IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

STRAGENT, LLC,	
Plaintiff,	**Civil Action No. 6:16-cv-00448-RWS-KNM**
v.	
VOLVO CARS OF NORTH AMERICA, LLC,	**JURY TRIAL DEMANDED**
Defendant.	

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement in which Plaintiff Stragent, LLC ("Plaintiff" or "Stragent") complains against Defendant Volvo Cars of North America, LLC, all upon information and belief, as follows:

THE PARTIES

1. Plaintiff Stragent is a Texas limited liability company having its principal place of business in Longview, Texas, where it has existed since at least 2008.

2. Defendant Volvo Cars of North America, LLC ("Volvo NA" or "Defendant") is a limited liability company organized under the laws of Delaware, with its principal place of business at 7900 National Service Road, Greensboro, NC, 27409. Volvo NA can be served through its registered agent, the Corporation Trust Company, Corporation Trust Center, 1209 Orange St., Wilmington, DE 19801.

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States of America, 35 U.S.C. § 1, et seq., including 35 U.S.C. § 271. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has general and specific personal jurisdiction over Defendant by virtue of the Defendant's continuous and systematic business activities in this State, directly or through intermediaries, which activities give rise to at least a portion of the infringements alleged herein and include: (i) making, using, offering for sale and/or selling the below identified infringing apparatus in this State, and/or importing the below identified infringing products into this State; (ii) purposefully and voluntarily placing the below identified infringing apparatus into the stream of commerce with the expectation that they will be purchased by consumers in this State; and/or (iii) deriving substantial revenue from the below identified infringing products provided to individuals in this State.

5. Venue is proper in this Judicial District as to Defendant under 28 U.S.C. §§ 1391(b) and (c) and 1400(b) by virtue of Defendant's continuous and systematic business activities in this Judicial District, directly or through intermediaries, which activities give rise to at least a portion of the infringements alleged herein and include: (i) making, using, offering for sale and/or selling the below identified infringing apparatus in this Judicial District, and/or importing the below identified infringing products into this Judicial District; (ii) purposefully and voluntarily placing the below identified infringing products into the stream of commerce with the expectation that they will be purchased by consumers in this Judicial District; and/or (iii) deriving substantial revenue from the below identified infringing products provided to individuals in this Judicial District.

DEFENDANT'S USE OF AUTOSAR TECHNOLOGY

6. AUTOSAR (AUTomotive Open System ARchitecture) is an enabling technology to manage growing electrical/electronic complexity, which has been standardized by a worldwide development partnership of vehicle manufacturers, suppliers and other companies

from the electronics, semiconductor and software industry. AUTOSAR comprises, among other things, a set of specifications describing software architecture components and defining their interfaces. The AUTOSAR standards facilitate the exchange and update of software and hardware over the service life of a vehicle by providing a common software infrastructure for automotive systems of all vehicle domains based on standardized interfaces for the different software layers.

7. There have been several Releases of AUTOSAR, with the current being version 4.2.2. The AUTOSAR Releases are backward-compatible.

8. Defendant is a Premium Partner in the AUTOSAR consortium. Defendant joined the AUTOSAR partnership in 2004, since 2007 have been migrating to AUTOSAR in their product lines, and have made, imported into the United States, and have used and sold in the United States vehicles comprising the AUTOSAR standards beginning with at least Release 3.2. For example, the 2016 Volvo XC90 incorporates AUTOSAR Release 4. Defendant's vehicles are AUTOSAR-compliant systems or apparatus comprising a plurality of electronic control units interconnected by network technologies which allow them to interact and share data in real time. Compliance with the AUTOSAR standard creates a system which reads on the patents in suit.

9. Dr. Thomas M. Mueller, Volvo Cars Corporations's Vice President in charge of its Electrics/ Electronics group, gave an interview in which Dr. Mueller stated that Volvo utilizes the AUTOSAR standard protocol for its communications, and that Volvo's current XC90 model includes hundreds of electronic control units, which are 100% AUTOSAR ver. 4.x. Volvo Car Corporation (a/k/a Volvo Personvagnar AB) is the parent company of Defendant.

10. John Lantz, a Technical Specialist in Electric Propulsion Systems at Volvo Car Group gave a presentation on "Multi-Domain Simulation for Electrical Propulsion Systems at Volvo Cars," showing that AUTOSAR integration is a key element in Volvo's product development.

