Pulse2011

Maximo
Linear Asset Management

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Agenda

- Why Linear?
- Product Overview
- What is new
- Questions

Why Linear? Many Challenges

Roadway

- Integration to GIS

Railway

- Track Occupancy

Pipeline

- Managing Leaks

- Aging infrastructure and declining funding
- Supporting growing service demands
- Managing continuous assets with dynamic segmentation
- Supporting visual & automated inspection systems
- Adhering to government regulatory requirements
- Minimizing risk with new systems

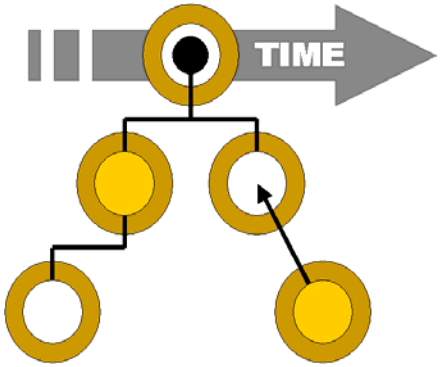
Hierarchical and Linear Models

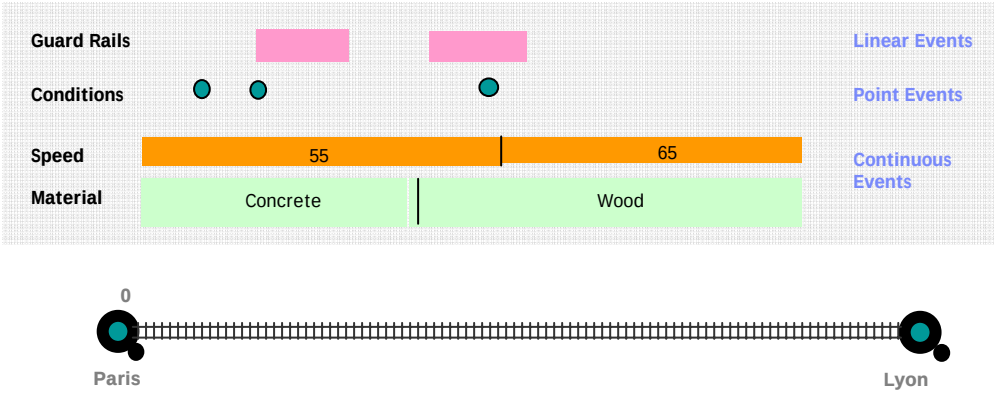
Hierarchical Model

- Works well for most traditional assets, such as facilities and rolling stock
- Uses parent-child relationships to link system, assembly, component, part type hierarchies
- Difficult to manage with linear or continuous assets

Linear Model

- Ideal for linear assets
- Uses measurements and point locations, allowing for dynamic segmentation
- Difficult to manage fleet, facility and production assets in this mode





Asset Challenges

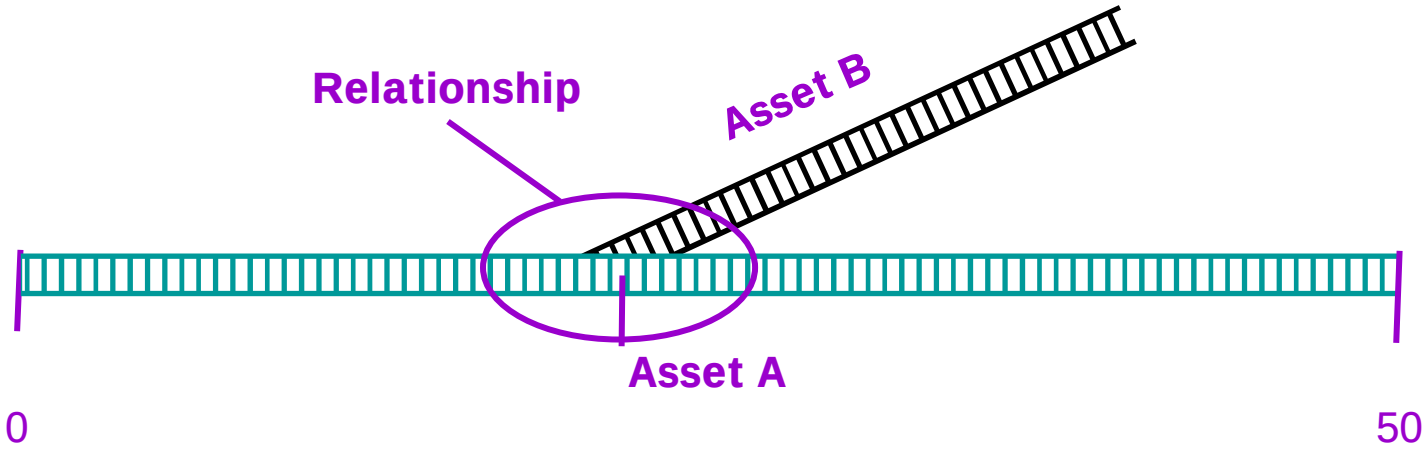
	Non linear Assets	Linear Assets
Examples	Pumps – *fixed location* Trucks - *mobile* Aircraft – *component-based*	Railway – track, signals, structures Roads – pavement, signs, etc. Pipelines
Characteristics	Occupy a finite and bound space Modeled using a hierarchy Installed, maintained and replaced as a whole or by component	Length that impacts maintenance Often modeled as a network Preserved and restored in place, and in segments

