Motor Grader Machine Monitoring
How Satellites Help Us

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Introduction & Overview

• 8 years mobile technology experience
• 2 years at RDO Equipment Co.
• How tech is changing the industry
• Benefits of telematics
• Implementation
Terms & Definitions

- **Telematics**: technology to remotely collect, send, & receive information
- **AKA**: telemetry, Internet of Things (IoT), machine to machine (M2M)
- **Examples**: JDLink (John Deere), VisionLink (Cat)
- **3 components**: **Device, Network, Application**
How Does It Work?

GPS

CANBUS Modem

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Accelerating Technology

The Pace of Change:

<table>
<thead>
<tr>
<th>Time to 50 Million Users:</th>
<th>Time to Reach 40% of US Households:</th>
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<tbody>
<tr>
<td>Radio: 38 Years</td>
<td>Telephone: 39 Years</td>
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<tr>
<td>TV: 13 Years</td>
<td>Smartphone: 10 Years</td>
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<tr>
<td>Web: 4 Years</td>
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91% of adults have their mobile phone within arm’s reach 24 hours per day

90% of text messages are read within 3 minutes

Google uses over 1 Million computers
They process over 1 Billion search requests – per day

51% of Internet traffic is “non-human”
aka “Machine to Machine” (M2M), Telematics, Telemetry
Given the pace of technology, I propose we leave math to the machines and go play outside.
Equipment Evolution

Mechanization Era
- Bigger
- Faster
- Stronger

Automation Era
- Easier
- Smarter
- Precise

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Why Telematics?

If You Can't Measure It,
You Can't Improve It

(William Thomson, Lord Kelvin)
Why Telematics?

• Maximize Uptime
• Maintenance Scheduling
• Fuel Cost Management
• Warranty & lease impacts
Why Telematics?

• Operator Training
• Operator Safety
• Resident Satisfaction
Mixed Fleet

- AEMP Standards
- OEM and 3rd Party
- Single Sign On
Where Do We Start?

• Talk with your dealer
  – Mythbusters
• Develop policies and goals
• Roll out initiatives
• “Clean slate”
Summary

• Technology is changing the industry

• Telematics are a valuable tool:
  – Organization
  – Operators
  – Residents

• Leverage OEM systems and grow
Questions?

For system specific details, please, stop by the RDO Equipment Co. and Butler Machinery booths.
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