11. Ove Berntsson of Volvo Car Corporation co-authored with Niklas Amberntsson of Mentor Graphics a presentation given at 3rd AUTOSAR Open Conference in 2011, entitled "Practical Implementation of an AUTOSAR toolchain at Volvo Cars." The presentation discussed the challenges of integrating software development tools from outside developers into Volvo's AUTOSAR software tool process.

12. All electronic control units of all automobiles that are imported, made, used, sold and/or offered for sale by Defendants are built-upon and incorporate the AUTOSAR standard.

COUNT I

DIRECT AND INDIRECT INFRINGEMENT OF U.S. PATENT NO. 8,209,705

13. Plaintiff realleges and incorporates by reference the prior paragraphs of this First Amended Complaint, as if fully set forth herein.

14. Plaintiff is the owner by assignment of United States Patent No. 8,209,705 ("the '705 Patent") entitled "System, Method and Computer Program Product for Sharing Information in a Distributed Framework." The '705 Patent was duly and legally issued on June 26, 2012. A true and correct copy of the '705 Patent is attached as Exhibit A. Plaintiff holds the exclusive rights to bring suit with respect to any past, present, and future infringement of the '705 Patent.

15. On information and belief, Defendant has been and now is directly infringing at least claims 1 - 6 of the '705 Patent in the State of Texas, in this judicial district, and elsewhere in the United States literally and/or under the doctrine of equivalents, by, among other things,

making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States, without license or authority, automobile vehicles and automobile parts, which incorporate the AUTOSAR standard.

16. Defendant has also induced and encouraged the direct infringement of at least claims 1-6 of the '705 Patent by Defendant's resellers and retailers, and their customers and end users, by intentionally directing them and encouraging them to practice, within the United States the patented method utilizing one or more devices that utilize and incorporate the patented invention. Defendant provides automobiles and parts that necessarily require resellers and retailers, and their customers and end users, to practice the inventions in order to make use of the automobiles and parts. Sale of a product that requires the user to directly infringe a patent in the normal use of the product constitutes inducement to infringe. In *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 766 (2011), the Supreme Court remarked that "lead[ing] another to engage in conduct that happens to amount to infringement, i.e., the making, using, offering to sell, selling, or importing of a patented invention" can constitute inducement to infringe if the knowledge requirement of 35 U.S.C. §271(b) is met. *See also Kaneka Corp. v. SKC Kolon PI, Inc*., 198 F. Supp. 3d 1089, 1109 (C.D. Cal. 2016) ("evidence that SKPI knew its film infringed Kaneka's patents and that it actively and intentionally sold this film knowing that it would be incorporated into Samsung and LG phones which would arrive in the United States is sufficient to establish that SKPI actively and knowingly aided another's direct infringement"); *Wing Shing Prod. (BVI), Ltd. v. Simatelex Manufactory Co*., 479 F. Supp. 2d 388, 411 (S.D.N.Y. 2007) ("the manufacture and sale of a patented product are by themselves sufficient to constitute active inducement under § 271(b)"). The filing of the original Complaint constituted notice to Defendants that Defendants' products and methods infringed Plaintiff's patents, and, thus,

Defendants' continuation of the accused conduct with knowledge that their actions would induce actual infringements demonstrated Defendants' intent to induce infringement. Thus, Defendant is liable for indirect infringement of the '705 Patent pursuant to 35 U.S.C. § 271(b).

17. Defendant is infringing at least one claim of the '705 Patent, because Defendant has incorporated the AUTOSAR standard into at least some, if not most, of the electronic modules in automobiles made, sold and used by Defendant. By incorporating the AUTOSAR standard into the automobiles, Defendant has infringed because at least claim 1 of the '705 Patent reads upon the AUTOSAR standard as set forth below:

a. "A method for sharing information, the method comprising:"

The preamble is not a limitation of this claim. However, to the extent it is construed to be a limitation, the AUTOSAR standard describes a method for sharing information.

b. "allowing receipt of information associated with a message, utilizing a first network protocol associated with a first network;"