Asset Challenges

	Non linear Assets	Linear Assets
Examples	Pumps – *fixed location* Trucks - *mobile* Aircraft – *component-based*	Railway – track, signals, structures Roads – pavement, signs, etc. Pipelines
Details	Material - Steel Location – BR430 Date of Last Repair – 1 May 2010	Material – Wood sleepers (0-3 kms) Concrete sleepers (3-5) Wood sleepers (5-10) Relations – Parallels service road (2-10) Intersects Rte 2 (4.2) Crossing Repair – 1 May 2010 (4.2)

EAM Application Challenges

- Assets are maintained in sections
- As assets change, the system needs to be updated
- Traditional hierarchical systems can require creating all new assets, resulting in lost history
- A solution using a linear model solves this problem



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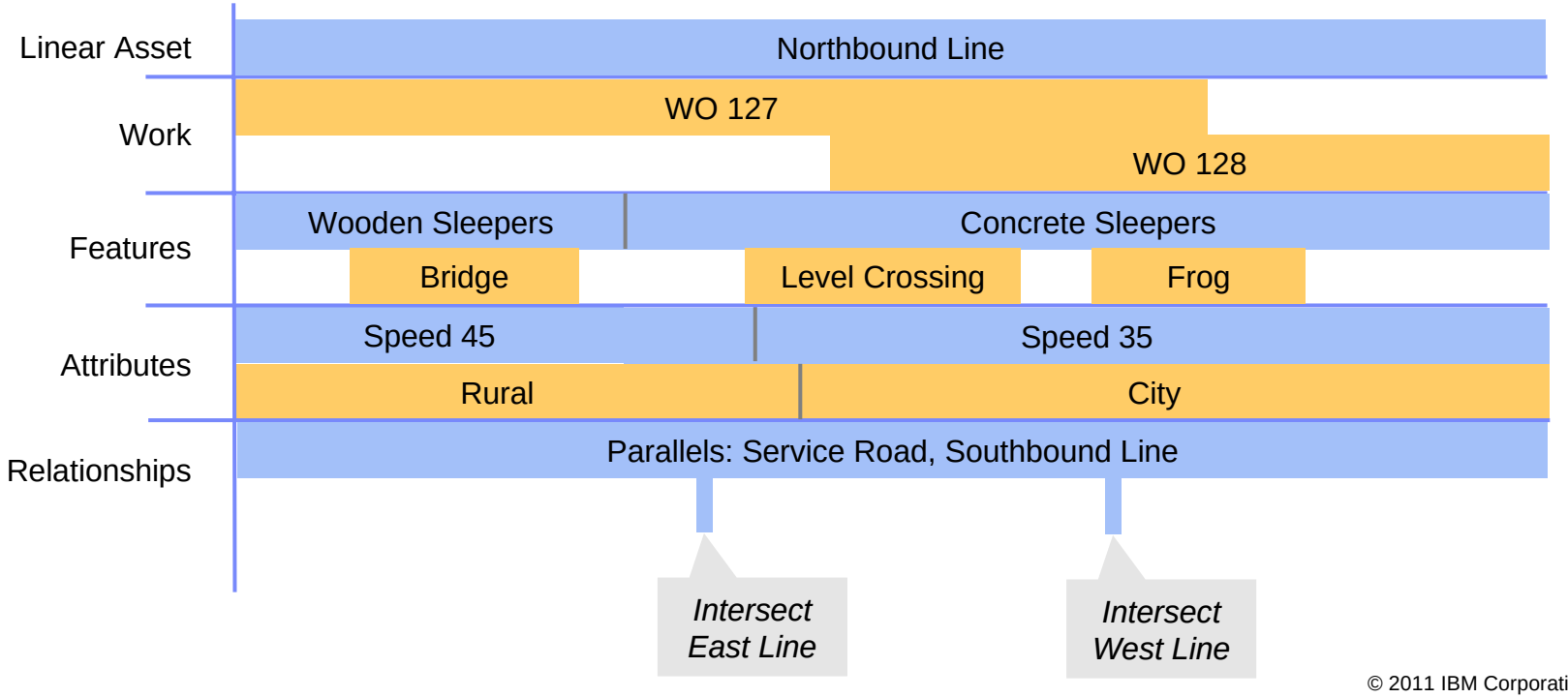
Maximo Linear Asset Manager

