



Satellite Tracking of Animals in Transit: **Track, Trace, Alert – Live**

TTA – Live

- **Track, Trace, Alert – Live** is an integrated system for Transporters to change their economics, exceed tough animal welfare requirements, and gain a sustainable, competitive advantage transporting live animals.



Background

- The "Crackless" Egg



Background

- The "Smart" Bottle



Background

- The "Smart" Can



Background

- Pig Balls



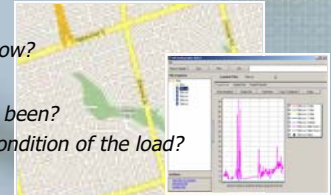
Sensor Packages

- Capture Conditions
- Transmit at High Speed
- Record Conditions
- Graphic Display
- Verify Performance
- Provide a "Fix"
- Payback



Track, Trace, Alert

- **Track**
 - Where is it now?
- **Trace**
 - Where has it been?
 - What's the condition of the load?
- **Alert**
 - "Houston, we have a problem!"
 - Cascade of contacts to fix the problem



TTA - Live

- **Track, Trace, Alert - Live** combines "Pig Balls" and the "Trace, Track, Alert System" to change the economics, exceed tough animal welfare requirements, and provide a sustainable, competitive advantage transporting live animals.



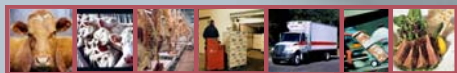
TTA - Live

- **The Economics**
 - Arrive Alive
 - Reduce Shrink
 - Prevent Downgrades
 - Automate the "Paperwork"
 - Monitor Drivers & Loads
 - Satisfy Insurance Companies & Bankers



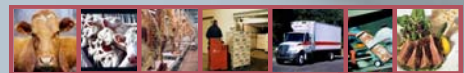
TTA - Live - Economics

- Research shows that a 1,000 lb. cow will lose between \$12 and \$41 in value during transport to slaughter. Should the trip be too long or too stressful for the animal and it ends up as a dark cutter, the carcass is discounted \$200-\$300 at the packing plant.
- Transportation losses from shrinkage and mortalities in pigs, chickens, and turkeys can be many times greater.
- Transportation of "exotics" is even more difficult.



TTA - Live - Legislation

- **Animal Welfare**
- **Traceability**
 - EU - Traceability of Meat
 - EU General Food Law
 - US Bioterrorism Act
 - Japan - Traceability of Meat
 - Quebec - Traceability of Beef



TTA – Live

- **Customer Requirements**
- **Other**
 - Dispute resolution
 - Driver Training
 - On Time Deliveries
 - Improved service
 - ...



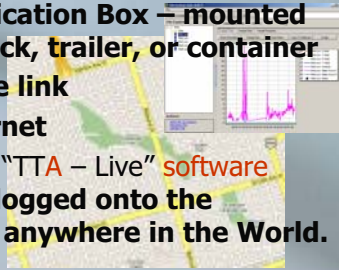
How Does It Work?

- "Pig Balls" – sensor package
- Communication Box – mounted in the truck, trailer, or container
- A satellite link
- The Internet
- A PC with "TTA – Live" software interface, logged onto the Internet, anywhere in the World.



What's Ready to go?

- "Pig Balls" – sensor package to measure conditions inside the load
- **Communication Box – mounted in the truck, trailer, or container**
- **A satellite link**
- **The Internet**
- **A PC with "TTA – Live" software interface, logged onto the Internet, anywhere in the World.**



What's left to do?

- "Pig Balls" – sensor package
 - Temperature
 - Humidity
 - Air velocity
 - Gas levels
 - Load density
- "TTA – Live" software interface
 - Integration with other software and systems
 - Other Features



Next Steps?

- **Recruit Industry Partners to advise and test**
 - Canada
 - USA
 - Brazil
 - European Union
 - Far East



TTA – Live – Delivery

- **Track, Trace, Alert – Live** is an integrated system for Transporters to change their economics, exceed tough animal welfare requirements, and gain a sustainable, competitive advantage transporting live animals.
- Delivery – 4th Quarter 2005



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