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TRB Asset Management Conference – November 2, 2005

Focused Work:

Prioritized Linear Asset Management for Rail

Too much of:



Infrastructure Problems

Not Enough of:



Maintenance Budget

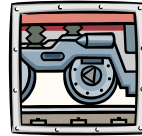
Too much of:



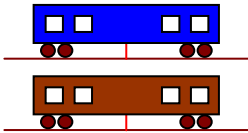
Aerial and Ground Radar



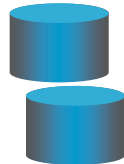
Track Charts



Work History



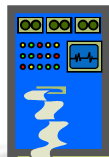
Track & Rail Geometry Car



Internal Databases



GIS Systems



Legacy Systems



Track Inspection

Not Enough of:



Data

Direction

How Do You:

- 1) Know where to work**
- 2) Prioritize work**
- 3) Track work progress, costing and material**
- 4) Squeeze the most out of your assets, but avoid run-to-fail**
- 5) *Improve safety, reliability and ROI***

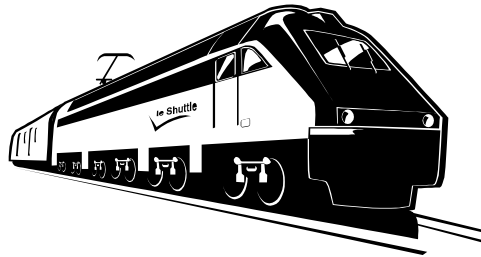
Effective linear asset management (“LAM”) provides a unified system view and tools for collecting, viewing and analyzing any dimension of a corridor asset’s condition and performance over time...



LAM OBJECTIVES

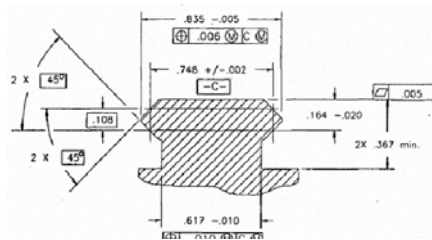
- Target resources to a specific need
- Reduce maintenance occupancy and costs
- Apply cost reducing long-term solutions to areas of high costs
- Enhance track capacity and on-time reliability
- Improve margins with increased asset life without spending additional capital

Locomotives and Cars



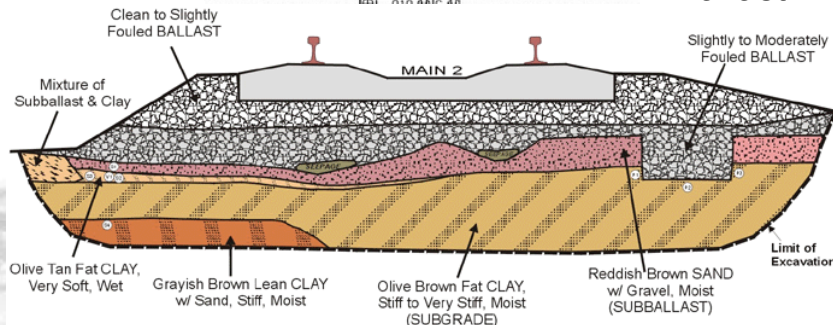
Traditional Enterprise Asset Management:

- Discreet assemblies (can be bar coded)
- Readily identifiable
- Rolling stock, stations, signals



Rail, Track, Ties, etc

Ballast



Linear Asset Management (“LAM”):

- Connected assets that don't move
- Hard to differentiate
- Poor performance can have huge effect on throughput

EAM Screenshot

ORACLE Asset Management [Diagnostics](#) [Home](#) [Logout](#) [Preferences](#)

[Home](#) [Assets](#) [Work Requests](#) [Work Orders](#) [Work Plan](#) [Stores](#)

Capital | Rebuildable Inventory Current Organization : **FAC**

Assets: Capital > Details

Hierarchy

- [-] FAC
 - [-] Fleet
 - [-] Real Estate
 - [-] Region - Central
 - [-] Region - East
 - [-] Westlake Building**
 - [-] FLR-WL-1
 - [-] FLR-WL-10
 - [-] FLR-WL-2
 - [-] FLR-WL-3
 - [-] FLR-WL-4
 - [-] FLR-WL-5
 - [-] FLR-WL-6
 - [-] FLR-WL-7
 - [-] FLR-WL-8
 - [-] FLR-WL-9
 - [-] Region - HQ
 - [-] Region - West

Asset Number **Westlake Building**

Asset Number Description **Building Westlake**

Asset Group **Building**

Asset Group Description **Building Asset Group**

Current Org **FAC**

Parent Asset Number [Region - East](#)

Parent Asset Group **Campus**

Category **Building.Office**

Owning Department **HQ-Ops**

Area

Accounting Class **Maintenanc**

Equipment Serial Number

Criticality

Maintainable **Yes**

Asset Route **No**

TIP: Click on the Parent Asset Number to go one level up the Hierarchy.

