



Carma Technology Corporation
600 Congress Avenue, Floor 14
Austin, TX 78701

Aug 17, 2020

Metropolitan Transportation Commission (MTC)
Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105

RE: Appeal - App Vendor for Smartphone App-Based Occupancy Verification System Pilot

Dear Mr. Nguyen and Members of the Operations Committee:

I write in response to the selection dispute denial letter received on August 13, 2020, from Therese W. McMillan, Executive Director. We have reviewed the MTC Carma Bid Protest Memorandum dated August 7, 2020 ("Memorandum") that was attached to this letter.

I hereby appeal this decision to the MTC Operations Committee in accordance with Section IX (General Conditions) subsection C (Selection Dispute) of the RFP.

To the members of the Operations Committee, we are grateful for this opportunity and respectfully request oversight and reconsideration of the selection of RideFlag upon a thorough examination of the following:

- Of the two firms shortlisted by MTC for this project, only one (Carma) reasonably meets the minimum requirements for this project. As admitted in MTC's memorandum, RideFlag has only begun testing its proposed product as part of a new pilot program with UDOT. The memorandum makes clear that RideFlag had not even begun that UDOT pilot (February 1, 2020) at the time they responded to the RFP. No reasonable interpretation of the requirement for a "mature, functioning product" could include minimal beta testing of an app ("Express Lanes Pilot") that didn't even launch on the App Store until February 27, 2020. We encourage the members of the Operations Committee to seek clarification on:
 - How many toll transactions has the Express Lanes Pilot app processed as part of that program?
 - Does that amount reasonably meet the minimum requirements for a "mature, functioning product" that has "at least one existing toll facility where the proposed app is or has been deployed/tested"?
 - Furthermore, exactly how many of its 5,012 registered users have had a HOV toll transaction processed in its UDOT program to date?

- How many of those 5,012 registered users are associated with RideFlag's other (carpool ride-matching) product that has no occupancy verification element, as opposed to their Express Lanes Pilot app?
- How many of those 5,012 registered users are even in the state of Utah?
- We further encourage the members of the Operations Committee to compare the maturity of RideFlag's product and its deployment history with our product, *GoCarma*, which is the only app-based occupancy verification system currently in full commercial deployment and currently reducing HOV violations.

Fully deployed since January 2020 for the Dallas Fort-Worth (DFW) metroplex, in partnership with North Central Texas Council of Governments (NCTCOG) and Texas Department of Transportation (TxDOT), the GoCarma system has processed more than 638,000 toll transactions across 8 toll roads on behalf of 14,441 drivers from 33,127 registered users in DFW. This project was deployed in January following years of pilot testing with independent oversight and full integration with toll systems provided by TransCore and Cintra. As a vehicle registered in the GoCarma app is detected by a toll system as part of a toll transaction, the toll system immediately queries GoCarma for the verified HOV status of the vehicle. The GoCarma app is fully automated and does not require any app interaction before, during, or after any trip.

	Carma / GoCarma	RideFlag
Completed HOV Toll Discount Pilots	3 (Austin, San Francisco Bay Area, Dallas)	0
Full Metro-Wide Commercial Deployments	1	0
Deployed Toll Roads	8	0
Toll Transactions Processed to Date	638,000	?
Registered Users for HOV Toll Discounts	33,127	?
Active Drivers (seen in a toll transaction)	14,441	?
Live Integrations with High Volume Toll Systems	2 (TransCore, Cintra)	0
Year Founded	2007	2014
Registered Users	500,000+	5012
Previous Projects with MTC	3 (2012 VPP grant with partners CCTA, TAM and SCTC; 2013 At the request of MTC, Carma created >30k carpools during BART	0

	strike at no cost; and 2015 VPP grant with partners CCTA and MTC 511 SFBay	
--	--	--

