## APPENDIX F

### Infringement of U.S. Patent No. 9,294,806

### By the Volkswagen Group

Volkswagen Group automobiles provide an infotainment console that infringes the '806 patent, for example claim 5. Many recent Volkswagen and Audi automobile models integrate HD Radio<sup>TM</sup>, SiriusXM®, Apple CarPlay<sup>TM</sup> running Apple Music streaming services playing live radio such as Beats 1 or Apple Music 1, or other platforms into the head unit with functionality claimed in the '806 patent, for example claim 5. These platforms are available in many Volkswagen models (*e.g.*, the Atlas, Beetle, CC, Golf, Jetta, Passat, Tiguan, and Touareg), and in many Audi models (*e.g.*, A3, A4, A5, Q5, S3, TT, A6, A7, A8, and Q8), which may have HD Radio<sup>TM</sup>, SiriusXM®, CarPlay<sup>TM</sup> or a similar platform integrated or retrofitted.<sup>1,2</sup> Many Volkswagen vehicles include HD Radio<sup>TM</sup>, SiriusXM®, and/or CarPlay<sup>TM</sup>, which enables streaming of radio broadcasts. These platforms include the iTunes tagging functionality which enables a user to use the console to "tag" a song being broadcast to interactively mark the song, thereby infringing the '806 patent, for example claim 5.

<sup>&</sup>lt;sup>1</sup> Data from HD Radio VW page, accessed on October 13, 2020 at https://hdradio.com/new\_car\_manufacturer/vw-2/

<sup>&</sup>lt;sup>2</sup> Data from HD Radio Audi page, accessed on August 10, 2020 at https://hdradio.com/new\_car\_manufacturer/audi/.

Claim		Volkswagen Audi A3 iTunes Tagging	
5.Pre	A broadcast scanning method for uniquely identifying a media segment associated with an electronic transmission of the media segment through acquisition of third party encoded data, the method comprising:	The Volkswagen Head Unit Console includes HD Radio and/or Sirius Radio functionalities equipped with iTunes Tagging features. The Volkswagen Head Unit Console is capable of receiving audio broadcasts as radio transmissions and accompanying data streams including song identifying information like song title and artist, as well as information identifying the broadcast station and Apple product information for the particular song for use with the iTunes Tagging function. The Head Unit is capable of extracting data from the data stream for a particular tagged song and saving this information.  See:  - VW Audi A3 Owner's Manual, pp. 206-207.³  - iTunes Tagging online documentation, July 2010, p. 1.⁴  - HD Radio Air Interface Design Description – Program Service Data, p. 10.  - "HD Radio Tombology – iTunes® Tagging."5	
5.a	obtaining, using a stream scanner module, a data stream associated with the electronic transmission of the media segment;	The Volkswagen Head Unit Console is capable of receiving radio broadcasts at the HD Radio and/or SiriusXM Radio accessory. The radio broadcast includes a particular audio song transmitted by radio as well as a data stream including metadata identifying the audio song or other audio broadcast.  See:  - iPod Accessory Protocol Interface Specification Appendix D, 2009, pp. 465-66 HD Radio Air Interface Design Description – Program Service Data, p. 10 "HD Radio TM Technology – iTunes® Tagging."	
5.b	determining, using at least one processor, data that identifies a source of the data	The Volkswagen Head Unit Console is capable of extracting data from the radio broadcast RDS data stream, including information identifying the broadcast station as the source of the broadcast audio stream. For example, the data stream includes a unique identifier specific to the station, as	

 $<sup>^3 \</sup> https://bordbuch-online.audi.de/AudiBordbuch/docs/2c91f63c-4949-4fd6-b0c7-b62561b597f8/206/\#zoom=z\ (VIN\ No.\ WAUAUGFF3LA006674)$ 

 $<sup>^4\</sup> https://web.archive.org/web/20100705044543/images.apple.com/itunes/tagging/pdf/itunes\_tagging$ 

