The MAVES Community of 3PL software users

The Blue Eagle

MAVES INTERNATIONAL SOFTWARE

MAVES' mission is to elevate the art of 3rd Party Logistics through efficient, flexible, intuitive software, in collaboration with 3PL practitioners and business partners who share our common goals.

L1: Inventory [Lot Activity]

Product | Date / Time | Transactions | Quantities | References | Links | Other | Blind Keys | Last Changed

BASE

HighViews
- 🖥 Product Balance
- 🖥 Lot Balances
- 🖥 Lot Activity
- 🖥 Unit IDs List
- 🖥 Unit Activity
- 🖥 Conveyance List
- 🖥 Conv Contents
- 🖥 Conv Activity

Client	Product	Lot Code	Rotation Date	Description 1	SKU	Date	Time	Whs	Whs Ref	Type	Line	Hold	Quantity
DOLE	80840	SN-889282	2015-07-22	Pineapple Juice – Blk Sng Str	DRM	2015-07-22		67	152616	REC	001		4
DOLE	80840	SN-889282	2015-07-22	Pineapple Juice – Blk Sng Str	DRM	2015-07-23		67	444827	ORD	001		-4
DOLE	80840	SN-978385	2015-07-23	Pineapple Juice – Blk Sng Str	DRM	2015-07-22		67	152618	REC	001		4
DOLE	80840	SN-978385	2015-07-23	Pineapple Juice – Blk Sng Str	DRM	2016-12-06		67	444891	SHP	001		-2
DOLE	80865	SN-889282	2015-07-22	Pineapple Concentrate – Asp 72	DRM	2015-07-22		67	152616	REC	002		4
DOLE	80865	SN-889282	2015-07-22	Pineapple Concentrate – Asp 72	DRM	2015-07-23		67	444827	ORD	002		-4
DOLE	80865	SN-978385	2015-07-23	Pineapple Concentrate – Asp 72	DRM	2015-07-22		67	152618	REC	002		4
DOLE	80898	SN-889282	2015-07-22	Pineapple Concentrate – Frz 72	DRM	2015-07-22		67	152616	REC	003		4
DOLE	80898	SN-889282	2015-07-22	Pineapple Concentrate – Frz 72	DRM	2015-07-23		67	444827	ORD	003		-4
DOLE	80898	SN-978385	2015-07-23	Pineapple Concentrate – Frz 72	DRM	2015-07-22		67	152618	REC	003		4
DOLE	82159	SN-889282	2015-07-22	Pineapple Concentrate – Frz 61	DRM	2015-07-22		67	152616	REC	004		4
DOLE	82249	SN-889282	2015-07-22	Topical Cold Conc – Asp 61	DRM	2015-07-22		67	152616	REC	005		4
DOLE	82259	SN-889282	2015-07-22	Pineapple Concentrate – Asp 61	DRM	2015-07-22		67	152616	REC	006		4
DOLE	82267	SN-889282	2015-07-22	Pineapple Concentrate – Asp 61	DRM	2015-07-22		67	152616	REC	007		4
DOLE	83850	SN-889282	2015-07-22	Pineapple Conc – Clarified 72	DRM	2015-07-22		67	152616	REC	008		4
DOLE	83850	SN-889282	2015-07-22	Pineapple Conc – Clarified 72	DRM	2016-12-08		67	444892	ORD	001		-4

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Your new HighViews are Shipping Soon!

Your all-new HighViews will begin shipping to MAVES Clients in March. HighViews are the central control point for ViewPoint Logistics™ operations and for that reason, we have made the new HighViews concurrently operable with your existing HighViews with no data migration required. Operators can move between old and new as they learn the new simplified user interface. And of course, this allows

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direct comparisons of functionality and ease-of-use, enabling you to imagine and suggest further improvements. To simplify terminology, we no longer refer to HighViews as 'ActionGrids' even though a major purpose of HighViews is to retrieve and analyze collections of live data at the 1,000 to 20,000-foot levels, and then drill-down to take action on events & transactions as required, (update data on trigger events). The HighView Eagle icon itself symbolizes the hunting Eagle flying high, analyzing its view over a large field of visible targets, followed by a tight focus on an individual object to achieve an end e.g. update transactions, (or catch dinner if you are an actual Eagle).

