

**DECLARATION OF DR. STEPHEN HEPPE IN SUPPORT OF *INTER*
PARTES REVIEW OF U.S. PATENT 8,717,166**

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I. INTRODUCTION AND QUALIFICATIONS

1. I am over 18 years of age. I have personal knowledge of the facts stated in this Declaration and could testify competently to them if asked to do so.

2. I obtained a Bachelor's of Science degree in electrical engineering and computer science at Princeton University in 1977, a Master's of Science degree in electrical engineering (specializing in communications) from The George Washington University (GWU) in 1982, and a Doctor of Science in electrical engineering (specializing in communications, with minors in operations research and electrophysics) in 1989. I have worked in the fields of radio communication, computer and network communications, packet radio, and ad hoc packet radio networking since 1977. In the late 1980's, I was the lead communications engineer on a project demonstrating differentially-corrected GPS-based precision approach for a military aircraft. This system relied on the AX.25 packet radio specification for air/ground communications. From 1995 through 2002, I worked on standards as well as hardware and software for an ad hoc (distributed) airborne packet radio system that could exchange GPS position reports and data between aircraft and ground stations. This included augmentations that provided routing and transmission of user data through the airborne stations, allowing transfer of data between aircraft and distant ground stations connected to the Internet or other wide area networks. My detailed CV is provided as Exhibit A hereto.

3. I have been asked by the Petitioners, Teletrac Inc., Navman Wireless North America, Ltd, Geotab Inc., and TV Management Inc., to provide my opinions about the technical issues addressed below. I am being compensated for my time spent on this matter at my standard hourly compensation rate. I have no financial interest in the outcome of this or any related proceeding. My compensation is not dependent upon the opinions that I am providing in this declaration.

4. I have reviewed U.S. Patent 8,717,166 (“the ‘166 patent”), its file history, and the prior art citations noted in my analysis and opinions. I understand that the latest recorded assignment of the ‘166 patent was to “PERDIEMCO LLC,” which I also understand to be the present assignee. I understand that the ‘166 patent includes 27 claims. I also understand that the Petition for *inter partes* review that accompanies this Declaration seeks to cancel challenged claims 1-10, 13-16, and 19-25 of the ‘166 patent.

5. I have reviewed and am familiar with various references, written materials, and literature, identified as follows:

- Ex. 1001 U.S. Patent No. 8,717,166
- Ex. 1002 The file history of the ‘166 patent
- Ex. 1003 U.S. Patent No. 7,327,258 (“Fast”)

- Ex. 1004 U.S. Provisional Patent App. No. 60/542,208 (“Fast Provisional”)
- Ex. 1005 U.S. Patent Pub. No. 2005/0156715 (“Zou”)
- Ex. 1006 Discrete Wireless’s Marcus GPS Fleet Management Application Product Brochure (“Marcus”)
- Ex. 1009 U.S. Patent No. 7,949,608 (“Li”)
- Ex. 1010 Software as a Service Article (“SaaS Article”)

6. The ‘166 patent, awarded to Darrell Diem, claims a priority date of December 23, 2005 based on provisional application No. 60/752,879. According to the Abstract, it is directed to a system and method for defining an event based upon an object location and a user-defined zone and managing the conveyance of object location event information among computing devices where object location events are defined in terms of a condition based upon a relationship between user – defined zone information and object location information. Accessibility to object location information, zone information, and object location event information is based upon an object location information access code, a zone information access code, and an object location event information access code, respectively.

7. Figure 1 of the ‘166 patent, shown below, illustrates an exemplary information-sharing environment of the Patent, including computing devices, a map server, and objects for which location information is provided.

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