Dear SME,

Thanks for agreeing to help out with this effort. Our task is to match each of the following communication protocols to the requirements that have been extracted from the known use cases. In order to help us get the right information to the right people and to properly summarize things for the CPUC, we're asking for your help in getting some basic information. Please complete the following to the best of your ability.

Section 1: Who and What

Please select your name from the following list: George Belli

Please select your protocol from the following list: Telematics

What is the current (approved by standards/industry group) version of your protocol?

When was it approved? July / Is it currently being revised ? Please Select

What is the anticipated date for the approval/release of the next version? January /

Section 2: When and Why

Please input a short narrative of the problem that your protocol was created to address, and when it first was adopted.

Telematics is a lower level network protocol utilized by Automakers to facilitate monitoring and communications between the vehicle and corresponding vehicle telematics server. This network protocol governs the end to end process of timely, secure, and managed data communications, which supports multiple applications and services. This was first demonstrated in Europe in 1988 and is now supported on nearly every production PEV. The Automakers developed the OVGIP to provide a common platform to interface with the utilities for aggregation and coordination of load control information to PEVs through each Automaker's telematics interface.

Section 3: Current Status:

Please summarize the current usage and level of adoption of this protocol. If possible, please discuss the number and location(s) of current implementations of the protocol.

Utilization of the telematics network protocol for application to VGI is being adopted by 6 OEMs as part of the OVGIP Phase 2 Development Program. There are presently 9 utilities across the US engaging with the OEMs in developing demonstration pilots including PG&E, SDG&E, SCE, Southern Company, HECO, Con Edison, AEP, PSE, and SMUD. Other utilities in the eastern US are in the process of discussing the VGI attributes of the OEM telematics. OVGIP with telematics is a progressively developing program.

Section 4: Actors Currently in Play:

In order to decouple protocol specific nomenclature and to reduce the number of actors to the minimum relevant number, we've come up with the following list. Please indicate what actors are able to communicate directly with each other by using your protocol.

	EV Driver (EVD)	Power Flow Entity (PFE)	Utility Customer of Record (UCR)	EV Battery System (EVBS)	EV Power Converter System (EVPC)	Energy Connection System (ECS)	Energy Meter (EM)	Building Management System (BMS)
EV Driver (EVD)	-	✔	✔	✔		✔	✔	
Power Flow Entity (PFE)	✔	-	✔	✔		✔	✔	✔
Utility Customer of Record (UCR)		✔	-	✔		✔	✔	
EV Battery System (EVBS)	✔	✔	✔	-		✔	✔	✔
EV Power Converter System (EVPC)					-		✔	✔
Energy Connection System (ECS)		✔	✔	✔		-		✔
Energy Meter (EM)		✔	✔	✔		✔	-	✔
Building Management System (BMS)		✔	✔	✔		✔	✔	-

Please add any notes needed to clarify the above table

The EVPC is now designated to be the DCPC which is defined as the off board DC Power Converter for DC charging/discharging. The matrix is somewhat skewed as example with DCPC (DC Charger) communication with ECS (AC Charging Device/EVSE). In most cases the telematics provides the communication/msg that then initiates the execution using applications standard i.e. Telematics initiates msg

What physical layer(s) does this protocol use for communication between devices?

Wireless/Cellular transmission

What language is used for communicating between devices (i.e. html, xml, etc.)

TCP,UDP, and any application layer protocol such as HTML, XML, using a Restful API. Each upper layer differs by application. Each Automaker application may use different upper layers.

Section 5: Actors Anticipated to be in Play (As appropriate):

If the next version of your protocol is expected to allow for additional communications, please indicate them in the following.

	EV Driver (EVD)	Power Flow Entity (PFE)	Utility Customer of Record (UCR)	EV Battery System (EVBS)	EV Power Converter System (EVPC)	Energy Connection System (ECS)	Energy Meter (EM)	Building Management System (BMS)
EV Driver (EVD)	-							
Power Flow Entity (PFE)		-						
Utility Customer of Record (UCR)			-					
EV Battery System (EVBS)				-				
EV Power Converter System (EVPC)					-			
Energy Connection System (ECS)						-		
Energy Meter (EM)							-	
Building Management System (BMS)								-

Please indicate any additional functionality or limitations to functionality that are germane to the consideration of this protocol:

Telematics is not version specific. Because it is an end to end network protocol between the OEM platform and vehicles there is the latitude to update and add functionality as required without any formal standards org process. The front end central server (OVGIP) will adapt to any communications application standard protocol when updated and released as appropriate to the VGI architecture

What physical layer(s) does this protocol use for communication between devices?

Wireless/Cellular

What language is used for communicating between devices (i.e. html, xml, etc.)

TCP,UDP, and any application layer protocol such as HTML, XML, using a Restful API. Each upper layer differs by application. Each Automaker application may use different upper layers.

Section 6: DC, Single Phase, or Polyphase:

Does your protocol directly control the flow of DC energy? Please Select

Does your protocol directly control the flow single phase AC energy? Please Select

Does your protocol directly control the flow of polyphase AC energy? Please Select

Does your protocol directly control the flow of energy from the vehicle back to the grid? No

If needed, please add any explanatory details to the answers in section 6:

As indicated previously telematics does not provide direct flow control. it provides the