The AUTOSAR-compliant vehicles employ a method which allows receipt of information associated with a message, utilizing a first network protocol associated with a first network. AUTOSAR, by definition, is designed to communicate messages utilizing one of several network protocols. Thus, "AUTOSAR prescribes everything that is needed to allow several AUTOSAR Software Components to be integrated correctly in an infrastructure consisting of networked ECUs." AUTOSAR Document ID 067: AUTOSAR Technical Overview at 10. "The communication services are a group of modules for vehicle network communication (CAN, LIN, FlexRay and MOST). They are interfacing

with the communication drivers via the communication hardware abstraction. The task of this group of modules is to provide a uniform interface to the vehicle network for communication between different applications . . .” AUTOSAR Document ID 067: AUTOSAR Technical Overview at 34-35. Within AUTOSAR, transmission and reception of information (messages) between software layers requires a combination of the information to be transmitted (a “payload”) with source and targeting information (“addresses”). In AUTOSAR these kinds of information are distinguished by terms such as “Service Data Unit” (SDU), “Protocol Data Unit” (PDU), and “Protocol Control Information” (PCI), as described in the AUTOSAR specification. AUTOSAR 4.2.2 - Requirements on AUTOSAR Features at 44 (“AUTOSAR communication shall support mapping of signals into transferrable protocol data units.”).

c. “causing a determination as to whether a storage resource is available;”

The AUTOSAR-compliant vehicles use a method which determines whether a storage resource is available. For example, receipt of a message via a FlexRay network interface requires sequential mapping of the frames of the message into buffer (memory) space; AUTOSAR contains functions which test the availability of such buffer space. The function PduR_FrArTpStartOfReception tests availability of adequate buffer (memory/storage) space prior to starting the copy operation which will place data in the buffer:

> [SWS_FrArTp_00294] ⌈If Retry is not enabled, and PduR_FrArTpStartOfReception returns an available buffer size that is too small for the FF-x, FrArTp shall abort the transfer and call PduR_FrArTpRxIndication with E_NOT_OK.⌋()

> [SWS_FrArTp_00300] ⌈If Retry is enabled, and PduR_FrArTpStartOfReception returns an available buffer size that is too small for the first block, FrArTp shall call PduR_FrArTpCopyRxData with info.SduLength equal to 0 until the available buffer is large enough for the first block. The calls shall be repeated until FrArTpTimeBr expires.⌋()

AUTOSAR_SWS_FlexRayARTransportLayer at 55.

d. "in the event the storage resource is not available, determining whether a timeout has been reached and causing a re-request in connection with the storage resource if the timeout has not been reached;"

The AUTOSAR-compliant vehicles use a method which determines whether a timeout has been reached and causes a re-request in connection with the storage resource. The AUTOSAR specification requires that "AUTOSAR communication shall support time-out handling for data transmission and data reception." AUTOSAR 4.2.2. – Requirements on AUTOSAR Features at 46. For example, in the context of the FlexRay network transport protocol:

> **[SWS_FrArTp_00301]** ⌈When FrArTpTimeBr expires during calls to *PduR_FrArTpCopyRxData* with info.SduLength equal to 0, a WAIT frame (FC frame with FS = WT) shall be sent, and the retry phase shall start again, but at most FrArTpMaxWft times.⌋()
>
> **[SWS_FrArTp_00295]** ⌈If *PduR_FrArTpCopyRxData* returns BUFREQ_E_NOT_OK, or when FrArTpMaxWft expired, the transfer shall be aborted and *PduR_FrArTpRxIndication* shall be called with E_NOT_OK.⌋()

AUTOSAR_SWS_FlexRayARTransportLayer at 56.

e. "in the event the timeout has been reached, causing an error notification to be sent;"

The AUTOSAR-compliant vehicles use a method which, in the event the timeout has been reached, causing an error notification to be sent. As alleged in

17.d., *supra*, AUTOSAR incorporates time-out handling when accessing storage resources. This time-out handling includes sending notification in the event of a time-out. For example, see the function call "*PduR_FrArTpRxIndication*" below:

> **[SWS_FrArTp_00295]** ⌈If *PduR_FrArTpCopyRxData* returns BUFREQ_E_NOT_OK, or when FrArTpMaxWft expired, the transfer shall be aborted and *PduR_FrArTpRxIndication* shall be called with E_NOT_OK.⌋()
>
> **[SWS_FrArTp_00117]** ⌈In case of failing to copy the received data, the remaining CFs of the current block shall be discarded. When the failure occured in the last block, and acknowledgement is enabled, an AF with a negative acknowledgement and FS = OVFLW shall be sent back to the sender. Otherwise, an FC with FS = OVFLW shall be sent back, but only if the initial call to PduR_FrTpStartOfReception returned BUFREQ_E_OVFL.⌋()