Some of the many features in your current HighViews that have been further enhanced and simplified are:

- Client Portal (AKA MyLogistics™) for your clients and other trading partners. Your clients may now authorize their own additional users without your involvement. For all intents and purposes, an authorized MyLogistics™ user sees their private HighView data as the internal 3PL users do.

- Simplified no-real-estate touch controls. Maximized visible rows of data.

- Simplified ultra-fast unlimited-size data retrievals, filtering, sorting & exporting.

- Enhanced data crunching, charting, hyperlinking/drill-downs of events, inventory, orders, receiving, packing.

- Enhanced report creation and export

- Exports of self-defined very large HighView data sets to Excel, CSV, XML, etc.

- Simplified access, including searching by example, for all graphical and other archived documentation (BOL, Receipts, Invoices, MSDS, etc.). Every document's access-events are time and operator stamped.

- Operator's can customize their own view of working data. (See what you want.)

- e-Commerce order management, network view and control, waving to the floor, etc.

You will be contacted to authorize the installation of your new HighView technology at your convenience.

MIDDLEWARE – TECHNOLOGY YOU USE BUT DON'T SEE

Over the years you may have heard that *"MAVES wants to update some middleware"* and wondered what that had to do with the 3PL application software you use every day. Well, behind the software you see and interact with daily there is quite a lot of hidden software you never see that is required by MAVES to make the 3PL software you do see on your screens and mobile devices, work. Without the invisible middleware, nothing works. MAVES must constantly adapt to and provide you with the latest and best middleware to provide you with improved 3PL functionality.

Keeping you up to date with the latest middleware technology

MAVES is the longest-serving dedicated provider of 3PL application software. Over those years from 1973 to the present we have continuously adapted to the latest and best supporting technologies (AKA 'middleware') available. From our early inventory control and real-time telephone direct order-entry system in 1973 to today's latest browser based mobile technology, and to our full-time future-oriented Research and Development department's efforts to create new technology of specific benefit to 3PLs, we endeavor to future-proof our Clients. MAVES holds world-wide patents on its adaptive technology that has kept

us up to date with the latest and best supporting technology over 4 decades.

Today we use the following enterprise-level supportive technologies (middleware) for both our 3PL suite ViewPoint Logistics™ and for the advanced work being done by our future-oriented research department.

Supporting technology behind your 3PL software
Languages & Frameworks – these are used to produce (to code/program) the graphical desktop and mobile device forms and business logic that you see and work with every day

- Java (SPRING)
- HTML5
- CSS4
- Angular (Typescript / JavaScript)
- PxPlus
- AIM - Application Intelligence Modeling (MAVES patented adaptive technology)

Databases – unseen but holding all your 3PL's data for storage, retrieval and reprocessing
- IBM DB2

Application Servers – These allow you to access your 3PL functionality via the internet – which is how nearly all MAVES applications communicate whether hosted in the cloud or on a private remote server.
- Apache Server
- WildFly
- Tomcat

Platforms – the fundamental operating systems for the computer hardware that hosts your 3PL applications and data
- Red Hat LINUX OS -> Red Hat Enterprise Linux
- Android mobile devices – all kinds – with Android Enterprise Accepted certification

Software development Project Management tools - coordinating all the steps required to build new functionality required by your 3PL specifically, or by MAVES' 3PL clients generally, and getting it to you in perfect condition, on time, without disruption.
- Maven
- Atlassian Suite – JIRA, Confluence, Bitbucket

(Git)

IDEs – Integrated development environment – tools which our individual programmers use to organize the coding logic they create for your 3PL applications
- IntelliJ

Research Department advanced tools – future-facing technology of possible and/or probable benefit to the special needs of 3PLs
- NoSQL
- RDF Triple Stores (Apache JENA Fuseki)
- Inverted indexing (Lucene / Elasticsearch)
- Docker

Well that's it about middleware, I'm guessing it's way more than you wanted to know, but hopefully it was interesting.

