



National and Regional Electronic Toll Interoperability

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Oklahoma Turnpike Authority History

- Enabling Legislation passed and OTA created in 1947.
- Opened Turner Turnpike May 1953.
- In 1954, Oklahomans voted to change the business model of Oklahoma Turnpike Authority (cross pledge).





OTA General Information

- Oklahoma Turnpike Authority is user funded; no state or federal funds (taxes).
- Works in conjunction with ODOT and local governments addressing Oklahoma's transportation needs.



Oklahoma Turnpikes



OKLAHOMA
TURNPIKE
AUTHORITY



OTA General Information

Includes 10 turnpikes

- * 605 road miles, (84 urban, 522 rural)
- * 2,420 lane miles
- * 808 bridges
- * 87 interchanges
- * 13 to 61 year old network and assets
- * serves 3,500 – 60,000 vehicles daily
- * 13 million monthly transactions



PIKEPASS Statistics

Active *PIKEPASS* tags as of 9-30-2014 1,529,029

Active *PIKEPASS* accounts as of 9-30-2014 639,881

Active NTTA Toll Tags  1,894,194

Highest Percentage *PIKEPASS* Usage on average
- Kilpatrick Turnpike at 87%



2013 Financial Information (Audited)

Revenue and Transactions by collection mode

<i>PIKEPASS</i> Revenue	\$133,606,000	57.4%
Cash Revenue	<u>99,140,000</u>	<u>42.6%</u>
Total	\$232,746,000	100.0%

<i>PIKEPASS</i> Transactions	108,415,000	69.4%
Cash Transactions	<u>47,756,000</u>	<u>30.6%</u>
Total	156,171,000	100.0%

