1. Overview of TMWSuite

TMWSuite is a Windows-based, client-server, software application for use by truckload motor carriers and logistics firms to help manage dispatch, billing, and settlement functions. TMWSuite was developed by TMW Systems, Inc. in Beachwood, Ohio (www.tmwsystems.com).

TMWSuite has seven base applications that work with a MS SQL database. To accommodate a wide variety of clients and business needs, TMWSuite has various add-on modules for EDI, maintenance, mileage, fuel, accounting, web queries, mobile communications, etc.

The following subsections provides an overview of all TMWSuite's base applications and many of its add on modules.

Functional diagram of TMWSuite

The following diagram shows the wide-ranging functionality of TMWSuite – how it can help you manage your enterprise planning and operations. The optional modules are shown in dashed lines; and depending on how you do business (or how you want to expand or optimize your business), you can select system components to fit your needs. Even within the base application, you can set various system parameters to customize how TMWSuite works best for your situation.
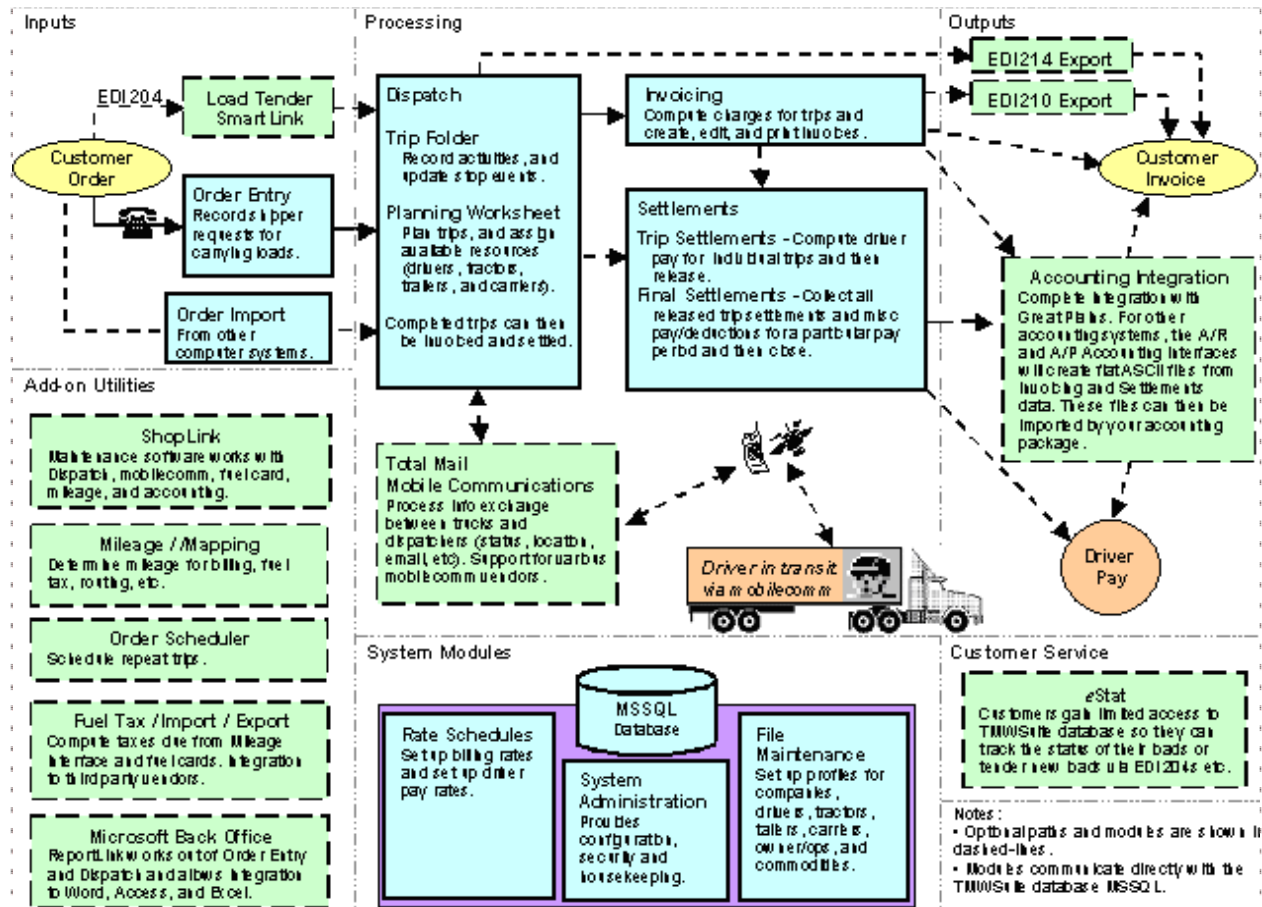
TMWSuite Overview

