What is TPEG?
TPEG (Transport Protocol Experts Group) is an emerging family of international standards that support a range of real-time traffic and traveller information services. TPEG provides an evolutionary path from RDS-TMC, taking advantage of higher bandwidth to support the transmission of even more comprehensive and user friendly traffic information, as well as related dynamic content such as fuel, parking, and weather.

Developed in close collaboration between auto and navigation brands, broadcasters, traffic service providers, and public authorities, TPEG is a suite of standards designed for communicating multi-modal traffic and traveller information over a wide range of bearers. TPEG is particularly suited for delivery of services over 3G and 4G mobile data connections, the internet, and over digital radio.

As with RDS-TMC (the dominant global standard for live traffic content), TPEG technology and standards development are supported and administered by TISA (Traveller Information Services Association) of which Intelematics is an active member.

Intended Use
SUNA TPEG can support a spectrum of applications, including navigation systems (portable and embedded), smartphone mapping and guidance apps, web mapping portals, and infrastructure management.

Our TPEG feed will initially be provisioned to support our customers in the development, testing, and localisation of TPEG-compatible navigation and mapping applications.

SUNA TPEG services can be delivered directly from the SUNA infrastructure to authorised end-user devices or used as a data interchange format, for instance in the provision of rich dynamic content to online mapping portals.

Benefits
SUNA TPEG will provide a number of advantages over earlier-generation technologies, in particular by supporting:

- improved congestion graphics, especially through support for colour-coding congestion levels across the arterial road network
- traffic events on minor roads
- further improvements to route optimisation, by providing delay information on all monitored roads, not just those heavily congested
- support for complementary services leveraging additional content like parking, fuel, weather, and variable speed limits.
- Support for bi-directional communication which will allow incremental updates, eliminate redundant data transmission, and enable probe data collection.

Content
SUNA TPEG initially supports a number of core TPEG service ‘applications’ that can be independently licensed. The SUNA TPEG service will initially support the following core TPEG applications:

<table>
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<tr>
<th>Standard</th>
<th>Application Name</th>
<th>Overview</th>
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<tr>
<td>TS 21219-15</td>
<td>Traffic Event Compact</td>
<td>Incident coding of cause and effect messages</td>
</tr>
<tr>
<td>TS 21219-18</td>
<td>Traffic Flow and Prediction</td>
<td>Status oriented method of providing link based traffic flow data</td>
</tr>
<tr>
<td>TS 21219-14</td>
<td>Parking Information</td>
<td>Parking data including pricing and additional parking station attributes</td>
</tr>
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</table>

The core service ‘Traffic Event Compact’ provides content that is essentially identical to the SUNA RDS-TMC (Alert-C) service, with extended coverage for events occurring on roads not covered by the TMC location referencing system. The ‘Traffic Flow and Prediction’ service complements this by providing congestion information across the monitored road network. This will support ‘heat-map’ rendering of traffic congestion levels as well as more precise time of arrival estimation and route optimisation (in a manner similar to that supported by SUNA Congestion Monitor).

SUNA TPEG will provide national coverage in both Australia and New Zealand. SUNA’s unique approach to the monitoring of traffic congestion leverages the fusion of high volumes of probe vehicle data with road sensor data (where available), to provide unparalleled precision and depth of coverage.
Additional TPEG applications for which support is planned include:

- bi-directional queries including incremental update, corridor and radius searches, and probe data upload
- variable speed limit information
- weather information
- fuel price information

In future, TPEG’s support for public transport content will enable truly multimodal route advice.

**Service Delivery & Coverage**

SUNA TPEG utilises TPEG over HTTP delivery via wireless channels, e.g. 3G/4G networks to vehicles and mobile devices as they are developed. In addition the SUNA TPEG platform can support broadcast distribution using the Australian commercial DAB+ radio networks.

TPEG-TEC coverage is focussed on the major metropolitan areas of SE QLD: urban areas of Sunshine Coast, Brisbane and Gold Coast; greater Sydney, including Newcastle and Wollongong, greater Melbourne and Geelong, Adelaide, Perth and ACT. In addition rural road network coverage exists throughout Australia where wireless coverage permits. Coverage for TPEG-TFP is restricted to major capital cities.

**Frequency of Update**

The SUNA TPEG Services TEC and TFP applications are updated every 2 minutes.

**Availability**

The SUNA services are hosted in a secure data centre with 24/7 monitoring, fully redundant systems and connectivity. Service availability will exceed 97%.

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### SUNA Traffic Channel Products:

- **SUNA RDS-TMC** – A standards-based broadcast service that broadcasts digitally encoded TMC traffic data using FM radio digital subcarrier (RDS).
- **SUNA XML-TMC** – Internet feed that delivers TMC encoded traffic data for use in web & wireless apps.
- **SUNA Congestion Monitor** – Internet feed providing live, detailed road-by-road congestion levels across capital cities.
- **SUNA Predictive** – A database of statistically normalised travel speeds for main roads that supports the prediction of future speeds or travel times based on historical averages.
- **SUNA Reporter** – Text based simpler traffic feed using XY for location for use in web and mobile applications.
- **SUNA New Zealand** – Offers a similar range of products to those offered in Australia.
- **SUNA Media** – A range of customised feeds designed to support audio and video traffic presentation.

For other information relating to SUNA TPEG Traffic Services, or other SUNA products please contact us at enquiry@sunatraffic.com.au or by telephone +61 (0) 3 8415 9000

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### Encryption & Licensing

The SUNA TPEG Service is encrypted according to the TPEG Standard TS 21219-10. A range of licensing options are available. Contact Intelematics for full details.