

Dispatch System

Requirements

Revision History

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# Overview

The Dispatch System is a software application and related software services used by Argix employees to manage and coordinate the movement of freight and freight containers (i.e. trailers, pallets, totes) between Argix terminals, agent terminals, client distribution centers, vendor warehouses, and client stores.

## Supported Business Services

The Dispatch System supports the following business services:

* Pickup Tsort freight for sorting in Argix National terminal and northeast Argix local terminals
* Accept delivery of Tsort freight for sorting in Argix National terminal
* Deliver ISA freight (i.e. LTL deliveries)
* Pickup returns freight from stores serviced by northeast Argix local terminals
* Deliver sorted Tsort freight from Argix National terminal to Argix local and agent terminals

## Supported Operations

The Dispatch System supports Argix operations to:

* Manage pickup appointments for Tsort freight inbound to Argix National terminal and northeast Argix local terminals
* Manage delivery appointments for Tsort freight inbound to Argix National terminal
* Manage pickup requests for vendor freight and returns freight inbound to the northeast Argix local terminals
* Manage line haul of sorted freight outbound from Argix National terminal to Argix local and agent terminals (agents within 1 day transit time)
* Deliver returns freight and containers to clients and vendors
* Transfer freight between Argix terminals
* Dispatch Argix drivers and contract drivers for moving trailers and freight
* Move empty trailers between Argix terminals, Argix agent terminals, and client/vendor warehouses
* Maintain trailer pools in Argix National terminal and overflow terminals (i.e. Herman’s yard)
* Verify pickup requests for our clients
* Assist with transportation safety concerns

## Context

The following drawing shows a high level view of the Dispatch System and the associations with Argix employees, business partners, and third party systems. This helps provide context for the system under discussion.



# Actors

The list below provides definitions for the roles employees assume when working with the Dispatch system.

* Dispatch Supervisor- manages pickup and delivery appointments for inbound freight; manages trips to inbound/outbound freight and trailers; manages trailers and drivers; and schedules pickup requests for the Argix local terminals.
* Dispatch Clerk- validates and imports pickup requests; manages route planning and driver assignment using Roadshow.
* Window Clerk- arrives and departs trailers at the terminal gate; receive inbound freight.
* Client Rep- enters and updates pickup requests from stores; and answer customer inquiries concerning pickup requests.
* Tsort Clerk- view freight on the inbound schedule to coordinate sorting activities.
* Shipping Clerk- view freight on the outbound schedule to coordinate shipping activities.
* Safety Manager- views Driver Settlement Sheets to resolve discrepancies concerning driver settlements, and searches the trailer log to answer safety inquiries.

# Use Cases

## Delivery Appointments

A delivery appointment schedules a third-party carrier to deliver a load containing Tsort freight to the Argix National terminal for sorting operations. The load may be a trailer or loose freight. The shipper or carrier requests an appointment and is given an appointment number. The Dispatch Supervisor captures information about the appointment, which is generally scheduled for the next business day or later. The Window Clerk arrives the trailer at the Operations Center- the trailer is delivered and an empty trailer is taken, or the trailer is a “live unload” and the Receiving Supervisor is contacted concerning unloading the freight. The Tsort Supervisor schedules sorting operations for the freight. The following drawing shows the use cases involving delivery appointments.



### Schedule Delivery Appointment

The Dispatch Supervisor needs to schedule a delivery appointment for Tsort freight inbound to the Argix National terminal by a third-party carrier. This is initiated by a phone call or an email from a shipper or carrier and is generally scheduled for the following business day. The delivery appointment captures information including shipper, load, carrier, arrival, and sort center (always Argix Logistics National). The system records the delivery appointment (scheduled) and an appointment number is returned to the caller.

### Schedule Delivery Appointment from the Shippers Ship Schedule

The Dispatch Supervisor needs to schedule a delivery appointment of Tsort freight inbound to the Argix National terminal per the Shippers Ship Schedule. The deliveries are serviced by a third party carrier.

### Schedule Recurring Delivery Appointment

The Dispatch Supervisor needs to schedule a recurring delivery appointment.

### Create Next Day Delivery Appointment Sheet

The Dispatch Supervisor needs to create the Delivery Appointment Sheet containing delivery appointments for Argix National terminal for the following business day. This sheet is used by the Warehouse Supervisor to schedule next day sorting activities. The sheet is published M-F at 5PM.

### Arrive Trailer for Delivery Appointment

The Window Clerk needs to arrive a delivery appointment into the Argix National terminal. The appointment needs to be verified (must be on the schedule). The appointment is updated (arrived) with trailer number and arrival time, a BOL is received and attached to a new or existing TDS is the AS/400. The Tsort Supervisor is notified of the freight arrival. The trailer is either dropped in the yard and an empty trailer is assigned to the carrier, or the trailer is a live un-load and the Receiving Supervisor is contacted to determine a door to unload the freight.