Base applications

The base TMWSuite system consists of these integrated applications:

Application	Function
System Administration	The System Administration application provides configuration, security and housekeeping functions for TMWSuite. These functions include:

- Establishing and maintaining user accounts.

- Creating and maintaining groups of users.

- Permitting/denying access to various programs, functions and fields.

- Establishing user-definable fields so that data can be labeled and categorized in a way that makes sense for your business environment.

- Editing and defining service regions for operations, and reporting functions.

- Establishing unit conversion tables for billing and driver payment purposes.

- Editing the configuration files so that the system's features match the way your company does business.

- Defining custom menu options that allow you to access external programs from within TMWSuite.

Application	Function
File Maintenance	The File Maintenance application is used to define profiles for entities that are key to your business operation. A profile is a record that contains basic information relevant to your company's relationship with that entity. A master file is a group of profiles of the same type. In TMWSuite, you can use the File Maintenance application to establish these master files:

- **Company master file**
  The company master file contains profiles of all organizations with which your company does business, such as shippers, consignees and companies responsible for payment of invoices. In addition, it may include profiles for any locations where you wish to show resources, such as drop and hook locations, truck stops, fuel stops, trailer wash sites, or trailer storage yards.

- **Driver master file**
  The driver master file consists of profiles of all drivers used by your company. This includes company drivers, owner/operators who drive, and drivers who work for inside carriers.

- **Pay To master file**
  The Pay To master file contains profiles of all owner/operators or third party carriers who are to be paid for transporting loads for your company.

- **Tractor master file**
  The tractor master file consists of profiles of all tractors used by your company. This includes company-owned tractors and those belonging to owner/operators and inside carriers.

- **Trailer master file**
  The trailer master file contains profiles of all trailers used by your company. This includes company-owned trailers and those belonging to owner/operators and inside carriers.

- **Carrier master file**
  The carrier master file consists of profiles of all inside and third party carriers that transport loads for your company.

- **Commodity master file**
  The commodity master file consists of profiles for each kind of cargo transported by your company.

- **City master file**
  The city master file consists of all city locations that may be recorded for a trip, or referenced in a company, driver, tractor, trailer, or carrier profile.

Application	Function
Order Entry	The Order Entry application is used to record a customer request for the movement of goods or materials. Such a request must be recorded before resources (i.e., driver(s), tractor/trailer/carrier) can be dispatched to move the load.

The primary information recorded for an order includes:

- The pickup and delivery locations.

- The scheduled pickup and delivery dates and times.

- Quantity, weight and description of the goods to be moved.

- Revenue classifications.

- Any special needs or information relating to the order, such as trailer requirements; temperature, hazardous materials, special permits, etc.

- Billing related data.

Other features include:

- A powerful search engine, which allows you to look up orders according to company, status, assigned resource, region, city, ship date, and/or delivery date.

- The ability to track and report on out-of-tolerance early and/or late arrivals according to customer.

- The ability to pre-rate an order based on billing rates set up in the Rate Schedules application.

- The ability to assign resources to an order.

Application	Function
Dispatch	The Dispatch application is the "heart" of TMWSuite. The other applications in the system either feed data into Dispatch or process information from entries made in Dispatch.