- We further encourage the members of the Operations Committee to consider whether MTC's Evaluation Summary, as disclosed in the memorandum, reasonably evaluates the *Qualifications and Experience* of the 2 shortlisted vendors. We are astonished that MTC calculated a score of 15 for RideFlag's Qualifications and Experience and only a score of 18 for Carma's Qualifications and Experience. In addition to being the only vendor with a full commercial deployment of an app-based vehicle occupancy verification system, Carma is the only vendor that has completed multiple federally funded pilots for app-based HOV toll discount projects, including with Central Texas Regional Mobility Authority, Contra Costa Transportation Authority and NCTCOG. Between 2011 and 2014, Carma helped MTC achieve hundreds of thousands of carpool trips, including removing thousands of vehicles from Bay Area roads during the 2013 BART strike. Carma has verified millions of HOV trips since 2009. It's a gross misrepresentation to so minimally distinguish between the *Qualifications and Experience* of the two entities.
- MTC's memorandum admits that MTC did not speak to our reference customer NCTCOG as part of the evaluation process about our project in the Dallas Fort-Worth metroplex, whereas it admits it did speak to RideFlag's reference, UDOT. In fact, no MTC staff member has ever interviewed either of the two project managers at NCTCOG about their experience working with Carma or using the GoCarma app on TEXpress lanes. We urge members of the Operations Committee to contact Dan Lamers (817) 798-7976 dlamers@nctcog.org or Natalie Bettger (817) 695-9280 nbettger@nctcog.org.
- In its memorandum, MTC states that RideFlag does not describe their technology as including "Facial Recognition Technology", rather that it describes it as "Facial Image Differentiation (FID)". This is simply not true. In RideFlag's published (2020) document "Edge computing: Why computing at the edge is the best place for PII data", RideFlag describes "Our facial recognition system".¹

Even disregarding the term used, MTC's letter admits that RideFlag still relies on facial imaging at the start and end of a trip to determine whether a person without a smartphone is in a vehicle. A 2018 MIT Media Lab study shows that such technology has error rates up to 34.7% higher for darker-skinned women compared to lighter-skinned men. Given near universal backlash this summer against the use of such technologies due to such high error rates, racial discrimination, privacy concerns, mask mandates, legal pushback and other reasons of practicality:

- Is it appropriate for MTC to select a technology that requires users to take a picture at the start and end of a trip?
- Furthermore, is it appropriate to ask a parent to take a photo of a child or infant's face at the start and end of their car carpool trip?

¹ "Edge computing: Why computing at the edge is the best place for PII data" - Published by Mark Feltham, RideFlag CTO. https://www.linkedin.com/posts/markfeltham_rideflag-embraces-edge-computing-to-ensure-activity-6638556199480549376-AeED -

- Is it appropriate for MTC in 2020 to ask road users in a carpool to remove their face masks while in the vehicle with others, including casual carpoolers?

The memorandum states that Carma should have raised its objection to the use of facial recognition technology during the RFP protest period. However, MTC has changed many policies and bypassed RFP standards in several areas over the past few months as a result of COVID 19. It is surely reasonable and timely to object to any requirement for carpoolers to remove their face masks to take a picture. Should this not be subject to the same emergency oversight as toll bridge coin collection or travel on Bay Area commuter services that have changed policies including BART, Caltrain and Muni?

- While requiring in the RFP that “the app must not require the driver to interact with the app while driving”, MTC’s letter excuses RideFlag’s requirement for a person without a smartphone to be registered in the vehicle with a facial image / photograph at the start and end of a trip. Furthermore, on page 12 of its response to the RFP, Rideflag admits that the app must be open (at least in background mode) for the app to be able to verify vehicle occupancy. Even in cases where Rideflag does not require a photograph, it still requires at least the driver to open the app. By comparison, the GoCarma app works automatically regardless of whether the app is open or closed.

Under Californian law (California Vehicle Code, Section 23123.5), it is illegal for a driver to hold a smartphone while driving. It is easy to envision how a requirement for a driver to take a photo or to even open an app increases the potential for a violation of this law and elevated road safety risk. In fact, based on our experience of conducting extensive research on casual carpooling in the Bay Area in partnership with the Transportation Sustainability Research Center at UC Berkeley,² it’s not plausible that Rideflag’s requirement is compatible with the efficiency and speed of casual carpool pick-ups. A typical casual carpool pick-up takes less than 15 seconds, so introducing a manual pick-up step that includes a photograph, a process which Rideflag states takes about 15 seconds (RFP response, page 5), inherently adds road safety risk and doubles casual carpool load times.

