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**Datasheet for the decision
of 16 October 2025**

Case Number: T 1746/23 - 3.5.01

Application Number: 20155533.1

Publication Number: 3686825

IPC: G06Q10/08

Language of the proceedings: EN

Title of invention:

NETWORK SYSTEM FOR AUTONOMOUS DATA COLLECTION

Applicant:

Astronics Advanced Electronic Systems Corp.

Headword:

Autonomous data collection/ASTRONICS

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - aspects of different use of known asset tracking using RFID tags (no - obvious/non-technical and no synergy)

Decisions cited:

T 1670/07



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Case Number: T 1746/23 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 16 October 2025

Appellant: Astronics Advanced Electronic Systems Corp.
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Representative: Manitz Finsterwald
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 12 May 2023
refusing European patent application No.
20155533.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman W. Chandler
Members: I. Kürten
D. Rogers

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse European patent application No. 20 155 533.1 for lack of inventive step (Article 56 EPC).

The decision refers, *inter alia*, to the following documents:

D1: US 2006/145815 A1

D3: US 2014/002278 A1

II. In the statement setting out the grounds of appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of the refused main or first to sixth auxiliary request.

III. In a communication pursuant to Article 15(1) RPBA, the Board expressed its preliminary view that claim 1 of all requests appeared to lack an inventive step, essentially for the reasons given in the contested decision.

IV. The appellant did not file any substantive reply to the Board's communication. In a letter dated 15 October 2025, the appellant informed the Board that it would not attend the oral proceedings.

V. The oral proceedings took place as scheduled on 16 October 2025 in the appellant's absence. At the end of the oral proceedings, the chairman announced the Board's decision.

VI. Claim 1 of the main request reads as follows:

A system to monitor and to reporting a status of assets on a vehicle, characterized by:

a plurality of RFID tags (16, 18), each RFID tag (16, 18) affixed to a particular asset and containing digitally stored information about the particular asset;

a plurality of RFID readers (12) mounted to said vehicle and positioned such that each one of the plurality of RFID tags (16, 18) is within direct communication with at least one RFID reader (12), wherein the RFID tags (16, 18) are read and their identities are compared to a database of known devices, in order to check for presence of the RFID tags (16, 18);

a data delivery system (26) effective to digitally transmit encrypted information from the plurality of RFID readers (12) to a data collection system;

a secure interface (14) disposed between the data collection system and a communication system; and

the communication system effective to transmit the information to one or more of a flight crew and a ground crew.

VII. Claim 1 of the first auxiliary request adds at the end of the second feature the wording "*wherein the database is configured for a particular aircraft*".

VIII. Claim 1 of the second auxiliary request replaces the clause starting with "wherein" in the second feature of claim 1 of the main request with the following:

wherein a wireless access point initiates an RFID read of the RFID tags (16, 18) all at once, wherein the read RFID tags (16, 18) are compared to known devices, wherein a check for presence based on a database is performed and a verification of dates of dated items is

performed to determine if the dated items are still within a useable range.

- IX. Claim 1 of the third auxiliary request combines the features of claim 1 of the first and second auxiliary requests.
- X. Claim 1 of the fourth auxiliary request is based on claim 1 of the second auxiliary request, with the term "*vehicle*" replaced by "*aircraft*".
- XI. Claim 1 of the fifth auxiliary request combines the features of claim 1 of the third and fourth auxiliary requests.
- XII. Claim 1 of the sixth auxiliary request deletes the words "*one or more of*" from the last feature of claim 1 of the fifth auxiliary requests.

Reasons for the Decision

1. *The invention*

The invention concerns monitoring and reporting the status of assets on a vehicle, such as emergency equipment on an aircraft (e.g. [0007] to [0009] of the application as filed).

Looking at Figure 1, each asset is fitted with an RFID tag (16, 18) storing information about it. RFID readers (12), mounted on the vehicle, retrieve data from the tags, including their IDs. The IDs are compared to a database of known devices to verify the tags' presence.

The data collected by the RFID readers is encrypted and transmitted to a central data collection system and then forwarded to flight or ground crews via a secure interface ([0013], [0014] and [0019]).

2. *Main request - inventive step*

2.1 The examining division held that claim 1 lacked an inventive step over D1.

D1, like the present application, concerns the use of RFID technology for physically tracking inventory assets. The disclosed system comprises multiple RFID tags (Figure 4: 102 (passive), 104 and 106 (active)) attached to inventory items and a number of RFID readers (110, 112, 114 and 122) that collect data from these tags and transmit it to a central server (108) (see also [0042] to [0047]).

2.2 The examining division found that claim 1 differed in that:

- a) the assets were *on a vehicle* and the readers were *mounted on the vehicle*;
- b) the system was effective to *transmit information to a flight and/or ground crew*;
- c) the information transmitted from the RFID readers to the data collection system was *encrypted*;
- d) the RFID tag identities were compared to a database of known devices, to verify the tags' presence.

2.3 The appellant argued that the distinguishing features worked together to improve the vehicle's operational safety. Specifically, features a) and d) helped identify missing parts that could pose a safety risk, feature b) ensured that this risk was communicated to flight or ground crews, and feature c) prevented tampering with the data, further supporting safe operation.

2.4 However, the Board is not convinced by this argument and agrees with the examining division that features a) to d) do not interact to produce a synergistic effect.

First, none of the differences affects the vehicle's operational safety. Although features a) and d) relate to monitoring assets on the vehicle, the claim is not limited to safety-critical components. It equally covers, for instance, galley or entertainment equipment on an aircraft, which are irrelevant to safe operation. As the collected data does not necessarily pertain to safety, encrypting it (feature c)) and transmitting it to ground or flight crews (feature b)) also do not affect operational safety.

Moreover, under the jurisprudence of the Boards of Appeal, a synergistic effect requires more than individual features addressing the same technical problem or their effects merely adding up (Case Law of the Boards of Appeal, 11th edition, I.D.9.3.1). This means that even if claim 1 were limited to safety-critical assets and each of the differentiating features contributed to safety, their combined effect must exceed the sum of their individual contributions. This is not the case here, as features a) to d) are not functionally interdependent. For instance, mounting an RFID reader on the vehicle (feature a)) only affects

the data collection and does not influence the processing and transmission of data (features b) to d)). Similarly, verifying the presence of RFID tags (feature d)) has no effect on data encryption or transmission (features b) and c)).

Accordingly, the differences can be assessed separately for inventive step, as done in the contested decision (see page 5 of the decision).

2.5 Re a):

D1 does not specify the environment in which inventory tracking takes place. Its background section mentions examples such as manufacturing facilities and warehouses. The Board agrees with the examining division that the drawing up of an inventory of assets in a vehicle represents a non-technical requirement that may arise from regulatory or administrative obligations (see also paragraph [0025] of the application). Only the manner in which this requirement is technically implemented can be taken into account for assessing inventive step.

The claimed implementation, however, is obvious in view of the prior art. D1 already discloses RFID tags affixed to inventory items (e.g. [0044]). Given the non-technical requirement to monitor assets on a vehicle, it would be self-evident to attach the RFID tags to those assets. Furthermore, the aim of autonomous and continuous data collection (see [0007] of the application) naturally leads to using stationary RFID readers mounted on the vehicle. This conclusion is also endorsed by D3 ([0020]), which suggests the same solution to address the same problem.

2.6 Re b):

The Board agrees with the examining division that transmitting information to flight or ground crews is a non-technical requirement concerning the information's recipients. Merely specifying that a communication system is "effective to transmit" information amounts to a statement of the requirement itself, rather than presenting a non-obvious technical means for achieving it.

The appellant's contention that alerting crew members to missing items enhanced safety is not convincing. As the examining division stated (decision, point 1.2), the impact on safety depends on the crew's reaction, which lies outside the scope of claim 1 and therefore cannot be taken into account for the assessment of inventive step (see, e.g. T 1670/07 - *Shopping with mobile device/NOKIA*, point 11).

2.7 Re c):

The Board agrees with the examining division that encryption is an obvious measure that the skilled person routinely performs to secure data.