Details

[Return to Search](#) Details

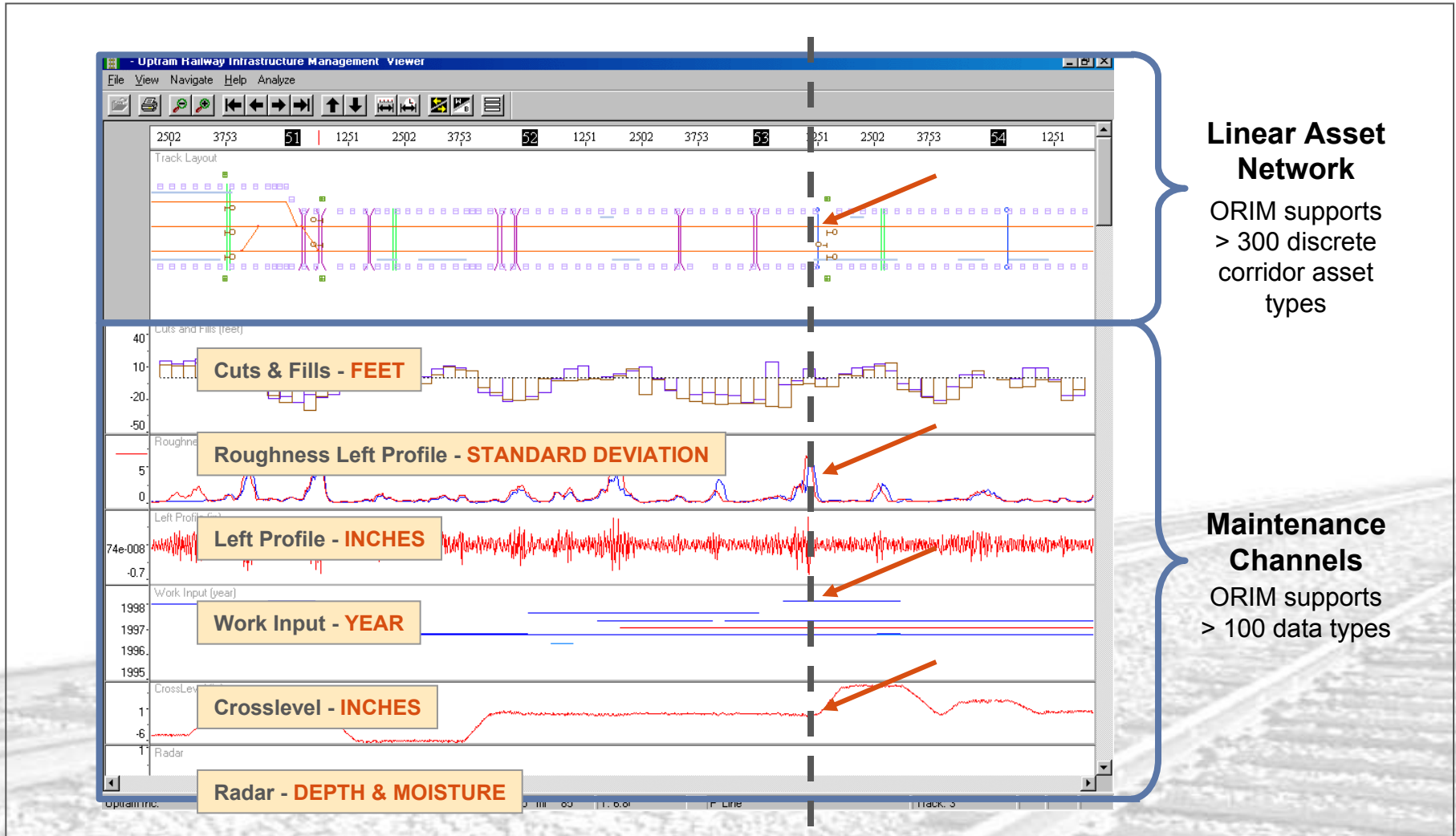
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What's a Linear Asset Management System?

ORIM provides a single source to visualize and act on many types of relevant information...