AUTOSAR_SWS_FlexRayARTransportLayer at 56.

f. "in the event the storage resource is available, causing storage of the information utilizing the storage resource; and"

The AUTOSAR-compliant vehicles use a method which, in the event a storage resource is available and the timeout has not been reached, causes storage of the information utilizing the storage resource. For example, the function "PduR_<User:LoTp>CopyRxData" serves "to provide the received data of an I-PDU segment (N-PDU) to the upper layer. Each call to this function provides the next part of the I-PDU data. The size of the remaining data is written to the position indicated by bufferSizePtr." AUTOSAR_SWS_PDURouter at 66.

g. "causing the information to be shared by: in real-time, sharing the information utilizing at least one message format corresponding to a second network protocol associated with a second network which is different from the first network protocol;"

The AUTOSAR-compliant vehicles use a method which shares in real time information utilizing least one message format corresponding to a second network protocol associated with a second network which is different from the first network protocol. For example, AUTOSAR provides for multicast or "1 to many" transmission (i.e. sharing) of I-PDU's (information/messages) to multiple network interfaces simultaneously via the PDURouter, which may route the same PDU to two or more different, network-specific transport modules (such as CAN, LIN, or FlexRay) simultaneously. *See* AUTOSAR_SWS_ PDURouter at 80, Fig. 14 ("I-PDU transmission on transport protocol on CAN, FlexRay and LIN."). Moreover, AUTOSAR specifies a real-time system. *See* AUTOSAR 4.2.2 - Aux - Layered Software Architecture at 9 ("Application Scope of AUTOSAR").

h. "wherein the method is associated with an electronic control unit with at least one gateway function, and a plurality of interface portions including:"

The AUTOSAR-compliant vehicles use a method which requires an electronic control unit with at least one gateway function, and a plurality of interface portions. The AUTOSAR specification calls for COM (communication) and PDURouter modules to be included in basic software which is to reside on any AUTOSAR-compliant electronic control unit (ECU). Gateway functionality is required by the standard in both the COM and PDURouter modules. The specification provides for interface with multiple communication buses, including CAN, LIN, and FlexRay. *See* AUTOSAR_SRS_Gateway at 9-10, Fig. 1.

i. "a first interface portion for interfacing with the first network, the first interface portion including a first interface-related first layer part for receiving first interface-related first layer messages and a first interface-related second layer part, the first interface-related first layer messages being processed after which first interface-related second layer messages are provided, where the first network is at least one of a Controller Area Network, a Flexray network, or a Local Interconnect Network; and"

The AUTOSAR-compliant vehicles use a method which requires an electronic control unit which includes a first interface portion for interfacing with a first network, the first interface portion including a first interface-related first layer part for receiving first interface-related first layer messages and a first interface-related second layer part, the first interface-related first layer messages being processed after which first interface-related second layer messages are provided, where the first network is at least one of a Controller Area Network, a Flexray network, or a Local Interconnect Network. AUTOSAR provides for interface with multiple network types via network-specific interface modules (the first layer part) which transfer received PDU's (messages) to a network-specific transport module (the second layer part) which processes the PDU's (messages) prior to providing them to the PDURouter module and higher software layers. *See generally* AUTOSAR_SWS_PDURouter at 10, Fig. 2.

j. "a second interface portion for interfacing with the second network, the second interface portion including a second interface-related first layer part for receiving second interface-related first layer messages and a

second interface-related second layer part, the second interface-related first layer messages being processed after which second interface-related second layer messages are provided, where the second network is different from the first network and is at least one of the Controller Area Network, the Flexray network, or the Local Interconnect network."

The AUTOSAR-compliant vehicles use a method which requires an electronic control unit which includes a second interface portion for interfacing with a second network, the second interface portion including a second interface-related first layer part for receiving second interface-related first layer messages and a second interface-related second layer part, the second interface-related first layer messages being processed after which second interface-related second layer messages are provided, where the second network is fIdifferent from the first network and is at least one of a Controller Area Network, a Flexray network, or a Local Interconnect Network.