Dispatch is used to plan and record the daily activities of drivers, tractors, trailers and carriers. This application is most effective when data is entered in real-time (i.e., when events are recorded as they occur). This enables you to look up the current location and availability of all resources. In addition, you can determine which resources are the best matches for trips not yet started.

The two core functions of the Dispatch application are:

1. Dispatch of resources and tracking of dates, times and locations of events performed for each trip.

2. Planning the resource assignments for moves that have not yet begun.

Dispatch consists of two primary screens:

- **Trip Folder**
  The Trip Folder is designed primarily for operations personnel who communicate regularly with drivers and/or carriers about their trip assignments. It is used to record the dispatch of resources and to update the status of an individual trip as it progresses to completion. Primary information in this folder includes:

  - The dates, times and locations of all stops.

  - Commodity-related data.

  - Events that occur at individual stops.

  - Resources (driver, tractor, trailer and/or carrier) assigned to the trip.

- **Planning Worksheet**
  The Planning Worksheet is designed primarily for operations personnel who plan loads and manage resources. It is used to review outbound and inbound trips and to match resources to outbound trips that are ready for dispatch.

Application	**Function**

Rate Schedules

The Rate Schedules application (also called Tariffs or Automatic Rating) has two purposes. It is used to record:

- Billing rates that your company has negotiated with its customers.

- Pay rates for drivers, owner/operators and third-party carriers.

A rate may consist of a single per-unit amount or a rate table (i.e., a matrix of amounts). For each rate, you can establish a set of restrictions that determines exactly when to apply the rate.

After rates are set up, you can use TMWSuite's Compute function to have the system automatically rate a trip for billing purposes, or calculate driver payment.

When you activate the Compute function, the system does the following to apply the proper billing or pay rate to a trip:

1. It searches through the line haul rates that have been recorded in Rate Schedules. (Such rates are known as primary rates in TMWSuite.) It checks the trip against the restrictions you have specified for each rate. These restrictions are the criteria the system uses to determine when to apply the rate.

2. When it finds a rate matching the trip, it calculates the line haul amount.

3. If any accessorial rates are associated with the line haul rate, the system compares the trip to the restrictions for each of those accessorial rates. If the trip matches the criteria for one or more of those rates, the rate(s) are applied.

Application	Function
Invoicing	The Invoicing application (also called the Billing Desk) supports the creation and printing of freight bills and stand-alone invoices.

Invoicing information is drawn from both the Order Entry and the Dispatch applications. Billing related information that is known at the time the order is prepared flows automatically from Order Entry or Dispatch to Invoicing. Information related to freight movement and entered in Dispatch also flows automatically to Invoicing. The billing clerk can manually enter additional information at the time the invoice is prepared.

When invoice preparation begins, the billing clerk usually reviews all orders ready to be invoiced. At that time, all or a selection of those invoices can be prepared manually, or they can be rated and completed automatically by the system. Automatic calculation of charges is based on billing rates, which have been recorded in the Rate Schedules application.

Most invoicing functions are performed on the Edit Invoice Folder, the primary work area of the Invoicing application. Invoice preparation generally involves these four steps:

1. Review the orders ready to be invoiced. This can be done one order at a time, or the orders can be listed in a queue window. If the queue is used, you can restrict the list according to shipping date, delivery date, shipper, consignee, Bill To company, or revenue classification. If more than one user performs billing tasks, these restrictions serve to divide the orders to be invoiced into separate work groups.

2. Advance through the orders, rating them and making necessary adjustments to the invoices.

3. Print the invoices.

4. Post the invoices by transferring them to your accounting system.

Application	Function
Settlements	The Settlements application is used to calculate pre-tax driver payment. Due to its integration with the Dispatch and Invoicing applications, pay-related information such as dispatch miles and shipment revenue flows automatically from them to Settlements.

The Settlement application contains two primary screens:

- **Trip Settlements Folder**
  This screen is used to record payment for a driver's individual trips. Pay can be determined manually, or it can be calculated automatically by the system. Automatic calculation of pay is based on pay rates, which have been recorded in the Rate Schedules application. When pay records for individual trips are correct and complete, the status of these records is changed from *On Hold* to *Released*. This means that they are ready for final processing in the Final Settlements Folder.