2019 MAVES ADVISORY BOARD USERS GROUP CONFERENCE (AKA MABUG)

Group shot of the MABUG 2019 attendees in the conference room

MABUG is your independent MAVES User Group, in operation since 1982. MAVES is of course a yearly invitee to your conference, which features not only MAVES presenters, but subject experts from 3PLs using MAVES, and from other technology groups with products of interest to 3PLs. Yearly conferences are an opportunity for MAVES users to network with others at social activities, to provide feedback on their use of MAVES software, to suggest future functionality, and finally to get a preview of upcoming new features planned by MAVES.

Last year's MABUG conference (2019) was held

in scenic downtown Sacramento, CA at the upscale Kimpton Sawyer Sacramento Hotel, from March 31 to April 3rd. A popular feature at this conference was a visit to state-of-the-art facilities of the Sierra Pacific Warehousing Group, who also hosted an excellent dinner in historic downtown Modesto, CA.

"The 2019 MAVES user Conference was a huge success! Every year, for the past 8 years, I have left the conference with at least one new piece of information that has improved my company's services and/or productivity. This year, I have 7 new takeaways that I will be implementing. The interaction with other MAVES Users has proven invaluable to my company. I would recommend every MAVES' Client sent their top users to the conference each year. The ROI is immediate."

- MABUG Attendee

JOIN THE DISCUSSION!

In response to your request, MAVES has set up a Discussion Board for MABUG. The purpose is to allow members of the user group to discuss topics of key interest around ViewPoint Logistics™ such as best practice scenarios, latest developments, industry trends, and testimonials. The Discussion Board is not designed to request support by or interact with the MAVES Support Team.

If you would like to become a member of the MABUG Discussion Board, please contact Kristiner Taylor at ktaylor@maves.com.

New Partnerships in 2019

For many years we have supported the label requirements of our 3PL clients through our ViewPoint Logistics™ software, specifically using Teklynx integrated barcode solutions. MAVES is now an official business partner and reseller of Teklynx software, allowing us to provide even better label solutions for our Clients.