<sup>&</sup>lt;sup>5</sup> https://hdradio.com/broadcasters/engineering-support/itunes-tagging-support/

	stream obtained through analysis of said data stream;	well as information related to the station URL required for use with the iTunes Tagging functionality.
		<ul> <li>See:</li> <li>VW Audi A3 Owner's Manual, pp. 206-207.</li> <li>HD Radio Air Interface Design Description – Program Service Data, p. 10.</li> <li>"HD Radio<sup>TM</sup> Technology – iTunes® Tagging."</li> </ul>
5.c	extracting at least third party encoded data obtained from the data stream;	The Volkswagen Head Unit is capable of extracting data from the radio broadcast data stream including Apple product information for use with the iTunes Tagging functionality. The Apple product information is sent for and particular to each song in the radio broadcast.  See:  - VW Audi A3 Owner's Manual, pp. 206-207.  - "HD Radio <sup>TM</sup> Technology – iTunes® Tagging."  - iPod Accessory Protocol Interface Specification Appendix D, pp. 463-465.
5.d	analyzing, using a stream analysis module, the third party encoded data extracted from the data stream, whereby the analysis generates analysis data that includes at least an identifying data that initiates identification of the media segment;	The Volkswagen Head Unit Console is capable of using an internal processor to retrieve the Apple product information and other information identifying the audio song from the extracted data stream for display to the user on the console display.  See:  - VW Audi A3 Owner's Manual, pp. 206-207.  - iPod Accessory Protocol Interface Specification Appendix D, 2009, pp. 465-66.  - "HD Radio <sup>TM</sup> Technology – iTunes® Tagging."
5.e	correlating the data that identifies the source of the data stream, additional data associated with the transmission of the media segment and at least part of the analysis data;	The Volkswagen Head Unit Console is capable of associating the Apple product information with other identifying information displayed to the user on the console display to enable correlation of the Apple product information with a particular audio song when the user "tags" a song playing on the HD radio.  See:  - VW Audi A3 Owner's Manual, pp. 206-207.

		<ul> <li>iPod Accessory Protocol Interface Specification Appendix D, 2009, pp. 465-66.</li> <li>HD Radio Air Interface Design Description – Program Service Data, p. 10.</li> <li>"HD Radio<sup>TM</sup> Technology – iTunes® Tagging."</li> </ul>
5.f	generating a unique identification of a specific instance of extraction of the third party encoded data associated with the electronic transmission of the media segment;	The Volkswagen Head Unit Console is capable of storing the data extracted from the data stream for any song that the user "tags" using the iTunes Tagging functionality. The Volkswagen Head Unit is capable of doing so by generating a "token: for the tagged song including the information required to identify the particular song and the data extracted from the data stream including song title and artist as well as identification of the broadcast station. The "token" allows a user to identify, retrieve, and purchase a tagged song.  See:  - HD Radio Air Interface Design Description – Program Service Data, p. 10 "HD Radio TM Technology – iTunes® Tagging."
5.g	identifying using at least one processor the media segment based on the correlation; and	The Volkswagen Head Unit Console is capable of determining from the extracted data, a particular song title and artist associated with a currently playing song. The information is displayed to a user while the song plays on a console display of the Head Unit Console.  See:  - "HD Radio <sup>TM</sup> Technology – iTunes® Tagging."
5.h	storing in a database the data that identifies the source of the data stream, the unique identification of the specific instance of extraction of third party encoded data associated with the electronic transmission of the media segment and the identification of the media	The Volkswagen Head Unit Console is capable of storing information associated with a tagged song in a memory of the Volkswagen Head Unit Console. The stored data includes information and data identifying the tagged song, such as song title and album, as well as unique station identifiers, and Apple product information.  See:  - VW Audi A3 Owner's Manual, p. 207.  - "HD Radio <sup>TM</sup> Technology – iTunes® Tagging."  - iPod Accessory Protocol Interface Specification Appendix D, p. 464-465.

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