

PRE-NOTICE DISCUSSIONS ON PROPOSED REGULATIONS
UPDATING AUTOMATIC VEHICLE IDENTIFICATION SPECIFICATIONS

CALIFORNIA DEPARTMENT OF TRANSPORTATION

TITLE 21 HEARING

INLAND EMPIRE TRANSPORTATION MANAGEMENT CENTER

13892 VICTORIA STREET

FONTANA, CALIFORNIA

July 22, 2015

10:00 a.m.

Reported By:

Vickie Blair,

CSR No. 8940, RPR-CRR, CLR

1 Fontana, California; Wednesday, July 22, 2015

2 10:00 a.m.

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5 MR. HARRIS: Good morning, everybody.

6 Let's get started.

7 My name is David Harris. I'm an attorney with
8 CalTrans in Sacramento. I'll be moderating today's
9 discussions.

10 But I'm also, I think, pretty clearly the person
11 most unfettered and [unintelligible] by substantive
12 knowledge of the subject matter we're about to discuss.

13 Many of you know Steve Hancock and Joe Rouse of
14 CalTrans. They are clearly the subject matter experts
15 in what we're about to talk about.

16 And so, in fact, this is our second workshop.
17 We had one in Oakland about two weeks ago, and, as I
18 said there, I think the success of today's meeting is
19 going to be made in large part by how few words I say
20 about Title 21 this morning, and the people that
21 actually know what we're talking about are doing the
22 talking.

23 But I wanted to just cover a few ground rules of
24 what we're talking about before we dive right in.

25 This is, again, the pre-notice discussions

1 regarding regulations dealing with Title 21, what I've
2 described to people, mostly they know about FasTrak
3 transponders and the technology that surrounds that,
4 and, obviously, there are a lot more details that go
5 into that. That's obvious the shorthand of that, and
6 you're obviously in the right room because I think there
7 is another gathering in the next room with the CHP. I'm
8 not really sure what they're doing over there, but
9 anyway --

10 Before we get started, I wanted to just cover a
11 few ground rules and housekeeping. Hopefully, you all
12 signed in when you came in and picked up the handout,
13 which was something like this, we're going to go through
14 that relatively quickly, but that's for your references
15 for later, it should be about 20 pages, and it then
16 looks like everybody has filled out their tent card, I
17 want to talk about our reporter, Vickie, in a little bit
18 but, if you can, just try to orient your card toward her
19 because she's the one who will need to know who's
20 speaking, and I'll cover that in a little bit.

21 Again, essential items, restrooms if you go out
22 that door, straight to the back, and then to your right
23 and then a quick left, men's and women's room are back
24 there. There is bottled water in the back behind that
25 little alcove there behind you there, if you want that.

1 I did see a vending machine out here, but it looked very
2 sad, about 75 percent empty, so I'm not sure what we're
3 going to do about that. But I'll cover what we're going
4 to do for lunch in a little bit. I handed out some
5 menus already, and we can talk about that in a second.
6 Actually, we can talk about it now.

7 But in terms of our scheduling, we have this
8 room until four o'clock. We will stay if we need that
9 time, obviously we'll stay until everyone has a
10 reasonable opportunity to be heard.

11 And, in terms of lunch, we did pass out a menu
12 from Panera bread, it's \$10 flat rate, unfortunately,
13 it's a cash-only proposition. If you could fill that
14 out, we'll collect those at about our 11 o'clock break,
15 and Kristy, who's roaming around here helping, will
16 bring lunch and then maybe have a working lunch, we'll
17 take a short break and then maybe have a working lunch
18 because I know that many people have come great
19 distances and they have a great distance to travel, so I
20 want to respect everybody's time. We'll try to keep
21 things moving, but also make sure there is some level of
22 comfort and take occasional breaks.

23 Now, with regard to that, Vickie Blair is here
24 as our court reporter, thank you very much, Vickie, and
25 she will be taking down a transcript of what we're

1 saying. And, obviously, because we want to know what
2 you're saying, and be able to have a record of it, once
3 we're done here. So, candidly, the schedule is going to
4 be determined largely by what Vickie needs because we
5 can all relax from time to time when other people are
6 talking, but anytime anyone is talking, Vickie is
7 working, and I want to be obviously cognizant of that
8 and make sure she has the ability -- so we'll take a
9 break every hour or so just to give everybody a chance
10 to stretch their legs and take a comfort break.

11 And, actually, what I learned from our first
12 workshop in Oakland a couple weeks ago I think candidly
13 a good deal of the value of this kind of meeting is you
14 folks can talk to each other, you know, in a more
15 informal setting. So we will take some breaks, but,
16 obviously, we have a relatively big agenda, so we're
17 going to try to work right through.

18 One again, Vickie is very good at what she does,
19 but she can only take down one person's comments at a
20 time, so let's try to take turns, do not talk over each
21 other. I will obviously try to help with that. I'll
22 try to make sure that I don't talk over anybody.

23 If you can, when you first speak, identify who
24 you are, what organization you're with, at least. I
25 know it's stilted and unwieldy to do that every time,

1 but if you could just do that the first time, it also
2 gives us a sense of who's here and the various
3 interests, because that's one of the things we're trying
4 to do here, not only making sure we capture all the
5 issues that might go into this rulemaking process, but
6 who's involved, who the stakeholders are, and that sort
7 of thing. So that will help us, as well.

8 And I already told Vickie I'm not looking for
9 any heroic measures, so we'll do our best to identify
10 everybody, we'll take turns, and make sure she has some
11 ability to do find out who's speaking.

12 And, again, as I told Vickie, when she needs a
13 break, she gives me the high sign and because I have bad
14 eyes and bad peripheral vision, maybe the rest you can
15 help me if she's waving frantically at me.

16 So, in any event, let's get right to it.

17 And what we're talking about here is pre-notice
18 discussions. I'll get to the pre-notice part of it in a
19 little bit. Basically, at this point, what that means
20 is that we're relatively in the early stage of deciding
21 what we're going to do with the Title 21 regulations.

22 But as we'll see in a couple minutes, we have a
23 very ambitious schedule, and so we're going to be going
24 from the beginning to the middle of this process very,
25 very quickly. I want to somewhat tamp down

1 expectations. It's not that we're hiding the ball, but
2 I just want to make clear that we're still, at Cal
3 Trans, deciding what direction we're going to take.
4 We're not fully wedded to any particular course of
5 action, candidly, that's one of the purposes of this
6 meeting is the -- you know, for you folks to let us know
7 exactly what you think we should be looking at. It's
8 not, you know, completely a brainstorming session, but I
9 think at least, initially, that's what we're looking
10 for. You know, we're looking to capture to make sure
11 that we're considering all the issues that are out there
12 as we go forward.

13 With that, I thought we could go through the
14 list of handouts we have here. It should look something
15 like this. It has the agenda on the front of it. It's
16 about 20 pages, and the first page is the agenda, and
17 we'll go through that in great detail as the meeting
18 continues.

19 If you go to the second page, which looks like
20 this, that is the notice we put out announcing this
21 workshop. We had one in Oakland two weeks ago, and
22 we're having this one here, obviously, in Fontana here
23 today again to solicit initial input from the various
24 stakeholders and folks who are interested in this kind
25 of thing as we begin the rulemaking process.

1 So that notice basically details -- or in very
2 broad detail, says what we're basically going to be
3 doing.

4 If you go to the next page, which has a big
5 "TITLE 21" at the top of it, this is the proposed
6 rulemaking calendar, and, because I'm a lawyer, I have
7 to issue the disclaimer at this point. All these dates
8 are approximate and obviously subject to change. There
9 are unforeseen circumstances.

10 But, as you look at this, you will see that we
11 are obviously on a very ambitious schedule to try to
12 make these changes as quickly as possible. You see at
13 the top there the May 2015 to August 2015, that's the
14 period we're in now. That's the public outreach,
15 including workshops like this one, to solicit input on
16 proposed regulations.

17 You see the next date, August 26, 2015, that's
18 obviously a big date. That's submission of our notice
19 of proposed rulemaking text to the Office of
20 Administrative Law, who's the state entity that approves
21 or disproves regulations, so that is the pre-notice part
22 of our discussion today. We have not officially put our
23 notice out, and so that's why this is called a
24 pre-notice workshop.

25 You'll see then the next day is December 5th,

1 which is when we plan to actually publish the notice of
2 our regulations, and that begins in 45 days. That is a
3 formal commentary where people can make written comments
4 either through the mail or on our website, that we're
5 going to be talking about in a little bit, and in other
6 ways.

7 And then once that 45-day commentary closes,
8 which will be around approximately October 22nd, on our
9 current schedule, we will then have probably one day of
10 hearings sometime between October 23rd and 26th to
11 solicit formal comments on the proposed text.

12 We will then begin on October 27th taking all
13 those comments that we received in writing and orally at
14 the hearing, CalTrans is required to assemble all those
15 comments, and we need to respond to every one of them as
16 part of rulemaking file that we ultimately submit. And
17 if there are no major changes, we will then proceed to
18 give [unintelligible]; if there are changes, we will
19 send out the revised text for at least a 15-day comment
20 period, and there can actually be multiple 15-day
21 comment periods depending on how significant and
22 substantial those changes are.

23 But, assuming that everything is in order, we're
24 planning on filing the rulemaking file with OAL in mid
25 February, which would lead to approval date sometime in

1 March, and then hopefully these regulations will be
2 approved by April 1st of next year.

3 If you go to the next page, this is basically
4 your Schoolhouse Rock on how to build some of the laws,
5 of how the APA adopts regulations, and you'll see at the
6 top there "LEGISLATURE GRANTS AUTHORITY TO ADOPT
7 REGULATIONS TO STATE AGENCY." There is, in fact, a
8 statute in the Streets & Highway Code that calls for
9 CalTrans, in consultation with other entities, to make
10 regulations regarding FasTrak transponders and other
11 automatic vehicle identification devices. You'll see
12 that rather nondescript drawing of the state building,
13 which is actually not a bad reputation of the CalTrans
14 building in Sacramento, and then you'll see next to that
15 at the top "PRELIMINARY ACTIVITIES." That's basically
16 the phase we are in now. That's the pre-notice period
17 where we're soliciting comments and making initial
18 decisions about what we're going to do.

19 And then you'll see it goes into "NOTICE OF
20 PROPOSED RULEMAKING," which we plan to do in about a
21 month or so in mid August, and then we will, of course,
22 soon after that, publish hard text that begins the
23 45-day comment period, and then, as I said, based on
24 those comments, we may or may not make changes, which
25 might result in a revised text going out for additional

1 comment period.

2 And I realize I'm racing through this relatively
3 quickly, but I just wanted to give a basic background of
4 where we're headed with this.

5 So that's a pictorial representation of the
6 previous stage, which was the calendar that we proposed.

7 The next page is entitled "OAL REVIEW," and this
8 is just basically, to let you know, these are the
9 standards that CalTrans will be held to by the Office of
10 Administrative Law. And you'll see the "APA STANDARDS."
11 APA stands for Administrative Procedure Act, which is
12 the act of the government code that governs how agencies
13 like CalTrans adopt these sort of regulations.

14 You see the first two, "AUTHORITY" and
15 "REFERENCE," basically that means there has to be a
16 statute that gives CalTrans the authority to do what
17 it's proposing to do because as an administrator agency,
18 CalTrans basically only has the power enumerated to it,
19 so if it's not in the statute, within the four corners,
20 we're not going to be able to do it. OAL will require
21 that our regulations are consistent with other law, that
22 they are clear, that they don't duplicate other law, and
23 the bottom one, which is very important in the state
24 over the last five years, is "NECESSITY."

25 There is a lot of talk about unnecessary and

1 overly burdensome regulations, so that is, obviously, an
2 aspect that we need to make sure that our regulations
3 are narrowly tailored to only do what they're proposed
4 to do, and aren't overly burdensome, and we'll get into
5 the details of that in just a moment.

6 If you go to the next page, which is entitled
7 "CALIFORNIA STREETS & HIGHWAYS CODE," this is the
8 statute upon which the regulations are based. This
9 statute is about originally 20 years old -- actually,
10 more like 25 years old. It was moderately amended in
11 2013, but it remained basically intact for the better
12 part of 25 years at that point, and it defines,
13 basically, the parameters by which CalTrans is to
14 promulgate these regulations. So I'm not going to go
15 into great detail on that, maybe you can see the various
16 requirements that we had, and, obviously, it's going to
17 be CalTrans' job to make sure that we stay within the
18 four corners of that particular set of statutes.

19 The next page is entitled "USEFUL LINKS" that I
20 thought would be helpful. The first one is to the
21 Office of Administrative Law. They have some very good
22 publications on their website talking about
23 participating in the rulemaking process. I would
24 encourage you to look at that and see how you can
25 participate as we move forward.

1 And then have a state to the CALIFORNIA STATUTES
2 there where you can find the statute that I just spoke
3 of.

4 And then the next one is the CALIFORNIA CODE OF
5 REGULATIONS, which is where these Title 21, as they're
6 known, regulations are currently located. Title 21
7 basically refers to virtually all the regulations that
8 CalTrans promulgates, and the ones we're talking about
9 in here are in Chapter 16 of that.

10 I then also have a link to the CalTrans website.

11 And then under you can see I've given out the
12 phone number and the email address for the Title 21
13 changes, and that's my Donald trump moment, I've given
14 out the cell phone number.

15 MR. HANCOCK: Oh, that's not my cell phone
16 number, so that's okay.

17 MR. HARRIS: That's a little better.

18 But, in any event, Steve, obviously, is the one
19 to contact about that there, and you can see the email
20 address there is where you can send any comments that
21 you have on this particular regulation.

22 Now I realize I've raced through those items
23 very quickly.

24 And then you'll see that the last seven pages of
25 the handout are, in fact, the regulations. I'm not

1 going to go into great detail now; we may refer to as we
2 go further along here. But just to give you an idea
3 that these are the regulations that CalTrans is
4 currently contemplating making modifications to, so this
5 will be the place where those changes will occur.

6 And, with that, I am going to turn it over to
7 the subject matter experts on this particular
8 California.

9 Any questions on that before we move forward?

10 Yes.

11 MR. JOHNSON: One quick question, I know you
12 went over the OAL review process. In regards to this
13 specific effort, is it safe to assume their focus and as
14 part of their review and approval is on consistency and
15 clarity --

16 MR. HARRIS: Right.

17 MR. JOHNSON: -- as it's related to law?

18 MR. HARRIS: Yes, and that it's not in conflict
19 with other law, and they're always concerned about the
20 fact -- well, whether the agency has stayed within the
21 four corners of the statute.

22 MR. JOHNSON: Okay.

23 MR. HARRIS: That's usually the parameter. But,
24 yeah, consistency and non-duplication. Clarity.
25 They're very big on clarity.

1 MR. JOHNSON: Since Title 21, what we're
2 working on already exists, we're just changing some of
3 the technology, so I was trying to understand what OAL
4 was looking for.

5 MR. HARRIS: And, obviously, because it is an
6 existing set of statutes, that will just be revised,
7 again, however technology determines it should be
8 revised by the necessary stakeholders, it will be a
9 little better than if you're creating something from
10 whole cloth.

11 Any other questions at this point?

12 MR. HANCOCK: I just wanted to add, on the
13 links, I did send out to the people that I have as
14 public notice for Title 21 an updated link for CalTrans,
15 and I will get the list of attendees here today and send
16 that out. It's a Title 21 specific web page that has
17 the information, and that way it will be easy for you to
18 access it. And since I'm sending out electronically, it
19 will be a little easier, you can just click on it, it
20 will be a hot link, and take you right to the web page.

21 MR. HARRIS: Oh, one more thing before I turn it
22 over to Steve and Joe.

23 Again, we did hand out these slips for a \$10 box
24 lunch from Panera. Depending on how long we're here,
25 we'll probably take a break around 12:30 or one, but if

1 you could fill this out and turn it in by our 11:00 a.m.
2 or so break, it will be more like 11:15, with your \$10,
3 and, again, I'm sorry that it's a cash-only proposition,
4 we'll give them to Kristy, and she can -- we can get our
5 lunch order in and do it in a relatively quick fashion.

6 With that, I'm going to turn it over to Steve
7 Hancock and Joe.

8 I believe Joe, you were going to first.

9 MR. ROUSE: Yes. Good morning, everybody, and
10 thank you for being here to.

11 Just give you a little bit of background on
12 myself, as David said, my name is Joe Rouse, and I am
13 the managed lanes and tolling program manager for
14 CalTrans. Managed lanes is my main area of expertise,
15 and I've kind of gotten involved in the tolling side of
16 things as a part of being involved with the managed
17 lanes, and I'll get into a little more detail about that
18 here in a minute.

19 I think it would be good, just for the record,
20 if we just start with a little bit of background as to
21 how we got to this point today.

22 David has already elaborated a little bit on the
23 history of electronic toll collection here in
24 California.

25 So, in 1990, state litigation was passed that

1 basically mandated that CalTrans works with our regional
2 transportation agency partners, any agency that's
3 operating a toll facility in California, to develop a
4 protocol for electronic toll collection. The two key
5 mandates within that law were that it be interoperable
6 and that it be an open standard.

7 The existing Title 21 protocol that we've been
8 using was developed in 1992; you can see that if you
9 look through the regulation. So, as David said, we are
10 working with technology that has been in place for over
11 20 years. Just to give you a little point of reference,
12 in 1992, I was a junior in high school, so that tells
13 you a little bit about how long that's been around.

14 MS McCUNE: Do the rest of us have to tell
15 you --

16 MR. ROUSE: No, I don't --

17 MS McCUNE: Okay. Good.

18 MR. ROUSE: I will spare you that.

19 I started getting involved in managed lanes and
20 the tolling end of things in 2007, and really with the
21 advent of the express lane operations, your
22 high-occupancy toll lanes, your express toll lanes, it
23 really started to cause a focus on a need for changes to
24 Title 21.

25 When I first started in 2007, the big thing that

1 was being talked about was being able to write to the
2 tech, and in 2007/2008, CalTrans developed what we call
3 an express lane business plan, and one of the
4 recommendations that came out of that business plan was
5 to make changes to Title 21. It didn't get into a lot
6 of specifics, but it was clear at that time there were
7 some changes that were needed.

8 And, shortly after that, we were able to get
9 some changes in place that allow for the switchable
10 transponders that Los Angeles, in particular, is using
11 for their express lane operations where you can declare
12 how many occupants you have in the vehicle and be
13 charged a toll, or not be charged a toll, depending on
14 your status. So we were able to make that work within
15 the existing protocol, and that has been pretty
16 successful, and it's still in operation today.

17 But, over time, since then, there's still been a
18 desire to really move forward with a newer type of
19 technology. I think cost is a major contributing factor
20 to that. Title 21 tags are manufactured only by a
21 couple of manufacturers, and it does result in some
22 additional costs for people who are purchasing these
23 tags and are using them.

24 So over the last year, maybe year and a half, in
25 particular, there's been some very intense discussions

1 with the state's toll operators through the California
2 Toll Operators Committee. Several of you in this room
3 are on that committee, and, again, we appreciate your
4 participation and attendance.

5 And the CTOC folks formally asked CalTrans to
6 look at making changes to the Title 21 regulation to
7 allow for a new technology, and the preference right now
8 is the 6C technology, but, as David has indicated, we
9 are still trying to officially determine, you know, if
10 that is the route that we want to go.

11 And so, for today, the reason why we're here
12 today is because we want to hear from you. We want to
13 hear particularly from tolling agencies as to why they
14 believe this change is necessary, and what they see as
15 the benefits, the pros, and any of the cons that can be
16 associated with this change.

17 One of the things that I would like to point out
18 is that there are other organizations that are using the
19 existing Title 21 specs for automated vehicle
20 identification, not necessarily for electronic toll
21 collection, for just for normal AVI purposes. So this
22 would be like airplanes. I do know that L.A. World
23 Airports is using this technology to help track vehicles
24 moving in and out of the airport. Usually it's the
25 transportation services, the transportation providers

1 like the Super Shuttle and things like that.

2 And then, in some cases, some of the seaports.
3 I know that the Port of Oakland and Texas Obear
4 [phonetic] is using the Title 21 technology to track
5 vehicles moving in and out of ports. So they would be
6 directly affected by this change, but they don't
7 understand why it's happening, and they could use some
8 of that background, too.

9 I don't know if anybody is here from L.A. World
10 Airports. There was supposed to be a representative
11 here. Okay. Good. Thank you for being here.

12 So, you know, for their benefit, I think it
13 would be good if they have a good understanding as to
14 why this change is being contemplated.

15 So, again, we are really going to be dependent
16 on the tolling agencies to -- as we go through this list
17 of questions that are in the packet here today, as we go
18 through these questions, we are really looking to you to
19 provide a lot of background and a lot of the information
20 and the answers to these questions.

21 So we strongly encourage your participation and
22 feedback it will really help us, you know, here at
23 CalTrans to just make sure that we are currently on the
24 right path and we know what we're doing and where we're
25 going.

1 Steve Hancock is going to be primarily
2 responsible for writing the regulation and making sure
3 it's updated and correct, so he can probably expound a
4 little bit more on what he sees, in terms of his duties,
5 and I'll let him add whatever he has.

6 MR. HANCOCK: Okay. My name is Steve Hancock.
7 I work for CalTrans. I am the ITS functional manager
8 statewide, so I work with these people in facilities
9 like this statewide. Also I am the Title 21
10 coordinator, so that's kind of why you guys are here.

11 And with that, Joe kind of mentioned the
12 California Toll Operators Committee. They came to us in
13 February. There's been previous discussions, as Joe
14 indicated, with the Toll Operators Committee over the
15 last few years.

16 But, in February, they came to us with the
17 request to look at going to 6C. They put forth an
18 effort to develop a transition plan for the CTOC
19 agencies, which, as I indicated, I'll give you an
20 updated link, sent out to the group, that will have the
21 link to the Title 21 webpage. It has the current
22 specifications, the record types, the transponders ID.

23 Also it has posted on there the transition plan
24 that the CTOC agencies have developed.

25 CalTrans participated in the development of that

1 transition plan, and through March, actually, we had two
2 meetings, one was down here, actually in this room, one
3 was in Northern California to do outreach with the toll
4 agencies in that development. That resulted in, at the
5 end of April at a CTOC meeting, the CTOC agencies
6 officially requested CalTrans to move forward with
7 regulation changes looking at 6C, and they officially
8 sent us a letter requesting the change to go to 6C.

9 And that's kind of, basically, why we're here
10 today, as David indicated, starting the rulemaking
11 process to make changes to the regulations, basically,
12 on the request of the California Toll Operators
13 Committee.

14 And, as Joe indicated, and I will reemphasize,
15 please speak up, the toll operators, on why you see
16 these regulations needed. Don't assume everyone in the
17 room knows the background. So, as you're talking,
18 please kind of fill in the details so everyone has the
19 same working knowledge of what is transpiring and
20 understands the discussion at hand.

21 So with that, David.

22 MR. ROUSE: Actually, if I could just add, I
23 would note that, as part of the transition plan that has
24 been developed, we have a pretty rough concept of how we
25 see this change happening. And so, you know, as

1 questions come up about the transition, I think we'll be
2 able to share with you kind of what our thoughts are on
3 it.

4 But, again, I just want to emphasis as David has
5 emphasized, we aren't completely married to this yet.
6 The attempt of having this discussion is to share that
7 outline with you, you know, in response any questions
8 you might have, and, if there are concerns with that
9 approach, we'll definitely take that into consideration
10 as we develop the final regulation.

11 I just want to make that clear.

12 MR. HARRIS: That I think, Joe, is the perfect
13 segue into item number III on the agenda, which is
14 entitled "Are there any alternatives to the transition
15 to 6C?" Which, once again, as Joe, I believe noted,
16 this entire process has been initiated by a request from
17 CTOC for a particular kind of transition that they're
18 interested in, but, for various reasons, obviously, the
19 department is required to consider all the different
20 alternatives. So let me just throw that one out there
21 at the beginning. Is 6C the way to go, or are there
22 other alternatives to the transition to 6C? That's
23 basically the initial question here.

24 Who wants to go first?

25 MR. JOHNSON: So Samuel Johnson with

1 Transportation Corridor Agencies, and I'm also the vice
2 chair of the California Toll Operators Committee.

3 I think that CalTrans did a good job sharing
4 their timeline. Probably what they didn't necessarily
5 share is how long CTOC has been discussing this subject,
6 and I've personally been involved with discussions going
7 back three to four years and discussing what is the best
8 technology that California should look at.

9 California has had a tremendous amount of
10 success in what we've accomplished in interoperability
11 in tolling, and that's one thing that we didn't want to
12 sacrifice as looked for new technology, but we also very
13 much wanted to increase competition.

14 As Steve and Joe know it, right now, actually,
15 we really only have one manufacturer of Title 21
16 transponders that is staying in it, but for many years,
17 we only had two. So it's not the greatest competitive
18 marketplace, but we were able to at least play those two
19 off of each other to make sure they drove prices down.

20 But just like all organizations, whether they're
21 public or private, we always try to look at cost
22 efficiencies, so how can we do what we're doing better
23 and cheaper. And that was another aspect that we looked
24 at in 6C. So with that increased competition --

25 I should go back to that.

1 One of the reasons CTOC has selected and
2 recommended to CalTrans that 6C be incorporated into
3 Title 21 is because 6C doesn't just pertain to tolls.
4 6C is an industry standard that's ultimately open, that
5 anybody can build products to as long as you're willing
6 to put in the engineering effort, you can take the
7 specification and build products.

8 And 6C chips are used on everything from
9 document tracking. Containers. It's used in a wide
10 variety of places. So just that economy of scale that
11 they can achieve from a chip manufacturer is
12 significant.

13 So by leveraging that, the CTOC agencies felt
14 that we could introduce more competition in California,
15 which is always a good thing, and then also that scale
16 is what helps drive the cost down.

17 So while there are other technologies that could
18 be used for toll, at least through CTOC's efforts, we
19 did not identify anything that was better, that was both
20 open for competition, and that was also very low cost.

21 MR. HANCOCK: Question: Are other states or
22 tolling agencies around the country using 6C technology?

23 MR. JOHNSON: Yes. And many -- I believe there
24 are three or four other states that are using 6C,
25 probably most important for California is two of our

1 closest neighbors that do tolling are using it, and
2 that's the State of Washington and the State of
3 Colorado. We all know there's no tolling in Arizona,
4 probably never will be.

5 I don't remember what happened with Nevada,
6 because I know they were starting on an express lane
7 project, but I never heard anything more about it.

8 In Oregon, while they're looking at price
9 overall, I think they have one toll facility, a very
10 short bridge.

11 But also, as we look to the East Coast states,
12 like Georgia, are using 6C, and Florida just made a
13 major announcement, and they're moving forward with 6C.

14 So I think folks who are going through new
15 implementations and having the same discussion about
16 what should -- what technology should be used for
17 tolling, they're seeing the same benefits that CTOC had,
18 and CTOC definitely reached out to those agencies to
19 understand why they made their choice and the basis for
20 their decisionmaking seems sound to us. We didn't find
21 anything to the contrary.

22 MR. CARRIER: Rick Carrier, TCA. I'd just like
23 to add that 6C is one of the protocols that's in the
24 running to become the national operability code.

25 MR. HANCOCK: I think there was a question or

1 comment over here.

2 MS. LeBLANC: I'm going to be pretty simple
3 here, can someone give a little background to the 6C
4 technology. This is new to us, so -- we're kinda new.
5 It's a protocol? Open standard? Is that all we're
6 talking about here?

7 MR. JOHNSON: I will defer to someone who has
8 much more technical knowledge on that.

9 MS. LeBLANC: I just kind of wanted to know the
10 difference between that technology and pretty much what
11 we're currently using today. I'm coming in cold.

12 MR. CARRIER: I can answer that, and then maybe,
13 Richard, you can fill in the details.

14 But 6C is ISO 18000-6C, it's a International
15 Standards Organization protocol, and, as Samuel
16 mentioned, it's not just for tolling; it's used for
17 inventory tracking. When you walk out of a store and
18 that thing beeps because it has one of those tags on it,
19 it's probably a 6C tag in the merchandise that you left
20 the store with.

21 MS. LeBLANC: And he mentioned he wanted to get
22 more diversity of providers of -- I'm assuming these
23 tags or transponders, so they're not the big bulky kind
24 anymore?

25 MR. CARRIER: Absolutely. That's the

1 difference.

2 MS. LeBLANC: Okay.

3 MR. CARRIER: Title 21 requires a battery; 6C is
4 passive. There is no battery in there. And there
5 are -- so for the form factor for 6C, there's a wide
6 range, you can get, you know, the hard case transponders
7 that we've seen today, or a sticker tag. I've seen
8 sticker tags this small. They put them on motorcycle
9 headlights and you can't even see them.

10 MR. HANCOCK: So does that help you?

11 MS. LeBLANC: Yes, that does. Thank you.

12 UNIDENTIFIED SPEAKER: So we need to have
13 transponders or tags with the 6C?

14 MR. CARRIER: I use the word "tag"
15 interchangeably with transponder.

16 UNIDENTIFIED SPEAKER: In some states they're
17 looking at this, too, just a tag with a bar code.

18 MR. JOHNSON: Yeah, so I think that's the
19 sticker tag format, so that's one of the other benefits
20 we're looking at in modifying Title 21 to incorporate
21 6C, you can basically get your transponder in any flavor
22 you want, depending on your agency needs.

23 So we definitely aren't abandoning our concept
24 for switchable transponders, which there's some
25 technical detail behind that, and we can share that with

1 anybody that's interested.

2 But that form factor of what a transponder looks
3 like, it can be anywhere from, you know, an itty-bitty
4 sticker. It has a barcode on it for inventory purposes,
5 but that's not what the tolling system reads when you go
6 through, it's just so you can scan it into your
7 inventory and properly assign to a customer's account.

8 But it can be a small sticker tag.

9 If you want a larger shell that's similar to our
10 current Title 21 transponders, you can do that, as well.

11 I think the one big benefit we see in both of
12 those models is 6C is a passive technology, like Rich
13 mentioned, meaning it doesn't require a battery.

14 So one of the pains that the tolling agencies,
15 like ours -- I won't speak for anybody else -- the TCA
16 goes through with our customer base is just monitoring
17 those transponders to make sure they're still working,
18 you know. We did, awhile ago, and I think several other
19 California agencies did so, as well, we went to battery
20 replaceable transponders, so at least the transponder
21 itself had a longer life, but still that requires some
22 effort in terms of either getting the battery to the
23 customer for them to change it out, if they remember, or
24 having them send us the transponder and we change the
25 battery and then send them another one.

1 At least for TCA, what we're looking at in that
2 form factor would probably be more along the lines of
3 sticker tags for most of our customers. For those who
4 want to go and use ExpressLanes, we definitely want to
5 still offer them a switchable transponder that would
6 still be in a normal shell.

7 But in both of those situations, a key thing is
8 it should never stop working because there's no power on
9 it. All the power comes from the roadside, so once we
10 issue someone a transponder in either format, we
11 shouldn't have to worry about it continuing to work. If
12 that transponder is not working, it's probably our
13 roadside stuff that's not working; not an individual
14 customer, one out of a million that we're trying to
15 track, and make sure their transponder's working.

16 MS. SUE: Shirlene Sue. L.A. World Airports.

17 So, in terms of a passive tag, is there a change
18 in terms of the antenna technology or the strength of
19 it? We had an issue where we have dual protocol and it
20 reduced the read capability because it needed to, you
21 know, have more strength on the antenna side, the
22 hardware side of it, versus the transponder. So is
23 there a change that's going to be needed on the reader?

24 MR. HANCOCK: Could I ask a clarification? You
25 say you're using dual protocol. Could you mention, if

1 you know, what protocols you're currently reading.

2 MS. SUE: Yeah. We changed our AVI system to go
3 to Title 21, we were using the APA, so -- which, I
4 guess, horizontal versus the vertical, so the antenna
5 that had to be installed to read during that transition
6 had to be able to read horizontal and vertical
7 polarities, so we had difficulty with the antennas
8 picking up both types. So we had to actually lower our
9 antennas about three feet.

10 MR. CARRIER: So we, TCA, installed dual
11 protocol readers, and we read Title 21 and a second
12 protocol to be determined. We think that protocol will
13 be 6C. And our system integrator is represented in the
14 room.

15 Richard, can you speak to whether having 6C in
16 Title 21 is going to negatively affect the ability to
17 read Title 21.

18 MR. DOERING: Well, we'd have to evaluate a lot
19 of other things, TransCore being one of the leading
20 system integrators, as Rick has mentioned, and also one
21 of the providers of readers and tags, has a lot of
22 experience in this area.

23 At this point, I think that it's most important
24 to highlight that for, a little bit of further
25 background reading to get up to speed, there was a

1 publication that was send out -- unfortunately, Kelnic
2 Ravel could not attend so I'm here in his stead, but
3 Steve Hancock did send to those on his email list, I
4 believe -- right, Steve? -- the CTOC plan?

5 MR. HANCOCK: Yes, the transition plan.

6 MR. DOERING: Right, this transition plan, and I
7 think you even referenced that it's on the website.

8 MR. HANCOCK: The website, right.

9 MR. DOERING: But it does mention a lot of
10 things, and there certainly are technical issues. You
11 mentioned vertical and horizontal polarization is the
12 term that we often use in the industry. And so,
13 certainly, there are RF issues, there are timing issues,
14 and so on.

15 But good integrators, good reader and tag
16 suppliers, are capable, in many cases, of dealing with
17 these, and we look forward to finding what the proposed
18 regulation is -- this is a preliminary meeting -- and
19 then commenting at that point on that.

20 But to follow up on the comments on tags,
21 there's analysis of tags, and form factors, and, you
22 know, different protocols in this transition plan even.

23 MR. JOHNSON: I'll add onto that. I definitely
24 don't want to make light of the need to make sure you
25 assess your individual system, but it does come down to

1 your individual system.

2 If it offers the group any comfort, the State of
3 Colorado, they adopted Title 21 originally, and they
4 were using our protocol in their state, and they went to
5 6C. And they implemented the dual protocol readers, and
6 they are currently today reading both together. So we
7 know they do work.

8 But I would have to be forthright, that depends
9 on the quality of your system. All right. So if,
10 unfortunately, for whatever reason, the choice you made
11 of a vendor and whatever they implemented, maybe they're
12 not as skilled as, you know, somebody like TransCore,
13 who does millions of these things. You just have to go
14 through a little effort to look at that and make sure
15 you address the specific of your area.

16 But in terms of the technologies themselves,
17 they can cohabit, and they can work well together, so
18 that's what we've seen, not just in Colorado, but in
19 Florida, as well, where they're reading, I think, three
20 protocols internally.

21 So it can be done.

22 MS. LeBLANC: I guess what I would say to that
23 is the toll road operation is a little different than
24 the airport where you have trip circuits, very close
25 quarters, a lot turns, entries, access points, different

1 types of algorithms, you're not running down a freeway
2 at 60 miles an hour for a hundred miles or so, so it's
3 definitely a little more complicated.