In 2019 MAVES became a partner with Techdinamics, expanding your options for quick and simple connectivity to all the major Webstores. This partnership enables a fast response to your e-Commerce business prospects.
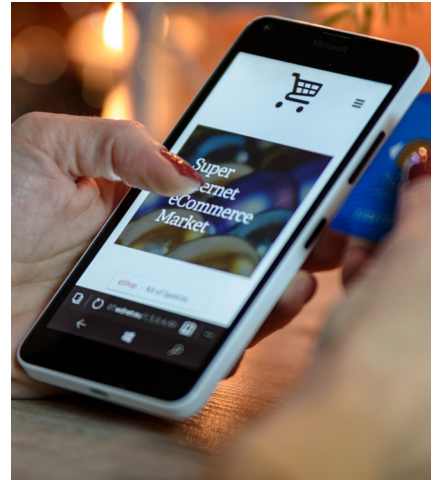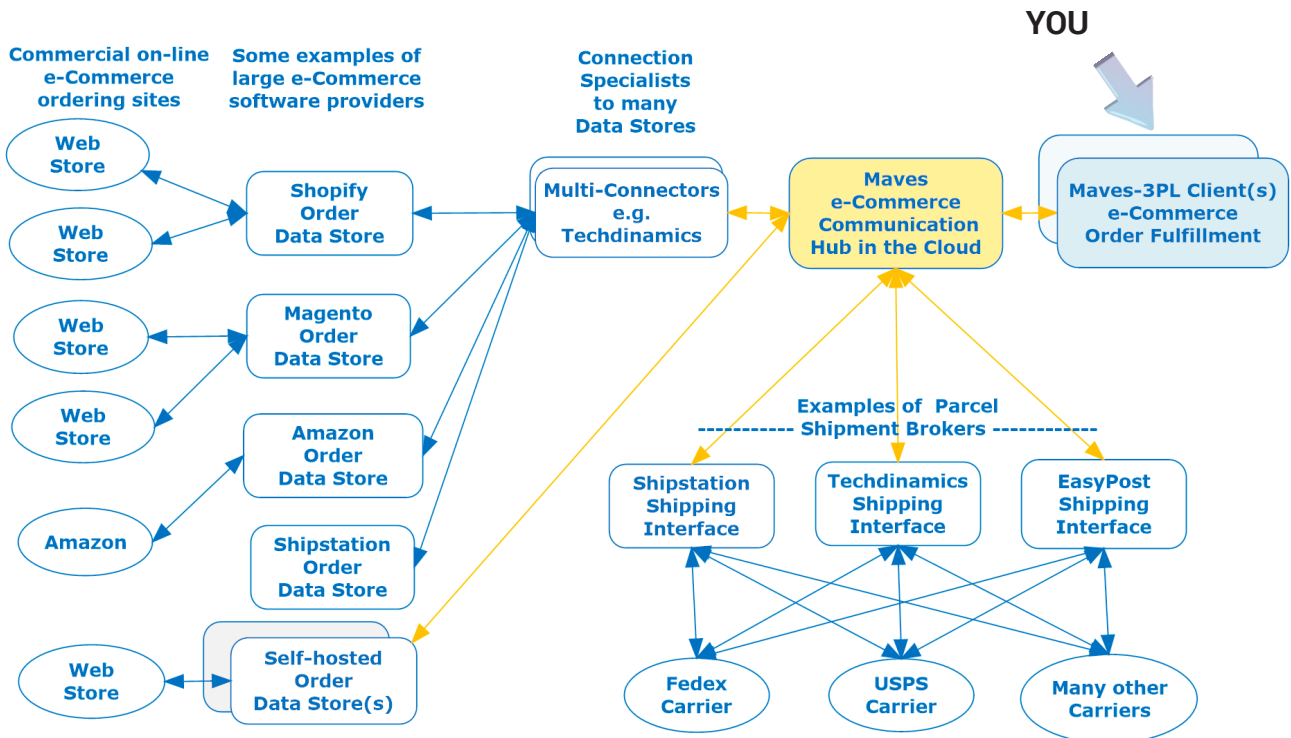
TRG is the leading mobile managed solutions and service provider in the data collection, mobility and barcode printing industry. Since our founding in 2002, TRG has provided customers with the greatest return on their original hardware investment. Our proven track record and ability to adapt to our clients' needs has propelled TRG to the forefront of the industry.

E-COMMERCE AND YOUR FULL SERVICES 3PL – NATURAL PARTNERS

The diagram below shows the immense and expanding world of e-Commerce data connections, from commercial websites on the left to your 3PL e-Commerce-fulfillment site on the right. As seen in gold in the diagram below, MAVES e-Commerce Hub is a single connection from your 3PL to the entire rapidly expanding world of e-Commerce webstores. It shows that your 3PL is spared all the complexity of dealing with orders from multiple individual sources. Even the arrangement of best-price parcel shipping can be optionally handled before the orders flow into your order management system.

The MAVES e-Commerce Hub

YOU

Commercial on-line e-Commerce ordering sites	Some examples of large e-Commerce software providers	Connection Specialists to many Data Stores		

Web Store — Shopify Order Data Store — Multi-Connectors e.g. Techdinamics — Maves e-Commerce Communication Hub in the Cloud — Maves-3PL Client(s) e-Commerce Order Fulfillment

Web Store — Magento Order Data Store

Web Store — Amazon Order Data Store

Amazon — Shipstation Order Data Store

Web Store — Self-hosted Order Data Store(s)

