Flexsim: Objects

W. M. Song 桑慧敏

Tsing Hua Univ. 清華大學

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Introduction of FlexSim

- FlexSim is a discrete event simulation software developed by FlexSim Software Products, Inc.
- FlexSim 1.0 was released in February 2003.
- The most recent of FlexSim release is version 7
- FlexSim Health Care was later developed for healthcare simulation.
- The FlexSim Software Products, Inc. headquarters is located in Orem, Utah, U.S.A.
- Trial Version "http://www.flexsim.com/" (Note: Less than 20 objects, Random seed not available)
- Education Use only: help > licence activation > licence service > use concurrent licennsing > 140.114.53.5
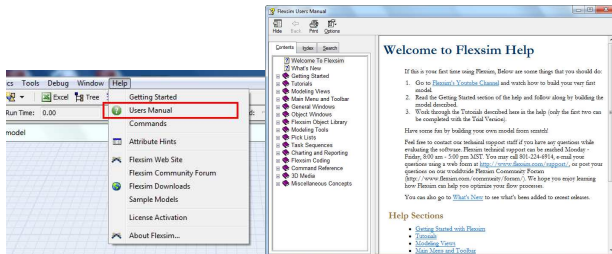- What is discrete event simulation?

Flexsim Learning Platforms

- Flexsim in USA

  `http://www.flexsim.com/community/forum/index.php`
- Flexsim in Asia (簡體字)

  `http://www.flexsim.asia/`
- FlexSim Users Manual in the toolbar

FlexSim Discrete Objects - 1

Library

Discrete Objects ▾ | Iab

- Source
- Queue
- Processor
- Sink
- Combiner
- Separator
- MultiProcessor
- Conveyor
- MergeSort
- FlowNode
- Rack
- Reservoir
- Dispatcher
- TaskExecuter
- Operator
- Transporter
- Elevator
- Robot
- Crane
- ASRSvehicle
- NetworkNode
- TrafficControl
- VisualTool
- Recorder
- BasicTE
- BasicFR
- BasicConveyor

- **Source**: create the flowitems
- **Queue**: store flowitems
- **Processor**: process flowitems
- **Sink**: destroy flowitems

FlexSim Discrete Objects - 2

Library

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- **Combiner**: group multiple flowitems together
- **Separator**: separate a flowitem into multiple parts
- **MultiProcessor**: simulate the processing of flowitems in sequentially ordered operations
- **Conveyor**: move flowitems along a set path
- **MergeSort**: non-accumulating conveyor that allowsto have multiple input positions and multiple output positions along the conveyor
- **FlowNode**: move flowitems from one location to another with time being consumed

FlexSim Discrete Objects - 3

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- **Rack**: store flowitems as if they were in a warehouse rack
- **Reservoir**: store flowitems as if they were in a fluid reservoir or tank
- **Dispatcher**: control a group of transporters or operators
- **TaskExecuter**: the top level class for Operators, Transporters, ASRSvehicles, Cranes and other mobile resources
- **Operator**: can be called by objects to be utilized during setup, processing or repair time

FlexSim Discrete Objects - 4

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Discrete Objects ∨ Tab

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- **Transporter**: used mainly to carry flowitems from one object to another
- **Elevator**: a special type of transport that moves flowitems up and down
- **Robot**: a special transport that lifts flowitems from their starting locations and places them at their ending locations
- **Crane**: similar functionality to the transporter but with a modified graphic
- **ASRSvehicle**: a special type of transport specifically designed to work with racks
- **NetworkNode**: define a network of paths that transporters and operators follow

FlexSim Discrete Objects - 5

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Discrete Objects ▾ | Tab

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- **TrafficControl**: control traffic in a given area of a travel network
- **VisualTool**: used to decorate the model space with props, scenery, text, and presentation slides in order to give the model a more realistic appearance
- **Recorder**: record and/or display information graphically
- **BasicTE**: a TaskExecuter that is meant for developers to create user libraries with
- **BasicFR**: a FixedResource that is designed to be customized into a user library object
- **BasicConveyor**: a conveyor that allows flowitems to move along the conveyor according to logic that is defined by the user

Objects: Source, Queue, Processor, and Sink

- Mind Mapping for 4 Objects in Flexsim: Source, Queue, Processor, and Sink
- Mind Mapping for Experimenter and Dashboard