- **Final Settlements Folder**
  This screen is used to determine the driver's final settlement amount for a pay period. The Final Settlements Folder lists all of the pay records that were released for a driver during a particular pay period.

  The Final Settlements Folder can be used to perform two functions: collection and closure.

  - The collection process applies any pay-related items not tied to a trip, such as deductions and adjustments. These items are applied according to a pre-established schedule for each individual driver.

  - Closure is the final step of the settlement process. At this point, the system considers the driver's pay period final. Therefore, the status of pay details in the period is changed to *Closed*, making them ineligible for change. In addition, no new pay details can be added to the settlement. Behind the scenes, balances on any standing deductions/adjustments for the driver are updated automatically.

After settlements for a pay period have been closed, settlement data is available for transfer to third-party accounts payable and payroll systems.

TMWSuite Management Reports

TMWSuite Management Reporting is a prepackaged Access reporting tool for extracting data from your TMWSuite database. This add-on application is provided to our clients at no cost. Many of the reports will be familiar to TMWSuite users who are former TTS users. The reports include:

TMWSuite Management Reports

- **Revenue Analysis**
  The Revenue Analysis report retrieves invoice data, regardless of the invoice status. Users can restrict data retrieval by invoice status, bill to, shipper, consignee, origin/destination states or regions, and revenue types. The data can be displayed in three different formats: totals only, invoice header detail, and invoice header detail grouped by customer.

- **Unbilled Revenue**
  The Unbilled Revenue report retrieves all orders that are delivered but have not been billed. Users can restrict data retrieval by ship date, order status, invoice status, and revenue types. Optionally, data for invoices with *Printed* or *Transferred* status can be included in the report.

- **Daily Sales**
  The Daily Sales report shows billed and unbilled revenue; revenue per mile; and total travel miles, loaded and empty miles within a ship date range. Users can sort and subtotal by order number, movement number, bill to, or driver. Data can be restricted by shipper, bill to, consignee, driver, tractor, trailer, driver type, revenue type, and origin/destination states or regions.

- **Trailer Locator**
  The Trailer Locator report shows current locations, based on the last actualized stop, for all active trailers. Users can use load status (*MT* or *LD*), current status (*Available*, *In Use*, etc.), current company and state, destination company and state, and trailer types as restrictions when retrieving data.

- **Inactivity Report**
  The Inactivity Report allows you to see which resources, i.e., drivers, tractors, and trailers, are idle during a user-specified period. The results are sorted by resources with the highest number of inactive days.

- **Resource Mileage Report**
  The Resource Mileage report shows the percentage of empty, loaded, and total miles for all resources (tractors, trailers, and drivers). Miles are calculated for all moves regardless of whether an order is attached. This report can be restricted by revenue type, tractor, trailer, or driver.

TMWSuite Management Reports

(cont.)

- **Daily Dispatch**
  The Daily Dispatch report retrieves current trip activity for drivers. Users can restrict the retrieved data by driver types and revenue types.

- **Available Loads**
  The Available Loads report shows all orders available to be dispatched within a given ship date range. Users can restrict retrieved orders by origin state and regions, destination state and regions, and revenue type.

Customizing TMWSuite

TMWSuite offers many features. Some will be very useful to you; others will not be applicable due to the way you do business. For this reason, TMWSuite can be configured to best suit the way your company operates.

Your TMWSuite system administrator can use the following tools to customize the system:

- **TTS50.ini file**
  The TTS50.ini file is a configuration file that contains a large number of settings or "switches". Some of these settings are used to turn off specific TMWSuite features. Others are used to tell the system how a particular feature is to operate. Changes to settings in the TTS50.ini file can be made with a text file editor.

- **General Info Table**
  Like the TTS50.ini file, the General Info Table is a global configuration file with many settings. These settings appear in a grid that you can access only in System Administration. The grid allows you to see or modify many system parameters at once. These parameters affect how various TMWSuite applications work, similar to the customization of features allowed by TTS50.ini settings.

