

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FARMERS EDGE, INC., FARMERS EDGE (US), INC.,
Petitioner,

v.

AGI SURETRACK, LLC,
Patent Owner.

IPR2023-00159
Patent 11,151,485 B2

Before FRANCES L. IPPOLITO, ROBERT L. KINDER, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

DOUGAL, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

A. *Background and Summary*

Petitioner, Farmers Edge Inc. and Farmers Edge (US) Inc., requests that we institute an *inter partes* review challenging the patentability of claims 1–10 (the “challenged claims”) of U.S. patent 11,151,485 B2 (Ex. 1001, “the ’485 patent”). Paper 1 (“Pet.”). Patent Owner, AGI SureTrack, LLC¹, argues that Petitioner’s request is deficient and should not be granted. Paper 6 (“Preliminary Response” or “Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 8, “Reply”) to Patent Owner’s Preliminary Response, and Patent Owner filed a Sur-reply (Paper 9, “Sur-reply”) to Petitioner’s Reply.

Applying the standard set forth in 35 U.S.C. § 314(a), which requires demonstration of a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we deny the Petition and decline to institute an *inter partes* review.

B. *Related Matters*

The parties identify the following related district court litigation: *Farmobile LLC v. Farmers Edge Inc. et al.*, No. 8:22-cv-00275 (D. Neb.). Pet. 59; Paper 7, 1. Patent Owner also identifies the following related *inter partes* reviews: IPR202200158, IPR2022-00164, IPR2022-00165, and IPR2022-00166. Paper 7, 1.

C. *The ’485 Patent*

The ’485 patent is titled “Farming Data Collection and Exchange System,” and is directed to “capturing, processing and sharing farming

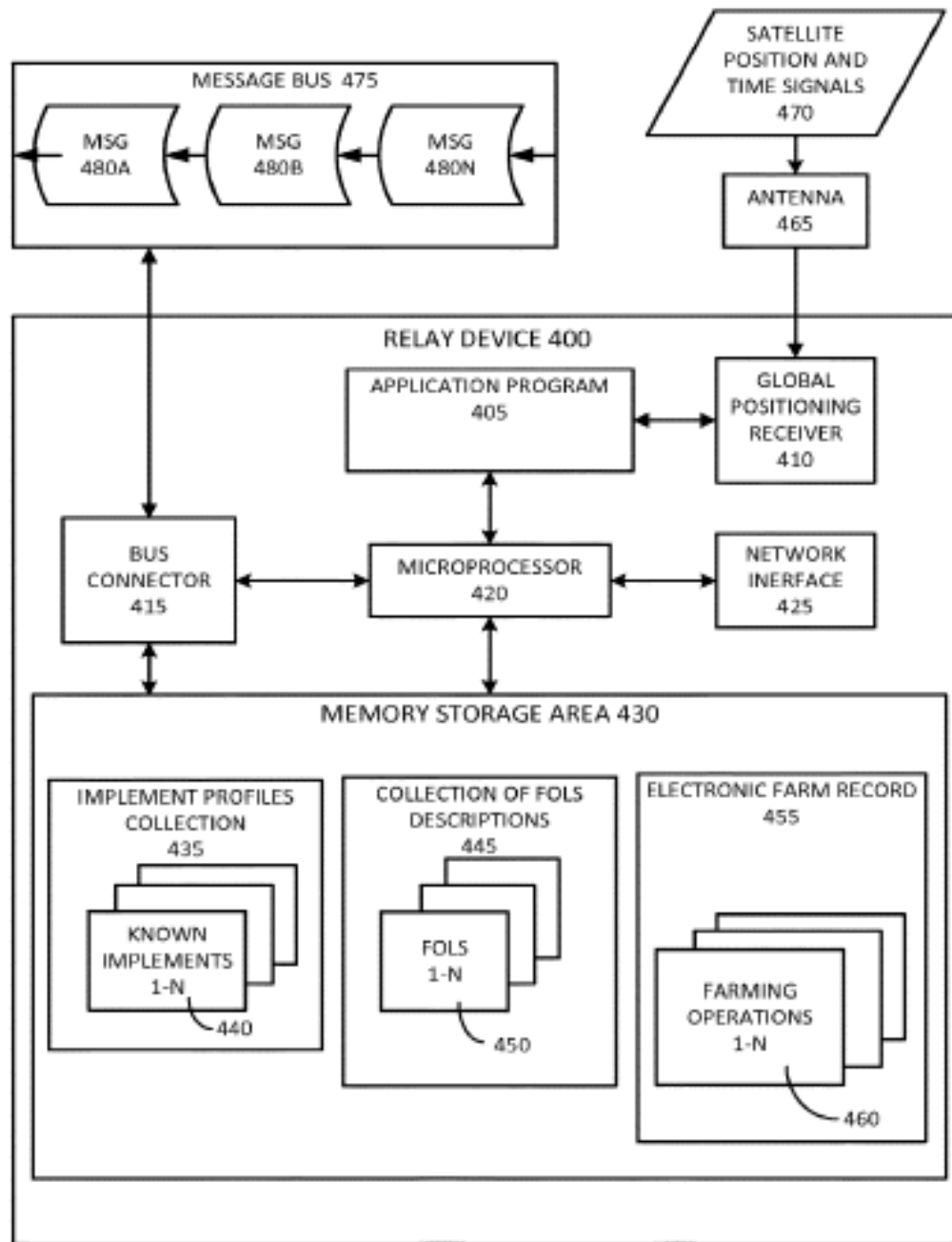
¹ We are informed that the Patent Owner has changed from Farmobile LLC to AGI SureTrack, LLC. Paper 11, 1.

