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

STRAGENT, LLC, **Plaintiff,** v. **BMW OF NORTH AMERICA, LLC, and BMW MANUFACTURING CO., LLC,** **Defendants.**	**Civil Action No. 6:16-cv-00446-RWS-KNM** **JURY TRIAL DEMANDED**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement in which Plaintiff Stragent, LLC ("Plaintiff" or "Stragent") complains against Defendants BMW of North America, LLC and BMW Manufacturing Co., 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 BMW of North America, LLC ("BMW NA") is a limited liability company organized under the laws of Delaware, with its principal place of business at 300 Chestnut Ridge Road, Woodcliff Lake, New Jersey 07677 and a registered agent at The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. BMW NA is a wholly owned subsidiary of BMW (US) Holding Corp., which in turn is a wholly owned subsidiary of Bayerische Motoren Werke AG ("BMW AG").

3.   Defendant BMW Manufacturing Co., LLC ("BMW Manufacturing") is a corporation organized under the laws of Delaware, with its principal place of business at 1400

Highway 101 South, Greer, South Carolina 29651 and a registered agent at The Corporation

Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

JURISDICTION AND VENUE

4.   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).

5.   This Court has general and specific personal jurisdiction over Defendants by

virtue of these Defendants' respective 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.

6.   Venue is proper in this Judicial District as to each Defendant under 28 U.S.C.

§§ 1391(b) and (c) and 1400(b) by virtue of each 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.

DEFENDANTS' USE OF AUTOSAR TECHNOLOGY

7.   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.

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

9.   Defendants are Core Partners in the AUTOSAR consortium. Defendants 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 BMW 7 series incorporates AUTOSAR Release 4.

10.   Simon Furst, General Manager Software Development and Software Infrastructure for BMW AG, the developer of the products made and sold by the Defendants and a representative of the Defendants' parent company, stated that AUTOSAR is being implemented as the core common requirement of all electronic control units of all BMW

automobiles, or, in Mr. Furst's words: "ONE ARCHITECTURE. ONE STANDARD. AUTOSAR." BMW's mandatory AUTOSAR requirements include that the electronic control units support the Controller Area Network and Flexray networks.

11.   Mr. Furst also made a presentation at the 2015 MathWorks Automotive Conference entitled "Model-Based Software Development: An OEM's Perspective," which highlighted the integration of the AUTOSAR standard into the entirety of BMW's automotive software development strategy.

12.   BMW provides access to AUTOSAR-compatible BMW System Software to outside developers, for the express purpose of permitting those developers to integrate the AUTOSAR "stack" with BMW System Software to form the "BMW AUTOSAR Core 4."

13.   In practice, BMW takes the AUTOSAR stack as a base upon which they develop and integrate all BMW-specific functionalities, called "BMW system functions." Defendants' vehicles are specifically designed and configured with hardware and software components that require AUTOSAR for the transmission of data content. The ability to transmit data content by way of AUTOSAR is an essential feature and function of Defendants' vehicles. Defendants' 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.

14.   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

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

16.   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.

17.   On information and belief, Defendants have been and now are 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.

18.   Defendants have also induced and encouraged the direct infringement of at least claims 1-6 of the '705 Patent by Defendants' 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. Defendants provide 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, Defendants are liable for indirect infringement of the '705 Patent pursuant to 35 U.S.C. § 271(b).

19.   Defendants are infringing at least one claim of the '705 Patent, because Defendants have incorporated the AUTOSAR standard into at least some, if not most, of the electronic modules in automobiles made, sold and used by the Defendants. By incorporating the AUTOSAR standard into the automobiles, Defendants have 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

19.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.

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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 -

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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 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 19.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.

20.   The filing of the original Complaint constituted notice in accordance with 35

U.S.C. § 287. Despite such notice, the Defendants continue to import into, market, offer for sale

and/or sell in the United States automobile vehicles and parts that infringe the '705 Patent.

21.   The infringing devices include all automobile vehicles and automobile parts that

incorporate electronic control units that are designed to communicate via the AUTOSAR

standard.

22.   Defendants' acts of infringement have caused and continue to cause damage to

Plaintiff. Plaintiff is entitled to recover from Defendants the damages sustained by Plaintiff as a

result of Defendants' wrongful acts.

COUNT II

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

23.   Plaintiff realleges and incorporates by reference the prior paragraphs of this First

Amended Complaint, as if fully set forth herein.

24.   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.

25.   Defendants have been and now are 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.

26.   Defendants are infringing at least one claim of the '843 Patent, because Defendants have incorporated the AUTOSAR standard into at least some, if not most, of the electronic modules in automobiles made, sold and used by the Defendants. By incorporating the AUTOSAR standard into the automobiles, Defendants have 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

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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 26.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 Specification of PDU Router V2.0.1 at 7, Fig. 1.

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 26.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 Specification of PDU Router V2.0.1 at 7, Fig. 1.

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

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

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

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Stragent requests that this Court enter:

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

B.   A judgment and order requiring Defendants to pay Stragent its damages, costs, expenses, prejudgment and post-judgment interest, and post-judgment royalties for Defendants' 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

Of Counsel:

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Respectfully submitted,

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<u>**CERTIFICATE OF SERVICE**</u>

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.

<div align="right">

/s/ Christopher M. Joe

Christopher M. Joe

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