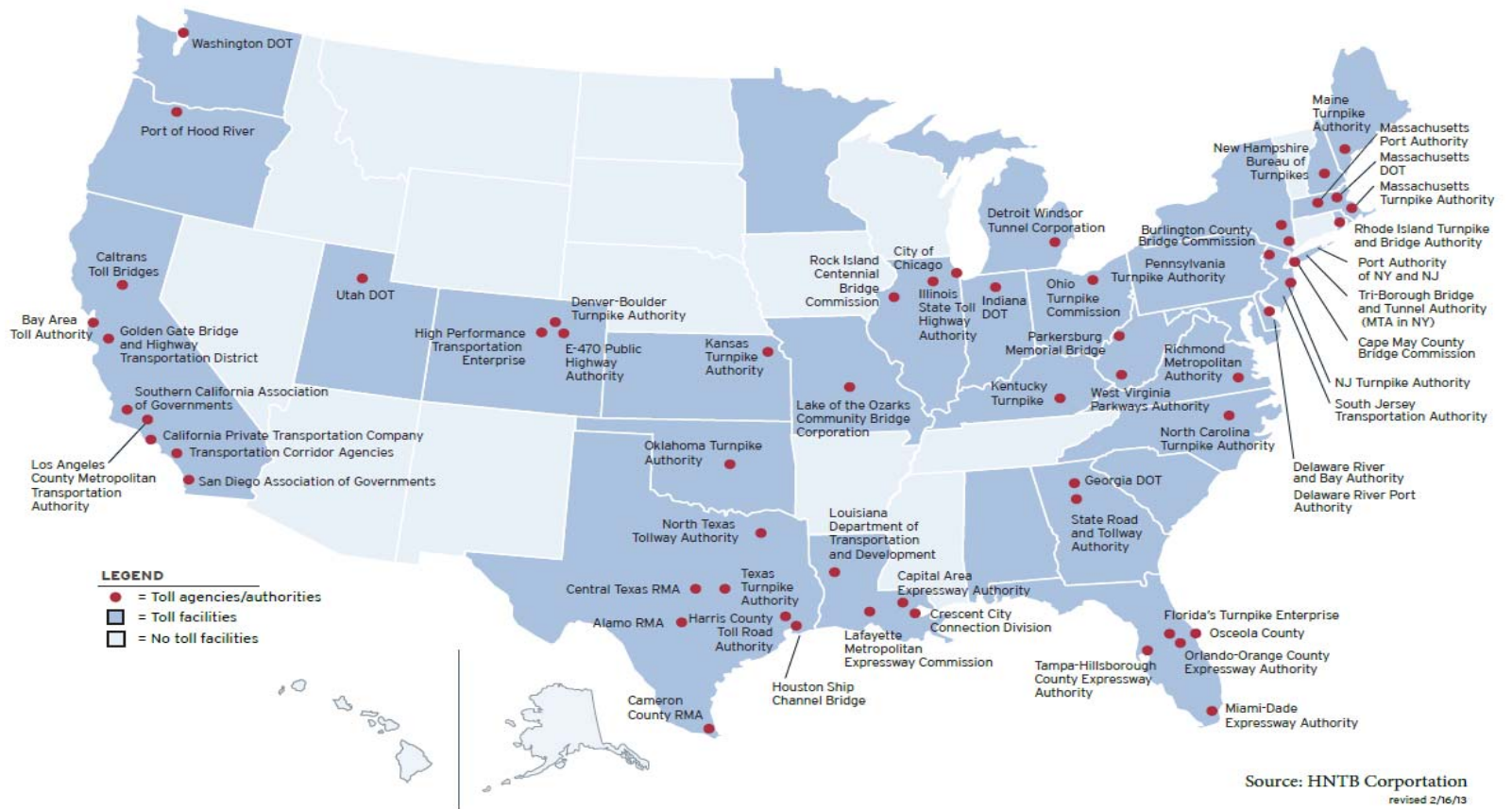




Oklahoma Turnpike System – Lanes with only *PIKEPASS* Equipment

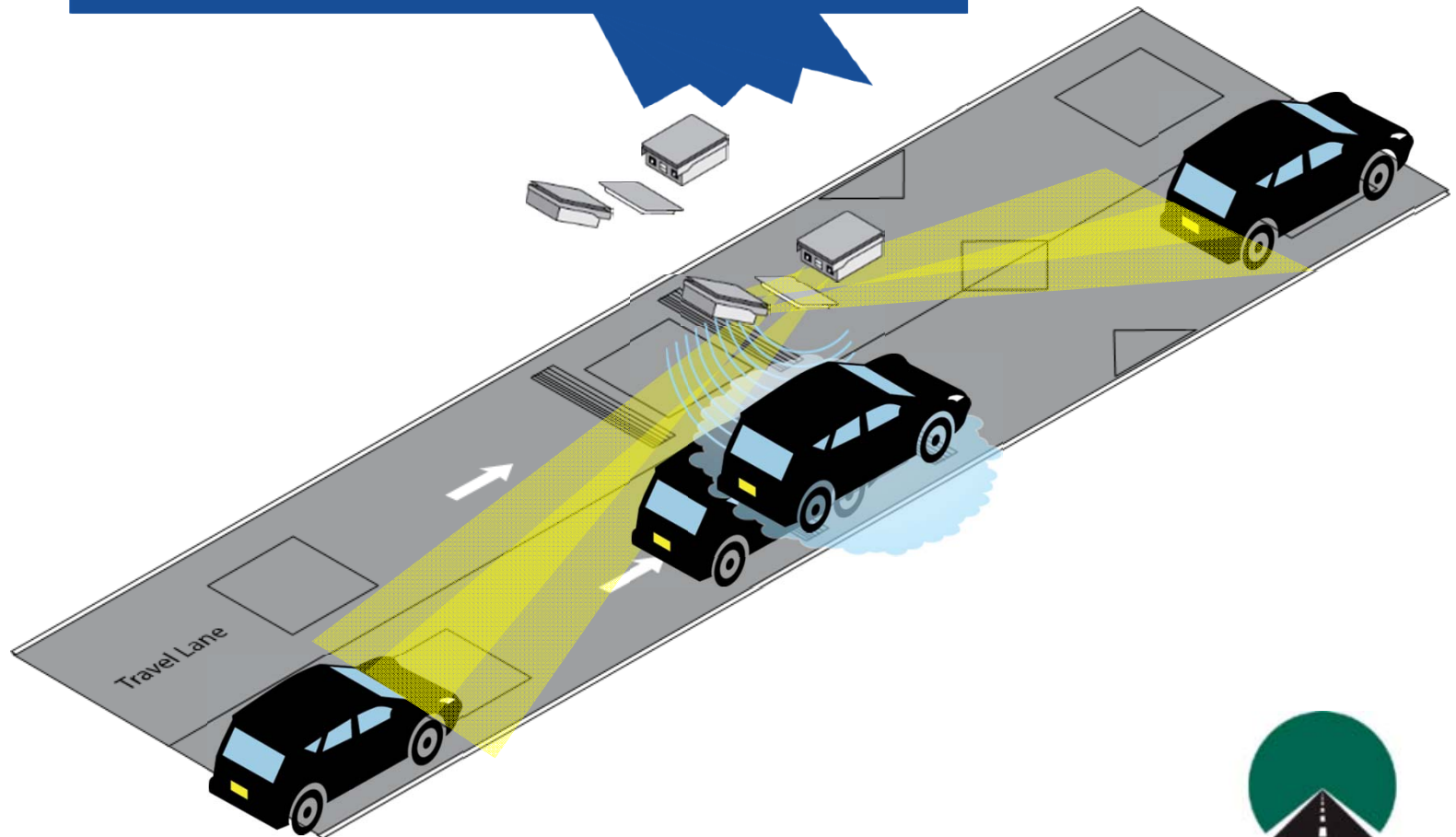
Total Toll Collection Lanes	476
Total <i>PIKEPASS</i> Lanes	393
<i>PIKEPASS</i> lanes - free flow	139
<i>PIKEPASS</i> Only lanes at slow speed	212
<i>PIKEPASS</i> Only lanes at highway speed	42