operation data generated during combined use of the farming vehicle and farming implement.” Ex. 1001, codes (54), (57).

The ’485 patent teaches that precision farming is a known technique which “permits farming businesses to program the farming equipment to carry out farming operations almost entirely under automated control.” *Id.* at 1:39–48. Precision farming “can automatically activate and deactivate the machines, and even particular sections, row units, nozzles or blades on the implement at precisely the right time and place in order to optimize inputs such as seed, pesticide and fertilizer, and thereby achieve greater yields.” *Id.* However, the ’485 patent conveys that these systems have “failed to provide . . . an easy-to-use, unobtrusive, secure and reliable way to capture, store, share and profit from what is fast becoming a massive amount of very detailed, and enormously valuable, farming operation data generated by these automated farming techniques, machines and computer systems.” *Id.* at 2:4–12.

The ’485 patent addresses this and other “problems by providing a relay device, a farming data exchange system and computer-implemented methods for tracking, collecting, storing and sharing farming operation data for farming businesses.” *Id.* at 3:18–22. Figure 4, reproduced below, is a block diagram of “the primary physical and logical components of a relay device 400” together with certain other components. *Id.* at 13:50–54.

FIG. 4



As shown in Figure 4, above, the block diagram includes relay device 400, message bus 475, and antenna 465. The relay includes microprocessor 420, bus connector 415, global positioning receiver 410, memory storage area 430, application program 405, and network interface 425. Message bus

475 can be positioned on a farming vehicle or farming implement and can send messages to relay 400 through the relay's bus connector 415. *Id.* at 13:63–14:2. The relay's global positioning receiver 410 is connected to antenna 465 which is configured “to receive position and time signals 470 generated by space-based satellites.” *Id.* at 14:2–6.

Memory storage area 430 stores electronic farm record 455, descriptive information about one or more farming operation land segments associated with the farming business 445, and a collection of implement profiles 435. *Id.* at 14:7–15, 14:36–48. The “collection 435 of implement profiles [can] defin[e], for a collection of known farming implements 440, a known manufacturer code, a known device class, a known version and a known communication protocol.” *Id.* at 14:7–11.

Application program 405 includes programming instructions for microprocessor 420 to cause the microprocessor to automatically extract content from one or more messages transmitted on the message bus, and then use the extracted content to automatically determine whether there is a match between the farming implement used to perform the farming operation and a known farming implement 440 in the collection of implement profiles 435. *Id.* at 14:60–15:2. When there is a match, the system “knows” which farming implement is being used, and can rely on the stored communication protocol in the profile to communicate with the farming implement over the message bus according to this communication protocol. *Id.* at 15:2–22.

Application program 405 can also use the extracted content, the position and time signals from the GPS receiver, and the known communication protocol defined by the implement profile for the known farming implement to determine a set of operating events that occur during

performance of the farming operation. *Id.* at 15:16–29. Application program 405 can also record other information about the farming operations, farming operation land segments, etc. *Id.* at 15:29–51.

D. Illustrative Claim

Of the challenged claims, claim 1 is the only independent claim:

1. A relay device for tracking farming operations for a farming business, comprising:

(a) a microprocessor;

(b) a bus connector for connecting the relay device to a message bus on a farming vehicle or farming implement, wherein the message bus is configured to carry message data generated by the farming vehicle or the farming implement while the farming vehicle and the farming implement are used to perform the farming operation;

(c) a global positioning system receiver that receives position and time signals from space-based satellites while the farming operation is performed;

(d) a memory storage area comprising

(i) a buffer for receiving and storing the message data carried on the message bus,

(ii) a defined filter set for the message data,

(iii) an electronic farm record for the farming business,

(iv) descriptive information about a farming operation land segment associated with the farming business, and

(v) a plurality of implement profiles each defining, for a known farming implement, a known manufacturer code, a known device class, a known version and a known communication protocol; and

(e) an application program comprising programming instructions that, when executed by the microprocessor, will cause the microprocessor to automatically

(i) extract content from the message data based on the defined filtering set and use the extracted content to determine that there is a match between the farming implement used to perform the farming operation and the known farming implement corresponding to one of the plurality of implement profiles,

(ii) use the extracted content, the position data, the time data and the known communication protocol defined by said one of the plurality of implement profiles to determine a set of operating events for the farming operation,

(iii) determine, based on the set of operating events, that at least one section of the farming implement was in a deactivated state during at least part of the farming operation,

(iv) determine a travel path for the farming operation based on the deactivated state and the position data and time data, and

(v) record in the electronic farm record a travel path description for the farming operation;

(f) wherein the travel path includes only areas of land on the farming operation land segment where the farming vehicle and farming implement traveled while the farming implement was not in the deactivated state, and does not include any areas of land on the farming operation land segment where the farming vehicle and the farming implement either (i) traveled while the farming implement was in the deactivated state, or (ii) did not travel during the farming operation.

Ex. 1001, 25:34–26:22.

E. Evidence

Petitioner's grounds of unpatentability rely on the following evidence:

Name	Patent Document	Exhibit
Nadison 610	EP 2,529,610 A1 (Dec. 5, 2012)	1006
Nadison 630	EP 2,530,630 A1 (Dec. 5, 2012)	1007

Name	Non-Patent Literature	Exhibit
ISO11783	ISO 11783-1:2007(E) (2007) (Part 1); ISO 11783-3:2007(E) (2007) (Part 3); ISO 11783-5:2001(E) (2007) (Part 5); ISO 11783-6:2004(E) (2004) (Part 6); ISO 11783-7:2002(E) (2002) (Part 7); ISO/FDIS 11783-10:2007(E) (2007) (Part 10); ISO 11783-13:2007(E) (2007) (Part 13); ISO 11783-11:2007(E) (2007) (Part 11)	1008, 1009, 1010, 1011, 1012, 1013, 1029, 1032

F. Asserted Grounds

Petitioner asserts the following grounds of unpatentability (Pet. 10), supported by the declaration of Aaron C. Ault (Ex. 1002):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–10	103	Nadison 610, Nadison 630, ISO11783

In its response, Patent Owner relies on the declaration of George Edwards (Ex. 2001).

II. ANALYSIS

A. Legal Standards

Petitioner bears the burden to demonstrate unpatentability. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). At this preliminary stage, we determine whether the information presented in the Petition shows a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been obvious over the proposed combinations of prior art. *See* 35 U.S.C. § 314(a).

A claim is unpatentable as obvious if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention

was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). We resolve the question of obviousness based on underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the prior art and the claims; (3) the level of skill in the art; and (4) when in evidence, objective indicia of nonobviousness. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

We apply these principles to the Petition’s challenges.

B. Level of Ordinary Skill in the Art

We review the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention. *Id.* at 13, 17. Petitioner asserts that a person of ordinary skill in the art

would have had a bachelor’s degree in either electrical, computer, mechanical, or agricultural engineering or a similar degree and [] at least 2 years of experience in heavy machinery telematics, and agricultural practice (including modern farming machinery and precision agriculture devices and systems), as well as networking and communications protocols specific to modern farming machinery and software development. Additional education would compensate for less experience, and vice-versa.

Pet. 11. Patent Owner accepts Petitioner’s level of skill at this stage. Prelim. Resp. 15. For purposes of this Decision, we adopt Petitioner’s proposal as reasonable.