2.8 Re d):

As the appellant noted (grounds of appeal, page 9), in D1, each RFID reader maintains a database of nearby tags and periodically requests responses from them (see [0068]). The appellant argued that claim 1 differed in the way non-responding tags were handled. In D1, the IDs of non-responding tags were removed from the reader's database, whereas in claim 1, these IDs were

sent to the data collection system and onward to ground or flight crews.

The Board does not consider that this difference is specified by claim 1 as it does not define how non-responding tags are treated. It merely requires that "encrypted information" be transmitted from the readers, without specifying its content. Even if it were, the step of notifying the crew of missing items would still represent a straightforward automation of a non-technical administrative task and would therefore be obvious.

The appellant's argument that D1 fails to explain how the database is created is irrelevant, as claim 1 does not address this aspect either. Likewise, the alleged security risk from ignoring non-responding tags is immaterial, as notifying crew members of such tags has no impact on security either (see point 2.6 above).

2.9 Hence, claim 1 of the main request does not involve an inventive step (Article 56 EPC).

3. *Auxiliary requests - inventive step*

3.1 The auxiliary requests add the following features:

1) the vehicle is an aircraft (fourth to sixth auxiliary requests);

2) the database is configured for a particular aircraft (first, third, fifth and sixth auxiliary requests);

3) a wireless access point initiates an RFID read of the RFID tags all at once (second to sixth auxiliary requests);

4) a verification of dates of "dated items" is performed to determine if they are still within a usable range (second to sixth auxiliary requests);

5) the information is transmitted to a flight and ground crew (sixth auxiliary request).

3.2 None of these amendments changes the conclusion on inventive step. As already held at first instance, the additional features are, individually or in combination, either non-technical or obvious for the skilled person. In particular:

3.3 Re 1), 2):

Adapting the system disclosed in D1 for use on an aircraft, or configuring the database for a particular aircraft, represents a straightforward application of known RFID-based inventory tracking to a different environment with similar monitoring needs. Such contextual adaptation does not entail any technical modification of the underlying system and therefore does not affect the assessment of inventive step for the main request.

The appellant observed that D1 concerned inventory management in stationary facilities (e.g. warehouses or factories) and argued that the skilled person would not adapt such a system for a moving aircraft.

The Board is not convinced by this argument as the claim does not include any features that exploit the

aircraft's mobility. From both the technical and asset monitoring standpoint, the requirements of a stationary or mobile environment are comparable, and the skilled person would immediately recognise that the system of D1 could be employed in any enclosed space requiring inventory management.

3.4 Re 3):

The feature of "*read[ing] all tags at once*" is ambiguous. As a result, this feature does not have a technical effect and cannot contribute to inventive step (see also points 3 and 3.1 of the decision). Nevertheless, in the Board's view, any of the possibilities of reading "all tags at once" are known options that the skilled person would choose without exercising inventive step (see, e.g., [0020] of the application). One option is also suggested by D1, where the reader broadcasts a poll message to all nearby tags (e.g. [0055], [0065]).

3.5 Re 4):

The Board shares the examining division's view that verifying whether item dates fall within useable ranges does not solve a technical problem, but rather constitutes a non-technical administrative or logistic check.

The appellant's position that this verification enhances safety cannot be accepted. The claim is not restricted to safety-critical items, and may equally encompass goods such as amenity kits or magazines, where expiration relates to quality or service rather than safety. In other words, the generality of the claim does not justify such a specific problem, but

rather the more general non-technical one of improving inventory management. Moreover, simply informing crews about expired or unusable items, does not mitigate any safety risks these items may pose (see point 2.6 above).

3.6 Re 5):

The appellant argued that transmitting information to both flight and ground crews was technical because it required technical communication means for use inside and outside the aircraft.

However, neither the claim nor the application provides any technical implementation details of such means. Without such details, the transmission of information to both flight and ground crews must be considered as a non-technical requirement with an obvious technical implementation.

3.7 For the reasons set out above, the Board considers that claim 1 of all auxiliary requests lacks an inventive step (Article 56 EPC).

4. As none of the appellant's requests is allowable, it follows that the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



T. Buschek

W. Chandler

Decision electronically authenticated