4 And, yeah, our systems are tuned a little finer
5 and require a lot more hand holding and care in order to
6 maintain its accuracy.

7 So these type of changes and dual protocols
8 definitely impact us significantly.

9 MR. JOHNSON: I definitely don't want to
10 downplay the impact, but -- and I don't claim to be an
11 RF expert, but I think, in that situation, the slower
12 speeds actually make it easier to do a dual protocol on
13 that type of system.

14 Because it's kinda like you mentioned, when you
15 first commented, right, to make things work you have to
16 kind of give small time slices. "I'm looking for
17 Title 21. I'm looking for 6C. I'm looking for
18 Title 21." Well, when a vehicle is going 65 miles per
19 hour, that window is very short; when a vehicle's going,
20 you know, 25, 35 miles per hour, it's not that hard
21 because within that --

22 MS. LeBLANC: Well, it depends on your
23 geography, on your topography, the way our antennas are
24 positioned, the way our traffic lanes are going through,
25 and if we are able to capture them accurately, based on

1 what Charlene was saying, because we've been struggling
2 with the dual protocols, the antennas, the proximity,
3 the limited space we have. It's challenging.

4 And then we're in an environment that's
5 constantly, under construction, and changing and
6 whatnot, so it's a little more complicated for us, even
7 at the slower speed.

8 MR. CARRIER: Can I just ask a question?

9 So, if I understand, your equipment is
10 specifically to the functions that happen at the
11 airport. I'm not sure why changing Title 21 to a
12 different protocol wouldn't preclude you from using
13 Title 21.

14 MS. LeBLANC: Well, I guess I wanted to make
15 sure I understood --

16 MR. CARRIER: You can keep using your existing
17 equipment and your existing transponders. You wouldn't
18 be forced to switch to 6C.

19 MS. McCUNE: But we are sunseting it, based on
20 this transition plan.

21 This is Kathy McCune from Metro ExpressLanes.

22 I think in the transition plan, does it not say,
23 Steve, at some point that Title 21 will sunset?

24 MR. HANCOCK: Right. And let me comment on
25 that. For a toll agency versus -- I'll just label it

1 non-toll agency because you have L.A. World Airports,
2 you can have Port Authority, and stuff like that. We
3 kinda had a discussion on this a little bit in Oakland.

4 We can handle a transition for the toll agencies
5 in a different time frame than we can handle the
6 transition for non-toll agencies, for the lack of a
7 better way of stating it. So we can -- I think we can
8 find a way to address both sides' concerns as far as
9 transitioning to a new protocol, you know, and dates and
10 times and all that, yeah, in the regulation.

11 MR. HARRIS: Yes.

12 MS. CLARK: I'm Tawnya Clark with Schneider
13 Electric.

14 Just a comment, without knowing your integrator
15 or what readers were installed, something -- you may,
16 depending on how long ago it was, you may actually, in
17 the reader, have the protocol available, just maybe not
18 turned on. So you may want to reach out to your vendor
19 and talk to them about what protocols are available.

20 Some of the readers have software upgrades to
21 the reader so that you're able to turn on additional
22 protocols, so you may have the capability there in the
23 background. Obviously, there will be some tuning or
24 positioning that could impact, but you probably -- first
25 I would say to check and see. You may already have the

1 capability there in the background.

2 MR. JOHNSON: Steve, Joe, I'm not sure who to
3 ask the question to. I'm just not aware. So does the
4 state regulation require that Title 21 be used for
5 airports, or is this a choice that those agencies have
6 made?

7 MR. ROUSE: The section of the Vehicle Code
8 specifically says that if the protocol is an AVI
9 protocol for electronic tolling collection, so when the
10 reg was developed a couple years after the law was
11 passed, it was basically just identified as a vehicle
12 identification protocol, and the primary purpose is for
13 electronic toll collection. But it could be used for
14 other purposes, and we have issued -- help me out here,
15 Steve. What do we issue to the other agencies?

16 MR. HANCOCK: As the toll agencies, and Los
17 Angeles World Airports, know, for people who are
18 registered with us that are Title 21 users, they contact
19 me when they issue new tags or need facility codes for
20 new tags, so that way I keep a record. It is on the
21 Title 21 webpage called the transponder ID document. I
22 believe it's version 29, if I recall correctly.

23 And basically what that spells out is a list of
24 facility codes and what agency it's assigned to, whether
25 it's a toll agency or not.

1 Two reasons for that: One, for the toll
2 agencies, they know what facility codes the other toll
3 agencies own for transaction purposes for
4 reimbursements. You can ask them the details or how
5 they handle that, better than -- Rick can better respond
6 to that than I.

7 For the other side is for others who are not
8 toll agencies so we don't issue tags with the same ID
9 code, so you don't have any overlap.

10 So, basically, we register three groups of
11 people, toll agencies, non-toll agencies, and
12 out-of-state users of Title 21.

13 Now, obviously out-of-state users don't have to
14 register with us because it's just a state regulation,
15 not a national regulation or a national requirement.
16 But since there have been a limited number of vendors
17 and such, as Samuel pointed out in the past, there have
18 been two, it seems like it's down to one right now, they
19 usually contact us or let parties know who are
20 interested in Title 21, "Hey, you need to register with
21 CalTrans."

22 So we just get their information, assign them a
23 facility code. I send that document out to the toll
24 agencies because they update their systems for
25 transaction purposes on a regular basis, and we post it

1 online so people have access to that information.

2 So it's basically a record tracking way so we
3 know who has what transponders assigned to that agency,
4 and then those agencies issue those specific
5 transponders out to their customers.

6 MR. JOHNSON: I asked because I wanted to make
7 sure we're sensitive to all our partners and while I
8 know the tolling agencies have be talking about this for
9 years, our partners at the airport may not have been
10 talking about it as long.

11 So I guess the question is it's a mandate for
12 them. If they want to continue to use Title 21, how do
13 they still get those IDs and things that you provide to
14 them, or does CalTrans hand that off to the airports?

15 MR. HANCOCK: We would probably -- actually,
16 there is a section in the existing regulation that talks
17 about CalTrans being the recordkeeping authority, or
18 they can hand it down to an entity down the road who's a
19 recordkeeping authority.

20 So we can either still keep the records, or if
21 the non-toll agencies, you know, we set this up in a way
22 where we transition -- just for example, we set up a
23 transition for the toll agencies that will be different
24 for them than for the non-toll agencies. We would still
25 be the recordkeepers for the non-toll agencies, if they

1 so choose.

2 MS. McCUNE: So what I hear you saying, then, is
3 it conceivable that we wouldn't sunset Title 21? That
4 those folks that are operating under Title 21 could
5 continue to do so in perpetuity? Is that what CalTrans
6 is thinking?

7 MR. HANCOCK: Well, what we -- that is a good
8 discussion. We can either -- first, like I said, for
9 the toll agencies, if they want to sunset Title 21,
10 which I would think that they probably would because you
11 wouldn't want to support two protocols over an extended
12 period of time. Just my assumption.

13 MS. McCUNE: Right.

14 MR. HANCOCK: So we could set up a time frame
15 for that, for just toll agencies, and we could also, at
16 the same time sets up a time frame to sunset Title 21
17 for the non-toll agencies, or, if they choose not to, we
18 could leave that in perpetuity, if that's what they
19 prefer.

20 I would think that they may want to take in some
21 consideration what Samuel brought up about one vendor
22 supplying toll tags now for Title 21 because I would
23 imagine you guys are dealing with the same vendors as
24 the toll agencies.

25 MR. JOHNSON: Where do you guys buy your

1 transponders?

2 MS. SUE: Yeah. Certainly we're interested,
3 actually, for the same reasons you all are, to move to
4 6C. We just need to know what is our impact on our
5 hardware and our programming since, you know, you guys
6 have a little more interoperability now between the toll
7 systems, and, since we're not, we're going to have to
8 look at what our infrastructure and our hardware
9 requirements are to move to 6C.

10 MR. HANCOCK: Yeah. And, you know, for
11 clarity's sake for the meeting for the non-toll agencies
12 here, as the toll agencies are well aware, and this is
13 one of the statutes that David has attached in here, is
14 there is a section in there that says basically for the
15 toll agencies one device -- an individual only needs to
16 be issued one device to use any toll facility throughout
17 state. So they're mandated to be interoperable on the
18 tolling side by regulation.

19 MS. SUE: Well, how many -- I don't know the
20 list, how many non-tolling agencies at LALA are you
21 dealing with?

22 MR. HANCOCK: Okay. Gee, I should have brought
23 my list. I don't have it with me.

24 As Joe indicated, Oakland Port Authority, you as
25 Los Angeles World Airports, Sacramento County Airports,

1 and the border.

2 MR. ROUSE: Custom and border protection,
3 century program, and then my understanding is that the
4 San José airport also uses Title 21, but we've never --

5 MR. HANCOCK: And there can be some agencies
6 using them that we're not aware of that haven't
7 registered with us. That's possible. So those are the
8 known agencies. I can double-check on the list and make
9 sure I'm not misleading.

10 MR. ROUSE: Yeah, that list is available on that
11 website that Steve will send out to you.

12 And for out of state, we have Colorado DOT and
13 then a tolling agency in British Columbia.

14 MR. HANCOCK: Okay. Yeah, I was just mentioning
15 the state agencies.

16 MR. ROUSE: So I think that's at least five or
17 six.

18 MR. HANCOCK: Yeah, that sounds about right,
19 five or six. But, yeah, the list is on the -- if you go
20 to that web page and look at the transponder ID document
21 that lists all the toll facilities that have registered
22 with us in the state or out of the state. Oh, and
23 non-toll facilities, I should say. So I should say
24 everyone that has registered with us.

25 So that's the complete list, and that also gives

1 you the facility code assignments to each toll agency.

2 That way, for example, since the non-toll
3 agencies -- and I might be going out on a limb here by
4 saying this, but these toll agencies, and correct me if
5 I'm misstating this, most of the -- for example, I
6 believe Los Angeles World Airports does not have any
7 agreements with any of the toll agencies, at least in
8 Southern California. Okay.

9 So, for example, if one of your vehicles goes
10 through, say, Samuel's facility Transportation Corridor
11 Agency, he's going to read your tag, and he's going to
12 know that an Los Angeles World Airports -- because he's
13 got that list and you registered with us -- vehicle went
14 through his facility. Now, if they don't pay tolls, he
15 probably going to be contacting you to say, "Hey, could
16 you please pay up."

17 MR. JOHNSON: Actually, I think in that
18 situation, most of the tolling operators would say,
19 "That's not an authorized toll tag," and it would be a
20 violation. But that's another opportunity we could talk
21 about, especially if our partners at the airport want to
22 look at leveraging, and they're concerned maybe they
23 can't leverage the same tag base.

24 But I think, more importantly, going back to the
25 concern they were presenting, is that flexibility and

1 that the airports aren't mandated by law to make this
2 change, does that give you the time you need to assess
3 your system to decide whether or not you want to use 6C
4 or not?

5 MS. SUE: Well, absolutely. Again, we'd like to
6 move to 6C so that we are compatible. Kathy and I had
7 met previously to talk about that because currently the
8 vehicles that access the airport have two transponders,
9 and, you know, they often interfere with each other.

10 So if we can get to a singular one there, which
11 I think originally started the discussion about five
12 years ago when we transitioned to Title 21, that we have
13 titles of because most of the tolling are private
14 vehicles, when they sell the limo or they sell the taxi
15 that's got our tag in and we're still reading it, but
16 it's a private vehicle, you know, so we have the
17 operators come and get one specifically issued by our
18 facility so that we know that they're a commercial
19 operator versus private. But again you have the private
20 vehicles that keep coming in with the tags into the
21 airport with the tags, and the limo company claims they
22 sold the vehicle. And we don't really know.

23 MS. McCUNE: So one of the discussions we had
24 is -- one of the discussions we talked about was the
25 possibility of integrating their system into our back

1 office, right, and then we could become interoperable
2 with LALA and then those folks would only need one tag,
3 and all that sort of thing.

4 So that's sort of where we're at. But,
5 obviously, we need to have a take a look a lot of the
6 technical issues in terms of, you know, whether that's
7 feasible, and, if so, how long it would take to
8 transition into all of that and all the other
9 considerations that go along with that.

10 But it may be coming. I mean, with the
11 transition to 6C, maybe it might be, you know, an
12 opportunity for us to take a look at just --

13 MS. SUE: I hope it's coming because, you know,
14 the work we have to do --

15 MS. McCUNE: Right.

16 MS. SUE: -- to keep track of a transponder that
17 they just rip off and keep put their seat.

18 MS. McCUNE: Right. Right.

19 And it may be timely because at some point our
20 contract with Xerox is going to sunset, and we might
21 have to put out an RFP for a new vendor in the next
22 couple of years, so, you know, it might be actually good
23 timing for us to take a look at maybe a new contract,
24 adding in some additional facilities, and one of those
25 could be LALA for our new vendor, so --

1 MR. ROUSE: Before we get into -- just a quick
2 process check. We have kind of moved away from item
3 three into four and five for sure.

4 MR. HARRIS: I think three, four, and five --

5 MR. ROUSE: It's all interrelated.

6 MR. HARRIS: Interoperability between three and
7 four.

8 MR. ROUSE: So I just want to make sure that
9 folks are okay with the way that we are proceeding here
10 with this discussion.

11 Initially we were kind of thinking of going
12 through all these things point by point, and so we've
13 kind of merged items three, four, and five. It seems to
14 me this has been a good conversation, and I like the way
15 it's going, and if we're okay with that, I suggest we
16 just kind of --

17 MR. HARRIS: Yeah, I was just thinking about
18 that.

19 Ken, when you get to item six and beyond, beyond
20 those, those are more for CalTrans' benefit, those are
21 the kind of questions that the OAL is going to ask us
22 before they approve our regulation. So I think three,
23 four, and five basically do go together, so --

24 But I think this might be a good point. Once
25 again we're going to have lunch brought in --

1 UNIDENTIFIED MALE SPEAKER: Can I ask you a
2 question?

3 MR. HARRIS: Yes.

4 UNIDENTIFIED MALE SPEAKER: You mentioned a year
5 ago that government sand bags. We don't owe any toll
6 facility. We don't have a [unintelligible].

7 The mention here of the nationwide requirement
8 to be compatible by -- I think it's October of 2016, and
9 one of the ones you're looking at is 6C.

10 What happens if 6C is not chosen?

11 MR. JOHNSON: I'll comment on that.

12 I think that was the bigger concern with
13 sunseting Title 21. While I think most of the agencies
14 are fine with the dual protocol concept, if we get to
15 the three protocol concept, I think that might present,
16 you know, a little more challenges, so we did want to
17 avoid that. So that's where we're holding that if the
18 state adopts 6C as a new part of -- I guess it's still
19 Title 21.

20 MR. HANCOCK: Technically it's still Title 21.

21 MR. JOHNSON: Legacy Title 21, new Title 21, and
22 then as the national one comes in, if we can pull out
23 the legacy one, we can be competent with the
24 efficiencies of our tolling system.

25 UNIDENTIFIED MALE SPEAKER: Nationwide are we

1 looking at just one protocol, or are they looking at
2 more than one.

3 UNIDENTIFIED MALE SPEAKER: There's a
4 possibility of more than one protocol.

5 MR. HANCOCK: Let me answer, sir. There's three
6 protocols under consideration; there will be one
7 protocol selected. Basically the three protocols under
8 consideration at the national level for interoperability
9 is Seagull, TransCore protocol, 6C, and TDM, which is
10 the E-ZPass protocol that's used mainly on the eastern
11 states. That's the third protocol that's being
12 considered.

13 On the national level, basically since that got
14 brought up, I'm just stepping a little bit out of this,
15 they're going to into conformance testing of the
16 protocols shortly, so the testing phase will be starting
17 on that, I believe going through all phases of testing,
18 and correct me if I'm wrong, Samuel, is probably about a
19 year time frame to have all the testing done because
20 we'll do the conformance testing, then they'll test the
21 three national protocols against the regional protocols,
22 being Title 21, one of those, just to give you a quick
23 overview of that.

24 MR. JOHNSON: So I believe that's the overall
25 plan here in terms of test timeline, but the big

1 challenge we have is that testing costs about
2 \$2 million, and the hat's being passed, but I think it's
3 still basically going around each entity.

4 MR. HARRIS: Samuel, thank you for that.

5 MS. McCUNE: I got 20 bucks.

6 MR. HARRIS: We did hand out menus for Panera.
7 Again, \$10 flat, and I apologize for the cash only
8 option, but if you could mark your menu as to what you
9 want, and we will collect the menus and the money, and
10 somebody will run out and get it, and then when we come
11 back, we will basically work until lunch arrives.

12 Why don't we take a -- I have about 11:09 on my
13 phone, say 11:20 we'll reassemble, but if you could turn
14 in your lunch menus.

15 (Recess taken.)

16 MR. HARRIS: Why don't we get started again.
17 I'm planning that, once everybody gets their lunch, we
18 can make it a working lunch, we can be respectful of
19 everybody's time, but we'll take a little bit of a break
20 once lunch arrives in the next hour or so.

21 I thought this morning's conversation was very
22 lively and helpful, and, as Joe has keenly observed,
23 basically three, four, and five on the agenda, I think,
24 go together, and so I think it's good that we discuss
25 them that way. I want to thank everybody for their

1 insights and sharing their expertise on the text.

2 Sam, I'm going to basically summarize what you
3 said. If I get it wrong, please make sure you correct
4 it. We're talking about whether, you know, the
5 electronic 6C, the benefits and drawbacks, you mentioned
6 that you thought it would be good to increase
7 competition because the nova system is not just for toll
8 agencies, and obviously we touched on the difference
9 between toll agencies and non-toll agencies, but I think
10 there are differences among toll agencies, I would
11 think, so that gets into that aspect of it.

12 And this is my main takeaway as I continue to
13 learn about this from our workshop in Oakland, there are
14 obviously issues in terms of transitioning, and when
15 does the current Title 21 protocol get sunset, if ever,
16 because, obviously, the statute requires that drivers
17 only have to have one device, but that doesn't mean that
18 there couldn't be multiple devices at different
19 agencies.

20 Why don't we get back into that discussion.

21 You also mentioned that if it's a passive
22 system, you don't have the battery issue, an improvement
23 on that.

24 MR. JOHNSON: So to make sure I was clear on
25 that first question, David, are there alternatives to

1 6C? Yes, there are alternatives. There's other
2 technology that could be used but through CTOC's
3 efforts. 6C was the best choice of what was out there
4 to be considered.

5 MR. HARRIS: You had also mentioned, and Steve
6 discussed, as well, it's clearly one of the front
7 runners for a national standard.

8 MR. JOHNSON: Yes, it is.

9 MR. HARRIS: So let's talk about time tables and
10 the kind of issues that will go into that.

11 For example, there are a few of you out there,
12 obviously, agencies and vendors that have inventories of
13 their current technology.

14 What kind of issues do you see there, if I could
15 just throw that one out?

16 MR. JOHNSON: I think, like the CTOC, there are
17 two transitions we want to pay attention to. The first
18 one would be for some of our newer vendors who are just
19 starting their facility to make it and they invested a
20 lot time and effort into their systems and their
21 transponder inventory, which we want to try to let them
22 get the life expectancy out of those transponders, which
23 could be, you know, five years. So we want to make sure
24 we looked at that.

25 But the other big piece that applies to everyone

1 is still the transponder, you know, we buy hundreds of
2 thousands of transponders every year. I don't want to
3 have to throw away ones that are in the process, now
4 having been delivered, so we want to make sure the
5 timetable would allow the legacy Title 21 and the new
6 Title 21 to co-exist until our investment in those
7 assets could be full depreciated, I would say. So we
8 don't want to move too fast.

9 And I think we were also taking into
10 consideration that some of our member agencies, some of
11 their systems is not quite as easy to just update the
12 firmware, as Rick explained earlier -- actually, as
13 Tawnya had explained earlier. Some of the agencies have
14 to replace their readers, so I think as we're taking
15 into consideration this transition timeline sunset, we
16 took all those things into account.

17 MR. HARRIS: It looks like you have a particular
18 time frame in mind.

19 MR. JOHNSON: Which I do not remember. I have
20 to turn to --

21 MR. HANCOCK: I can try and address that. The
22 time frame, within a couple other outstanding issues,
23 was mid 2018 when the toll agencies with SEBA could read
24 and process 6C transactions.

25 MS. McCUNE: This is Kathy McCune from L.A.

1 Metro ExpressLanes.

2 I just wanted to go on the record because I know
3 this is part of the whole hearing process to sort of
4 echo what Samuel has been saying about the rationale for
5 the agencies wanting to move to 6C. I know Nevada just
6 went through a recent procurement of their tags, and I
7 think the price went up 20 to 30 percent because of the
8 lack of competition. So you can't release a business
9 model like that and your prices continue to escalate,
10 and recognizing that we all have, you know, hundreds of
11 thousands of current Title 21 transponders out in
12 operation, there is going to be some, I guess, initial
13 costs for all of us, in terms of this transition, but
14 over time the price will come down.

15 And, you know, you've talked about the FasTrak
16 Flex or the switchable tag, that's primarily what Metro
17 is using at this point, but we do see a need for some
18 additional format needs in terms of tags right now.

19 We have -- and, Ellen, I'm sure know because you
20 operate ExpressLanes, we have clean fuel vehicles
21 operating on our ExpressLanes that we have no way of
22 tracking or figuring out who's using, and we do have the
23 capability of charging, but we can't do it at this
24 point. So there's a need for us to try to figure out
25 sort of differentiate some of our users and to apply

1 different pricing models to those different users, and I
2 think that the variations in the format that the 6C
3 comes in really would help us, and would reduce our
4 costs in some ways.

5 So rather than issuing them a \$20 current
6 Title 21 tag that comes in that plastic box and has the
7 battery and all of those things, we could give them a
8 sticker and have them put it on their vehicle, and that
9 would allow us to recognize that vehicle and be able to
10 do some differential pricing for them.

11 So there's, you know, completely -- well, new
12 ways that we're thinking about what 6C could offer our
13 program, and so we really see 6C as sort of the next
14 generation for us.

15 And, as you said, this technology has been in
16 operation for 20 years. I, I mean, who has a cell phone
17 that's been in operation for 20 years? I mean, really?
18 Technology changes so quickly that we need to --

19 I mean, we're still behind the curve, but we
20 need to start catching up to where technology is going,
21 and I think this really does offer us a lot of
22 flexibility within our own programs and reduces the cost
23 over the long term, and I think there's a good rationale
24 for that.

25 MR. HARRIS: You bring up some good points, but

1 I wanted to ask what are the benefits to consumers, if
2 any, of a transition to 6C.

3 MR. JOHNSON: I think one of the big ones -- I
4 don't know who mentioned it during the break, I heard
5 someone talking about it. A lot of our tolling
6 customers don't like the big box in the windshield.

7 MS. McCUNE: Right, they hate it.

8 MR. JOHNSON: Yeah. So if we could go with
9 something in a sticker format or even external mounting
10 for motorcycles, if they're pretty small and pretty much
11 invisible, the only thing you need to see is really the
12 bar code that we spoke about earlier. So that's a huge
13 benefit for customers.

14 And then also the cost, right, because on all
15 our toll facilities our customers bear all our costs,
16 everything that's required, from buying transponders to
17 maintaining the equipment, everything that's on the
18 road, so if that cost continues to escalate, as Kathy
19 noted, customers have to pick that up.

20 Whereas, if we can go to -- and this is not
21 necessarily true for everyone because not everyone can
22 use sticker tags, but if you can go to sticker tag and
23 significantly reduce your cost, and I know we mentioned
24 that earlier, and we probably should be sharing some
25 numbers, I think that, at least in my experience, we

1 were paying about \$12 per transponder, 12 to 13 bucks,
2 and for TCA, you know, 500,000 customers, transponders,
3 that doesn't include our express account, that's six and
4 a half million dollars.

5 Whereas some of the sticker tags we're seeing
6 that are our partners across the country and the world
7 are buying, they're 50 to 75 cents. And, again, it's a
8 one-time purchase that we don't have to visit again in
9 five years so.

10 That 6.5 that I mentioned, that's a recurring
11 capital cost, whereas the 50 cents, or even if we say a
12 dollar per tag one-time cost, that's a significant
13 savings that customers will get the benefit.

14 MR. HARRIS: You say one-time cost, so you're
15 saying the life span of a 6C tag, whatever is greater
16 than the five years that you mentioned for --

17 MR. JOHNSON: Absolutely. And I won't just say
18 6C, it's really the passive technology, because it
19 doesn't have a battery. It's just a chip that's waiting
20 to get power over the airwaves, and that chip lasts
21 until you damage it.

22 And I think I heard someone else saying that,
23 unless you damage that and try to remove the sticker tag
24 from the vehicle, immediately destroys it. If that
25 sticker tag works day one, it should be working day

1 10,000.

2 MR. HANCOCK: So follow-up question: So the
3 only areas we probably have to replace the sticker tag
4 under normal circumstances if, say, someone had a crack
5 in their windshield and had to replace the windshield,
6 something like that.

7 MR. JOHNSON: Right.

8 MS. HAYES: Or you sell your vehicle.

9 MR. JOHNSON: No, because then what we can do --
10 this is another thing the agencies, the toll operators
11 deal with, if they sell the vehicle, we can just remove
12 their tag from their account, mark it inactive, and then
13 the person with the new car or who bought that used car,
14 if they wanted a tag, they already have a tag, we just
15 register that tag.

16 MS. McCUNE: We just reactive it under their
17 name.

18 MR. JOHNSON: Yeah, so we don't have to go
19 through that process that we go through now, if you want
20 to close your account because you sold your car, send us
21 your transponder, and 30 days after we get your
22 transponder, we'll finally issue you your refund.

23 MR. HANCOCK: Ellen, you had a question.

24 MS. LEE: Actually a comment. It's just not
25 only the cost savings that we have for the actual costs

1 of the technology, but also postage costs for
2 replacement, educational materials, all that saves us.

3 MS. McCUNE: Right. Good point.

4 MR. HANCOCK: So what it is costing you to mail
5 out a legacy Title 21 transponder, so we can kind of
6 differentiate that?

7 MS. LEE: Hmm.

8 MR. JOHNSON: I don't have that per unit cost.

9 MS. KOBELNETZ: A dollar nine, and then it goes
10 back to the cost of the stamp because the weight is the
11 stamp itself, so for a sticker tag it's standard mail.
12 Right now we're a dollar nine for the legacy.

13 MS. McCUNE: Ours is 2.38 because we send our
14 tag out in a padded envelope because we don't want the
15 switch to get damaged.

16 MR. HANCOCK: So the different form factors here
17 with Title 21 require you to do different shipping
18 methods, is what I'm hearing.

19 MS. HAYES: Right.

20 MS. McCUNE: Right.

21 MR. KOBELNETZ: Scott Kobelnetz with SanDisk.

22 With there's also an operational efficiency
23 benefit with the 6C tags, you know, you mentioned how
24 old the Title 21 technology is. The fail rate on those
25 tags, particularly because of the battery that's in

1 there, is high, five, 10 percent it really just depends.
2 We have on ship those back to the manufacturers, get new
3 tags in, and when someone has to do that times however
4 many hundreds of thousands of tags are coming into
5 California every year, the fail rate with 6C tags is
6 much lower because there's much less infrastructure in
7 those tags. It's just simple math. So the operational
8 efficiency that's going to be added to the agency is
9 going to lower our labor cost. Everything scales,
10 right?

11 MS. SUE: A question on the technology, or even
12 the current one for the transponders, are you having
13 issues on where they go on the vehicle and the reading
14 of bulletproof windshields? We came up -- what we had
15 was to have an external -- it's the limos, it's the Town
16 Cars, so, you know --

17 MR. JOHNSON: It's metalicized windshields.

18 Ms. Sue: Yeah, metalicized windshields.)

19 MS. SUE: So how do you guys deal with those
20 vehicles?

21 MR. CARRIER: We have external transponders.

22 MS. SUE: Yeah, I mean, we had those, as well,
23 but they all broke as they crashed into the other
24 bumpers.

25 But, again, how the 6C placement would be, is

1 there some other, you know, for those types of cars or
2 windshields, would it require a variation of that or a
3 different type of technology or a different placement?

4 MS. CLARK: So if you look at, as an example, to
5 Samuel's point about the variety of form factors,
6 stickers, obviously the most low profile, if you look at
7 Washington State DOT, they have a variety of probably I
8 think it's five to seven different -- they did a pilot
9 where they look at, you know, kind of what do people
10 want on their car?

11 So to address you question, same problems exist
12 whether it's Title 21 or 6C with regards to interference
13 of metallicized windshields. There are form factors that
14 do external -- attach to the license plate, similar form
15 factors as you would see in the Title 21 to address
16 that.

17 The other thing that I think Rick mentioned is
18 that there are -- there's a development of products that
19 was originally for motorcycles, but is actually used for
20 vehicles that have metallicized windshields that will
21 allow you to place that on a headlight so that those
22 cars that are impacted by the metallicized, the higher
23 end cars, you do have the ability to put that kind of a
24 transponder.

25 So there are multiple form factors that deal

1 with different options for what the client wants, as
2 well as for addressing some of the technical issues that
3 come with metalicized windshields.

4 MS. SUE: And we would -- you know, I want to
5 get to where we're interoperable with, you know, the
6 Metro lanes so we'd have to kind of have a consensus of
7 where those types of vehicles would be placing their
8 transponder, their tag on their car.

9 MR. HANCOCK: Let me mention one thing about
10 form factors, since it's kinds gotten brought up, and
11 this got brought up in Oakland, too, so I just wanted to
12 mention it in this meeting.

13 Title 21 currently, as everyone knows, does not
14 indicate any different type of form factors, it's just a
15 specification. The form factors have been developed
16 between the agencies and the vendors over time, and I
17 believe, and correct me if I'm wrong, I consider there's
18 three form factors in the existing Title 21: The
19 standard tag, the switchable tag, and then the wall type
20 protocol tag that is being issued, by TCA. So that's
21 what I consider.

22 And what I would see in the -- as we move
23 forward in new regulation, that would still be the case,
24 is the regulation would just cover the specification
25 general and the form factors would be worked out by the

1 toll agencies, the non-toll agencies, I would say the
2 end users for the lack of a better way of stating it.

3 MS. McCUNE: But still we've seen with the 6C
4 technology out there already, we know that there are
5 numerous form factors that could be developed by the
6 manufacturers.

7 The other thing I wanted to get to because you
8 mentioned efficiencies and cost. Right now, none of our
9 motorcycles require a transponder because we're having
10 difficulty reading them, so everything is done through
11 license plate reads, which is not very efficient, leads
12 to high rates of failure or mistakes being made, also it
13 increases your costs because, you know, some of them
14 have to be manually reviewed and everything else.

15 So being able to put a sticker on the headlight
16 or somewhere on the windshield or the whatever of the
17 motorcycle would be very beneficial to allow us to
18 reduce those costs of having to do everything through
19 license plate reading technology. So that's another
20 efficiency that we see with going with the new Title 21
21 technology 6C.

22 MR. HANCOCK: For the sake of discussion, we'll
23 just call it 6C.

24 MS. McCUNE: Okay.

25 MR. HANCOCK: We have legacy Title 21.

1 MS. McCUNE: So, yes, that's the benefit we see
2 with going with --

3 MR. DOERING: There probably should be also a
4 point of clarification. The terminology as -- if you
5 referenced some of these terms, metallized windshield is
6 used more than the other term I heard in the room,
7 metallized.

8 MR. HANCOCK: Just for the record, I believe we
9 mentioned bulletproof windshields. I don't think that's
10 even legal in California to have a bulletproof
11 windshield, so --

12 I believe everyone is, as Richard has indicated,
13 is talked about metallized or metalicized windshields
14 when they're talking different windshield issues in
15 technology and stuff.

16 MS. SUE: Biden is in town today.

17 MR. HANCOCK: Okay.

18 MR. JOHNSON: It's allowed for some people.

19 MR. HANCOCK: For general purpose for the every
20 day person in life, people sitting around this table
21 here, I would say yes.

22 MR. JOHNSON: So kind of just to go back to
23 Shirlene's question, I think that challenge will
24 continue.

25 The good thing about 6C, especially if you use a

1 sticker tag, once you put it on that right spot on the
2 windshield where you can get a good read regardless of
3 the metal content in the windshield, then it's going to
4 continue to work forever.

5 But that challenge, I think that's something the
6 tolling industry is going to have to work on the auto
7 industry on to give us one little spot in the windshield
8 where it has less metal content because it will
9 interfere with the read.

10 But, like Tawnya said, you have more options
11 with external mounting, now you can put a sticker tag on
12 the outside of the vehicle, you know, depending on the
13 quality of the tag, and probably more the glue that's
14 holding the tag to the windshield, it should last a good
15 amount of time.

16 MS. CLARK: And the auto manufacturers do
17 listen. There was an initiative a few years ago for
18 cool cars where they talked about reducing, and there
19 was a big push back because, from the toll operation
20 standpoint, the impact of doing that and the metallic
21 content in the windshield does reduce, obviously, your
22 readability would increase operational cost because then
23 your only alternative would be a transponder on the
24 exterior of the vehicle, which then takes away the
25 ability to do switchable and some other things.

1 MS. McCUNE: Right, right.

2 MS. CLARK: So they did listen, and they were
3 receptive to understanding, in addition to, obviously,
4 the manufacturers of car who were looking at that
5 increases their costs. But they do listen, and I do
6 think that, you know, it's important to continue to
7 maintain that open communication with them on it.

8 MR. HANCOCK: I think at that time, the -- and I
9 believe the cool care initiative kind of has --

10 MS. CLARK: It went away for now.

11 MR. HANCOCK: Yeah. They were talking about a
12 deletion zone in the windshield that you could put --

13 MS. CLARK: Yeah.

14 MR. HANCOCK: -- because it has impacted garage
15 door openers --

16 MS. CLARK: Car phones.

17 MR. HANCOCK: -- and any device that you would
18 put inside the care for electronic or remote control
19 operation, basically.

20 MR. JOHNSON: That's my understanding, but if
21 somebody has better information, please share, it's
22 those three spots in the windshield right behind the
23 rearview mirror, and then in the two corners.

24 So that's why we provide specific directions,
25 with videos, for our customers to make sure they mount

1 their transponder correctly.

2 MR. THOMAS: I'd like to add some comments.
3 David Thomas with Riverside County Transportation
4 Commission. We are a CTOC member.

5 We have two toll facilities that come on, 91
6 express lane extension into Riverside County in 2017 and
7 the I-15 ExpressLanes in 2020, targeting.

8 I think there's an added benefit, we support
9 implementation of 6C for all the reasons that were
10 stated this morning, and I think there's an added
11 benefit we haven't talked about yet, which is just the
12 availability of transponders or a sticker to the
13 traveling public.

14 We can make a device more readily available that
15 people want to put on their vehicle, that means there's
16 more vehicles, more travelers that have access to
17 ExpressLanes. ExpressLanes are a huge benefit to the
18 traveling public. You get to where you're trying to go
19 on time, it helps with overall congestion on the main
20 line, as well, main lanes.

21 So just the availability of something that's
22 more available and in more vehicles, in itself, provides
23 a huge benefit to the travel public, benefit to use as
24 an agency, a tolling agency, our facilities are being
25 paid for through toll rather than bonds.

1 The payment of those bonds is extremely
2 important to our agency, and, again, by having the
3 availability of more vehicles to utilize the
4 ExpressLanes, that's toll revenue that is going to
5 payoff those bonds, a greater likelihood that we will be
6 able to pay off our bonds, and that travelers will have
7 access.

8 So a couple pretty significant benefits that
9 come with just having a transponder or a sticker that's
10 more readily available to the traveling public.

11 MR. HARRIS: Expand on that a little bit.

12 What makes 6C more readily available to the
13 traveling public?

14 MR. THOMAS: It was mentioned earlier just that
15 people would be more willing to have this on their
16 vehicles because it's not a bulky item, it's going to be
17 less costly, where people would be willing to just pay
18 the price for the \$5 sticker or whatever that cost is.

19 I know it's \$5 in Florida, but it's much less
20 costly than 20 plus dollars for the transponder, so
21 let's just get it, put it on our vehicle, and not worry
22 about it. We can use it if we need it, where now it's
23 more of a process and a cost. You get a transponder if
24 you want one.

25 In Florida, you can basically go to a Walgreens

1 and purchase a sticker from Walgreens, hang it on the
2 shelf, for five bucks. I see that we're going to
3 probably move away from the process of where you're
4 mailing them out as an agency and they're just going to
5 be readily available at the drugstore, and I think we
6 should have a lower cost solution, that will get
7 deployed, as well. And just more availability to the
8 traveling public.

9 MR. JOHNSON: I would echo what David noted that
10 our partners in Georgia and Florida, as he mentioned,
11 they have these things on gas stations, you know, just
12 readily accessible by the public to pick one up.

13 And that \$5 is not for the sticker tag, that's
14 your prepaid amount. So you pay \$5, you take a sticker
15 out to your car, and slap it on, and you have \$5 worth
16 of toll. Of course, you still need to either go online
17 or call or register your tag with the agency.

18 But one of the things we have to do right now,
19 and I think most of our agencies were concerned about
20 inventory control because the items do cost, you know,
21 13 bucks each, so we're limited in the partners we
22 select. If we want to help distribute transponders, and
23 those partners, when we do select them, we make sure
24 they have firm inventory controls.

25 I won't speak for others, but if I get this

1 wrong, I don't remember what it was in San Diego, even
2 in Costco, you go to Costco, you pick up a card in the
3 aisle, and then you pay for the register, but then you
4 have to go to the electronic merchandise counter to pick
5 up your transponder. So it's an extra step.

6 So if we have a model, like David said, that's
7 employed in other states, the customer has one less
8 step. They grab it from the aisle, they pay for it at
9 the register, and they just go, because we're now not as
10 concerned about inventory control and we can let a
11 merchant partner just put it on the shelf like candy
12 bars.

13 And I think some of our agencies have even
14 talked about giving them away free. If we can get the
15 cost point down to like 50 cents, it's in our best
16 interest to do what David says to increase issue and
17 access to distribute the sticker tags, you know, and
18 have them on the vehicles, and we just want to folks to
19 setup for an account.

20 MR. THOMAS: Also just mention something about
21 the timing, the 2018 date works very well for our
22 agency. We're actually in the stages of developing our
23 back-office software for 2017 implementation. We'd like
24 a decision made on this so that we can actually be ready
25 when we open the 2017 with this technology.

1 And then whenever a decision is made and
2 implemented altogether, we'll be ready at that point.
3 So I think there would be less cost for us if a decision
4 was made now as we're developing our software.

5 The devices already have the capability, but the
6 software developers will be spending extra costs right
7 now to do this, it will be less costly for us to do this
8 as we're already developing a software [unintelligible]
9 for a later date.

10 MR. HANCOCK: Any other comments on inventory
11 costs, distribution, between existing methods and new
12 possibilities with newer technology as we move along?

13 MR. HARRIS: Just a question. Can you hear the
14 people up front?

15 (Discussion held off the record.)

16 MR. HANCOCK: Let's see. Are there any other
17 alternatives to the transition to 6C, what are the
18 benefits of the transition? What are the drawbacks?
19 Are there any drawbacks?

20 MR. JOHNSON: Change. Change is never free.

21 MR. HANCOCK: So what type of -- what changes do
22 you have to make?

23 MR. JOHNSON: It really depends on the agency
24 and your system, like we mentioned earlier, and Tawnya
25 mentioned, some folks, it's just a software upgrade.

1 Some folks just have to turn it on. Some folks may
2 actually have to replace the readers.

3 It sounds like our folks at the airport they
4 have to look at their setups a little more thoroughly
5 because they're going to have costs, as well.

6 So the change is not free, and so that is a
7 potential drawback, but if you take into account the
8 longer term benefits, the bigger picture, it still makes
9 good sense.

10 MR. HARRIS: So there are upfront costs?

11 MR. JOHNSON: Oh, yeah. It's not going to be
12 free.

13 MR. HARRIS: How quickly do you think you'll
14 recover that those costs?

15 MR. JOHNSON: Well, for us -- it will depend on
16 the agency, but for TCA we can probably see benefits
17 because our cost to do it will be very, very small
18 because we've been planning on this for a while. So our
19 return on investment period will be almost immediately,
20 but I can't speak for the other agencies.

21 MR. HANSEN: Harry Hansen with Kapsch.

22 I think the other thing to point out, too, is
23 it's not just the reader change. There are software
24 changes involved in order to be able to exchange the
25 data amongst the agencies because the original

1 interoperability specification for exchanging data is
2 really tied to the existing Title 21 style number, and
3 so there may have be some changes that have to be
4 accommodated for the new 6C type stuff.

5 So it's hardware and some software changes that
6 will have to come up.

7 MR. CARRIER: So that enter interoperability
8 that's in the latest CTOC revision, that was just
9 changed, so all the CTOC agencies are going to make
10 those changes.

11 MR. HANSEN: It's just the making the changes,
12 yes, exactly.

13 MR. CARRIER: It's the file.

14 MR. HANCOCK: It's the file format. The file
15 format has been agreed upon and approved by the CTOC
16 agency, it's just the implementation by each agency that
17 needs to take place at this point, is what you're
18 saying? Okay. I just wanted to make sure for
19 clarification purposes.

20 We kind of discussed projected timeline, time
21 tables for transitioning to the new protocol.

22 Any other items that anyone would like to bring
23 up on that?

24 MR. HARRIS: Yeah. I'd like to delve into it a
25 little bit more because it seems like there's some

1 general consensus that there should be a -- I don't know
2 for how long, extended transition period where we're
3 operating both the legacy Title 21 and new 6C, whatever
4 it happens to be. And, obviously, I can understand why
5 there would be benefits to a longer period.

6 Are there any agencies or stakeholders who have
7 a problem with a longer transition period? In other
8 words, who want to have a shorter transition period?
9 Obviously the statute talks about drivers only have to
10 have one -- but what kind of administrative issues --
11 let's start with the toll agencies -- do the toll
12 agencies face from having to run two different systems
13 and how long can you do that, or do you want to do that?

14 MS. KOBELNETZ: I don't think we want to do it
15 indefinitely because then you're looking at, as your
16 ending the useful life of some of your components, then
17 that weighs into the cost of the replacement components.

18 But once it's set up, you have to have some
19 period of time where we are multi-protocol, so all the
20 work is going to be done. So as long as we have a
21 reasonable sunset date from that, there isn't really
22 that big of a hurdle, as far as I'm aware.

23 Having an indefinite period is what I would be
24 concerned with because then after you get -- you know,
25 once you go through your life cycle, then you're going

1 to incur some of those costs a second time.

2 MR. HARRIS: So is that the primary factor in
3 the transition period, how long the life cycle of your
4 legacy software and hardware is? That the main issue,
5 how long you have to have a transition period?

6 MR. JOHNSON: I would say it's more around the
7 tag investment, because that's the one thing that's
8 going to change.

9 MS. McCUNE: Right, because you have to have
10 your inventory in place.

11 MR. JOHNSON: Your software updates and your
12 back office and the readers, once you do that, it's
13 done. But the transponders, having that, that's the
14 cost that -- you know, we want to give agencies adequate
15 amount of time to get their return on investment for
16 those items. I don't want to have to throw away a tag
17 in a year that I just bought.

18 MR. HANCOCK: So question on following up with
19 Scott. From, say, let's reference a point in time here,
20 say from when you start processing 6C tags to how long
21 the time frame would you like to see, would you feel
22 it's needed for the sunset legacy Title 21?

23 MS. KOBELNETZ: Well, at a minimum, five years
24 because that's the life cycle of our current tag; at
25 maximum, I wouldn't want to go too far beyond that three

1 to seven years is kind of the range I was thinking.

2 MR. HANCOCK: Okay. Is that three to seven,
3 five, middle point seem -- so if we discuss five years
4 from the point of reading 6C to new protocol to end the
5 life of sunseting the legacy protocol seem reasonable
6 to everyone?

7 MR. THOMAS: What would be the start date again,
8 Steve?

9 MR. HANCOCK: I'm just referencing the time
10 frame of when every -- when people read and process 6C,
11 say -- I think we earlier discussed that as mid 2018, as
12 we discussed as part of the date. So five years from
13 that point is what I would be referencing in this
14 discussion, in that.

15 So does that seem reasonable to toll agencies
16 and non-toll agencies? Would you like something
17 different than that?

18 MS. SUE: Well, it sounds like, you know, as an
19 airport, we'd still have the option to continue doing
20 whatever. But we would actually be fine with a
21 five-year. We actually see all our operators annually
22 or biannually, so we would be able to transition in two
23 to three years.

24 MR. HANCOCK: So it sounds like we wouldn't have
25 to have a separate transition time for toll agencies

1 versus non-toll agencies, or would you guys still like
2 to see that?

3 MS. SUE: I would be fine with -- you guys
4 actually have the larger population, so we would work
5 with them.

6 MR. JOHNSON: Yeah, that five-year period you
7 mentioned, Steve, based on that start point you
8 identified to me, that's really seven years. I think
9 that our agency would be comfortable with that.

10 MR. HANCOCK: Okay.

11 MR. JOHNSON: As soon as we see -- because we're
12 going to be watching this as it goes through the process
13 and if it looks like this is going to sail smoothly,
14 then we're going to immediately adjust our plans. If
15 it's rocky, then we're going to hold out till the last
16 minute.

17 MS. McCUNE: Right.

18 MR. JOHNSON: But I think that total potential
19 of seven years you laid out, I think that's more than
20 adequate for us. But I do want to make sure we're
21 always a good partner with our other agencies, so --

22 MR. HANCOCK: So anyone here got any objections
23 to that time frame? Concerns? Issues?

24 MR. HARRIS: We're talking about both toll and
25 non-toll agencies, and I recognize that for vendors,

1 contractors, private companies, they have trade secrets,
2 proprietary information they don't want to share with
3 their competitors and the like.

4 But what's the sense, not just from vendors and
5 contractors, but from the tolling agencies, of how
6 quickly can contractors gear up to the transition?

7 You mentioned increased competition and the
8 benefit of that potentially, but how long would it take
9 for the various --

10 MR. JOHNSON: I'd say zero time because I think
11 the -- many of the folks who are already manufacturers
12 and suppliers, they already make that stuff for others,
13 so they have a similar standard, we may have some tweaks
14 for California, but, generally speaking, they're ready,
15 and maybe Harry can speak to that because his firm has
16 initially been a big player in California, and he's here
17 because he see opportunities.

18 MR. HANSEN: But I think from a 6C standpoint,
19 from equipment-wise, the vendors are already there. You
20 got multiple players in the market from both a hardware
21 standpoint and a tag standpoint. And, in essence, it's
22 not -- I want to say it's not new technology because, as
23 Samuel stated, it's being used in other states.

24 So it's not like you're out on the bleeding
25 edge, as we tend to want to stay away from sometimes.

1 And so I think from the standpoint -- I think a
2 lot of it, too, is most of the agencies within
3 California have already done recent upgrades to their
4 system, and so already have in place multi-protocol
5 readers.

6 And so, as Samuel also pointed out, it's -- you
7 know, it's an update, turn-on type of thing. I think
8 maybe we've got one or two agencies that have yet to put
9 in the multi-protocol and they're just on the edge of
10 issuing RFPs, anyway, and it's probably going to be
11 contemplated in their equipment refresh. So they're
12 going to be sitting there ready to go, and, you know --

13 So, once again, once the hardware's in place,
14 then depending on when the start of your issuing tags is
15 going to be, you're going to have some ramp up with
16 procurement.

17 You know, there's always that issue that when
18 you've got all the agencies trying to order all at once,
19 the vendors may get a little bit of -- it may be a
20 little iffy at the beginning, you know. But, you know,
21 that settles down once the flow starts going.

22 And then, again, it's, you know, software
23 changes and the vendors that have to be involved in
24 that. And that's probably, I would say, probably more
25 of the problematic because it will have to go through

1 the cycle of making of software change, testing it
2 before it goes live, putting it live, you know, so there
3 will be probably a longer cycle to get that ready, but
4 still within the time limits of the 2018.

5 MR. JOHNSON: I think the one item in your
6 question, David, we should be clear on it is that the
7 CTOC agencies have been investigating and making sure we
8 understand when that will become a reality.

9 The one piece we need that doesn't physically
10 exist yet in 6C is a three-position switch, in terms of
11 switchable transponders. There are 6C switchable
12 transponders, but they're two position, and that's what
13 they use in Washington. Either you're a carpool or
14 you're not a carpool.

15 But, like Kathy mentioned, some of our agencies
16 want to be able to do tier pricing for two plus versus
17 three plus, which means you have to have a switch with
18 three positions. That doesn't physically exist yet.
19 I've seen product types from a few players in the
20 industry, but that's probably the one thing we have to
21 watch to make sure that's ready in quantity.

22 The folks we talk to say they can develop that
23 in a matter of months but, you know, developing and
24 coming up with a design and then cranking out, you know,
25 a few hundred thousand of them is a bit of a difference.

1 MR. HARRIS: Do we need to delve a little more
2 deeply into what three position means to everybody?

3 MR. HANCOCK: Is everyone clear on what three
4 position -- okay. Question over here.

5 MS. CLARK: No.

6 MR. HANCOCK: Oh, I'm sorry. I thought you had
7 a question.

8 MR. HARRIS: Let me just actually flip the
9 thought on its head for a second because you've talked
10 about how 6C could lead to increased competition.

11 Why doesn't the legacy Title 21 technology lend
12 itself to competition? Why aren't there more players in
13 the field?

14 MR. JOHNSON: As big as California thinks they
15 are, in terms of tolling, we're pretty small.

16 UNIDENTIFIED SPEAKER: Yeah.

17 MR. JOHNSON: So we've got something that's only
18 used in our state, so folks lie Kapsch, you know, they
19 want to be able to sell 30 million of these things;
20 California, we're good for about five.

21 MR. HANSEN: And then the thing is at one point
22 Title 21 started to grow, as we talked about, Washington
23 started to put it in, Colorado, I think even Utah looked
24 at it at one point. Golden Ears up in British Columbia
25 did, but then it just kind of bled out. Again, I think

1 it was because there was only two vendors that did it.
2 There was, you know, it was never big enough to really,
3 you know, make the thing explode.

4 And then, you know, now with the national
5 interoperability discussions, Title 21 isn't anywhere in
6 that market, and so it's just -- it's -- you got an area
7 that's just fading.

8 So, you know, if you've only got two vendors and
9 they're starting to drop out -- and I don't think it's
10 drop out, but I think it's more becoming specialty run,
11 which you can see with the pricing Nevada got for their.
12 I mean, it's just, you know, "Oh, you need transponders?
13 We'll fire up a run for you."

14 It's just, you know, it's not are -- 6C is much
15 larger, especially with the standard, you're talking
16 more worldwide market, so you've got a lot of vendors
17 playing in that.

18 And I think it does raise the other issue of
19 what California is going to consider as a 6C device.

20 I raise that issue from a certification
21 standpoint because that was one of the initial problems
22 with Title 21. I think the first vendor, which was
23 Texas Instruments, certified in front of CalTrans.

24 I remember the second vendor actually going
25 through their certification, which I believe ARINC was

1 observing for CalTrans, and that was done in a hotel
2 room because I was at that one. And then it kind of,
3 again, faded from there. It was kind of got lost in the
4 how do we certify whether you're Title 21 or not?

5 And I think that's one of the things that have
6 to be considered with 6C. I know OmniAir has got their
7 certification, but we don't want to be in a position
8 where it's 6C but it's not 6C, you know, same problem.

9 MR. HANCOCK: So to pick up on a couple things,
10 would you say part of the advantage here of going to 6C
11 versus Title 21 is you have more capabilities, it's
12 newer technology, or is it a vendor only issue?

13 MR. HANSEN: I think it's newer technology, but
14 it's a standardized technology you're going to an ISO
15 standard. Title 21 never got to that point.

16 As an ISO standard, you have more vendors
17 willing to build to it, plus you've got more call for
18 it, as Samuel pointed out, in other industries, as well.
19 So now you've got a much broader market base to which
20 you're building, which means it also entices other are
21 vendors to come in and build it.

22 Now, you may only have, at this point, specific
23 builders that are looking at the tolling market, but,
24 you know, the tolling market is also really large
25 outside of the United States, too.

1 So you've got a lot more players, I think, in
2 this market for using the 6C technology.

3 MR. HANCOCK: Does 6C give you capabilities that
4 Title 21 does not?

5 MR. CARRIER: You can write to a 6C tag; you
6 cannot write to Title 21.

7 MR. HANCOCK: So there are some additional
8 functionality or capabilities as writing to the tag.

9 MR. HANSEN: And I think that's really going to
10 be a case of what you ask for.

11 Because, again, the writing to the tag, at least
12 in my opinion, it's a nice feature, but not everybody
13 takes advantage of it, and, I mean, we see this in the
14 E-ZPass market, as well. Some people use it; some
15 people don't. It's just -- you know, it's going to be
16 "What do you want to do?" and "Do you really need it?"
17 kind of thing.

18 MS. CLARK: So to Harry's point, when you talk
19 about manufacturing, and to kind of go off what Samuel
20 was saying, initially just two providers of it. Didn't
21 even really look like a market. Even now, just with 6C,
22 as far as manufacturers and, you know, there are more --
23 there's probably at least, from an AVI specific
24 standpoint, double the manufacturers or more that can
25 provide AVI tags for 6C that even would provide Title 21

1 now today.

2 There are other manufacturers for different form
3 factors using a similar technology under a different
4 application. There are some specific requirements for
5 an AVI tag that are very different from some of the
6 other uses for 6C.

7 But there's already more manufacturers and,
8 therefore, more competition on the 6C side than there
9 ever was with regard to Title 21, outside of the fact
10 that obviously the component differences are much less
11 from the standpoint of the manufacturing cost.

12 So you're already ahead of the game with regards
13 to manufacturing from the ability for people to respond
14 or their interest in responding from a RFP, you know,
15 standpoint for a tag.

16 MR. HANCOCK: So go ahead, Samuel.

17 MR. JOHNSON: I was going to ask if we can go
18 back to Harry's comment about the certification.

19 MR. HANCOCK: Sure.

20 MR. JOHNSON: That's one of the things that CTOC
21 agencies have talked a lot about, Harry, because as good
22 as Title 21 is, there are still debates that happen,
23 that happen with our vendors about, well, is it truly
24 Title 21 or not, because when one vendor is reading
25 another's tag, things don't always work as well as we

1 expect them to do. So that was the key focus of the
2 CTOC agencies and working with CalTrans on this.

3 So that, going forward, there is a requirement
4 for third party certification for California.

5 MR. HANCOCK: So speaking on the certification
6 side, going forward, what I hear is what you're saying,
7 Samuel, is you'd like to see a certification requirement
8 as far as the regulations.

9 MR. JOHNSON: I don't know if it has to be in
10 the regulation. I think that's something that each
11 agency can handle in its procurement process because it
12 is a cost that the vendors incur that they pass back to
13 us.

14 But I think all of us would still like to see
15 that here and know that we have maybe the certification
16 process is established by CalTrans in conjunction with
17 the spec so that we know how folks will test, approve,
18 and meet the spec. But I don't know if necessarily
19 having that in the legislation is -- I don't know if
20 it's good or bad.

21 MR. HANCOCK: Okay.

22 MR. JOHNSON: So I know that the agencies want
23 to do it. No question about that.

24 MR. HANCOCK: Let me restate it this way: You
25 want it -- how it's required is a point of discussion.

1 MR. JOHNSON: Exactly.

2 MR. HANCOCK: Okay. Any other comments on
3 certification?

4 So on certification, would the toll agencies,
5 like CalTrans, to oversee the certification side of it
6 or would they like to oversee the certification or a
7 combination thereof?

8 MR. HANSEN: I was going to say I think that --
9 and I agree with Samuel, it should be some sort of
10 third-party certification.

11 MR. HANCOCK: Okay.

12 MR. HANSEN: And I think how you phrase the
13 regulation or don't should be that, you know, you have
14 to provide --

15 MS. CLARK: Proof.

16 MR. HANSEN: -- proof of 6C certification from
17 an approved third party.

18 MR. HANCOCK: Approved by CTOC or CalTrans?

19 MR. HANSEN: That's the question.

20 But the reason I say that is you really want to
21 have it certified by somebody who can certify 6C. You
22 don't want anybody running in and going, "I got a
23 certificate," you know.

24 MS. CLARK: Right.

25 MR. HANSEN: That wouldn't fly, either.

1 MR. HANCOCK: So instead of having a third-party
2 certification service or test lab or something like that
3 accredited to do that kind of.

4 MR. HANSEN: Right. Sort of along the lines of,
5 you know, doing UL on the other devices. Right.
6 Exactly.

7 MS. CLARK: So the T21 certification was done
8 originally, but then there wasn't anything called out
9 for recertification. So it was a little more soft.

10 To Samuel's point, recertification to 6C,
11 proving that you have it in the first place, do you
12 require that every year? Do you require that every five
13 years? All of those things impact that end-user cost or
14 the cost to the agency of the tag.

15 So whether you call it out in the legislative
16 specification or whether it's just a requirement in the
17 RFP that you provide every X number of years, whatever
18 it is that's decided, all will impact.

19 So the current suppliers of 6C all have gone
20 through some external third party, most of them
21 certification for compliance with the standard. I think
22 what you want is to make sure that continues, which is
23 different than maybe the way it was done with Title 21,
24 so -- but at what frequency, to Samuel's point, does
25 create some additional costs or -- not risks, but

1 additional costs that ends up getting passed on.

2 So looking at how you balance that requirement
3 versus the costs to the tags is going to be important.
4 And whether you call that out in a specification or
5 whether each agency decides what they're comfortable
6 with, you know, will impact that decision.

7 MR. JOHNSON: It feels like the more we talk
8 about this, Steve, at least my perspective is this is
9 something that the toll agencies or anybody can control
10 through the marketplace, versus having it spelled out in
11 legislation.

12 MR. HANCOCK: Okay.

13 MR. JOHNSON: Because I think for me, I'm not
14 even necessarily sure I need the recurrence piece you
15 mentioned, Tawnya, but the current version and model of
16 software that a vendor is proposing to me, I need to
17 know that that's been certified to the California
18 standards. I think that would help me a lot. And if
19 that's the stuff I continue to use, I don't see a need
20 to have the vendor go back and recertify that a year
21 later unless there's been a change.

22 MR. HANCOCK: So a change in the manufacturing
23 process or the different form factors that has not been
24 certified or something to that affect.

25 MR. HANSEN: Exactly.

1 MR. JOHNSON: Those are my thoughts.

2 MR. HANCOCK: Okay. Does anyone want to add or
3 have a differing opinion on Samuel's thoughts on that?

4 MR. JOHNSON: How would you guys like to see
5 that work? Scott? Kathy?

6 MR. HANCOCK: Yeah.

7 MS. KOBELNETZ: I really don't have a preference
8 as long as we all come to a consensus and it's
9 consistent throughout the state. You know, I don't want
10 to see that as an individual agency. You know, it needs
11 to be consistent for all of us.

12 You know, OmniAir has been thrown out, you know,
13 right now I don't have enough information to make an
14 opinion one way or the other. An independent third
15 party, you know, I feel strongly about. As far as how
16 often, you know, again, I don't have enough information
17 to make an opinion one way or the other, but I would say
18 that it should be consistent.

19 MS. McCUNE: Would it be appropriate for the
20 CTOC committee to discuss and make a recommendation so
21 that we're all on the same page?

22 MR. HANCOCK: Sure.

23 MS. McCUNE: Would that be appropriate? Is that
24 something we could do?

25 MR. HANCOCK: Yeah.

1 MS. KOBELNETZ: Well, I think what Sam said, I
2 actually prefer it not be spelled out in the
3 legislation.

4 MS. McCUNE: Right, I agree with that. But I
5 was just wondering if we could do that amongst the
6 agencies through our CTOC process and come up with a
7 common understanding of what it is that we're going to
8 do.

9 MR. JOHNSON: Kathy makes a good point because
10 if we're not all in this together.

11 MS. McCUNE: Right.

12 MR. JOHNSON: If somebody goes out and buys
13 stuff without a certification and that stuff doesn't
14 work, that might impact what would go over on the other.

15 MS. McCUNE: Right.

16 MR. HANCOCK: So just to make sure everyone --
17 I'm hearing everyone correctly.

18 Would you say a simple statement in the
19 regulation is certification testing will be required by
20 an approved certification and testing facility, approved
21 by CTOC or something like that, or are you saying just
22 don't say anything in the regulation at all.

23 MR. HANSEN: I think you have to say something
24 in the regulation about -- like CTOC --

25 MS. KOBELNETZ: That gives us the authority to

1 change as time goes on because, you know, as we all
2 know, it's going to change, and it's going to change
3 quickly, sooner rather than later. So other than having
4 to come back to you to change verbiage and go through
5 that process, even if it's minor.

6 MR. HANCOCK: So this would just be general
7 language saying a certification of the transponders,
8 readers -- and I'm just throwing it language out, I'm
9 not being specific -- here certification of the
10 transponders and readers is required by an approved
11 testing facility -- certification or testing facility
12 approved by the CTOC agencies.

13 MS. KOBELNETZ: I'd even say less than that.

14 The CTOC agencies will collaborate and come to a
15 consensus on the certification process or something like
16 that. I think we all work pretty well together, and,
17 you know, we'll be able to do that. But it just gives
18 us the ability to have more leeway.

19 MR. HANCOCK: And the non-tolling agencies, any
20 thoughts, comments on certification or anything?

21 MS. LeBLANC: I just want it to work.

22 MR. JOHNSON: I think that's why we're being so
23 generic in our discussion because we just want it to
24 work. We want to be able to buy equipment and
25 transponders from anybody and know that it's going to

1 work. But how to get there, we probably need some more
2 thoughts.

3 Probably part of that, though, is, as CTOC
4 continues to work together to get those certification
5 requirements, we do need those documented and held, and
6 maybe along with the technical spec for the protocol
7 CalTrans also holds the requirements document for
8 certification. I'm not sure but the CTOC agencies
9 probably have to think about that some more.

10 MR. HANCOCK: Okay.

11 MR. JOHNSON: But I wouldn't ask you guys to
12 have to take on that work actually doing the
13 certification and working with testing because I think
14 the state might run into some challenges about what can
15 you charge to make sure you cover your costs.

16 MR. HANCOCK: Well, I think it comes down to
17 what the gentlemen at the ends there said, a third
18 party, I would think, would seem to be the most logical
19 way to go.

20 MR. HANSEN: Well, I think that puts it on the
21 vendors.

22 MR. HANCOCK: Yeah.

23 MR. HANSEN: There's going to be a vendor cost
24 to get their equipment or their -- you know, certified
25 and be able to produce the certification.

1 And, like I said, if you put it in the context
2 of like UL certification, that's where you want to be.
3 Right. "Here's my equipment. It has 6C certification
4 from this external lab." Done.

5 MR. HANCOCK: Okay.

6 MR. HANSEN: And then it just makes it easy on
7 everybody. We're not scheduling separate -- you know,
8 certifying that it works according to some floating
9 spec, if that changes -- I mean, you're trying to get it
10 certified that it operates to the standard, and if you
11 got labs out there that are doing that kind of
12 certification, I mean, I throw out OmniAir, you know,
13 there's probably a couple more that want to do that, you
14 know, as the market expands, then you're going to have a
15 set of certifications that can be issued.

16 MR. HANCOCK: Okay.

17 MR. JOHNSON: And when CTOC talked about that
18 certification, I think there are some -- 6C is great.
19 There are some flexible areas in there, some other
20 Title 21, which is -- creates some of the problems we
21 had. So as we go down that certification path and give
22 it more thought, it may be California 6C certified
23 versus just 6C certified.

24 MR. HANSEN: You may want to tread carefully in
25 that because once you start diverging from the standard

1 6C path, now you're starting to jeopardize national
2 interoperability.

3 MR. JOHNSON: And we talked about that a lot,
4 especially on the chip side.

5 At least my understanding from what I've learned
6 is that economy of scale we talked about and really
7 achieving that low cost is in the chip manufacturers.
8 The chip manufacturer is going to crank out the 6C chip.
9 But maybe it's on the application side. I don't know if
10 you have any problems on that.

11 But there are some things, as we heard, there's
12 no guarantee that a Washington state 6C would work in
13 Florida.

14 MR. HANSEN: True. At this point, right.

15 But once you get into certification, and I know
16 that even at the national level they're talking
17 certification, to be able to make sure that you can use
18 it anywhere. When you start talking about -- we'll call
19 it state X as opposed to California, but some variation
20 in what you're certifying, then you're getting on that
21 fine edge of not functioning properly maybe somewhere
22 else where they don't care about it.

23 MR. JOHNSON: And not the intent.

24 MR. HANSEN: Okay.

25 MR. JOHNSON: The intent is to make sure that

1 it's truly interoperable and that it works throughout
2 the state. If we can leverage what goes on nationally,
3 then that would be ideal for California. But right now
4 I understand, even with the 6C certification, this field
5 the way it is, even with the flexibility in certain
6 aspects, it may not be fully interoperable, and that's
7 what the CTOC agencies are, you know, asking CalTrans to
8 help us mitigate with how we lay this out.

9 MR. HANSEN: Right.

10 MS. BOND: Patti Bond with the TCA.

11 Samuel, just to clarify on that point, if 6C was
12 adopted as the national interoperability, then the
13 certification would be uniform throughout the whole --

14 MR. HANSEN: It would have to be. Absolutely.

15 MR. JOHNSON: Definitely.

16 MS. BOND: Yeah.

17 MR. HANCOCK: Okay. Any other questions,
18 comments on certification as we move on here? Do we
19 want to take a break, David? It's about 20 after.

20 MR. HARRIS: Why don't we take a break for
21 lunch. Why don't we take about 20 minutes till about
22 12:45. Lunch will be here and then we can make it a
23 working lunch.

24 (At the hour of 12:23 p.m. to 1:00 p.m., a
25 luncheon recess was taken)

1 MR. HARRIS: Why don't we get started again.

2 Again, we'll add another challenge to Vickie's
3 work here with all the rustling, so if you could keep
4 your voice up a little bit, but I want to be respectful
5 because I'm sure people have places they need to go,
6 so -- I think we're making good progress, but I don't
7 want to get jammed up for time.

8 So just to review, and, again, if we don't cover
9 something, there's a catchall agenda item at the end
10 about other issues, anything that we don't bring up, or
11 that you think about later, obviously you can bring it
12 up at the end when we're wrapping up. But I why don't
13 we continue our discussion.

14 Are there any other discussions on items three
15 through five? Alternatives? Benefits? Drawbacks?
16 Time tables? Is there anything else that people would
17 like to cover at this time with regard to those issues?

18 All right. I'll move on to the next one.

19 And, again, these next items tend to have a lot
20 to do with the ability of the department to be able to
21 promulgate regulations that the Office of Administrative
22 Law is going to accept.

23 And number six is a very generic one. We've
24 covered, I think, this to a certain degree, particularly
25 the benefits with regard to competition and to

1 consumers, but about the potential economic impact.

2 There appear to be, obviously, a lot of positive
3 ones, but we also need to look at the very negative
4 impact, we need to talk a little bit about the upfront
5 costs the agencies will bear.

6 And so it's just, in general, what are the
7 potential economic impacts of the transition from a
8 legacy Title 21 we have now to whatever it happens to
9 be, whether it happens to be 6C or something else.

10 MR. JOHNSON: Other than the positive points we
11 talked about earlier, David, with increased competition,
12 more businesses -- business going to California, on that
13 scale on an economic impact, I'm not really seeing any
14 of the negatives.

15 There are some short-term cost impacts that
16 accompany any change that we have to deal with, maybe
17 that fits more under eight. I'm not sure.

18 MR. HARRIS: Let me fold in number seven at this
19 point, and we can go back to it, because number seven is
20 somewhat unusual. It's unique. And here I apologize to
21 our friends from out of state for the provincial tone of
22 what I'm about to say, but there is an aspect of
23 regulatory practice in California that looks toward
24 whether it's going to allow California businesses to
25 compete, and Samuel also mentioned, you know, that 6C

1 has the potential to provide increased competition,
2 which would be good for California and out-of-state
3 companies. But, in general, is there any major issue
4 of -- I guess what I'm asking is are California
5 companies put at any disadvantage by the transition?

6 MR. CARRIER: I would say a California company
7 [unintelligible] it would benefit from this because,
8 right now, they do not compete in the Title 21 market.
9 Both Title 21 providers are outside -- the manufacturing
10 is outside of California. If we go to 6C technology, I
11 would assume, you know -- there would be more
12 opportunity for additional providers to start up in
13 California.

14 MR. HARRIS: But there are no barriers for
15 California companies?

16 MR. CARRIER: They can --

17 MR. JOHNSON: Staying with an open standard?

18 MR. HARRIS: And at most, neutral.

19 Anybody else have thoughts on that particular
20 issue, the ability of California companies to compete?

21 MR. JOHNSON: The only other thing I can think
22 of, David, goes back to tolling agencies, our ability
23 to, as we achieve cost efficiencies, it helps us
24 maintain our toll rates, which, you know, California
25 businesses are exposed to so a lot of folks,

1 unfortunately, get their toll [unintelligible], so --

2 But, in that regard, we're keeping what some
3 consider to believe [unintelligible] it's good for
4 California businesses. It might be a bit of a stretch,
5 but --

6 MR. HARRIS: Any other particular thoughts on
7 those issues?

8 MR. HANCOCK: What about on the economic side,
9 overall savings, do you have any projections or cost
10 savings, factoring in the transition costs and stuff
11 long term.

12 MR. JOHNSON: Right. That's that number I
13 mentioned earlier, so, you know, it's the cost of our
14 current -- to our account holders that have a
15 transponder, and, actually, I was low on my numbers
16 because I said 500,000, but that's FasTrak accounts, but
17 it's -- we average about two transponders per account,
18 so if we look at a million transponders and having to
19 replace them all over five to 10 years, that cost is
20 pretty significant. I mean, we're talking, you know, a
21 one-time capital replacement cost if we had to -- it
22 doesn't work this way, but if we had to give every one
23 of our customers a replacement transponder, that's
24 \$13 million for us as a historical number, not even
25 based on what we're seeing now.

1 So if I can go from 13 million to 100,000,
2 that's pretty significant. If I only have to pay a
3 dollar per transponder with a 6C [unintelligible] versus
4 our additional Title 21 transponders that cost savings
5 increases for my agency.

6 MR. HARRIS: Let me play devil's advocate for a
7 moment right here, but the gentleman who was here
8 earlier talked to me about increased availability would
9 be good. Let me again take a bit of the opposite side.

10 Is there any constituency out there that's going
11 to be vehemently opposed to this, because it does make
12 it more ubiquitous. It does mean that more people --
13 are we going to be inducing more toll facilities because
14 of this advance in technology?

15 You know, there are a lot of issues here, and
16 some of them are not totally relevant here.

17 For instance, there's a pilot project at the
18 department that the CalTrans commission people are
19 working on called the road usage charge. Basically as
20 cars become more fuel efficient, gas taxes don't produce
21 as much revenue anymore, and then there needs to be a
22 new funding mechanism for transportation.

23 Other people are going to say, "Well, this is
24 just another state-imposed tax."

25 MR. JOHNSON: Right.

1 MR. HARRIS: This is another sneakier way of
2 getting more taxation on people than --

3 MR. JOHNSON: Yeah. I'm not sure, David. I'm
4 sure there are probably some environmental groups that
5 would still say, "Hey, this just promotes more driving."

6 But I don't necessarily hear that much
7 discussion about demand on toll roads because of the fee
8 aspect.

9 So, yes, I mean, our roads are wide open now,
10 and if the toll doesn't increase as much as it would
11 have if we don't switch to 6C, I don't know if that
12 incremental difference is going to change folks'
13 behavior. I guess it could, but I don't have --

14 My experience with environmental groups,
15 sometimes they stretch to -- well, I guess we all do, to
16 attain our own agendas. Do they complain about this?
17 Maybe, but it's hard to argue that that concept of a
18 potentially new [unintelligible] versus the hard reality
19 of the fiscal numbers we're citing, I think that's an
20 unfair fight in our advantage.

21 MR. HARRIS: And obviously in some sense, policy
22 can help dictate with regard to tolling facilities, so
23 actually reduce, not induce driving, but then lessened,
24 but what about the other part of that aspect that you're
25 creating a two-tiered society. You're creating Lexus

1 lanes, the haves get the, basically, ability to travel
2 more freely than the great masses? How about that?

3 MR. JOHNSON: Right. Yeah, I don't think
4 there's a huge disagreement that folks with more
5 disposable income use toll facilities more. I think
6 it's like any product choice, you have folks with more
7 disposable income are going to buy a higher value
8 product while other folks might choose not to.

9 But in the scheme of California and
10 transportation I think anything we can do with our toll
11 facilities to manage costs and keep them affordable,
12 that benefits our other facilities. So while an
13 environmental group might say, "Hey, you're inducing
14 demand."

15 I think we can counter and say, "Well, we're not
16 creating new trips." In fact, somebody already all of a
17 sudden decides "Hey, I don't need a transponder because
18 I'm not going to drive my car," can we shift more folks
19 over from congested facilities? Probably, but I think
20 that's what we want.

21 MS. LEE: Sam's point is that -- but, you know,
22 if there's capacity in the express lane and you have
23 congestion on the general lanes, and you're moving more
24 vehicles from the general lanes to the express lanes,
25 you're actually benefitting those people that are

1 sitting in the general purpose lanes, not, you know --
2 vehicle emissions, moving more people through the
3 corridor, so I see it as a benefit.

4 MR. HARRIS: Other comments to economic aspects
5 of the transition to 6C or some other --

6 MR. HANCOCK: Anything from the non-tolling
7 agencies?

8 MS. SUE: I mean, ours is a cost recovery, so we
9 charge them back for that, but just in terms of, I would
10 think -- not really on a non-tolling basis, but the
11 benefits, you know, of the smaller mechanism, I mean,
12 your costs, your storage, your environmental impact, as
13 of right now it's a hazardous, you know, disposal --

14 UNIDENTIFIED SPEAKER: True.

15 MS. SUE: -- as we're getting rid of the
16 Title 21. So I think that's definitely a good
17 environmental and economic impact in a positive way.

18 MR. HARRIS: You're saying with regard to
19 disposal of the batteries?

20 MS. SUE: It's a hazardous waste disposal.

21 MR. JOHNSON: That's true.

22 MR. HARRIS: What currently happens to those
23 batteries?

24 MS. SUE: They're all sitting in a landfill.

25 MR. JOHNSON: I don't know where they end up,

1 but I know we have a specific program identified and we
2 go through a company and we pay them a fee to take our
3 old transponders that have batteries and dispose of them
4 properly. What they do once we hand it to them, I don't
5 know.

6 MR. HANCOCK: But you have a service that comes
7 in that you pay for that handles the --

8 MS. BOND: It's a certified services.

9 MR. HANCOCK: It's a specialized service that
10 does that.

11 MR. JOHNSON: Yes.

12 MS. LeBLANC: You recycle them.

13 MS. BOND: Yeah.

14 MS. SUE: It certainly would alleviate our
15 storage issues of all these transponders.

16 MS. BOND: Right.

17 MR. HARRIS: That actually leads me to the next
18 topic, the impact to our state and local governments,
19 and particularly on the public tolling agencies and the
20 non-tolling agencies, as well.

21 It sounds like, from our discussion, that there
22 are a number of benefits. Again, we talked about the
23 initial upfront costs being a little bit larger, and I'm
24 assuming there is going to be some cost associated with
25 maintaining or running the two systems for a period of

1 time, but not significant, and then, obviously, over
2 time, recovered relatively quickly.

3 MR. JOHNSON: I think on that aspect, the upside
4 is significant, and not to mention there are some
5 short-term costs. I don't know if necessarily for my
6 agency, recycling, there is an ongoing cost for having
7 the dual protocol setup. I can view those as more
8 one-time capital costs to modify our system to support
9 it and, once they're modified, it's just useful.

10 But the other costs impact, as you probably did
11 mention earlier, is related to, and this is something
12 maybe our commercial partners can comment on, as Kathy
13 mentioned earlier, we're seeing the price of Title 21
14 transponders go up. Some of that we recognize is
15 because it's a limited marketplace, but I think other
16 agencies, in addition to mine, have concerns that, as
17 Title 21 fades out, what can we, say, talk about, in
18 2018, what's the cost of a transponders going to be in
19 say 2017 for a manufacturer who knows we're only going
20 to be making these things a few more months. So we're
21 trying to ramp down while we're switching over, and some
22 of that, you know, manufacturing costs are all about
23 scale, so they're making fewer and fewer of them, are
24 our costs going to go up even more.

25 MR. HARRIS: And let's delve a little bit into

1 the economics of it.

2 Aside from manufacturers and suppliers of the
3 devices, what other entities are involved economically
4 in providing these kind of, you know, hardware,
5 software, services that sort of thing? We talked about
6 certification before the last break.

7 MR. JOHNSON: Right.

8 MR. HARRIS: Are there companies in California,
9 elsewhere, that do that kind of certification that will
10 be involved in the business if we do a transition from
11 legacy Title 21 to 6C?

12 MR. JOHNSON: So in terms of the traditional
13 players involved in the tolling market, of course we
14 have our suppliers of equipment, our suppliers of the
15 transponders, our suppliers of the software, and, I
16 guess more often than not, all three of those pieces are
17 handled within a certain firm. There is some separation
18 between roadside equipment and back office and the
19 transponders, and I don't know if this presents a big
20 change to that, as far as the short-term effort that
21 some agencies would need to go and modify their systems
22 to do dual protocols to get set up for 6C.

23 There's some one-time costs there that, you
24 know, are to the benefit of private industry because
25 they're going to need to do the work.

1 Typically agencies like mine will also have a
2 consultant to act as kind of our owner's representative
3 to oversee that contractor's work, so there's
4 opportunities there for them.

5 Ongoing, in terms of the certification piece,
6 I'm not sure if those companies exist, where they're
7 actually at. I know OmniAir is out of Florida, right?
8 Does anybody know?

9 MR. HANCOCK: I think Jet Labs has facilities
10 pretty much throughout the country, and I don't know
11 where they specifically do RFID testing, but they do
12 have facilities pretty much throughout the country.

13 MR. JOHNSON: Even in California.

14 MR. HANCOCK: Yes, they have one up in Northern
15 California in the bay area.

16 MR. JOHNSON: So I think with our concept to
17 move forward in requiring certification for tolling
18 equipment to make sure tolling agencies like mine are
19 getting something that's going to work with everyone
20 else's, that's sort of a new business in California,
21 doing the tolling, that may attract others or increase
22 the work that Jet Labs already has in California. I'm
23 not sure what the reality will be, but there's
24 definitely opportunity.

25 MR. HARRIS: And, in terms of job creation or

1 job lost, I mean, in one regard that ship has already
2 sailed. I mean, the demise of the human toll taker is
3 long gone.

4 MR. JOHNSON: Right.

5 MR. HARRIS: But are there other aspects of this
6 that maybe will create jobs or won't result in any job
7 loss, basically?

8 MR. JOHNSON: Well, just I guess from a supply
9 and demand standpoint, California is going to create
10 more demand for 6C transponders.

11 What I don't know is the relative scale. Like I
12 mentioned earlier, you know, California's pretty big,
13 but still in tolling, especially on a national basis
14 like 6C, we're fairly small. So I would assume we do
15 create [unintelligible] because at some point our five
16 million transponders throughout California that are
17 currently under Title 21 those can be replaced with 6C
18 transponders in one form or another. So somebody has to
19 make those that wasn't making them for California
20 before. But does it create a huge number of jobs? I
21 really -- I don't have that answer.

22 MR. HANSEN: I would think so.

23 I would think the other thing to look at is that
24 for existing agencies, except for the blip where it's
25 going to take to turn on or add the ability to read 6C

1 and interchange, once you're past that blip, you're
2 still basically the same agency operating in the same
3 environment with the same customer base. It really
4 hasn't changed a more or less kind of employment
5 situation. You still are doing the same functions, you
6 know, and moving through that. Maybe you got one or two
7 less people doing inventory control, right, you know,
8 you're not shipping and mailing a lot of those,
9 especially if you cart them out and stick them in
10 stores.

11 MR. JOHNSON: Right.

12 MR. HANSEN: But from the -- you know, so
13 there's that aspect that isn't going to be there.

14 Now, when you are talking about new toll
15 agencies coming online, and you've got several of the
16 hot lane type projects that are always, you know, coming
17 about, you know, you'll have the traditional players in
18 the market a little bit, and you might have one or two
19 more entrants now that it's kind of opened up a little
20 bit from, you know, the traditional Title 21 type
21 equipment.

22 MS. CLARK: So from an impact to California, one
23 of the things to consider is that several silicon
24 manufacturers are based on California. They may not
25 manufacture here, but they're based in Northern

1 California, so now, I mean, you could tie that, from a
2 manufacturing standpoint, additional orders that they
3 would receive that they wouldn't have normally.

4 So the bulk of I would say, and correct me if
5 I'm wrong, Steve, I would say 80 or more percent of them
6 would be based, at least operationally here, even if
7 their manufacturing is offshore. So that does translate
8 to -- maybe a very small scale because you're talking
9 chip cost, but to California revenues.

10 MR. HARRIS: Other economic impact? Okay.

11 And then with regard to the fiscal impact to
12 state and local government, I think we covered that as
13 well.

14 Are there any additional comments anybody wants
15 to make at this time?

16 MR. YOUNG: Donavan, I am with TTI. We support
17 TCA and, of course, CalTrans.

18 But in Georgia, you know, we're a state agency,
19 and I've worked for them from 2010 to recently, and we
20 saw -- the biggest thing we saw switching to 6C was tag
21 penetration, and I know a lot of the agencies have to do
22 the plate-based tolling, which is a very expensive
23 way to -- you add it to the cost of the toll, but not
24 having to do as many image reviews also leads to less
25 phone calls.

1 So we had a lot of changes in Georgia where we
2 needed fewer, you know, and these were outsourced
3 employees, to take phone calls as well as to do
4 [unintelligible] review.

5 So the more tags you put on the street, and we
6 didn't sell our tags, we put them out there for free, so
7 every dollar the customer spent was on literally -- you
8 know, on the toll they were going to use. That created
9 a very deep penetration on tags. And then we added in
10 the unbankable, as well, through income, you know, we
11 could sell tags literally at a Walgreens. You know,
12 they just literally went like -- like Samuel said, the
13 money they pay goes right to their tolls. That led to
14 even more. We had a 95 percent tag penetration in
15 Georgia.

16 And then we started partnering with other
17 agencies in that quadrant, it was so easy because they
18 were all going to 6C, as well. So now if you add in the
19 interoperability with surrounding states, you're going
20 to have less costs because all you're doing is
21 exchanging tag numbers versus having to do image review
22 for out-of-state plates. It's going to cost you,
23 operationally, a lot less.

24 So for a state that may be getting funded by,
25 you know, getting some funds from the state, as well as

1 from the tolls, I mean, that's a significant impact, you
2 know, based on the size of the agency.

3 MR. JOHNSON: David, we might have in our
4 responses to the questions, we might have missed an
5 opportunity by focusing so much on tolling versus the
6 tolling adoption of 6C in California, does that help
7 other areas? Now I'm thinking about B and B and the
8 process [unintelligible] I know Mexico, the country of
9 Mexico, they're using 6C tags on their license plates to
10 help with the state. That's an opportunity where the
11 state could look at some additional fiscal benefits.

12 I'm thinking even parking meters, right. I know
13 they don't call them this anymore, meter maids, right,
14 they still have to capture a lot of information manually
15 in order to process a parking citation.

16 Well, if tolling sets the stage for DMV to adopt
17 6C sticker tags for vehicle information, then the people
18 who are doing parking enforcement, they could use a
19 simple technology to scan that information quickly.

20 I know none of us want meter maids to be able to
21 give us a ticket faster, but there are some financial
22 benefits there and improvements in accuracy.

23 Maybe we have to think about those economic
24 impacts or really the benefits on a broader scale than
25 just tolling, and I think we could -- I think the more

1 we think about that, more and more opportunities will
2 reveal themselves.

3 MR. HARRIS: That's an excellent point. And so,
4 basically, you're getting to the increased flow of
5 commerce within California, and other parts of the
6 world.

7 MR. JOHNSON: Yeah, right.

8 MR. HARRIS: And I used to work at the DMV, and
9 I know that scofflaws are a major issue. So are you
10 saying there would be an advantage to DMV and FTD being
11 able to catch people who avoid tolls and that sort of
12 thing?

13 MR. JOHNSON: Well, I know that's a key thing,
14 you know, we do, but we could also leverage that.

15 So I don't have specifics in my mind, but in
16 terms of the technology overall, I think as we look at
17 transportation and the various pieces of transportation,
18 we talked about airports and parking, but there are
19 other aspects, as well, where 6C technology, like we
20 said at the beginning, is used in more than just
21 tolling.

22 So if the state's adoption of 6C for tolling
23 paves a path for using 6C in other areas, I think it has
24 a lot of potential.

25 MR. HARRIS: Yeah.

1 MS. SUE: I would kind of echo that.

2 I mean, I think if it's, you know, common
3 technology or so easily available, not just public
4 agencies, but you have a standard private parking where
5 your tenants are regular parkers, you just, you know,
6 have them reap some software that their office -- you
7 know, their parking is based your tag.

8 UNIDENTIFIED SPEAKER: Yeah.

9 MS. SUE: I mean, there's, I think, a multitude
10 of opportunities for parking or events, and if you're
11 already registered with the event organizer, then your
12 parking's paid for through your tag.

13 MS. CLARK: And the idea behind the electronic
14 vehicle registration is to utilize technology that's
15 already deployed to your point, to do other
16 functionality, so the EVR programs outside North
17 America, it's a revenue collection because there are a
18 lot of people who are skipping paying their annual
19 registration fees, so what it does is the agencies --
20 although that becomes more difficult if it's not a
21 national program, but it allows them to monitor and talk
22 between each other, share that information, so that you
23 can use technology that's deployed for more than one
24 application.

25 And that's kind of down the road where the whole

1 idea behind connected vehicle is going, that you're
2 sharing information. Obviously, tolling is a different
3 part of it, and it's a different technology right now,
4 who knows where that's going, but that's the idea behind
5 it, is that you've got this information in the car,
6 whether it's connected a vehicle, whether it's a toll
7 tag, and using it for multiple applications, from an
8 opt-in technology for a customer to gain efficiency to
9 be able to do things more effectively.

10 MS. SUE: Well, like you get priority parking if
11 you have a registered 6C for, you know, a Lakers event
12 or something, "Here's your specific area" if you already
13 are a tag holder that's registered.

14 There's a lot of -- you know, if it's through
15 the public agency where you get the information with a
16 private partnership, I think there's great
17 opportunities.

18 MR. JOHNSON: And I'm starting to think about
19 even the commercial vehicle inspection for the big rigs
20 that the state does. I've only been to a couple
21 facilities, but the one in San Diego at the old time
22 crossing, they use kind of an archaic system based on
23 colored stickers to determine when the last time a truck
24 got inspected, and then so, you know, this quarter it's
25 a blue sticker, this quarter it's an orange sticker, but

1 they have to require a human to observe the trucks and
2 slow them down to see the color of the sticker to know
3 whether to pull the man for their inspection for that
4 year.

5 Well, they could leverage something, you know, a
6 technology like this, to make that more automated and
7 gain some efficiencies.

8 I think like any technology, you know, you might
9 start looking at it in this one area, but if you look at
10 how it can be used in other areas, the benefits just
11 grow.

12 MR. HARRIS: Yeah, and I don't want to foreclose
13 the conversation about economics, but I want to keep
14 this on fiscal impacts on state and local governments.

15 But I'm now going to introduce topic number nine
16 here on the agenda because we talked in roundabout terms
17 about the wonderful efficiencies that we can gain, but
18 this is an issue of mine, and whether it's connected
19 vehicle, autonomous vehicles, the fact that this makes
20 it easier to keep track of people, whether we're talking
21 corporate big brother or government big brother,
22 obviously, certain people are going to bristle about
23 that, and here I'll share briefly.

24 I was a chief counsel for the DMV from 2010 to
25 2014, and very immersed in autonomous vehicle

1 regulations, friends of Google, and other places,
2 obviously, doing that, and the specter that was always
3 raised by the privacy advocates between the unions is,
4 "Well, Google has a data mining company. That's all
5 they're interested in." And so if they know that Emeril
6 likes fish tacos, if he's going to the mall, it's going
7 to program his autonomous vehicle to take him by every
8 fish taco place along the way, as a somewhat innocuous
9 example, you know, but that's the kind of thing that I
10 think certain people might raise.

11 You cannot only tell where I've been, who I'm
12 traveling with, how many I'm positive were in my car,
13 are there going to be people concerned about, you know,
14 individual privacy being violated by the advance in
15 technology.

16 MR. JOHNSON: I guess, generally speaking, yes;
17 but in terms of what's before us and what we're working
18 on now, I would say no because this doesn't change that
19 there's the stringent rules that the toll agencies have
20 to comply with in the state.

21 So it doesn't change any of our privacy laws.
22 We're still required to -- or we're still prohibited
23 from sharing our data with anyone, other than what's
24 needed to collect tolls. That's the only thing we can
25 use the data for.

1 MR. HARRIS: Tawnya, you used the phrase a
2 couple minutes ago, opt-in.

3 MS. CLARK: Yes. Right. So, as an example, you
4 don't have to take any of the facilities in California.
5 You don't have to. You choose to take them, the same
6 way you would --

7 You know, and privacy, obviously, I think
8 everyone's concerned about your information being
9 shared. I think that the decision that's made, from an
10 example, if you talk about cell phones, I mean, it's
11 really, if anybody wants to track you, they can track
12 you by your license plate, they can track you by your
13 cell phone, they could track you by your toll tag.

14 Could someone read your toll tag and gather your
15 information? That information about who you are is
16 actually held in the back office behind a wall.

17 Reading my tag number 12345 doesn't mean that
18 you know it's Tawnya Clark; it knows that 12345, and
19 maybe you could sniff that, and maybe you could
20 duplicate my tag and use my tolls for a month, and then
21 I'm going to go, "Hey, here's my -- you know, I didn't
22 travel here."

23 But it still is a choice. I choose to take the
24 toll road, or I choose to opt-in to use that technology
25 because it benefits me personally.

1 So, yes, I think there is a concern from a data
2 security and probably a little bit from your credit card
3 security because typically it's associated with a
4 payment method, but, for the most part, I don't think
5 that -- it's a great story, and, yes, there are always
6 risks, and I'm probably sure that everyone in here has
7 had their credit card number taken from you somewhere.

8 So there are those risks, but you are choosing
9 to take the toll road, you are choosing to sign up for
10 an account. And maybe not in California, but most toll
11 facilities nationwide have, for some reason, right now
12 what it's called is escaping me, but you have the
13 ability to basically not tie your information to it.
14 You can go in and recharge your account. You don't have
15 to give your information.

16 MR. HANSEN: Anonymous tag.

17 MS. CLARK: Yes. Thank you.

18 So you don't necessarily have to say that I'm
19 Tawnya Clark tied to my credit card. You can, "Say
20 here's my payment," you recharge your toll tag at a
21 particular location, like you would maybe for a cell
22 phone, so you can still use the facility, but no one
23 knows who you are.

24 So I think there are things that can be
25 implemented, but, again, it's still an opt-in chose.

1 You're still choosing to take the toll road.

2 MR. HANSEN: I think one of the other things,
3 though, is the problem with the individual privacy, it's
4 not so much within the toll road arena because, you
5 know, the people who are using the toll road are using
6 the toll road and they understanding that.

7 Where you start to run into the not necessarily
8 problem with individual privacy, but it's the perceived
9 problem, is with all of the sensors that are being put
10 up by other transportation agencies within the state
11 using the tags to track traffic flow, and that's where
12 the perception comes into your tracking me, right.

13 They know -- you know, if they're using the toll
14 road, they know you're reading the tag and they know
15 you're going to know where they are. It's when these
16 other sensors are coming up, and I know they're doing it
17 in the San Francisco area, I thought I saw something
18 else in --

19 MS. CLARK: They do it in San Diego, too. But
20 all you're doing is tracking how long it takes for
21 123456 to get from here to here.

22 MR. HANSEN: I understand, but it's the
23 perception.

24 MS. CLARK: So it's an education thing.

25 MR. HANSEN: Yeah, you know, if you have -- I

1 think in the San Francisco area, they actually scramble
2 the data so when it hit the database in the back it was
3 sort of unrelated -- you couldn't take whatever the
4 number was that you were using to do your analysis of
5 the tag and relate it back to the real tag.

6 So they sort of scrambled the data, but there's
7 that perceived -- there's that perception that "You're
8 tracking me and you can track me wherever I'm at now."

9 We, you know, won't count the fact that somebody
10 pointed out that, you know, there's cameras everywhere
11 watching license plates going everywhere, and, as you
12 said, you can track the cell phones everywhere, so --
13 you know, yes, it's a tracked world, but, I mean, that's
14 where I see the individual privacy issue.

15 MR. CARRIER: That's an individual privacy issue
16 related to having a transponder in your vehicle, that
17 doesn't have anything to do with changing Title 21 as it
18 exists today.

19 MR. HARRIS: It's under legacy Title 21 and
20 whatever we move to, this conversation does ultimately
21 get much broader than our discussion here.

22 There was a story last night on the news about
23 hackers getting, actually, intentionally taking a
24 control of an ignition key and turning it off on the
25 freeway and those kind of things, it just doesn't

1 necessarily [unintelligible] and I think your point is
2 very well taken, and so that's what I think we need to
3 get to, is there any greater risk to individual privacy
4 based on a transition to 6C than there is --

5 MR. CARRIER: Only if, like Samuel and some
6 other people said, if the tag becomes -- increasing tag
7 penetration, if there's more of them out there, you
8 know, I don't know if, you know, that would aggravate
9 the privacy issue because the effectiveness of the
10 sticker tag or the form factors of some of these tags
11 that can be stickers with increased penetration of the
12 tags.

13 MR. ROUSE: David, two things: First, for the
14 record, the San Francisco Bay area is no longer using
15 the FasTrak tags for traffic [unintelligible]. They've
16 moved away from that within the last couple years.

17 MR. HANCOCK: They've actually purchased, from
18 private entities, for travel times, is what my
19 understanding is.

20 MR. ROUSE: The second thing is, and, Rick, this
21 goes back to something you mentioned earlier, is with
22 6C, there's now the capability to write to the tag.

23 Does that create additional risk.

24 MR. YOUNG: Well, that can be locked, too.

25 UNIDENTIFIED SPEAKER: Right.

1 MR. YOUNG: I mean, typically you lock that and
2 password protect it because it's a access command versus
3 an inventory thing where you have essentially three
4 things you're doing, you have select, inventory, and
5 access, and all the access pieces are typically locked.
6 So, yeah, you can unlock them, but you would have to
7 know the password.

8 MS. CLARK: And there's special authentication
9 that you can have in the reader that says unless you get
10 the right answer back from the reader, you don't
11 actually send your information.

12 That applies some additional things from
13 Samuel's point whether 6C in California or 6C
14 nationwide, but that's why there's a group that's
15 leading up the 6C initiative to make sure that
16 everybody's implementing it the same.

17 There are things you can put into place on top
18 of it, to Donovan's point, that help the protection.

19 But, again, still the information about who you
20 are and your account is still held in the back end. It
21 doesn't change, as Rick said.

22 MR. JOHNSON: CTOC has only talked about using
23 that write capability mainly on the ExpressLanes, mainly
24 entrance and exits because, unfortunately, we have
25 customer who play the hide-the-tag game or

1 switch-the-occupancy game and knowing what that --

2 We want the CHP, the CHP pulls someone over, we
3 wanted them to have the ability to see what was the
4 switch, the occupancy switch on at the last read point
5 that they just passed, or was it read at all. Did the
6 person have it under their seat, and now they're
7 whipping up the CHP to say, "No, I had it up." We get
8 that a lot.

9 So that was the only use that California had
10 talked about, that write capability form, and, as I
11 recall from our last discussion, it wasn't like anybody
12 was going to fall on their sword for that piece.

13 Going to what Tawnya said and what Rick
14 mentioned earlier, one thing we did have the ability to
15 do -- or we didn't have as easy an opportunity to do
16 with Title 21 as we would with 6C, and that's to add
17 additional security between the transponder and the
18 reader. And I don't know where that current standard
19 is, but the next version of 6C was supposed to include
20 some encryption capabilities there to reduce the ability
21 somebody of somebody to sniff and sniff data having to
22 do with K tags. But that would be a capability that the
23 adoption of 6C would set us up to be able to consider
24 going forward, so we could actually improve privacy
25 somewhat.

1 But, as Tawnya said, we're not going to put any
2 PII data on the tag. I know my agency wouldn't want to
3 do that, and I assume others wouldn't want to, as well.

4 MR. HANCOCK: And for the record PII --

5 MR. JOHNSON: Oh, sorry. Personally
6 identifiable information. So no names, no addresses, no
7 credit card numbers, nothing that links that transponder
8 to an individual.

9 MR. HANSEN: The 6C CTOC they use, they have the
10 hash written into their standard, which is just that
11 extra security they use, the TID and a little bit of the
12 CR -- you know, the first, you know, bits of data to
13 validate that that's the correct, you know, number
14 and --

15 But mainly with interoperability what -- to just
16 do as you're doing now, you're sharing each other's
17 numbers, and if it's not a valid number, you know, then,
18 you know, it becomes a violation, so --

19 And then Georgia, too, I know you guys have
20 talked about switchable tags, and you'll probably have
21 to develop that, anyway, but we had really good luck
22 with self-declaration, I mean, I don't -- that could be
23 done in the back office, and, with enforcement, it was
24 just as easy because instead of having the lights like
25 you have in California, we just equip the police

1 vehicles with LPRs and they just read the license plate
2 and they had a list of valid HOV, you know, tag numbers
3 that were registered for that particular time. And we
4 just told the customer, so you can only declare
5 15 minutes before you travel, and that's it. And we had
6 some pretty good luck with that. And enforcement, you
7 know, became quite simple, because, again, they could
8 handle it in the back office versus where it could be
9 cheated at the front end.

10 MR. HARRIS: Other comments? Questions on any
11 of those topics? Okay.

12 Well, that brings us, at this point, to the free
13 part of our program. Any other issues, anything else we
14 haven't covered today that we'd like to discuss at this
15 time? Anyone?

16 MR. HANCOCK: Silence.

17 MR. HARRIS: Obviously you have the schedule
18 that we're looking at, I'd like to give another plug for
19 the CTOC document, which is a really good document. As
20 a Neo-Luddite, it's invaluable to me, as far as trying
21 to [unintelligible] so I would recommend that to anyone,
22 probably for most of you, it's very helpful.

23 Again, I think I am the perfect audience because
24 if I can be made to understand this, just about anybody
25 can understand this. That's a very useful tool, as

1 well.

2 Again, you have the handouts that have our
3 schedule. The department is very much committed to
4 being transparent throughout this entire process. And
5 we have the time for Steve and Joe and I and the others
6 to start rolling up our sleeves and get something on
7 paper so it can be published and registered with the
8 Office of Administrative Law, and it will begin the
9 45-day comment period to make formal comments, but you
10 can always contact us at the number. There's a Title 21
11 website, as well as an email address where you can
12 continue to send us any comments or questions that you
13 have. And, obviously, we'll be reaching out to all of
14 you and the other stakeholders as we go along here to
15 bounce ideas off you and try to get a sense of where
16 we're headed even outside of the formal OAL ruling.

17 Steve?

18 MR. HANCOCK: I have a question, and maybe for
19 clarification for the group here.

20 When we get to the 45-day commentary, it's
21 published, you're in the formal process now. We may --
22 we can provide them the information when it goes out for
23 publication or I can send out the links and all that so
24 they're aware of it being out and the time frame and
25 stuff.

1 But when they make their comments, who do they
2 send them to? Do they send them to me --

3 MR. HARRIS: Yes.

4 MR. HANCOCK: -- or do they send them to OAL?

5 MR. HARRIS: When the notes are published and
6 they're registered and then when the text of the
7 proposed regulation is published, there will be a
8 website and a physical mailing address where you can
9 send comments.

10 And you actually make a couple good points here.

11 Obviously, once we do get to the public comment
12 period, because it is public, and those comments are
13 made back in the official rulemaking file, in fact, they
14 will end up in the official rulemaking file, and the
15 department is required not to only compile and collect
16 those comments, but to respond to all of them formally
17 as part of the rulemaking process, and that happens when
18 we submit them to OAL.

19 So once we get into the formal process, things
20 get a little more cut and dried in terms of the
21 communication, but we are very much committed to
22 remaining transparent throughout this whole entire
23 process. So we will have asked questions and we will be
24 answering them as best we can. But there will be a
25 website and a physical address to which you can send

1 your formal comments.

2 And then, obviously, at the end of the 45-day
3 period, there's going to be a public hearing where
4 people can also come and make their comments, as well,
5 and we're required to collect and respond to all those
6 comments.

7 MR. JOHNSON: Along those lines, David, where
8 will the public hearings be held and what do they look
9 like?

10 MR. HARRIS: That's a good question.

11 I think, you know, there will be at least one,
12 although given that there are agencies in Southern
13 California, Northern California. We haven't totally
14 nailed this down. We may have one in Northern
15 California and one in Southern California, either on
16 back-to-back days or a day apart, and they will be a
17 formal process. There will be in an auditorium
18 somewhere there will be a microphone in the middle of
19 the aisle, people line up, come up and make their
20 comments, and the department will say "Thank you very
21 much for your comment" and that's basically it.

22 MR. JOHNSON: So is there, for lack of a better
23 term, an ordinance reading?

24 MR. HARRIS: What?

25 MR. JOHNSON: An ordinance reading? I'm just

1 going back to my transit days, we would have public
2 hearings on change in transit fares.

3 MR. HARRIS: Yeah, we'll -- at the hearing,
4 we'll summarize what the -- we won't read it, obviously,
5 word for word, but we'll summarize the main points of
6 it.

7 MR. HANCOCK: Thank you, David, because I will
8 probably be the one who does it.

9 MR. HARRIS: But we'll give a relatively
10 detailed description of what it is, and then people will
11 come up and make their comments, and, as I say, it will
12 be a much more formal proceeding.

13 MR. JOHNSON: Okay.

14 MR. HARRIS: Any other questions on the process
15 at this point?

16 MR. ROUSE: David, I would just like to note
17 that for those of you who got the email invitation to
18 this pre-notice workshop, that a copy of a questionnaire
19 with these questions on it was provided to you, and we
20 do want to thank those of you who sent in your comments.

21 We still do welcome those questionnaires if you
22 have -- if you -- I'm not --

23 MR. JOHNSON: It's on my desk.

24 MR. ROUSE: We appreciate those who have
25 responded. If you haven't responded, and would like to

1 respond, there is still a little bit of time, although
2 that window is probably going to be rapidly closing here
3 as Steve is going to have to start, you know, working
4 full bore on putting this regulation together.

5 So I think it would be good if we probably -- if
6 we could get those within the next probably two weeks,
7 would you say?

8 MR. HARRIS: Yeah.

9 MR. ROUSE: So if, in the next two weeks, you
10 could send those questionnaires back, and if you could
11 just fill them out and email them back to the Title 21
12 email account that everything is being sent to you from,
13 and we will go ahead and include those as we go through
14 this process.

15 MR. HARRIS: And you're obviously not limited to
16 what's in there, by any means. That's just to ask some
17 of the bigger questions.

18 So anything that you're interested in, please
19 send us the comments, whatever it might be. Obviously
20 the earlier the better, the more time we have to look at
21 it and think about it, the more, you know -- obviously,
22 the better we'll be able to look at it before we
23 complete.

24 So, with that, I thank everybody for coming and
25 for the very lively discussion, and it was very

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valuable. Thank you.

(Whereupon, at 1:51 p.m., the meeting was
adjourned.)

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STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

I, Vickie Blair, CSR No. 8940, RPR-CRR, CLR, in
and for the State of California, do hereby certify:

That said hearing was taken before me at the
time and place therein set forth, and was taken down by
me stenographically and thereafter transcribed via
computer-aided transcription under my direction and is a
true record of the testimony given;

I further certify I am neither counsel for, nor
related to, any party to said action, nor interested in
the outcome thereof;

IN WITNESS WHEREOF, I have hereto subscribed my
name this 6th day of August, 2015.

Vickie Blair, CSR No. 8940, RPR-CRR, CLR

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