C. Claim Construction

In *inter partes* review, we construe claims using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b), including construing the claim in

accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2022).

The parties assert that no terms require express construction. Pet. 16; Prelim. Resp. 15. We agree. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. 35 U.S.C. § 103

Petitioner argues that the combination of Nadison 610, Nadison 630, and ISO11783 renders obvious claims 1–10. Pet. 17–55. Patent Owner argues Petitioner has not demonstrated a reasonable likelihood of success showing that at least claim 1 is unpatentable. *See* Prelim. Resp.

For the reasons expressed below, we determine that Petitioner has not established a reasonable likelihood of succeeding in showing that at least claim 1 is unpatentable.

1. Nadison 610

Nadison 610 is titled “Method for harvest monitoring.” Ex. 1006, code (54). Nadison 610’s “invention relates to a method for monitoring agricultural work, in particular for monitoring the amount of product harvested[, and] further concerns a computer program, a processing unit and an agricultural machine for performing the method.” *Id.* ¶ 1. Nadison 610 explains that “harvest control allows for optimization of harvesting logistics, storage management, processing and packaging logistics and for adjustments of supply opposite demand.” *Id.* ¶ 6. Nadison 610 identifies “yield monitoring systems,” but further explains that for some harvesters, the

sensors built into the machinery are unreliable or absent. *See id.* ¶ 7 (stating that “for most specialty harvesters (e.g. vegetable, potato) such systems are either not available or not reliable enough.”). Nadison 610 notes that “the large variation of size, shape, density and sensitivity of the various crops requires very specific designs for each yield monitoring system,” and “other material such as soil or other plant parts (leaves) moved through the harvester together with the product create additional challenges.” *Id.*

Nadison 610 proposes a solution for monitoring the amount of product harvested. *Id.* ¶ 11. Nadison 610 uses “a predetermined yield map” with “positional data and sensor data” that conveys location of the agricultural machine and information on the state of the equipment of the agricultural machine. *Id.* The amount of product harvested is calculated based on the positional data, the sensor data, and the predetermined yield map. *Id.* Nadison 610 further explains that “the amount of product harvested is calculated on basis of the length of the path harvested as determined from the positional data, the yield map and the working width of the machine.” *Id.* ¶ 27. Nadison 610 describes that “the sensor data comprises information on a state of the equipment, wherein the state of the equipment includes information whether the equipment is active, i.e. engaged and/or running, and whether product is flowing through the equipment.” *Id.* ¶ 35.

2. *Nadison 630*

Nadison 630, titled “Method for position monitoring,” was filed on the same day by the same inventors and same applicant as Nadison 610. *Compare*, Ex. 1006, codes (22), (71), (72), *with* Ex. 1007, codes (22), (71), (72). Similar to Nadison 610, Nadison 630 is also directed to monitoring agricultural work. Ex. 1007, code (57). Nadison 630, however, is focused on “continuously providing positional data and sensor data to the processing

unit while the agricultural machine is in operation, [...and] continuously checking, whether the agricultural machine is inside a predetermined field, plot or patch based on the positional data, the sensor data and the field map.”

Id. at ¶ 10. Nadison 630 explains that when the processing unit determines that the agricultural machine is outside the predetermined field, plot or patch, the processing unit will take remote control of the machine by “interact[ing] with the equipments control system through mechanical, hydraulically or electrical activators or through interacting with an electric or electronic control systems such as the Implement-ISOBUS.” *Id.* at 33.

3. ISO11783

Petitioner asserts, and Patent Owner does not dispute, that ISO11783 “is comprised of thirteen parts.” Pet. 10; *see also generally* Prelim. Resp. Though the ISO 11783 standard includes thirteen parts, Petitioner only relies on, or cites, parts 1, 3–7, 10, 11, and 13.² *See* Pet. 19. Part 4 is also in evidence (Ex. 1039), but is not relied on by Petitioner. Thus, for the purposes of this Decision, ISO11783 is limited to parts 1, 3–7, 10, 11, and 13, and we do not rely on or consider the other parts.