U.S. Toll Agencies & Authorities



PIKEPASS System Overview

VCARS™ Vehicle Capture and Recognition System
Rear License Plate Video Billing & Enforcement



The Godfather – Sonny Corleone at Toll Booth



Source: Charles J. Galvin, the Onion



Sonny would be alive today
if he had a **PIKEPASS** !!



Source: Charles J. Galvin, the Onion





Methods of toll collection are changing

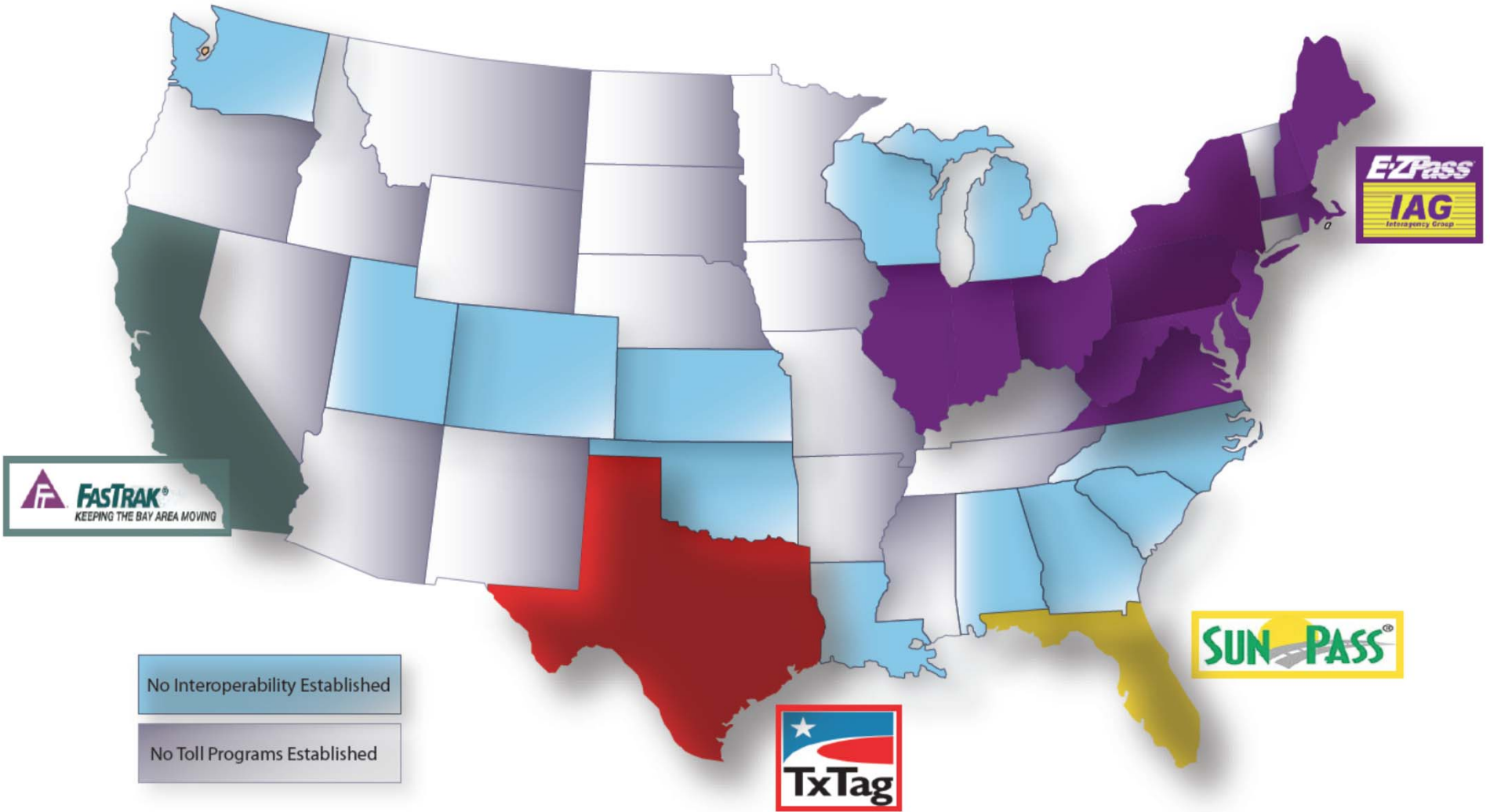
- Toll industry facing a time of changes & challenges
 - Advances in technology are bringing about the end of traditional toll collection methods
 - Interoperability of Electronic Toll Collection (ETC) systems
 - All Electronic Tolling (AET) – collecting tolls by way of license plates