Examples of Parcel ----------- Shipment Brokers -----------

Shipstation Shipping Interface — Techdinamics Shipping Interface — EasyPost Shipping Interface

Fedex Carrier — USPS Carrier — Many other Carriers

A web-store customer's purchase can travel, from the moment of approval of their credit, into Maves' e-Commerce Order Management System in 1 or 2 seconds, and be fulfilled and shipped in minutes. (Best case scenario)

The growth of e-Commerce and the growth of 3PL services go hand in hand. Your 3PL facility and your wealth of experience is the natural partner for companies who sell consumer items through websites that require rapid order fulfillment. Many 'web store' companies are new ventures that do not have their own assets to host the distribution of the products they are selling on-line; other e-Commerce web stores are traditional bricks & mortar companies and may already have warehousing facilities, but which are not suitable for fulfilling a large volume of small-unit direct-to-customer shipments. Either way, an increasing e-Commerce marketplace should mean much more business opportunities for full service 3PLs.

Some full-service 3PLs have been slow to add this rapidly expanding e-Commerce fulfillment

requirement to their value-added services, while new non-full-service fulfillment start-ups have been quick to the market. And yet, full-service 3PLs have out-of-the-box built in advantages in the handling of goods.

At the end of the day, e-Commerce is all about Order Management and inventory accounting, something your 3PL does day in and day out. However, there are important differences in e-Commerce order management VS traditional 3PL order management…

1. **Volume, shipping units, and the speed of fulfillment**

   e-Commerce orders are most often at the retail level, meaning in eaches or the smallest shippable unit, and may number in the thousands daily. These must be fulfilled by a variety of unit level picking and packing methods, with release to small-parcel delivery services normally within the day of orders being received.

2. **Order intake to the 3PL – traditional EDI VS Ultra-fast Web Services**

   e-Commerce orders bypass the 40-year-old slow and complicated traditional EDI intake of orders. Instead e-Commerce orders arrive directly into the 3PL Order Management system via 'MAVES e-Commerce Hub' that sits in the cloud gathering orders from many different sources. Even before these orders flow into your 3PL order management system, they can optionally be rate-shopped for best price parcel delivery and an order tracking number.

   Using your MAVES HighView you can view and analyze future incoming orders while they are still being collected and rate-shopped out in the cloud, and of course once they flow into your Order Management system, your MAVES HighView enables you to analyze, group, and manage the release of orders to the floor.

RESEARCH AND EXPERIMENTAL DEVELOPMENT – DISCOVERING FUTURE CAPABILITIES TO ADVANCE YOUR 3PL SERVICES

MAVES is dedicated to 3PL warehouses who serve many clients at once. 3PL multi-client is widely acknowledged to be more than twice as complex as single client warehousing. This is because of concurrent differences required to emulate the standard operating procedures and inventory issues of multiple clients within a single warehouse. To resolve the many issues relating to concurrent differences MAVES has for several years maintained a full-time dedicated team of scientific research professionals headed by a Master of Science - Expert Systems.

As all research has great uncertainties and no guarantees of success, our aspirational goals do not have specific target dates but involve full-time dedicated ongoing research and development.

Some goals of our research are to eventually make possible (if we can)…

• Enabling logistics business analysts and knowledgeable practitioners (you) to create new logistics-application capabilities without programming skills.

• Time travel: Within your security profile the entire logistics-application database would be viewable and analyzable exactly as it existed at any prior moment in time, e.g. 3 years ago on March 17th at 10:01 pm.

• Time and Space travel: Users could review the travel and contact history of any mobile

equipment or operator, through both time and space, its arrival, duration, departure, and status, backward or forward, and also see the performance of the warehouse physical work events that caused them.

- Clients of multiple 3PLs might access their global business data, consolidated and/or separately, across all their independent 3PL providers' private databases in real time. This would enable smaller independent 3PL providers to provide equal or better information services to their clients than even the largest multi-site 3PL warehousing service providers.