As alleged in 17.i., *supra,* AUTOSAR provides for interface with multiple network types via network-specific interface modules (the first layer part) which transfer received PDU's (messages) to a network-specific transport module (the second layer part) which processes the PDU's (messages) prior to providing them to the PDURouter module and higher software layers. AUTOSAR provides for the combination of at least the different network types CAN, LIN, and FlexRay. *See generally* AUTOSAR_SWS_PDURouter at 10, Fig. 2.

18. The filing of the original Complaint constituted notice in accordance with 35 U.S.C. § 287. Despite such notice, the Defendant continues to import into, market, offer for sale and/or sell in the United States automobile vehicles and parts that infringe the '705 Patent.

19. The infringing devices include all automobile vehicles and automobile parts that incorporate electronic control units that are designed to communicate via the AUTOSAR standard.

20. Defendant's acts of infringement have caused and continue to cause damage to Plaintiff. Plaintiff is entitled to recover from Defendant the damages sustained by Plaintiff as a result of Defendant's wrongful acts.

COUNT II

DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,566,843

21. Plaintiff realleges and incorporates by reference the prior paragraphs of this First Amended Complaint, as if fully set forth herein.

22. Plaintiff is the owner by assignment of United States Patent No. 8,566,843 ("the '843 Patent") entitled "System, Method and Computer Program Product for Sharing Information in a Distributed Framework." The '843 Patent was duly and legally issued on October 22, 2013. A true and correct copy of the '843 Patent is attached as Exhibit B. Plaintiff holds the exclusive rights to bring suit with respect to any past, present, and future infringement of the Patent.

23. Defendant has been and now is directly infringing at least claim 51 of the '843 Patent in the State of Texas, in this judicial district, and elsewhere in the United States literally and/or under the doctrine of equivalents, by, among other things, making, using, offering for sale, selling, and/or importing within this judicial district and elsewhere in the United States,

without license or authority, automobile vehicles and automobile parts, which incorporate the AUTOSAR standard.

24. Defendant is infringing at least one claim of the ‘843 Patent, because Defendant has incorporated the AUTOSAR standard into at least some, if not most, of the electronic modules in automobiles made, sold and used by Defendant. By incorporating the AUTOSAR standard into the automobiles, Defendant has infringed because at least claim 51 of the ‘843 Patent reads upon the AUTOSAR standard as set forth below:

a. “An apparatus, comprising:”

The preamble is not a limitation of this claim. However, to the extent it is construed to be a limitation, Defendant makes or has made, uses and, in the United States, at least sells automobiles, each of which is an apparatus.

b. “a control unit configured for:”

Defendant’s automobile vehicles comprise AUTOSAR-compliant ECUs. An ECU is defined here, as in AUTOSAR, as an embedded computer system consisting out of at least one CPU and corresponding periphery which is placed in one housing.

c. “identifying information associated with a message received utilizing a first network protocol associated with a first network;”

The AUTOSAR-compliant vehicles comprise an electronic control unit configured for allowing receipt of information associated with a message, utilizing a first network protocol associated with a first network. AUTOSAR, by definition, is designed to communicate messages utilizing one of several network protocols. Thus, “AUTOSAR prescribes everything that is needed to allow several AUTOSAR Software Components to be integrated correctly in an

infrastructure consisting of networked ECUs." AUTOSAR Document ID 067: AUTOSAR Technical Overview at 10. "The communication services are a group of modules for vehicle network communication (CAN, LIN, FlexRay and MOST). They are interfacing with the communication drivers via the communication hardware abstraction. The task of this group of modules is to provide a uniform interface to the vehicle network for communication between different applications . . ." AUTOSAR Document ID 067: AUTOSAR Technical Overview at 34-35. Within AUTOSAR, transmission and reception of information (messages) between software layers requires a combination of the information to be transmitted (a "payload") with source and targeting information ("addresses"). In AUTOSAR these kinds of information are distinguished by terms such as "Service Data Unit" (SDU), "Protocol Data Unit" (PDU), and "Protocol Control Information" (PCI), as described in the AUTOSAR specification. AUTOSAR 4.2.2 - Requirements on AUTOSAR Features at 44 ("AUTOSAR communication shall support mapping of signals into transferrable protocol data units.").

d. "issuing a storage resource request in connection with a storage resource and determining whether the storage resource is available;"

The AUTOSAR-compliant vehicles comprise an electronic control unit configured to issue a storage resource request in connection with a storage resource, and cause a determination as to whether a storage resource is available. For example, receipt of a message via a FlexRay network interface requires sequential mapping of the frames of the message into buffer (memory) space;