Generally, the ISO11783 specifies a communications system for agricultural equipment based on the CAN 2.0 B protocol and Society of Automotive Engineers (“SAE”) J 1939 documents developed jointly for use in truck and bus applications and for construction and agriculture applications. Ex. 1008, 5. According to ISO11783, the disclosed system is

² Exhibits 1008–1013, 1029, 1032 contain two sets of page numbers. The Petition refers to the page numbers in bold, which are not the same numbers as the stamped exhibit page numbers. For clarity, we refer to the exhibit page numbers and reference the citation in the Petition when needed.

intended to “enable electronic control units (ECUs) to communicate with each other, providing a standardized system.” *Id.*

To this end, ISO11783 teaches that “device description data” specifies device-related properties that can be supplied by the device manufacturer as a set of XML definitions. Ex. 1013, 28. As an example, ISO11783 teaches that

a device description for a sprayer contains the geometry of the sections or nozzles, the number of tanks and their volumes, and supported process data variables. This information shall be specified by DeviceElement, DeviceProperty, and DeviceProcessData XML elements in the file.

The first element of DeviceElements represents the device itself and gets ElementNumber = 0. For this DeviceElement, the ParentIdRef refers to the XML element device.

Id. Additionally, ISO11783 discloses that each device is defined by at least one XML element 'DeviceElement' and the optional device-element-related XML elements 'DeviceProcessData', 'DeviceProperty' and 'ValuePresentation'. *Id.* at 32. ISO11783 further teaches that “[b]y defining these device descriptions of XML elements as objects similar to how objects are used inside an object-pool definition of ISO 11783-6, all device-related data can be transferred to the task controller by means of the ISO 11783 transport protocol and/or extended transport protocol.” *Id.*

4. *Analysis of the Claims*

Petitioner argues that independent claim 1 is taught by the combination of Nadison 610, Nadison 630, and ISO11783. Pet. 17–42. Generally, Petitioner relies on the similar teachings of Nadison 610 and Nadison 630 for the majority of the features of claim 1 and on their combination with ISO 11783 for the features involving a “plurality of implement profiles” *Id.*

Patent Owner disagrees, arguing, among other things, that Petitioner fails to show that the cited references teach or suggest “a plurality of implement profiles . . . each defining . . . a known communication protocol,” as required by claim 1. Prelim. Resp. 16–24. On this record, we agree with Patent Owner.

As all of the challenged dependent claims depend from claim 1, this limitation is relevant to all challenged claims.

a) Implement Profiles

Claim 1 includes the following limitation:

a memory storage area comprising . . . (v) a plurality of implement profiles each defining, for a known farming implement, . . . a known communication protocol.

Ex. 1001, 25:47–56.

Petitioner asserts that Nadison 610 discloses a memory means 32 that stores various types of farming-related data. Pet. 24. Petitioner adds “it would have been obvious—in view of ISO11783—to store ‘a plurality of implement profiles each defining, for a known farming implement . . . a known communication protocol’ on the device described in the Nadison references.” *Id.* at 30. Petitioner contends that

[a] POSITA would have understood in view of ISO11783 that the NAME field of the address claim procedure is used to identify a machine, including its ISO11783-defined manufacturer code, device class, and version. . . . *A POSITA would have also understood that part 10 of ISO11783 teaches to identify a device description object pool [(“DDOP”)] (i.e., a “communication protocol”) using the NAME field.*

Id. at 30 (citing Ex. 1002 ¶¶ 168–170) (emphasis added); *see id.* at 31 (“Part 5 of ISO11783 states that ‘[e]very ECU transmitting messages on an ISO11783 network shall have a NAME,’ which ‘describes its function and

place in the network.”). In other words, Petitioner argues that because ISO11783 teaches identifying a machine or device using the NAME field, a POSITA would have found it obvious to identify a known communication protocol in that same field. *Id.*

However, the portions of ISO11783 cited in the Petition do not support Petitioner’s arguments or Mr. Ault’s testimony in this regard. For example, Petitioner argues that ISO11783, Part 10 teaches “objects containing the device description data” for the implements include manufacturing code, device class, and device software version. Even assuming Petitioner is correct, missing from this disclosure is any mention of a “communication protocol” required by claim 1. Pet. 29; *see also* Ex. 1013, 33 (cited as page 27 in the Petition).

As another example, page 28 of ISO11783, Part 10 (cited as page 22 in the Petition) teaches that the task controller stores the device description for transfer back to the FMIS (farm management information system), but *does not* teach the NAME field or device description includes a communication protocol. Ex. 1013, 33; Pet. 29–30 (citing Ex. 1013, 27). Rather, ISO11783 teaches that “[t]he task controller shall also store the device description for transfer back to the FMIS. For this transfer of the device description data over the ISO 11783 CAN network, a set of objects is defined. The objects containing the device description data are described in Annex A.” Ex. 1013, 28.