### View Delivery Appointments

The Tsort Supervisor needs to view delivery appointments concerning sort date and scheduled arrival time in order to staff and schedule sorting operations for the day. Once the freight has arrived, he needs to know the trailer number and TDS number.

The following drawing shows the activities and actors involved in managing a delivery appointment.



## Pickup Appointments

A pickup appointment schedules Argix to pick up a load containing Tsort freight from a vendor and bring it to the Argix National terminal or a northeast Argix local terminal for sorting operations. The Dispatch Supervisor captures information about the pickup, which is always scheduled for next business day or later. The Dispatch Clerk schedules and coordinates driver activity. The Window Clerk arrives the trailer at the Operations Center which contains one or more loads. The Tsort Supervisor schedules sorting operations for the freight. The following drawing shows the use cases involving pickup appointments.



### Schedule Pickup Appointment

The Dispatch Supervisor needs to schedule a pickup appointment for Tsort freight inbound to the Argix National terminal or a northeast Argix local terminal. This is initiated by a phone call or an email and is generally scheduled for the following business day. The pickup is almost always for a full trailer; but occasionally for loose freight. The pickup appointment captures information including the vendor, load, pickup time, and sort center. The system records the pickup appointment (scheduled).

### Schedule Recurring Pickup Appointment

The Dispatch Supervisor needs to schedule a recurring pickup appointment.

### Assign Driver for Pickup Appointment

The Dispatch Clerk needs to assign a driver for a pickup appointment. This is done as part of route planning for the day. The driver is assigned to the pickup appointment, and the pickup appointment is updated (assigned).

### Confirm Driver for Pickup Appointment

The Dispatch Clerk needs to confirm that a driver can complete the trip assigned to him. The driver is called to confirm he accepts the pickup appointment, and the pickup appointment is updated (confirmed).

### Arrive Trailer for Pickup Appointment

The Window Clerk needs to arrive a trailer containing one or more loads (pickup appointments) into the receiving terminal. Each appointment is updated (arrived) with trailer number and arrival time, and a BOL is received and attached to a new or existing TDS is the AS/400 for each load. The trailer is dropped in the yard.

The following drawing shows the activities and actors involved in managing a pickup appointment.



## Pickup Requests

Pickup requests schedule northeast Argix local terminals (i.e. Ridgefield, South Windsor, and Wilmington) and some Argix agent terminals (i.e. Nordol) to pick up vendor Tsort freight and store returns; occasionally, a pickup is serviced by the Argix National terminal for large vendor freight. The Dispatch Supervisor captures information about the pickup request, which is always scheduled for the following business day or later (although some agent terminals may service a pickup on the same day). . The Dispatch Clerk uses Roadshow to create routes and assign drivers. The Window Clerk arrives the trailer from the received paperwork. The following drawing shows the use cases involved with pickup requests.



### Schedule Pickup Request Serviced by Argix Local Terminal

The Dispatch Supervisor or a Client Rep needs to schedule a pickup request from a shipper serviced by an Argix local terminal. This is initiated by a phone call or an email and is generally scheduled for the following business day. The system records the pickup request (scheduled).

### Schedule Pickup Request Serviced by Argix Agent Terminal

The Dispatch Supervisor needs to schedule a pickup request from a shipper serviced by an Argix agent terminal. This is initiated by a phone call or an email and is generally scheduled for the following business day. The system records the pickup request (scheduled). The servicing agent is notified of the scheduled pickup request.

### Schedule Pickup Request Serviced by Argix National Terminal

The Dispatch Supervisor needs to schedule a pickup request serviced by the Argix National terminal for large vendor freight (i.e. 10+ pallets) that is sorted at an Argix local terminal. This is initiated by a phone call or an email and is generally scheduled for the following business day. The system records the pickup request (scheduled). This requires scheduling an inbound trip to the receiving local terminal serviced by the Argix National terminal.

### Notify Agent of Pickup

The Dispatch Supervisor needs to notify the servicing agent of a pickup. This is done by phone call??

### Export Pickup Requests

The Dispatch Clerk in the local terminal needs to export pickup requests for his terminal into a file that can be imported into Roadshow. Pickup requests that do not have a shipper number need to be printed for manual driver assignment.

### Update Driver to Pickup Request

The Window Clerk in the local terminal needs to update a pickup request with an assigned driver. This is done after the route solution is created in Roadshow and drivers have been assigned to the routes.

### Arrive Trailer for Pickup Request

The Window Clerk needs to arrive a pickup request into an Argix local terminal. The request is updated with the actual arrival time.

The following drawing shows the activities and actors involved in managing a pickup appointment.



## LTL Deliveries (i.e. ISA Freight)

LTL deliveries schedule Argix to transport palletized freight between a shipper and a consignee. The freight is held overnight at an Argix terminal where it is inducted into the Tsort system for receiving, shipping, tracking, and billing purposes. The customer requests an LTL pickup. The Dispatch Supervisor manages Dispatch-related activities. The Dispatch Clerk coordinates driver routing and assignments. The Window Clerk arrives and departs trailers. The Receiving Clerk receives the freight in the warehouse. The Tsort Clerk inducts the freight into the Tsort system. The Shipping Clerk coordinates outbound shipping. The Safety Manager receives signed BOLs as proof of delivery.



### Schedule LTL Pickup

The Dispatch Supervisor needs to schedule an LTL pickup. The pickup and delivery is serviced by an Argix terminal. The freight may be held at an Argix terminal for some period of time (i.e. overnight) before final delivery.

### Route LTL Pickup

The Dispatch Clerk needs to assign an LTL pickup to a new or existing trip.

### Arrive Trailer for LTL Pickup

The Window Clerk needs to arrive an LTL delivery into an Argix terminal. The delivery is updated (arrived) with trailer number and arrival time, and a BOL is received. The full trailer is dropped in the yard, or the partial trailer is assigned a door for unload and the warehouse is notified.

### Depart Trailer for LTL Delivery

The Window Clerk needs to depart a trailer outbound to a shipper with LTL freight.

### Receive LTL Freight

The Receiving Clerk needs to receive and inspect LTL freight.

### Induct LTL Freight

The Tsort Clerk needs to induct LTL freight into the Tsort system for tracking and billing purposes, and route the freight to the proper zone.

### Ship LTL Freight

The Shipping Clerk needs to ship LTL freight.

### Receive POD

The Safety Manager or the Dispatch Supervisor needs to receive POD paperwork for the LTL delivery from the driver. The paperwork is usually a signed BOL. The BOL is received and attached to an existing TDS in the AS/400.

The following drawing shows the activities and actors involved in managing an LTL delivery.



## Line Haul Deliveries

Line Haul deliveries are scheduled from the Argix National terminal to deliver sorted Tsort freight from the Local schedule to Argix agents carried by Argix, to deliver sorted Tsort freight from the Jamesburg Ship Schedule to Argix agents using third party carriers, and to deliver return freight and shipping containers to Argix clients and vendors. . The Dispatch Supervisor… The Dispatch Clerk… The Window Clerk…



### Publish the Local Schedule

The Shipping Supervisor needs to publish a schedule of local (one day transit) deliveries for sorted Tsort freight. The schedule is published daily.

### Schedule Line Haul Delivery from the Local Schedule

The Dispatch Supervisor needs to schedule an outbound delivery of Tsort freight to an Argix local/agent terminal per the Shipping Departments Local Schedule. The deliveries are serviced by the Argix National terminal and are within one day transit only.

### Schedule Line Haul Delivery from the Jamesburg Ship Schedule

The Dispatch Supervisor needs to schedule an outbound delivery of Tsort freight to an Argix local/agent terminal per the Jamesburg Ship Schedule. The deliveries are serviced by the Argix National terminal and are within one day transit only.

### Schedule Line Haul Delivery for Returns

The Dispatch Supervisor needs to schedule a delivery to return something to an Argix client or vendor. The delivery could be for return freight or shipping containers (i.e. totes, pallets, etc.). Some deliveries can be made when ready; others require a call ahead to schedule an appointment. Most returns are for a live unload.

### Update Jamesburg Ship Schedule

The Dispatch Supervisor needs to update the Jamesburg Ship Schedule for local loads with driver names, load numbers, and scheduled delivery times.

### Assign Driver to Line Haul Delivery

The Dispatch Clerk needs to assign a driver to a local delivery. This is done as part of driver route planning for the day. The driver is assigned to the delivery, and the delivery is updated (assigned).

### Confirm Driver for Line Haul Delivery

The Dispatch Clerk needs to confirm that a driver can complete the trip assigned to him. The driver is called to confirm he accepts the delivery, and the delivery is updated (confirmed).

### Depart Trailer for Line Haul Delivery

The Window Clerk needs to depart a trailer outbound to an Argix local terminal or Argix agent with sorted Tsort freight. A BOL must exist or the trailer cannot be departed. The actual departure date/time is updated for the BOL in the AS/400.

The following drawing shows the activities and actors involved in managing a Line Haul Delivery.



## Driver Dispatch

Create driver runs, transfer freight, move empty trailers, deliver the mailbags.

### Create Driver Runs

The Dispatch Clerk needs to organize one or more trips into assignable driver runs. In addition, LTL deliveries of loose ISA freight are added to existing trips.

### Assign Driver to a Trip

The Dispatch Clerk needs to assign a driver to a trip or a run.

### Confirm Driver for Trip

The Dispatch Clerk needs to confirm that a driver can complete the trip or run assigned to him. The driver is called to confirm he accepts the trip, and the trip is updated (confirmed).

### Schedule Transfer between Argix Terminals

The Dispatch Supervisor needs to schedule a transfer of freight between two Argix terminals (not Z loads).

### Schedule Empty Trailer Move

The Dispatch Supervisor needs to schedule to move an empty trailer between two Argix locations.

### Schedule Mailbag Delivery

The Dispatch Supervisor needs to schedule to deliver Argix mailbags between Argix terminals.

## Trailer Tracking

Trailer tracking records the history of trailers inbound to and outbound from the Argix National terminal yard. This history is used to inventory trailers in the Jamesburg yard and to investigate the history of a trailer.

### Record Inbound Trailer

The Window Clerk needs to capture information about a trailer arriving to the Jamesburg yard.

### Record Outbound Trailer

The Window Clerk needs to capture information about a trailer departing from the Jamesburg yard.

### Yard Check

The Freight Clerk needs to determine what trailers are in the Jamesburg trailer yard or an overflow yard (i.e. Hermann’s yard) in order to maintain trailer pool counts and to inform outside carriers of the location of one of their trailers.

### Search Trailer History

The Safety Manager needs to research the history of a specific trailer in the Jamesburg trailer yard.

## Administration

Administation.

### Depart/Arrive Trailer from an Argix Terminal Gate

The Gate Guard needs to depart/arrive a trailer from an Argix terminal gate. Every trailer that departs or arrives at the gate is logged on the Gate Sheet.

### Schedule the Local and Line Haul On-Call Drivers

The Dispatch Supervisor needs to schedule the local and line haul operators who will be on call for the upcoming weekend.

### Create Mailbag Reminder Notice

The Dispatch Supervisor needs to send an email reminder for the mailbag containing outside driver checks from the HR department.

### Create Weekend Access List Notice

The Dispatch Supervisor needs to email the weekend access list that advises employees, managers, and operators of those people who need access to the Jamesburg and Ridgefield facilities over the weekend.

### Create Hours of Operation Notice

The Dispatch Supervisor needs to email ...

### Create Weekend On-Call Notice

The Dispatch Supervisor needs to email ...

### Create Next Day Tractor Trailer Sheet

The Dispatch Supervisor needs to create a Dispatch Sheet that confirms local operators of their start for the next day.

### Update Tractor Trailer Operators Settlement Sheet

The Dispatch Supervisor needs to update the Tractor Trailer Operators Settlement Sheet with daily trip information for each driver. This sheet is used by the Safety Manager to determine an operator’s compensation for completed trips.

### Create Truck to Dock Sheet

The Window Clerk needs to create a Truck to Dock Sheet (TDS) for a freight arrival.

# Business Rules

## Safety/DOT Compliance

* Driver cannot operate more than 70hrs per 7/8 days.

## Yard Checks

* Mailbags are scheduled for delivery by 4PM and delivered by the following morning at 8AM.

## Mailbags

## Cutoff Times and Sort Days

* Clients can have specific cutoff times for pickup appointments (i.e. Amscan should be picked up by 1PM). The default cutoff time is 3PM.
* Clients have sort dates that are the same day or the next day after pickup; this affects cutoff time. In addition, some clients have specific sort days (i.e. Vitamin Shoppe Monday and Thursday).

## Other

* Pickup requests larger than 10+ pallets require pickup by Argix National.

# Non-functional Requirements

## Presentation

Desktop access only; no mobile access required at this time; maybe web access to allow clients to request an appointment; a list of client’s should include Argix as a client selection (to pick-up stuff for us).

## Reporting

None at present.

## Performance

Fast response when entering new pickup requests; <30sec.

## Security

Authentication: only domain users can access the system; there are no anonymous users.

Authorization: limited system access depending upon role; currently, users are authorized for access and have configurable rights for add/update/delete on ‘all’ of their ‘owned’ records.

## Availability

24/7.

## Concurrency

60-70 total users; 10-15 concurrent users; generally, there is a user per Argix Local terminal and a few users in the Argix National terminal.

## Interoperability

Roadshow

* Export pickup requests into a Roadshow file format.

Ship Schedules

* Create trips from the Jamesburg Ship Schedule for local deliveries.
* Update driver, load number, and scheduled delivery time on Jamesburg Ship Schedule when trip is assigned and confirmed.
* Update actual arrival time on Jamesburg Ship Schedule when trailer arrived.