AUTOSAR contains functions which test the availability of such buffer space. The function PduR_FrArTpStartOfReception tests availability of adequate buffer (memory/storage) space prior to starting the copy operation which will place data in the buffer:

> [SWS_FrArTp_00294] ⌈If Retry is not enabled, and PduR_FrArTpStartOfReception returns an available buffer size that is too small for the FF-x, FrArTp shall abort the transfer and call PduR_FrArTpRxIndication with E_NOT_OK.⌋()
>
> [SWS_FrArTp_00300] ⌈If Retry is enabled, and PduR_FrArTpStartOfReception returns an available buffer size that is too small for the first block, FrArTp shall call PduR_FrArTpCopyRxData with info.SduLength equal to 0 until the available buffer is large enough for the first block. The calls shall be repeated until FrArTpTimeBr expires.⌋()

AUTOSAR_SWS_FlexRayARTransportLayer at 55.

e. "determining whether a threshold has been reached in association with the storage resource request;"

"in the event the storage resource is not available and the threshold associated with the storage resource request has not been reached, issuing another storage resource request in connection with the storage resource;"

The AUTOSAR-compliant vehicles comprise an electronic control unit, which determines whether a threshold has been reached in association with a storage resource request. Further, the electronic control unit is configured to determine whether a timeout has been reached and cause a re-request in connection with the storage resource. The AUTOSAR specification requires that "AUTOSAR communication shall support time-out handling for data transmission and data reception." AUTOSAR 4.2.2. – Requirements on

AUTOSAR Features at 46. For example, in the context of the FlexRay network transport protocol:

> **[SWS_FrArTp_00301]** ⌈When FrArTpTimeBr expires during calls to *PduR_FrArTpCopyRxData* with info.SduLength equal to 0, a WAIT frame (FC frame with FS = WT) shall be sent, and the retry phase shall start again, but at most FrArTpMaxWft times.⌋()
>
> **[SWS_FrArTp_00295]** ⌈If *PduR_FrArTpCopyRxData* returns BUFREQ_E_NOT_OK, or when FrArTpMaxWft expired, the transfer shall be aborted and *PduR_FrArTpRxIndication* shall be called with E_NOT_OK.⌋()

AUTOSAR_SWS_FlexRayARTransportLayer at 56.

f. "in the event the storage resource is not available and the threshold associated with the storage resource request has been reached, sending a notification; and"

The AUTOSAR-compliant vehicles comprise an electronic control unit which, in the event a timeout has been reached, causes an error notification to be sent. As alleged in 24.e., *supra*, AUTOSAR incorporates time-out handling when accessing storage resources. This time-out handling includes sending notification in the event of a time-out. For example, see the function call "*PduR_FrArTpRxIndication*" below:

> **[SWS_FrArTp_00295]** ⌈If *PduR_FrArTpCopyRxData* returns BUFREQ_E_NOT_OK, or when FrArTpMaxWft expired, the transfer shall be aborted and *PduR_FrArTpRxIndication* shall be called with E_NOT_OK.⌋()
>
> **[SWS_FrArTp_00117]** ⌈In case of failing to copy the received data, the remaining CFs of the current block shall be discarded. When the failure occured in the last block, and acknowledgement is enabled, an AF with a negative acknowledgement and FS = OVFLW shall be sent back to the sender. Otherwise, an FC with FS = OVFLW shall be sent back, but only if the initial call to PduR_FrTpStartOfReception returned BUFREQ_E_OVFL.⌋()

AUTOSAR_SWS_FlexRayARTransportLayer at 56.

g. "in the event the storage resource is available, storing the information utilizing the storage resource;"

The AUTOSAR-compliant vehicles comprise an electronic control unit configured to, in the event a storage resource is available and the timeout has not been reached, causes storage of the information utilizing the storage resource. For example, the function "PduR_<User:LoTp>CopyRxData" serves "to provide the received data of an I-PDU segment (N-PDU) to the upper layer. Each call to this function provides the next part of the I-PDU data. The size of the remaining data is written to the position indicated by bufferSizePtr." *See* AUTOSAR_SWS_PDURouter at 66.

h. "wherein the apparatus is operable such that the information is capable of being shared in real-time utilizing a second network protocol associated with a second network, and"