Turning to ISO11783 Table A.1 (reproduced below), Annex A describes attributes of ISO11783's DeviceObjects.

Table A.1 — DeviceObject definition

Attribute Name	Type	Size (bytes)	Range or Value	Record Byte	Description
Table ID	String	3	DVC	1-3	XML element namespace for Device.
Object ID	Integer	2	0	4-5	Unique object identifier inside this object pool. Device Object ID = 0.
Number of designator chars (N)	Byte	1	0 .. 32	6	Length of following designator string.
Device Designator	String	0 .. 32		7	Descriptive text to identify this device. This text can be displayed to the operator.
Number of Software version chars (M)	Byte	1	0 .. 32	7+N	Length of following software version string.
Device Software Version	String	0 .. 32		8+N	Software version indicating text.
WorkingSet MasterNAME	Double Integer	8		8+N+M	NAME of Working-set master. The NAME structure is defined in ISO 11783-5
Number of DeviceSerial-Number chars (O)	Byte	1	0 .. 32	16+N+M	Length of following DeviceSerialNumber string.
DeviceSerial Number	String	0 .. 32		17+N+M	Device and manufacturer-specific serial number.
Device Structure Label	String	7		17+N+M+O	Label given by Device to identify the Device Description Structure. This label allows the device to identify the current version of the Device Description Object Pool present in a Task Controller and to determine whether an update is needed.
Device Localization Label	Byte Array	7		24+N+M+O	Label given by Device to identify the Device Description Localization. Bytes 1 to 6 are defined by the Language Command PGN (see ISO 11783-7). Byte 7 is reserved and set to FF ₁₆ .

Table A.1 labeled “DeviceObject definition” lists attribute names in a far-left column with descriptions for each attribute name in a far-right column. *Id.* at 27. While Annex A provides several definitions for the DeviceObject, Petitioner has not explained persuasively how any of these fields is or includes a “communication protocol.” Indeed, Petitioner has not explained sufficiently how the ISO11783 teaches that a communication protocol is defined as part of the DeviceObject, device descriptions, or NAME field. As shown, Annex A does not discuss or mention a communication protocol for any of these definitions.

Likewise, ISO11783, Table 1-NAME fields (reproduced below), also does not mention a communication protocol.

Table 1 — NAME fields

Field	Definition	No. of bits	Byte no.	Byte ordering ^a	
Self-configurable address	Indicates whether an ECU is self-configurable (1) or not (0); needs always to be known and set to the appropriate value	1	8	Bit 8: Self-configurable address	
Industry group	Defined and assigned by ISO, identifies NAMEs associated with industries (e.g. agricultural equipment)	3		Bit 7 to bit 5: Industry group (most significant at bit 7)	
Device class instance	Indicates occurrence of a particular device class in a connected network; definition depends on industry group field contents (see Figure 1)	4		Bit 4 to bit 1: Device class instance (most significant at bit 4) ^b	
Device class	Defined and assigned by ISO, provides a common NAME for a group of functions within a connected network; when combined with an industry group can be correlated to a common NAME, e.g. "planter" with "agricultural equipment"	7	7	Bit 8 to bit 2: Device class (most significant at bit 8)	
Reserved	Reserved for future definition by ISO	1		Bit 1: Reserved	
Function	Defined and assigned by ISO: when value between 0 and 127, independent of any other field for definition; when > 127 and < 254, definition depends on device class; when combined with industry group and device class, can be correlated to a common NAME for specific hardware, though not implying any specific capabilities	8	6	Bit 8 to bit 1: Function (most significant at bit 8)	
Function instance	Indicates specific occurrence of a function on a particular device system of a network ^a	5		5	Bit 8 to bit 4: Function instance (most significant at bit 8)
ECU instance	Indicates which of a group of ECUs associated with a given function is referenced ^c	3			Bit 3 to bit 1: ECU (most significant at bit 3)
Manufacturer code	Assigned by committee (see ISO 11783-1), indicates manufacturer of ECU for which the NAME is being referenced; independent of any other NAME field	11	4	Bit 8 to bit 1: Most significant 8 bits of manufacturer code (most significant at bit 8)	
			3	Bit 8 to bit 6: Least significant 3 bits of manufacturer code (most significant at bit 8)	
Identity number	Assigned by the ECU manufacturer, necessary where the NAME is not unique (i.e. two identical NAMEs on the same network)	21		Bit 5 to bit 1: Most significant 5 bits of identity number (most significant at bit 5)	
			2	Bit 8 to bit 1: Second byte of identity number code (most significant at bit 8)	
			1	Bit 8 to bit 1: Least significant byte of identity number (most significant at bit 8) ^c	
NOTE See 11783-1 for numerical values of industry groups, device classes, functions and manufacturer codes.					
^a The byte ordering of the NAME fields is arranged so that the NAME can be treated as a number, consistent with ISO 11783-7 [3].					
^b Bit 1 is the last of the data bits sent and closest to the cyclic redundancy code (CRC) in the message.					
^c Bit 8 is the bit closest to the data link control (DLC) in the message.					