- Users would be able to speak conversationally to their database in the manner of Siri or Alexa and obtain relevant answers and/or behaviors regarding any and all information in the 3PL database, without having to go to menu items.

- Knowledgeable users could self-create and modify their own physical work processes, as uniquely required by each of your clients.

Again, all that is current research and has no delivery date. Some of it may not be possible or practical, but we are making progress.

MAVES EMPLOYEE SPOTLIGHT: TONY ZHANG

Meet Tony Zhang, MSc Expert Systems, Director of MAVES dedicated Scientific Research & Experimental Development Team.

Kristiner Taylor of our Marketing team sat down with Tony for a one on one.

Q. Tell me about your educational background.

Tony: I graduated from the National University of Defense Technology with a Bachelor of Engineering in Computer Software at age 20. Later I returned to study for my master's degree in Artificial Intelligence (Expert Systems) and I graduated at age 22.

Q. How would you describe your role at MAVES?

Tony: My department is strictly dedicated to working with advanced technologies not yet in common use. My role is to evaluate and determine how they might be used to create better functionality for 3PL warehousing and transportation (logistics). For example, how good would it be if you could just ask the computer any question, e.g. "Which orders are going to Kentucky tomorrow?" and get a full answer, rather than searching for the task or report which was preprogrammed to give you that answer? Today we can answer that and much else in our experimental database, without programming any specific questions or answers. Our goal is to retrieve any and all data by voice with none of the specific programming that is required today. We

are getting much better at it but are not quite there yet.

Q. What do you like to do in your spare time when you are not researching answers to questions that no one is asking?
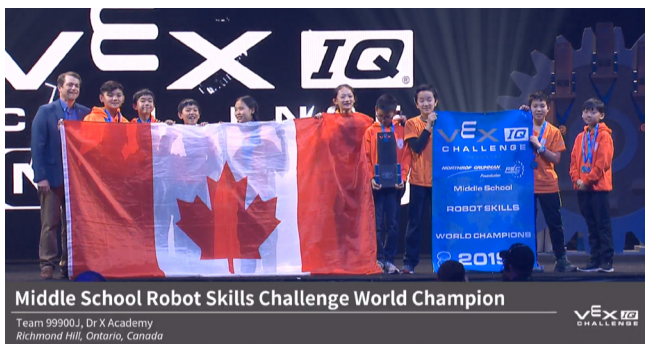
Tony: I enjoy Volleyball and Golf.

Q. You have two young kids, correct? Tell us about them.

Tony: Yes, both son and daughter were recently in VEX world robotics competitions.

Q. Please describe what that means.

Tony: Vex competitions test STEAM skills (Science, Technology, Engineering, Arts, and Mathematics) by tasking teams of students to design and build a robot to play against other teams in a games-based engineering challenge. These tournaments are held year-round at the regional, state/province, and national levels, culminating in the national winners going on the VEX Robotics World Championship each April.

Shot of daughter's team receiving World Champion award for Robot Skills

Q. And how did your kids fare in these competitions?

Tony: My daughter's academy (Dr X Academy) won both the 2019 VEX IQ Robot Skills World Championship, and the VEX IQ Teamwork Challenge World Championship for the Middle School Category. Teams from China came second.

My son's team placed 8th in the world in the High School Category.

Q. Why do you feel it is so important that your kids attend Dr X Academy?

Tony: My wife and I believe that the future belongs to kids who have STEAM skills, regardless of the profession, trade or other vocation they eventually choose.

DR. X ACADEMY

Dr. X is an after-hours STEAM academy (Science, Technology, Engineering, Arts, Mathematics) for middle and high school kids. MAVES is a supporting donor for Dr. X Academy, with a focus on supporting girls. Girls are somehow being inhibited from pursuing careers in STEAM. That girls are really good at the hard subjects is proven by their participation in Dr. X's academy winning two World Championships in 2019.

Footnote: MAVES International Software strives for progress through innovation and accordingly supports STEAM education for the next generation by making regular donations to the Dr. X Academy and independent teams.