

## DEPARTMENT OF TRANSPORTATION



# **QUESTIONNAIRE**

## **REGARDING TRANSITIONING FROM THE CURRENT TITLE-21 PROTOCOL TO A NEW PROTOCOL**

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The California Department of Transportation (Caltrans) is currently considering the development of regulations regarding new technologies and new technical specifications to replace the current automated vehicle identification protocol currently set out in the California Code of Regulations (commonly referred to as the “Title-21 protocol”). Caltrans is very interested in hearing from stakeholders as to their views on the transitioning from Title-21 protocol to a new protocol, most likely the 6C protocol.

Caltrans will be holding two public workshops (July 8, 2015 in Oakland and July 22, 2015 in Fontana) to solicit initial comments on the transition from the current Title-21 protocol.

However, in anticipation and in connection with those workshops and other activities to facilitate public participation in the regulatory process, Caltrans invites you to complete the following questionnaire. This information will greatly assist Caltrans as it begins the process of considering new regulations.

Please provide your responses following each question. Please feel free to forward this questionnaire to any other interested parties.

Please e-mail your responses to: [Title.21.Changes@dot.ca.gov](mailto:Title.21.Changes@dot.ca.gov).

Please list the name of the person completing the questionnaire and the name of the agency or company you represent.

NAME **Matt Russell**

AGENCY **Transportation Investment Corporation (TI Corp)**

1. Are there any alternatives to the transition to 6C, including comparable Federal regulations or regulations/protocols in other states? **There are other protocols in widespread use, however 6C is a cost-effective and user-friendly technology that has gained a significant and widespread usage within North America, and therefore offers several key advantages, including: proven performance; established certification program; open standards; widespread use outside of tolling, meaning that the tolling industry does not carry the burden of R&D; and opportunities for interoperability with other tolling**

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agencies, and with closely related industries (e.g. transportation, parking etc.). Another advantage of 6C is that it has been short-listed as a potential national interoperability protocol.

**2. What are the benefits of the transition to 6C? What are the drawbacks?**

6C tags are very cost effective, and can therefore be provided to customers at little or no charge; and their small form factor makes them very appealing to customers. These factors, together with the right business rules to encourage their use, makes it easier to achieve high penetration rates with 6C than with T21 and many other technologies in use within tolling.

6C performance meets our requirements, and the fact that they are unmovable between vehicles (meaning you always have a clear link between the vehicle and the device) allows transaction posting business rules to be enhanced for the purposes of improving automation and accuracy of transaction posting. For example you can use rough OCR plate matching at the roadside to ensure that the tag has been associated to the correct transaction, reducing the chance of errors and split transactions.

**3. Please discuss the factors involved, including projected timetables, for transitioning to a new protocol, with respect to the following:**

By way of background to the below responses, TI Corp began open road tolling on Port Mann (using the TReO brand name) in December of 2012 via the use of 6C tags. The nearby Golden Ears Bridge (GEB) had been using Title 21 tags since 2009. The province of BC required that toll devices from both facilities should work on both facilities, i.e. device-level interoperability. For this reason both facilities implemented multi-protocol readers programmed with both T21 and 6C protocols. However it was decided that only customers with a 6C tag would be eligible to receive a single combined bill (billing-level interoperability). This meant that although GEB have not undergone an official transition from T21 to 6C, the region's T21 tag population are gradually diminishing due to decreasing demand of T21 and increasing demand of 6C. There are no firm plans to remove the remaining T21 tags from circulation at this time.

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- a. Transponder procurements/existing inventories **Technically speaking neither GEB nor TI Corp 'transitioned' to 6C. GEB T21 transponders are essentially being phased out gradually over a number of years as customer demand for T21 tags decrease**
- b. Toll-system modifications **Both GEB and TI Corp deployed multi-protocol readers in 2012 capable of reading 6C, T21 and ASTMv6 (used by the Weight2GoBC trucking program). TI Corp's system integrator Sanef ITS modified their custom built lane controller software to use Sirit multi-protocol readers. They did this as part of the entire roadside and backoffice system implementation. GEB had to switch out existing single-protocol Sirit readers to TransCore multi-protocol readers. Transcore and GEB's system integrator Sanef ITS worked together during 2012 to complete this project.**
- c. Agency administrative changes **TI Corp's concession agreement with the province of BC was originally written with T21 tags in mind. This was modified when the decision was made early on in the planning phase of the project to use 6C instead. There were very few if any changes required**
- d. Public education, outreach, and marketing **Customers in the Vancouver region, who previously only had experience of GEB's T21 tags, took positively to 6C tags. By the time tolling had begun on Port Mann in December 2012, over 500k 6C tags had already been distributed free of charge to customers. This was almost 10 x the number of T21 tags distributed by GEB since they had begun tolling in 2009. Being free of charge, easy to apply decals and of a small form factor meant they were an easy sell.**
- e. Issues regarding certification **Vendor equipment and tags had already been certified by OmniAir Certification Services using The 6C Toll Operators Coalition (6CTOC) certification program and tag programming standards. No other certification were required.**
- f. Issues regarding three-position transponders. **TI Corp only use single position tags. HOV/HOT declaration is handled in the back office and not at the lane.**

#### **4. Please describe how the transition:**

- a. Impacts business and/or employees **6C tags are cheaper, have no batteries and are not reusable, so there is less inventory overhead.**

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- b. Impacts small businesses **Generally a positive impact since businesses can put a tag on each vehicle in their fleet. Although some trucking companies would prefer a form factor that was moveable between vehicles and not attached to the windshield (they have a lot of windshield replacements)**
- c. Impacts jobs or occupations **None**
- d. Imposes reporting requirements **None**
- e. Impacts individuals. **Our experience is that customers prefer 6C over T21**
5. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here? **The huge growth to the tolling 6C market coming from California's' transition would very likely drive down costs for all 6C users**
6. What are the costs that businesses and individuals may incur to comply with this regulation over its lifetime? **It would reduce tag costs**
7. What are the fiscal impacts on state and local government? **It would reduce tag costs**
8. Are there any issues regarding fairness of competition? **6C is an open protocol with multiple chip manufacturers, tag and reader manufacturers, distributors, software developers and integrators competing in the market. I cannot think of another tolling protocol with the same level of competition**
9. Are there any issues regarding individual privacy? **None**
10. Please provide comments on any other relevant issues not addressed above. **There have been no issues of litigation related to our use of 6C technology. As we do with the purchase of any technology, we build non-liability clauses into our contracts.**

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE