

IBTTA  
74<sup>th</sup> ANNUAL MEETING & EXHIBITION  
September 16-20, 2006 • Hyatt Regency Dallas • Dallas Texas USA

IBTTA  
International Bridge, Tunnel and Turnpike Association

TRANSPONDER ACCOUNT

## Interoperability:

### *Mirage or Reality?*

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## Interoperability

- ❖ What is interoperability?
- ❖ Private/public motivation
- ❖ Why open architecture?
- ❖ Roadblocks to open architecture
- ❖ Interoperability coverage
- ❖ Review of interoperability models
- ❖ Potential in the U.S.

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## What is Interoperability?

- ❖ From the customers perspective
  - One transponder, one account, one application, one contract, various roadways
- ❖ From the agency perspective
  - Technical
  - Contractual
  - Procedural

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## Motivations for Interoperability

- ❖ Private
  - Recover costs of development
  - Maximize profit
  - Expand market access
- ❖ Public
  - Ensure free movement of goods and people
  - Provide high level of customer service

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## Why Open Architecture?

- ❖ To commoditize the product and create competition to reduce equipment costs
- ❖ To make it technically possible to have contractual and procedural interoperability
- ❖ CA Title 21 is the only U.S. technical interoperability definition

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## Road Blocks to Open Architecture

- ❖ Vendor specific patents on various technical aspects
- ❖ Refusal of the public sector to insist on a technical standard
- ❖ Refusal to warrant transaction accuracy for equipment provided by others
- ❖ Lack of national regulation

## Interoperability Coverage

- ❖ Who is the frequent user that travels from one ETC area to another?
  - Primarily the long distance freight operator
- ❖ Interoperability scope changes
  - E.U. - Germany, Austria
  - U.S. – IAG, southern and western states
- ❖ As ETC matures the coverage area expands and intersects with other regional systems

## Interoperability Models

- ❖ Australia – jointly developed documents
- ❖ Europe – resolving procedural differences
- ❖ Chile – jointly develop documents
- ❖ South Africa – developing documents
- ❖ U.S. – no single standard for technology at 915 MHz, 5.8 GHz future

## Interoperability in the U.S.

- ❖ The wait for 5,8 GHz
  - Ideal solution
- ❖ Timing and motivations of participants
  - Within the next technological cycle?
  - Auto manufacturers – a business reason must exist
  - Toll operators – a reason for change out of technology changeout must exist
- ❖ National government must be committed enough to regulate



## Interoperability:

*Mirage or Reality?*