Derailment Prevention: Sources of Equipment Health Information

- Inspections
- Grades
- Equipment Restrictions

- Maintenance Advisories
- Recalls

- ATSI Alerts
- Data Summaries
- Technology-driven Inspections

- Car Grading
- Bad Order Codes

Umler
Early Warning
Equipment Health Management
TRAIN II
EHMS Alerts: First Step in Defect Communication

- “Cautious” approach to dissemination of data
- Tied to AAR rule making process
  - Requires high level of detector maturity
  - Restricts getting information out
- Focus limited to pre-identified problem areas
- Single data-type focus
- Specific meaning is tied to an alert level
- Specific actions required based on alert level
- Intended for proactive planning
EHMS Data Summaries
Expanding the vision

- Get raw information out as early as possible
  - Even at “experimental” stage
- Allow industry to work with and learn from the data
- Look at the data in a holistic view

- Intended for tactical planning, not routine monitoring
EHMS Data Summary
The Power of Holistic Views

The Sweet Spot

Elevated Wheel Temperature

Acoustic Signature

Medium Wheel Impact

Improved Accident Prevention

Increased Proactive Maintenance Opportunities

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Alert vs. Data Summary

Alerts

- Elevated Wheel Temperature
- Medium Wheel Impact
- Acoustic Signature

Summary

(2008-2009)

- Elevated Wheel Temperature
- Acoustic Signature
- Medium Wheel Impact

Integrate with Carrier HBD

Rule Based

Individual Alert Type

Maintenance Focus, Proactive

Event Driven (Push)

Informational; Optional

Holistic view

Train Focus, Tactical Planning

Interchange Pull

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Typical Summary Flow

**Carrier**
- 418 (Advance Consist) received
- Summary query made
- Results received
- Data integrated into system
- Data analyzed
- Planning
- Interchange Received
- Query redone
- Subscription Set
- Update(s) received
- Operating decision made
- Inspect, forward, stop
- Repair authority received
- Report repairs, inspections
- Summary Closed
- Interchange Deliver
- Subscription Stopped

**Car Owner/Shop**
- Shop Forecast
- Summary query made
- Results received
- Data integrated into system
- Data analyzed
- Planning
- Car received in shop
- Query redone
- Operating decision made
- Repair authority received
- Report repairs, inspections
- Summary Closed
- Shop release

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Data Summary Flow

Wayside Detector

Railroad A

Data Summary
Eqmt: ABC 123
Statistically Relevant Data

Interchange Or Shop Request (500 Max)

Wayside Detector

Railroad B

Data Summary
Eqmt: ABC 123
Statistically Relevant Data

Integrated Data Summary (Railinc)

Real Time

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# Data Summary and Rollup

**Component Wheel 3L**

Equipment CSX 0000236704

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<th>BNSF</th>
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</table>
Getting the Data

• Primarily a “PULL” system
  – Online query; view online
  – Online query; data download
  – XML web service query
  – 500 car max per query

• “Temporary ‘I care’ Subscriptions”
  – Web signup/cancel
  – XML signup/cancel
  – Expiration;
    • NOT intended for ongoing fleet monitoring
    • InteRRIS exists for fleet monitoring
EHMS Data Summary “Care” Table
EHMS Query

Not Quite Ready for Primetime

Town Hall: Oct 23 in Chicago

Integrated View
- Alerts
- Detector Events
- Repairs
- Inspections
- Summaries

Multiple Filters
- Up to 500 cars
- Select all or some
- View online
- Download to Excel
Timeline for Summary Implementation

• Class 1 Deliverables 8/12
  – Infrastructure
  – Summary type definition
  – XML Web services for summary report
  – Summary roll-up
  – CRH reporting via XML

• Industry Delivery 10/14
  – Update Query UI
  – Update CRB UI

• Town Hall 10/23

• Training and communication
  – TBA – Stand by!
Railinc 2009 preview

- EHMS Alert Disposition Status Indicator
- Disposition Instructions leveraging RAMPED
- Integrated Equipment Health Query
- Various system enhancements
What to do to prepare yourself

• Join Railinc’s SharePoint Site:
  https://community.railinc.com/community/atsi/default.aspx
  – Get the specs, whitepapers, project plans
• Join Railinc’s “Wikitrain”
  – http://wikitrain/display/Projects/EHMS
  – Get the details, project deliverables, samples
• Track www.railinc.com for important news
www.railinc.com

24 Hour Customer Service

800-544-7245
csc@railinc.com
Legacy Umler Laptop Version
UMLER becomes Umler/EMIS

- Umler/EMIS is coming – full speed ahead
- Many changes **WILL** affect you
  - Your systems that use UMLER **WILL** have to change
  - Your processes that use UMLER **WILL** have to change
  - History will be severed
- You need to know what those changes are
- You need to know what to do to prepare yourself, your department and your company

New data structure and names
New web system
Error-free strategy
Access to reports and query
New Messaging
Web services opportunities
...in short, EVERYTHING
How does Umler/EMIS affect you?

• Technological Changes
  ▪ Some Umler Data Element will change
    o **Split** into multiple Umler/EMIS data elements
    o Data characteristics **changed** (i.e. length or value
      ✓ From feet and inches to inches
      ✓ From tons and hundredweight to pounds
    o **Elimination** of unused elements from Umler
  o Date elements **decoded**

  ▪ **Messaging changes**
    o Dynamic EDI (TRAIN II)
    o Support for XML
    o New Web Services
    o Replacement for Query87 Type 22