- Offered as an Add-On solution to Maximo Asset Management 7.x (requires license key)
- Designed to manage all types of linear assets
- Works with all Maximo industry solutions and add-on solutions
- Available in the same languages as Maximo

Linear concepts in a Network Model

- **Allow users to identify assets as ‘linear’**
- **Allow them to virtually segment linear assets without impacting the underlying geometry**
- **Utilizes concepts such as Features, Attributes and Relationships**



Maximo Linear Asset Manager

- **Provides capabilities beyond Maximo Asset Management**
  - **Linear Assets** – Assets that have a start and end measure
  - **Features** – Physical objects, such as kilometer posts, that identify where maintenance will take place
  - **Linear Attributes** – The same attribute to be applied multiple times to a linear asset
  - **User-defined relationships** – Extend beyond parent-child hierarchies by creating user-defined relationships such as “Intersects with”

Asset, Features, Attributes, Relationships

Asset (South-bound Track)

Features (Level crossing)

Relationships (Service road parallels track)

Features (Trees, grass, signs, signals, chain markers,)

Asset (North-bound Track, service road)

Attributes (Track number, speed, ballast wooden ties)

Maximo Linear Asset Manager

- **Provides capabilities beyond Maximo Asset Management**
  - **Asset/Feature/Relationship History –** Display the state of an asset's attributes, features or relationships at any point in its history
  - **Linear Work Search** – Allow users to locate work by asset as well as measure
  - **Linear Work Progress** – Track progress against linear asset work orders
  - **Linear Self-Service Service Requests** – Add measures for more effective incident management
  - **Dynamic Gauge and Characteristic Meters** – Allows meter readings at any point along the linear asset

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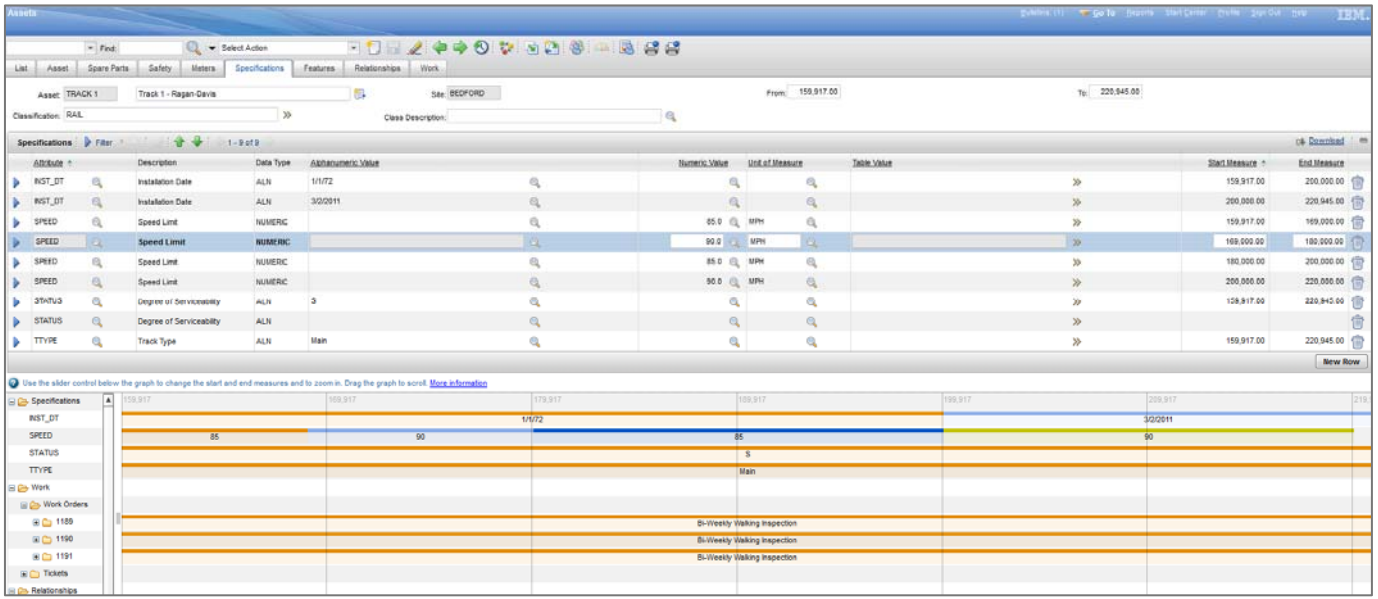

What's New: Linear Visual Control

PRODUCT DEMONSTRATION

Questions?

Thank You!