AUTOSAR requires that information be shared in real-time, sharing the information utilizing at least one message format corresponding to a second network protocol associated with a second network. For example, AUTOSAR provides for multicast or "1 to many" transmission (i.e. sharing) of I-PDU's (information/messages) to multiple network interfaces simultaneously via the PDURouter, which may route the same PDU to two or more different, network-specific transport modules (such as CAN, LIN, or FlexRay) simultaneously. *See* AUTOSAR_SWS_ PDURouter at 80, Fig. 14 ("I-PDU transmission on transport protocol on CAN, FlexRay and LIN."). Moreover, AUTOSAR specifies a real-

time system. *See* AUTOSAR 4.2.2 - Aux - Layered Software Architecture at 9 ("Application Scope of AUTOSAR").

i. "the control unit includes: a first interface for interfacing with the first network, the first interface including a first interface-related first component for receiving first data units and a first interface-related second component, the control unit being operable such that the first data units are processed after which processed first data units are provided, where the first network is at least one of a Controller Area Network type, a Flexray network type, or a Local Interconnect Network type; and"

AUTOSAR-compliant vehicles are necessarily associated with an electronic control unit which includes a first interface portion for interfacing with a first network, the first interface portion including a first interface-related first layer part for receiving first interface-related first layer messages and a first interface-related second layer part, the first interface-related first layer messages being processed after which first interface-related second layer messages are provided, where the first network is at least one of a Controller Area Network, a Flexray network, or a Local Interconnect Network. AUTOSAR provides for interface with multiple network types via network-specific interface modules (the first layer part) which transfer received PDU's (messages) to a network-specific transport module (the second layer part) which processes the PDU's (messages) prior to providing them to the PDURouter module and higher software layers. *See generally* AUTOSAR_SWS_PDURouter at 10, Fig. 2.

j. "a second interface for interfacing with the second network, the second interface including a second interface-related first component for receiving second data units and a second interface-related second component, the control unit being operable such that the second data units are processed after which processed second data units are provided, where the second network is at least one of the Controller Area Network type, the Flexray network type, or the Local Interconnect Network type."

The AUTOSAR-compliant vehicle includes a control unit that includes a second interface portion for interfacing with a second network, the second interface portion including a second interface-related first layer part for receiving second interface-related first layer messages and a second interface-related second layer part, the second interface-related first layer messages being processed after which second interface-related second layer messages are provided, where the second network is different from the first network and is at least one of a Controller Area Network, a Flexray network, or a Local Interconnect Network.

As alleged in 24.i., *supra*, AUTOSAR provides for interface with multiple network types via network-specific interface modules (the first layer part) which transfer received PDU's (messages) to a network-specific transport module (the second layer part) which processes the PDU's (messages) prior to providing them to the PDURouter module and higher software layers. AUTOSAR provides for the combination of at least the different network types CAN, LIN, and FlexRay. *See generally* AUTOSAR_SWS_PDURouter at 10, Fig. 2.

25. The filing of the original Complaint constituted notice in accordance with 35 U.S.C. § 287. Despite such notice, Defendant continues to import into, market, offer for sale and/or sell in the United States automobile vehicles and parts that infringe the '843 Patent.

26. The infringing devices include all automobile vehicles and automobile parts that incorporate electronic control units that are designed to communicate via the AUTOSAR standard.

27. Defendant's acts of infringement have caused and continue to cause damage to Plaintiff. Plaintiff is entitled to recover from Defendant the damages sustained by Plaintiffs as a result of Defendant's wrongful acts.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Stragent requests that this Court enter:

A. A judgment in favor of Stragent that Defendant has directly and indirectly infringed the '705 Patent, and directly infringed the '843 Patent;

B. A judgment and order requiring Defendant to pay Stragent its damages, costs, expenses, prejudgment and post-judgment interest, and post-judgment royalties for Defendant's infringement of the '705 and '843 Patents as provided under 35 U.S.C. § 284; and

C. Any and all other relief to which the Court may deem Stragent entitled.

DEMAND FOR JURY TRIAL

Plaintiff Stragent, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: March 17, 2017

Respectfully submitted,

BUETHER JOE & CARPENTER, LLC

By: */s/ Christopher M. Joe*
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(c) on this 17th day of March 2017. Any other counsel of record will be served by facsimile transmission and first class mail.

/s/ Christopher M. Joe
Christopher M. Joe