- **User-defined labels**
  Your company has its own "language". You use certain terms to categorize your loads, your equipment, and your drivers. You also have names for the types of data you record. To use your own terms and categories, TMWSuite allows you to define many fields yourself. Such user-defined fields are called labels. They are stored in a portion of the System Administration application called the label file.

TMWSuite add-ons

Add-on features are available to accommodate the wide-ranging needs of TMW's client base. To purchase an add-on, contact TMW Sales. A number of add-on features are described here:

Add-on	Function
Order Scheduler	The Order Scheduler feature allows you to automatically schedule trips that are standard business. Such trips have stops that always occur:

- At the same locations.

- On the same day(s) of the week.

- At the same time(s) of day.

Use of the Order Scheduler feature eliminates the need to manually enter such "milk run" trips individually. Instead, you set up a template for a particular type of trip. Then you establish a trip schedule that is based on that template. When you process the schedule, the system automatically creates new trips by making copies of the template.

EDI   Electronic Data Interchange (EDI) is a common set of electronic document standards that allow for electronic commerce between trading partners. In the trucking industry, this electronic commerce is typically the transmission of common business documents between shippers and carriers. EDI versions of these documents have numeric designations like 204 load tenders, 990 order confirmations, 214 shipment status reports, and 210 invoices.

As an example, when shippers tender a load to a carrier, they first generate a document in their system. This document is then translated into an EDI transaction set and transmitted to the carrier, typically by a Value Added Network (VAN), but alternatively via the Internet or a direct connection between the shipper and carrier. This transaction set must be translated through a process called mapping into a "flat file" format document that can be imported into TMWSuite. Every document from each trading partner requires its own map for translation. The resulting document can then be imported with a SmartLink.

When invoicing a shipper, or sending a shipment status report, the process is reversed. The carrier first generates a document in TMWSuite. The SmartLink then exports this document in "flat file" format. The document is then translated by the mapping process (using document- and trading partner-specific maps) to an EDI transaction set. Finally, it is transmitted to the shipper by a VAN, over the Internet or through a direct connection.

Add-on	Function
ShopLink	ShopLink is a fleet equipment-maintenance system for vehicle management and cost analysis. A complete package for any fleet with rolling stock, ShopLink has the ability to customize hundreds of variables and screen display options. Reports and analysis output can assist you in five separate cost-reduction areas for ongoing budgets and productivity, and future purchases and planning.

Features include the following:

- Allows a PM (Preventive Maintenance) based on fuel usage.

- When you do A, B, and C PMs, if you close a "C" PM, it updates A and B automatically.

- Supports various currencies with tracking capabilities.

- Twenty-five hard-coded reports.

- User-defined fields are reportable through Crystal Report Writer Professional.

- Shop inventory is user definable.

- Generates barcode labels using any type of reader.

- Uses ATA standard VMRS codes.

- Can define an individual toolbox for each mechanic and track tools as parts.

- Improved handling of consignment parts.

- Meters section includes lifetime- and current-warranty information.

- Transmits purchase orders electronically with optional module.

- More accurate reporting--allows "reason for repair" for each individual part.

- Tracks warranty status and reason for delay.

- Can set min/max points on inventory and request list by vendor of parts that need to be re-ordered.

- Automatically creates a purchase orders for stock below level and uses lowest-cost vendor.

- Updates inventory as purchases are received; holds purchase orders open for backorders as long as needed.

- No limit to number of digits or segmentation of accounting numbers.

- Help screens.

- Creates a time card, runs and exports reports of everything each mechanic did each day.

Add-on	Function
eStat	How much time would you save if your shippers could trace their own loads and thus reduce interruptions for "What's the status of my load?" calls? What if your customers could place their orders via the Internet? *e*Stat brings this exciting possibility to reality. With *e*Stat, your customers and business partners can log into the system via the Internet and view their last loads for any shipper, consignee, or payer. The load information they see includes up-to-date status of each load – as determined from check calls, fuel purchases, or mobile communications / GPS reports. They can drill down into the detail of any order. They can display location indicators on a map. In addition, they can place their orders through the same system. Reporting functions are available, including regularly scheduled reports that are generated automatically and can be accessed via the Internet, or automatically e-mailed to an end user.
ReportLink	ReportLink allows you direct access to all your data. The Executive Reporting feature provides you with a set of ready-made Excel reports. Many built-in functions include Percent-per-Month, Revenue per Mile, and Total Miles by Revenue Class. ReportLink includes sample spreadsheets with graphs showing revenue and expense trends over time periods and key account analysis represented graphically. Compare business segments and drill down into the data to find out where and why you were the most profitable. Automatically email customer reports to a selected client account.
Total Mail	TotalMail™ is an intelligent message center that processes and records information exchanged between trucks and dispatchers. Using a database server and an Omnitracs™ satellite link, trucking companies can more efficiently exchange information with their drivers, eliminating costly delays and errors. For dispatchers, TotalMail provides a simple method to both communicate with drivers (and other dispatchers), and automatically update the TMWSuite™ database. Text messages and preset forms can be sent to drivers, using either the TotalMail viewer application or directly from the TMWSuite™ Dispatch program. By automatically updating the TMWSuite database, TotalMail allows dispatchers to concentrate on scheduling.
Mapping	Combine mapping software with dispatch and your dispatchers can 'see beyond the walls.' This tool displays your trucks at their current or final destination. It can be used to plot customer locations.

Add-on	Function
ETA Warning Agent	The ETA Warning Agent notifies concerned parties when a tractor is likely to be late for a pickup or drop event. The program looks at upcoming stops and the assigned tractor's position based on its latest TotalMail check calls. The program then directs the mileage interface to calculate the remaining travel time to the stop for an estimated time of arrival (ETA). If the arrival will be later than scheduled, the ETA Warning Agent sends a warning e-mail or TotalMail message to the specified parties. A warning will also be sent when resources have not been assigned and it appears the scheduled ETA will not be met.
	Typically, the ETA Warning Agent checks loads automatically based on the parameters you set for it. You can also initiate the checks manually if desired. Either way, it gives a late notice to whomever you specify, e.g., dispatchers, dock managers, customers, etc.
Accounting Interface	The TMWSuite Accounting Interface provides the means of transferring your billing and settlements data to your accounting package. The interface exports the data from your invoices, vouchers (A/P records for third-party pay) and pay records (pay details and time cards) from TMWSuite to your accounting package. Whether the data is exported directly to your accounting package or is exported to a file your accounting package imports depends on the accounting software you are using.
Advances/Fuel Purchases Import	The Advances/Fuel Purchases Import interface provides communication between TMWSuite and providers of electronic data.

The interface is designed to import two types of information:

- Advances to company drivers and owner/operators.
  Note: Advances can be in the form of Express Cash, Express Checks, phone card usage, etc. The cash advances information becomes pay details that are transferred to the Settlements application.

- Fuel purchases made by company drivers and owner/operators. Fuel purchases information is "married" to trip data to provide estimated miles. Estimated miles can be exported to the Fuel Tax Export interface, which exports it to your fuel tax services.

  Note: Fuel purchases information may also become pay details, when it relates to owner/operators.

Add-on	Function
FuelTax Export	TMWSuite's FuelTax Export interface provides data for your third party fuel tax service. The number and type of export files created is determined by the fuel tax service to which you are exporting. The FuelTax Export interface uses SQL Server stored procedures to access fuel tax data from the legheader table. In addition, the FuelTax Export interface pulls data from the city table, the fuelpurchased table, and the checkcall table for users who also employ the TMWSuite Advances/Fuel Purchases Import interface.
Imaging	The Imaging interface allows you to save your invoices and/or master bills as images for processing by a third party imaging vendor. Images are produced as part of the normal invoice printing process when the invoice status is being updated from *Ready to Print* to *Printed*. Invoices and master bills may be printed or imaged at the same time.