Table 1 labeled “NAME fields” lists a “Field” in a far-left column with a “Definition” for each Field in a column adjacent. Ex. 1010, 10. ISO11783 explains that “[e]ach ECU on a network shall have at least one NAME, identifying the ECU by its primary function. Network integrators and ECU manufacturers shall ensure that each ECU on a particular network has a unique NAME not possessed by another ECU on that network.” Ex. 1010, 9.

Thus, the purpose of the NAME field is to describe an ECU's "function and place in the network, and any function on a network can be designated by a NAME." *Id.* Missing, however, from this disclosure is any teaching regarding communication protocols. More importantly, Petitioner has not explained sufficiently why a POSITA would have defined a known communication protocol in the NAME field when the NAME field is directed to identifying the ECU's *function* and *place*.

The testimony from Petitioner's expert, Mr. Ault, is not persuasive in this regard. *See* Ex. 1002 ¶¶ 165–170. For example, in paragraph 152 of his declaration, he repeats the same citations of ISO11783 presented in the Petition. Ex. 1002 ¶ 165. Mr. Ault testifies that

the POSITA would have understood that ISO11783 standard part 10 *directly teaches the POSITA to identify a device description object pool (a "communication protocol" in the language of the '485 patent) using the NAME field (as WorkingSetMasterNAME) as well as other items such as a "Device Software Version" in table A-1.*

Ex. 1002 ¶ 165 (emphases added). Initially, we note that a citation to the entirety of ISO11783, Part 10 is hardly helpful. We decline to speculate on the specific disclosure the Petitioner relies upon in these 100 pages. Still, we observe that ISO11783 teaches that the NAME field describes the NAME of Working-set master, but does not describe a communication protocol. *See* Ex. 1013, 33. Similarly, the Device Software Version is described as "Software version indicating text;" not a communication protocol. *Id.* In other words, neither field includes a communication protocol.

Additionally, in paragraph 166, Mr. Ault states, "the ISO11783 standard explicitly recognizes that 'device description data' used to specify 'device-related properties' must be 'known' by the 'farm management

information system’ in order to perform tasks with the implement.” Ex. 1002 ¶ 166. Later, in paragraph 168, Mr. Ault asserts that the ISO11783 NAME field identifies an electronic control unit’s function and place on the network. *Id.* ¶ 168 (“[T]he NAME field includes a device class, manufacturer code, and identity number ISO11783 part 5 . . . explains the device class ‘provides a common NAME for a group of functions . . . e.g. ‘planter’ with ‘agricultural equipment.’”). We agree that ISO11783 teaches how an ECU identifies itself to other ECUs in the network. Nevertheless, Mr. Ault does not explain where ISO11783 teaches that that identification must include a communication protocol in the NAME field.

Mr. Ault further alludes that ISO11783 provides a standardized, and thus known, communication protocol that supports the use of proprietary communications simultaneous with standardized messages. Ex. 1002 ¶ 64. Mr. Ault later surmises that “it would have been obvious to a POSITA to store proprietary message formats for manufacturers that use proprietary message format.” *Id.* ¶ 170.