At the very least, this requirement is in violation of the spirit of the California’s distracted driving legislation and the current trend nationally towards even more stringent distracted driving legislation. The Operations Committee should ensure that consideration is only given to technologies are fully automated and never require driver interaction prior to, during or following any trip. This is crucial to ensuring road safety, but also to gaining public acceptance – particular in the case of family-pools traveling with young children in the vehicle.

- On June 22nd, 2020, Carma’s law firm issued a letter to RideFlag requiring RideFlag to immediately cease-and-desist from the continued manufacture, use, sale and/or offer for sale of RideFlag’s occupancy validation system and any other products using technology that infringes Carma’s patent rights.

²Casual Carpooling in The San Francisco Bay Area: Understanding User Characteristics, Behaviors, and Motivations, Transport Policy 51 (January 2016)
https://www.researchgate.net/publication/292208482_Casual_Carpooling_in_The_San_Francisco_Bay_Area_Understanding_User_Characteristics_Behaviors_and_Motivations

We are alarmed and disappointed to learn that MTC staff involved in the evaluation and dispute process did not perform simple due diligence on RideFlag's deceitful marketing claims. In response to the fact that RideFlag is clearing infringing Carma's patents, it's disappointing that MTC's memorandum again merely repeats RideFlag's misleading assertions.

The memorandum states that, "*The RideFlag OCV solution described in this RFP **has seven (7) USPTO separate patent protected filings** for Occupancy Count Validation using app-to-app and smartphone facial differentiation/recognition validation.*" (Memorandum, page 8, emphasis added.)

This is facially incorrect, as is evident from even a simple online search. In fact, U.S. Government records reflect that RideFlag does not own a single granted U.S. Patent. Below is a screenshot of the U.S. Patent and Trademark Office (USPTO) website reflecting that no granted U.S. patent is assigned of record to a company with the name RideFlag in its name.

The screenshot shows the USPTO Patent Full-Text and Image Database search interface. At the top, there is a navigation bar with links: Help, Home, Quick, Advanced, Pat Num, Order Copy, and PTDLS. Below this, the text "Searching US Patents Text Collection ..." is displayed. The search results section shows "Results of Search in US Patents Text Collection db for: AN/rideflag: 0 patents." The text "AN/rideflag" is circled in red. Below the results, it states "No patents have matched your query". At the bottom, there is a "Refine Search" button and a search input field containing "an/rideflag", which is also circled in red.

The USPTO website does reflect that three (3) – **not seven (7)** – granted U.S. patents were filed by inventors Michael Papineau and Mark Feltham.

[USPTO PATENT FULL-TEXT AND IMAGE DATABASE](#)

[Home](#) [Quick](#) [Advanced](#) [Pat Num](#) [Help](#)

[Bottom](#) [View Cart](#)

Searching US Patent Collection...


Results of Search in US Patent Collection db for:
(IN/papineau AND IN/feltham): 3 patents.
Hits 1 through 3 out of 3


Jump To


Refine Search

PAT. NO.	Title
1 10,628,691	Streamlined vehicle occupancy verification utilizing confirmation
2 10,490,076	Vehicle parking space occupancy verification and use authorization
3 10,354,458	Vehicle occupancy verification utilizing proximity confirmation

Yet, those three U.S. Patents (Nos. 10,354,458, 10,490,076, and 10,628,691) are all owned by their inventors, Michael Papineau and Mark Feltham; **not RideFlag**. Below are screenshots of U.S. Government records showing that the three (3) patents have not been assigned by their inventors to RideFlag or any other corporate entity.

Application #	Attorney Docket #	Patent #	Status
15/789,503	RFG-npr-001	10,354,458  Issued - 07/16/2019	Patented Case - 06/26/2019
Assignments			
Assignment Data does not exist for application 15789503			

Application #	Attorney Docket #	Patent #	Status
15/878,308	RFG-npr-003	10,490,076  Issued - 11/26/2019	Patented Case - 11/06/2019
Assignments			
Assignment Data does not exist for application 15878308			

Application #	Attorney Docket #	Patent #	Status
16/512,148	RFG-npr-006	10,628,691 	Patented Case - 04/01/2020 Issued - 04/21/2020
Assignments			
Assignment Data does not exist for application 16512148			

Even if these three (3) U.S. patents *were* assigned to RideFlag (which they are not), they do not cover “Occupancy Count Validation using app-to-app and smartphone facial differentiation/recognition validation,” as alleged by the Memorandum.