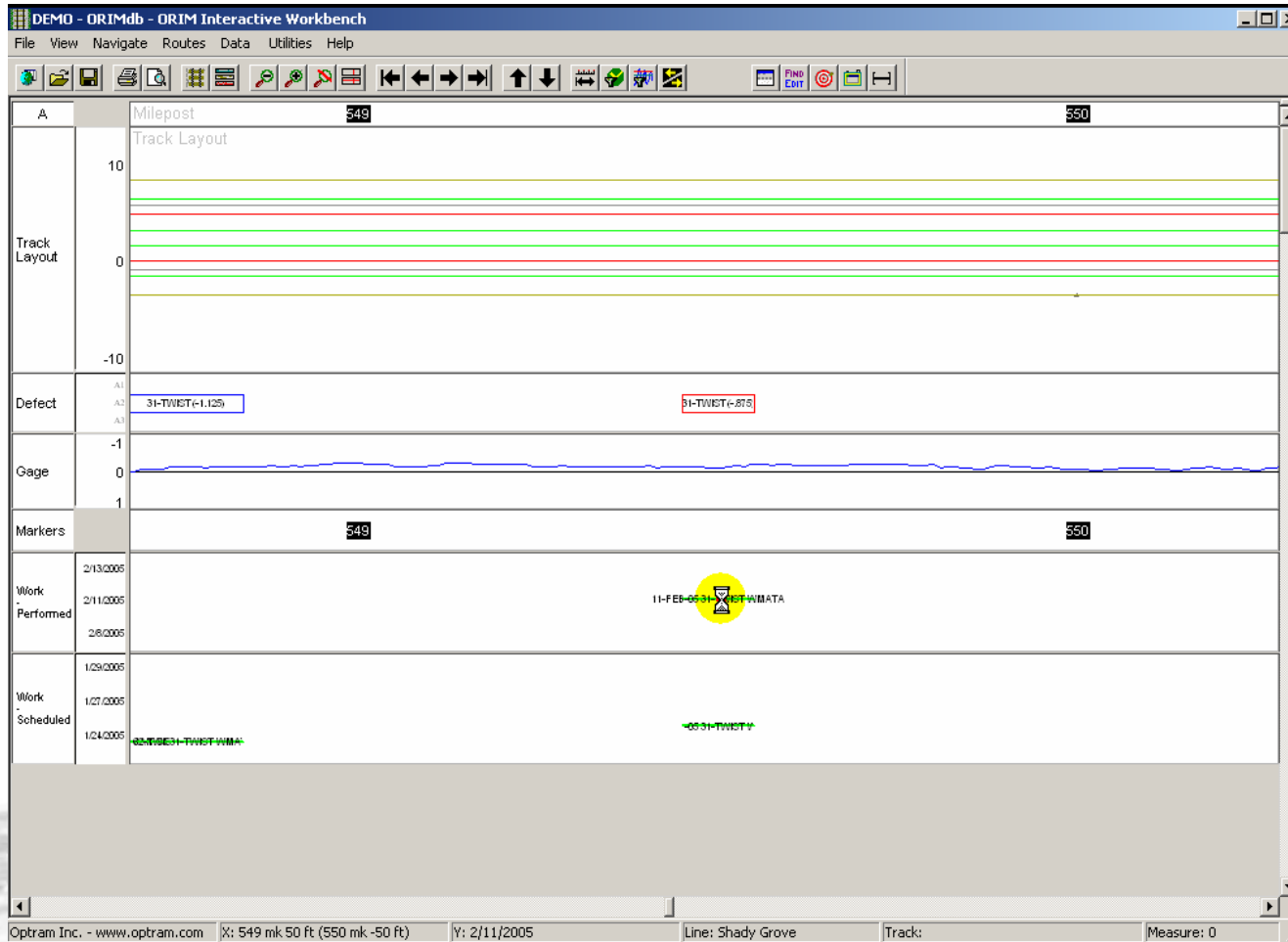


Linear Asset Network

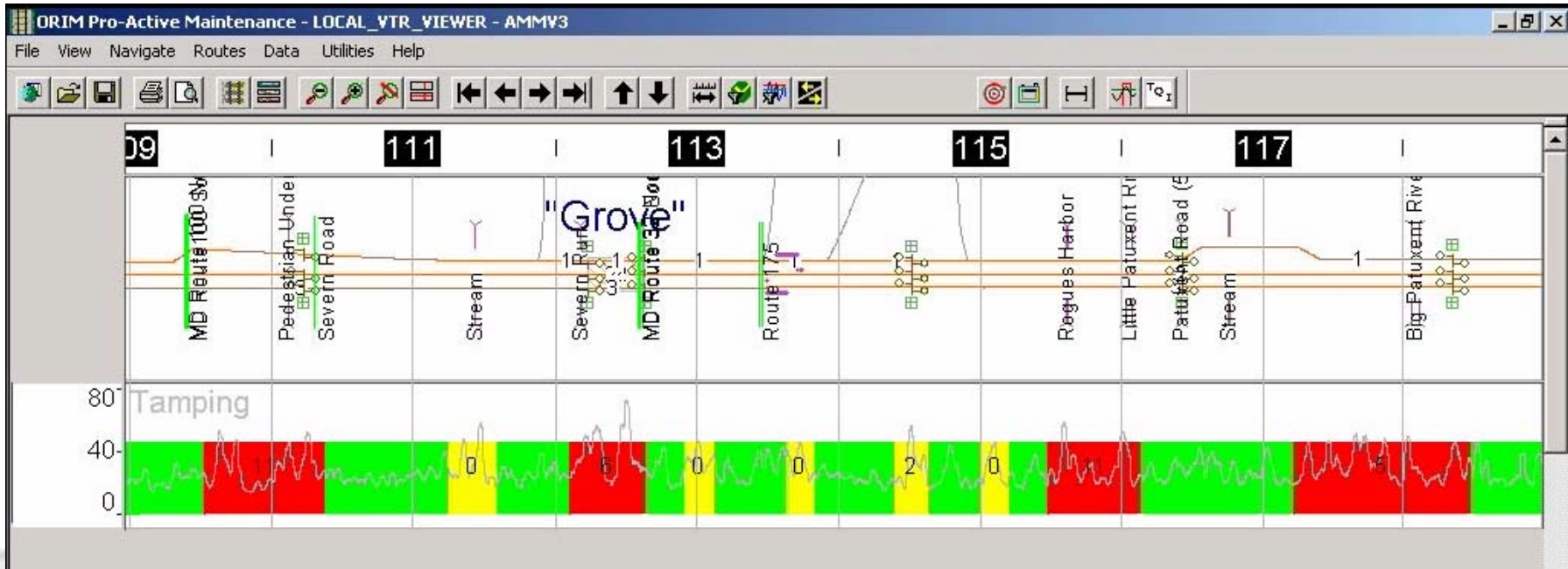
ORIM supports > 300 discrete corridor asset types

Maintenance Channels

ORIM supports > 100 data types



Prioritized work: Distilling Data into Actions



Accurately Know Where You Worked!

Optram Enterprise

File View Journal Route Help

NEC Single Asset Selec...

4000, 3000, 2000, 1000 < AP 2 | 7000, 6000, 5000, 4000, 3000, 2000, 1000 < AP 1 | 4000, 3000, 2000, 1000 < AP 0

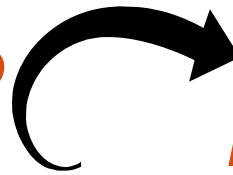
FeatureID	Layer	Name	Start Line	Start Track	Start MP	Start Offset	End Line	End Track	End MP	End Offset	Length
509193	CatenaryPole	1-13+90	AP	NULL	0	3780	AP	NULL	0	3780	N/A
465776	Track Segment	4	AP	NULL	1	3806	AP	NULL	1	1076	N/A
8000108	Signals [Con...	8L	AP	NULL	1	5186	AP	NULL	1	5186	N/A
509478	CatenaryPole	1+6085	AP	NULL	1	6084	AP	NULL	1	6084	N/A
512080	Bridge OH	West Philade...	AP	NULL	1	7353	AP	NULL	1	6795	N/A

www.optram.com | AP: 2 + 1,935.13ft | 1984.42 Ft/inch | Single Asset Selection

LAM answers the
key question:

EAM takes Optram Rail data
to the next step:

***What Asset Do I need to
Fix and When?***



***How Do I Best
Perform the Work?***

- » **More accurate MoW labor, material, and equipment cost *planning* and *execution***

Based upon actual asset condition, work history and performance

- » **Automatic generation of pre-planned work orders and associated logistic support elements**
- » **Reduced errors**
- » **Tight integration = lower overall IT support costs**



The screenshot displays the ORIM Interactive Workbench software interface, which is used for emergency response and track management. The main window shows a 'Track Layout' with a horizontal line representing the track, marked with mileposts (14, 15, 16, 17, 18) and various colored icons representing different track components. Below the track layout, there are several smaller windows:

- ORIM - GIS Component:** A window showing a map of the area with yellow and blue lines indicating track locations. It includes navigation controls like zoom in (+), zoom out (-), and pan.
- Ground Left Video:** A video feed showing a view from the left side of the track.
- Ground Center Video:** A video feed showing a view from the center of the track.
- Ground Right Video:** A video feed showing a view from the right side of the track.
- Aerial Forward Video:** A video feed showing an aerial view of the track area.
- ORIM - Control Panel:** A control panel with playback options, including 'Ground video collection rate', 'Custom playback rate' (set to 30 mph), and 'Route' (set to 'No Route'). It also shows a user name 'JDanwell' and a list of recent events.
- ORIM - GIS Component (Map):** A detailed street map showing the track layout overlaid on a grid of streets. A red star indicates a specific location on the map.

Using EAM/LAM Technology can help you to:

- 1) Work smart**
- 2) Work efficiently**
- 3) Use the right tools for the job!**

THANKS!

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