National Interoperability

- ETC systems today are not interoperable across North America
 - ✓ 6 different systems – Segoe, EZ Pass, ATA, T21, 6c, and Allegro
 - ✓ 5 major regional areas of interoperability
 - ✓ The largest is E-ZPass Group and Trucks





National Interoperability

- Key Issues for National Interoperability
 - ✓ MAP-21 (Moving Ahead for Progress in the 21st Century Act)
 - ✓ 6 existing protocols used to read toll tags
 - ✓ Determine core requirements
 - ✓ IP issues - Patents
 - ✓ Business requirements & rules
 - ✓ Governance & decision making
 - ✓ How to pay for it – No funding for MAP-21
 - ✓ One protocol needs to be selected
 - Sego(PIKEPASS), EZPass, and 6c under consideration





National Interoperability

Why is it necessary ?

- Our customers want expanded interoperability
 - Mostly between two regions
 - Trucking community wants coast to coast
 - One tag one account
- To be in compliant with Map-21 by July 2016



Why is Interoperability so difficult?

- Electronic Toll Collection system have to be compatible
- The Tolling Agency must be committed to the time and expense
- 6 different protocols across North America alone, needs to be 1
- Cost to be compatible is expensive
- An agreement and business rules have to negotiated



What is OTA Doing?

- Initiatives toward interoperability



- Member of ATI
- Two Interop Partners
 - ✓ Tulsa Airport Parking Garage
 - ✓ North Texas Tollway Authority (NTTA)
- Currently on a path to be Interop with the Kansas Turnpike Authority (KTA) on November 1, 2014
- Nationally
 - ✓ A member of the International Bridge Tunnel and Turnpike Association (IBTTA) Interoperability Committee helping shape interoperability nationwide.





Steps to Interoperability with NTTA and KTA

- **North Texas Tollway Authority**
- **Discussed for number of years – Equipment not totally compatible**
 - OTA not compatible with hard case toll tags
 - 2013 – Decision made to move forward despite incompatibility
- **Problems with connecting to Texas IOP Hub**





Regional Interoperability

- **April 2013 – Decision made to work with NTTA (Peer to Peer)**
 - Agreement and Business Rules Negotiated
 - ✓ Approved by NTTA and OTA Board October 2013
 - Software Programming, Marketing, Training put in place
 - Went live on August 10, 2014



Kansas Turnpike Authority

- **First discussion took place in 1995**
- **KTA didn't feel that it fit their business model**
- **June 2013 KTA expressed interest in becoming IOP**
 - Agreement and Business Rules Negotiated
 - Agreement Approved by KTA and OTA Board on March 2014
 - Software Programming, Marketing, Training currently underway
 - Go live November 1, 2014





OTA Future Plans

- IOP with those compatible equipment
- IOP across North America
- Comply with the national protocol
- EZ Pass – Not going away; used to Bypass Weigh Stations



All Electronic Tolling (AET)

- We've come a long way from 100% cash
 - ETC brought about many advances
 - Mixed use lanes
 - Dedicated ETC lanes
 - Highway Speed Lanes
- Today cash customers represent 31% and decreasing



All Electronic Tolling (AET)

- Increase in vehicles on the facilities requires additional throughput
 - Building larger plazas many times not possible
 - ✓ Cost
 - ✓ Land not available
 - ✓ Environmental factors



All Electronic Tolling (AET)

- Safety Improvements
 - No merging, collisions
 - Smooth traffic flow
- AET allows higher throughput without the need for expanded facilities
 - Cash lane 300 Vph
 - AET facility 2000 Vph



All Electronic Tolling (AET)

- Environmental Benefits
 - ✓ Smaller footprint, eliminates idling
- Potential Reduction in operating costs
 - ✓ Cost of a cash transaction more than a PIKEPASS transaction



Summary

- Tolling is growing
 - ✓ Traditional transportation funding mechanisms unable to maintain infrastructure
 - ✓ Tremendous growth expected in managed lanes
- DOT's are in the tolling business
 - Delaware, Massachusetts, New Hampshire, Virginia, Florida, North Carolina, South Carolina, Kentucky, Utah.....





Summary

- ✓ Interoperability is growing across the US
- ✓ AET is becoming an acceptable way of collecting tolls especially in the urban areas such as Dallas and Denver

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Thank You

Questions ?