TECHNOLOGY TRENDS
IN THE TOLLING INDUSTRY
Louisiana Transportation Conference
emovis is the leading service delivery and technology provider of Abertis in the global markets for all electronic tolling and smart mobility solutions.

The company is 100% owned by

emovis facts
✓ active in the U.S. for more than 35 years
✓ employs more than 800 employees worldwide
✓ processes more than 350 million toll transactions per year
✓ located in New York, Paris, London, Dublin and Croatia
Single Gantry Architecture

Entry Laser
Rear camera
Antenna
Front camera
Exit Laser

ANPR
AVDC
AVI

ZONE CONTROLLER

OPERATIONAL BO
Embedded applications:
- Vehicle counting
- Triggering
- Classification (4 classes)
- Virtual loops definition and management (Up to 24 per camera)

- Concept is to use those thermal camera to detect wheels (hot spots)
- Use vehicle counting and classification to work on “vehicle” object detected by the camera.
- Image processing to determine number of wheels / axles
Thermal Camera Applications

USE OF THERMAL CAMERAS FOR:

- Vehicle detection
- Vehicle classification
- Vehicle tracking in the capture zone
- Axle counting

- No in-ground sensors in multilane environments
- Weather is no longer a constraint
- Easy to install and configure
- Easy to maintain
Keeping an eye on the connected car
Automatic® OBD-II Device

✓ Trip logging
✓ Business tagging
✓ Business expensing apps
✓ Engine light diagnostics
✓ Fill-up logging
✓ iPhone and Android apps
✓ Web dashboard
✓ Unlimited 3G syncing
✓ Crash Alert
✓ Parking tracking
✓ Live vehicle tracking
✓ Event-based apps (e.g. IFTTT)
✓ Streaming apps
**Operational Back Office: Capabilities**

<table>
<thead>
<tr>
<th>GOVERNANCE &amp; INTEGRATION</th>
<th>IMAGE REVIEW</th>
<th>SECURITY</th>
<th>OPERATIONS</th>
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</thead>
<tbody>
<tr>
<td>Data Workflow, Lifecycle &amp; Governance</td>
<td>Manual review and certification of transactions that cannot be automatically processed.</td>
<td>Authentication Authorization Accounting Data Protection</td>
<td>Deploy and effectively manage the platform</td>
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<tr>
<td>IMAGE FINGERPRINTING</td>
<td>Generation of a binary fingerprint for each processed transaction</td>
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<td>Binary Fingerprinting</td>
<td>Generating a fingerprint for each transaction and associating it with a certified result</td>
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**Review & Certification**
Each transaction processed by the OBO becomes certified by means of manual review or automation.

**Enterprise Management & Security**
Empower existing operations and security tools to manage the OBO.
Image Fingerprinting

Transaction Management Module

Transaction XML

Can post?

Transaction Post

Signature Database

Vehcile Signature Recognition

[Matching Signature Found]

[No Match or First Crossing]

[Rejected]

Image Review

[Accepted]

www.emovis.com

Commercial In Confidence
Implementing the concept of functional scalability
Flexible Charging Engine

**Flexibility and Agility**
- Visual / Decision Tree configuration of rating
- Discounts calculations
- Commissions calculations
- Pre-paid and post-paid scenarios
- Agility in introducing new schemas
- Customers/Partners identification

**High scalability & Revenue sharing**
- 30 different components to model the charging logic
- Rating types:
  - Usage / Consumption based, Recurring rate, One-Shot rate
- Functions
  - Flat, Variable, Based on formulas and Macros
Robust Account Hierarchy

Business Partner A
- Contract Account 1
  - Contract Service X
    - Contract Service Y
  - Contract Service Y
- Contract Service Z

Business Partner B
- Contract Account [n]
- Contract Account [n]
### Billable Items & Complex Invoicing

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**Example:** One event -> 4 Billable items

**Results:**

- Final customer is not going to pay anything but the invoice is created with the usage and the discounts -> transparency for the final customer
- Amounts to be invoiced to the Public Administration are calculated at the beginning and are linked to the original event -> Full traceability
M50 Quick Pay – Features & Benefits

Pay & Go

Get Reminders & Pay

www.emovis.com
PayNearMe Cash Payment Solution

www.emovis.com  Commercial In Confidence
PayNearMe Cash Payment Retail Locations

Retail Store Count

- 7-Eleven: \(8,038^{(1)}\)
- CVS: 8,005
- Family Dollar: 7,619
- Casey's General Store: 1,941
- Ace Cash Express: 1,007
The Future Call Center – Cognitive Call Center

Omni-channel solution
Respond consistently on any channel of the customer’s choice.

AI + human expertise
Complement live agents with virtual agents to scale support and lower costs.

Customized service
Integrate with your existing systems to personalize experiences.

Data driven
Analyze customer behaviors and preferences in real time, gaining new insight.
The Future Call Center – Cognitive Call Center

- Customer
- Customer Care Virtual Agent
- Messaging
- Voice call
- Live agent
- IBM Voice Gateway
- Voice of the Customer
- Tone Analyzer
Thank you