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**Libin**

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(54) **DEPLOYING AN EMERGENCY VEHICLE**(71) Applicant: **All Turtles Corporation**, Little Rock, AR (US)(72) Inventor: **Phil Libin**, San Francisco, CA (US)(73) Assignee: **All Turtles Corporation**, Little Rock, AR (US)

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*G10L 25/51* (2013.01)  
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*G01C 21/26* (2006.01)

(52) **U.S. Cl.**

CPC ..... *G08G 1/0965* (2013.01); *G06N 20/00* (2019.01); *G10L 25/51* (2013.01); *G01C 21/26* (2013.01)

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See application file for complete search history.

(56) **References Cited****U.S. PATENT DOCUMENTS**

7,095,861	B2 *	8/2006	Byers .....	G08B 3/10 340/436
7,106,180	B1 *	9/2006	Pompei .....	A01M 29/18 340/384.7
8,918,343	B2 *	12/2014	Mitchell .....	G10L 17/26 706/12
9,352,817	B2 *	5/2016	Simon .....	G10K 11/26
9,961,435	B1 *	5/2018	Goyal .....	G10L 25/84
10,034,083	B2 *	7/2018	Bostick .....	H04W 4/38
2003/0161483	A1 *	8/2003	Byers .....	G10K 11/346 381/61
2008/0036595	A1 *	2/2008	Hollstien .....	G08B 13/1436 340/541
2010/0088093	A1 *	4/2010	Lee .....	G10L 15/22 704/233

(Continued)

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Constructing a noise pollution map for an area includes a first subset of users performing initial noise recordings in the area using audio devices, using machine learning to provide classification of noises in the initial noise recordings, a second subset of users, larger than the first subset of users, capturing noise in the area using audio devices, creating summaries of noises using the classification to classify noises captured by the second subset of users, and aggregating the summaries to construct the noise pollution map of the area. The audio devices may include headsets, smart speakers, smart television sets, and/or computers. The summaries of noises may be created using software that is installed locally on devices of the second subset of users. The summaries may include source information, amplitude and frequency characteristics, duration, parameters of a corresponding one of the audio devices, user location, surroundings, and/or user movement information.

**13 Claims, 5 Drawing Sheets**