

# Process Simulator - Material Handling Edition

## Presenter Information:

Bruce Gladwin – SVP, Commercial Products  
[bgladwin@promodel.com](mailto:bgladwin@promodel.com)

Aaron Nelson - Product Manager  
[anelson@promodel.com](mailto:anelson@promodel.com)

Andy Schild - Regional Sales Director  
[aschild@promodel.com](mailto:aschild@promodel.com)



March 24, 2020  
Process Simulator Material Handling Edition Webinar  
For Software Version: 10.6.0.4253  
Copyright © 2020 ProModel Corporation  
705 E Timpanogos Pkwy  
Orem, UT 84097  
801-223-4600

# Agenda

- Introducing Material Handling in Process Simulator!
- Common MH systems in Manufacturing and Service systems
- Example 1: Conveyor Systems
  - Accumulation and Transport Conveyors
  - Merges, Splits and On-Conveyor Activities
- Example 2: Dynamic Resources
  - Operators, Forklifts, AGVs
  - Path Networks
- Considerations for existing ProModel and MedModel users
- Differences between ProModel and Process Simulator capabilities
- Aaron: Building a simple conveyor system and dynamic resource
- Andy: Upgrading existing licenses to the Material Handling version

# Purpose

1. Many Process Simulator users requested the ability to have dynamic (mobile) resources like operators, and/or conveyors in their models.
2. We wanted to provide those capabilities, like in ProModel and MedModel, but in a way that is easier for the person who is new to simulation modeling (a main goal with Process Simulator).

# Common Material Handling Systems

## ▶ Manufacturing

- Conveyor Systems
  - Roller and Belt Conveyors
  - Power & Free Systems
  - Overhead Conveyors
- Forklifts, Pallet Jacks
- Tuggers, “Waterspiders”
- AGVs & AGCs