We observe that in paragraphs 63 and 64 of his declaration, Mr. Ault relies on Exhibit 1014, titled “An Electronic Communication Protocol for Agricultural Equipment,” for the proposition that ISO11783 “supports the use of proprietary communications simultaneous with standardized messages” and “[m]anufacturers are free to implement enhanced control and information systems beyond those directly supported in the standard.” *Id.* ¶ 64 (citing Ex. 1014, 7)³. We understand this cited disclosure in Exhibit 1014 acknowledges that proprietary communications are *beyond those*

³ Petitioner cites to page 9, however, we use the stamped page numbers for the exhibit.

directly supported in the ISO11783 and that enhanced control and information systems are required for proprietary communications. *Id.* Said another way, these statements are consistent with our understanding that ISO11783 does not, by default, teach proprietary communication protocols defined in the device description fields, e.g., NAME field. Ex. 1014, 7 (“ISO11783 does not provide a complete design that can be implemented without further considerations on agricultural equipment.”). That being the case, we agree with Patent Owner’s position that the ISO11783 does not itself “identify different proprietary formats (i.e., the communication protocol) used by a given implement from a stored collection of implement profiles.” Prelim. Resp. 22.

We further note that Mr. Ault suggests that proprietary message formats indicate the existence of a known communication protocol. *See, e.g.*, Ex. 1002 ¶¶ 67, 170. As such, Mr. Ault opines that the proprietary message formats are not the known communication protocol, but indicate the *existence* of a communication protocol somewhere. Thus, storing those proprietary message formats falls short of defining the known communication protocol.

Even assuming for the moment that proprietary message formats teach communication protocols, Petitioner has still not explained sufficiently why a POSITA would store those proprietary message formats in the NAME field. The NAME field specifies ECU function and place in a network. *See* Ex. 1010, 9–10. However, it is not clear why proprietary message formats would identify the function or place of an ECU in a network, which is the purpose of the NAME field. *See* Pet. 31 (“The NAME field includes a device class, manufacturer code, and identity number among other fields.”).

We note that Mr. Ault also provides testimony about a machine's communication compatibility found in an ISO11783 message. Ex. 1002 ¶¶ 116–126. However, Mr. Ault's testimony in this regard is cited with little to no corresponding explanation or discussion in the Petition. *See* Pet. 15–16, 30–31. As stated in the Consolidated Trial Practice Guide⁴, “parties that incorporate expert testimony by reference in their petitions, motions, or replies without providing explanation of such testimony risk having the testimony not considered by the Board.” TPG 35–36 (citing *Cisco Sys., Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12 (PTAB Aug. 29, 2014) (informative)); *see also* 37 C.F.R. § 42.6(a)(3) (“*Arguments* must not be incorporated by reference from one document into another document.” (emphasis added)). On this basis, we need not consider Mr. Ault's testimony, in paragraphs 116–127 of his declaration, that is improperly incorporated by reference (without discussion) into the Petition.

Moreover, these statements are largely conclusory. For example, at least paragraphs 124–126 lack any citation to the underlying facts or data upon which the testimony is based. *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”); *Upjohn Co. v. Mova Pharm. Corp.*, 225 F.3d 1306, 1311 (Fed. Cir. 2000) (“Lack of factual support for expert opinion going to factual determinations, however, may render the testimony of little probative value in a validity determination.”) (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)); *Carella v. Starlight Archery & Pro Line Co.*, 804

⁴ Consolidated Trial Practice Guide 40 (Nov. 2019), <https://www.uspto.gov/TrialPracticeGuideConsolidated> (“TPG”)

F.2d 135, 138 (Fed. Cir. 1986) (“Although in some circumstances unsupported oral testimony can be sufficient to prove prior knowledge or use, it must be regarded with suspicion and subjected to close scrutiny.”).

On the whole, upon reviewing the parties’ evidence and arguments, we find that Petitioner’s arguments are incomplete as discussed in detail above. Thus, we determine that Petitioner has not established a reasonable likelihood of prevailing in its contention that claim 1 would have been obvious over the combination of Nadison 610, Nadison 630, and ISO11783.

b) Conclusion

As the Petition does not sufficiently identify how Nadison 610, Nadison 630, and ISO11783 teaches the limitations of independent claim 1, it fails to establish a reasonable likelihood of prevailing in showing that any of the claims are unpatentable.

III. CONCLUSION

For the foregoing reasons, we do not institute trial.

IV. ORDER

ORDERED that, pursuant to 35 U.S.C. § 314(a), no *inter partes* review as to any claim of U.S. patent 11,151,485 B2 is instituted.

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