevant to its internal operational state. It may be that it could be used to clean floors of a greenhouse, but this does not make it a device with an agronomic sensor used for developing an agronomic plan as required by claim 1. Nor would the skilled person

seriously contemplate, as a matter of obviousness, changing the cleaning robot and station of D1 to use the system for collection of agronomic data, let alone to implement an agronomic management plan developed on the basis of this data.

Consequently, starting from the teaching of D1, all lines of attack must fail to demonstrate obviousness of claim 1 as granted in the light of the cited prior art. This is without prejudice to the question of admissibility of late filed evidence or arguments, which thus does not need to be addressed by the Board.

4.5 Thus, the subject-matter of claim 1 as granted according to the main request involves an inventive step and, therefore, complies with the requirements of Articles 100 (a) and 56 EPC.

4.6 In conclusion the Board confirms the decision under appeal that the grounds for opposition do not prejudice maintenance of the patent as granted. Thus, the auxiliary request need not be considered by the Board.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



G. Magouliotis

A. de Vries

Decision electronically authenticated