For example, Mr. Papineau’s U.S. Patent No. 10,490,076 is entitled “Vehicle Parking Space Occupancy Verification and Use Authorization,” which clearly relates to vehicle *parking space occupancy* and nothing more.

Mr. Papineau’s U.S. Patent No. 10,354,458 requires, “*transmitting said digital photograph to said server to verify that a number of occupants in said commuter vehicle is equal to or greater than the number of RF signals detected within said commuter vehicle; [and] delivering communications in the form of a push notification from the server to individuals associated with said mobile devices and requiring a response from each of said individuals receiving said push notification.*” The RideFlag OCV solution is not alleged to involve requiring message responses from individuals receiving push notifications following photographic verification.

Thus, even if Mr. Papineau and his colleague were to execute a remedial assignment of their rights in these three (3) granted patents to RideFlag, RideFlag would at most hold three patents that do not even cover the RideFlag OCV solution.

Finally, Carma Technologies now holds twelve (12) granted or allowed U.S. patents covering all aspects of occupancy verification and ride sharing, each of which holds a priority date of February 12, 2007, and of which the seven granted patents are shown below (the other five are allowed and will issue shortly):

Searching US Patent Collection...

Results of Search in US Patent Collection db for:
AN/"carma technology": 7 patents.
Hits 1 through 7 out of 7

Jump To

Refine Search

PAT. NO.	Title
1 10,741,071	Systems and methods for proxy communication in a shared transport system
2 10,672,271	Systems and methods for detecting continued occupancy of transport users in transport vehicles
3 10,593,208	Systems and methods for electronic rider verification in a shared transport network
4 10,593,207	Displaying optimal transportation modes between two geographic points
5 10,593,206	Ride hailing with optimal pick-up points in shared transport system
6 10,453,339	Pooled point-to-point ride hailing in shared transport system
7 10,083,608	Shared transport system and service network

Carma's U.S. Pat. No. 10,083,608 ("Continuous Coordinated Proximity Monitoring in a Shared Transport Network") is clearly infringed by the RideFlag OCV solution. The Memorandum asserts that MTC's Professional Services Agreement has an indemnification clause that "protect[s] the agency against patent infringement." The memorandum's assertion that its indemnification clause protects the agency against patent infringement has no legal basis. Any indemnification clause between MTC and RideFlag would only specify, at most, that RideFlag is obligated to cover MTC's legal costs and damages. MTC's reliance on indemnification from RideFlag recalls the adage that "an indemnification clause is only as good as the indemnifier's ability to pay." Here, RideFlag is a new entrant to the market with an unproven product, minimal revenues, even fewer patent rights, and virtually no ability to cover MTC's legal damages.

- Carma is also aware that RideFlag has been holding itself out to U.S.-based state government and commercial entities as a leading provider of patented occupancy validation technology. As above, RideFlag in fact holds 0 U.S. patents, while its founders individually filed patent applications as recently as 2017, many years after the launches of the world's largest ridesharing and HOV verification companies and more than ten years after Carma was founded and filed its own patent portfolio. Carma believes that RideFlag's misstatements about its patents are made in violation of 15 U.S.C. § 52 of U.S. Code prohibiting the dissemination of false advertisements for the purpose of inducing the purchase of services and engaging in unfair and deceptive acts under that Title. RideFlag's inaccurate statements about its technology and IP may also run afoul of various U.S. state laws governing the accuracy of statements made to government agencies in the process of bidding on government RFPs and contracting with state governments.

We believe that a reasonable review of the above should lead to a determination that MTC's management of the evaluation, selection and dispute review process did not meet the standards that should be expected by the Operations Committee. Therefore, we request the Operations Committee rule if RideFlag's inaccurate statements about its technology and IP run afoul of MTC policies, or U.S.

and State of CA laws, governing the accuracy of statements made to government agencies in the process of bidding on government RFPs and contracting with government agencies.

Again, we thank you for this opportunity to submit this appeal. We strongly support MTC and the Operations Committee in piloting technologies for mitigating HOV violations and would welcome an opportunity to work with you further on this project. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to be 'P. Steinberg', written in a cursive style.

Paul Steinberg, Chief Business Officer
paul.steinberg@gocarma.com
408-540-9942