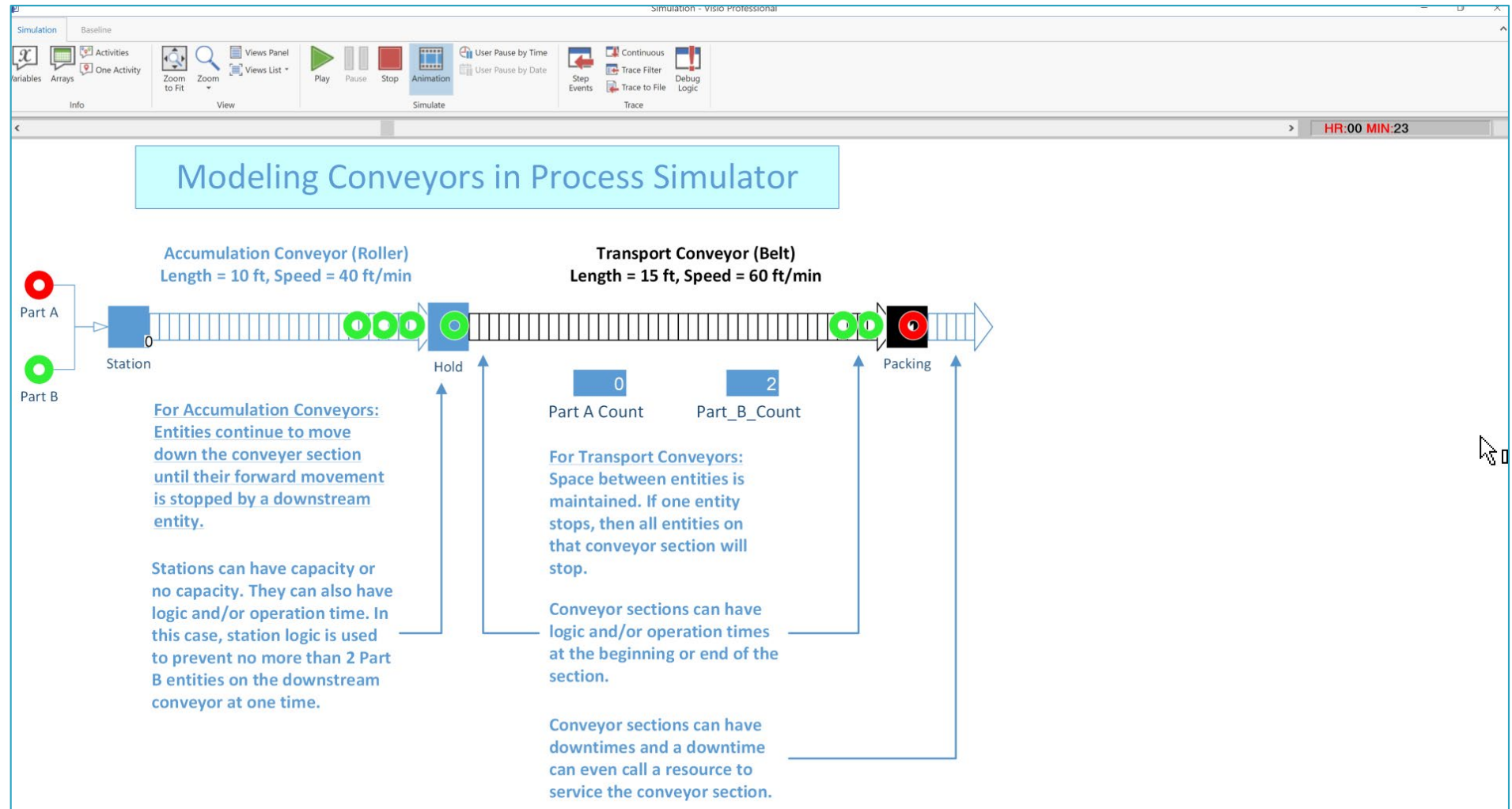
## ▶ Distribution Networks

- Truck, Train, Ship, Plane
- Multi-modal systems

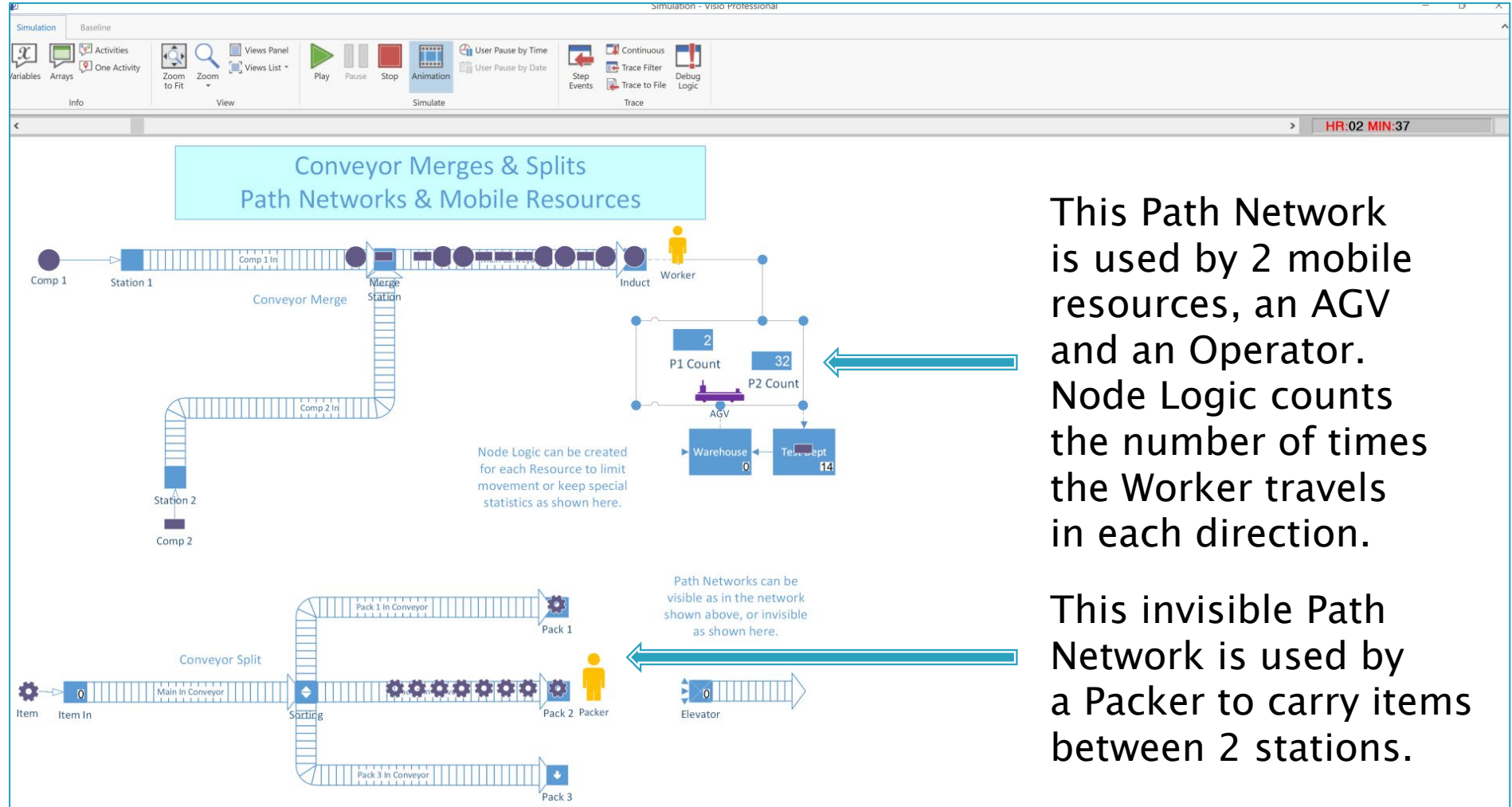
## ▶ Service Systems

- Hospital Networks
- Passenger Flow
- Queuing Systems
  - Banks, Theme Parks

# Conveyor Systems



# Dynamic Resources



This Path Network is used by 2 mobile resources, an AGV and an Operator. Node Logic counts the number of times the Worker travels in each direction.

This invisible Path Network is used by a Packer to carry items between 2 stations.

# For ProModel / MedModel Users...

1. Conveyor sections are modeled as Routings in Process Simulator and not as Activities. This was necessary to be able to use more of Visio's powerful drawing functions.
  - Conveyor sections become Locations duration translation to the .mod file. If you open the .mod file in PM/MM, the conveyor sections will be in the Locations module.
  - (When building a model in ProModel or MedModel, conveyor sections are created as Locations and always remain as such.)
2. In order for a Resource to be dynamic and travel from one Activity to another, it must move on a Path Network and the Activities it services must interface with the Path Network.

# Process Simulator vs. ProModel

- ProModel Capabilities that are Not available in the Process Simulator, Material Handling Edition
  - No Queue functionality, only Conveyors
  - Entities cannot travel independently on Path Networks
  - Bridge Cranes



# Model Building Demonstration

Let's build a simple model with...

1. A simple conveyor system
2. A path network and a dynamic resource

# Upgrading to the new MH Edition

- This is not a free upgrade...
  - We realize that many users will not need or want these material handling capabilities, so we are making this an optional module that you can purchase.
  - Contact your ProModel Sales Director for a quote to upgrade based on your specific situation. The price will depend on:
    - Your existing license(s): Perpetual vs. Subscription
    - Whether your licenses are current or expired
    - Number of licenses to upgrade

# FINISHED

- Thanks for attending this webinar! We hope it was helpful.
- Remember, help is only an email or phone call away.
- Good luck and happy modeling!

Technical Support  
888-776-6633  
support@promodel.com  
6 am - 6 pm M-F, Mountain Time