



TECHNOLOGY OVERVIEW

- **Rapid Application Development**
- **Lower Total Cost of Ownership**
- **Design, Develop, Deploy**
- **Mobility Solutions**

Overview

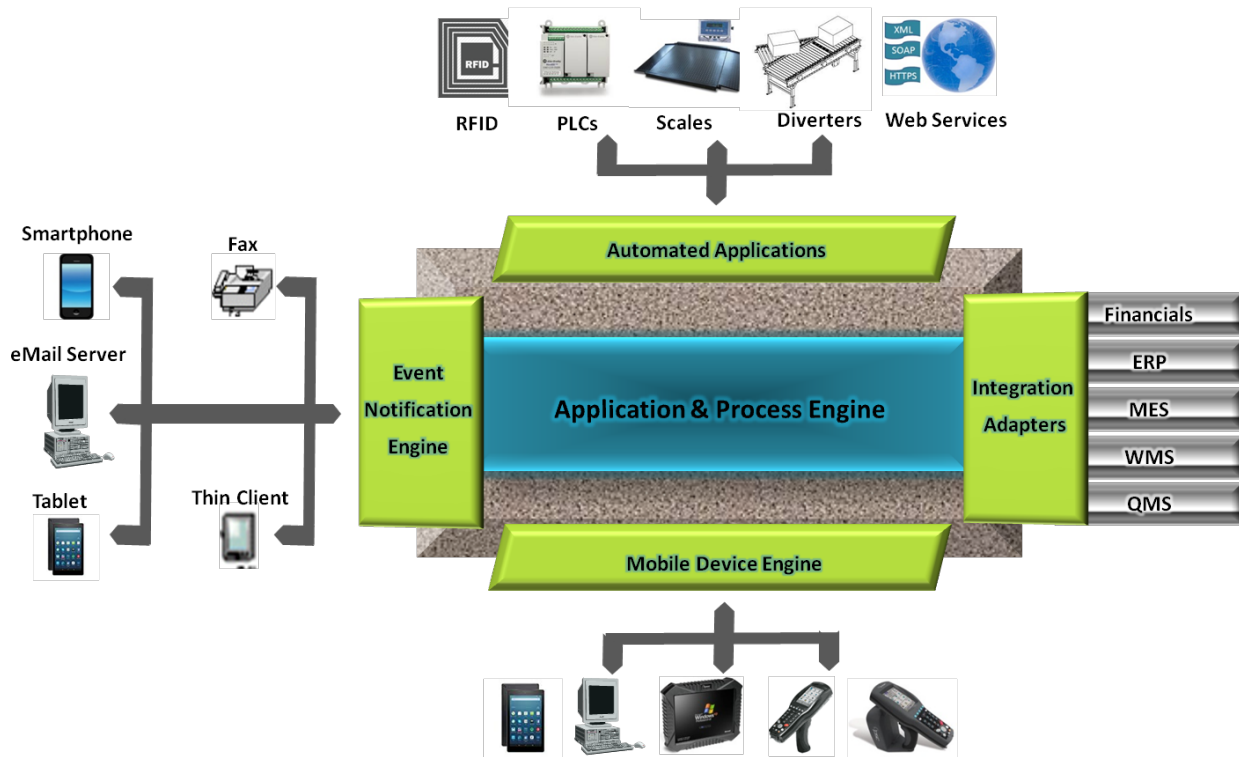
Automatic data capture has become a mission critical platform in today's industry. Automatic Identification Data Collection (AIDC) technology is no longer a subordinate technology to business applications. Companies require a single application for entering and capturing inventory data. For example, it is not practical for a materials handler to use one application to update the warehouse management system, another to update the enterprise resource planning system, a different one to update shipping systems and still another to update quality control systems. The materials handler should be able to do his job without concern for which back-office applications are being used to receive, provide or validate the transmitted information. A good AIDC application is capable of simultaneously parsing and transforming data while transmitting to multiple systems of record as well as simultaneously transforming, validating and receiving data from multiple data sources.

TouchPath

TouchPath's TransitionWorks (TWS) software platform is a powerful AIDC and mobility development platform, delivering the data collection applications required by businesses today. TouchPath provides the necessary solution for companies to **rapidly design, develop, deploy** and manage AIDC applications using a wealth of technologies from radio frequency identification (RFID), barcodes, biometrics, programmable logic controllers (PLCs), scales, sensors and mobile devices. With hundreds of in-production installations worldwide, TouchPath captures and transforms data faster, simpler and more reliably than ever before.



TouchPath's AIDC Platform



TouchPath solutions created in the TransitionWorks Platform naturally integrate the three primary elements of complex AIDC processes:

Automated Edge devices. Advanced data collection technologies like RFID, barcode, PLCs, scales, sensors, conveyors, and biometrics – multi-device, multi-frequency, multiple data formats and multiple form factors which can be interacted with individually or simultaneously.

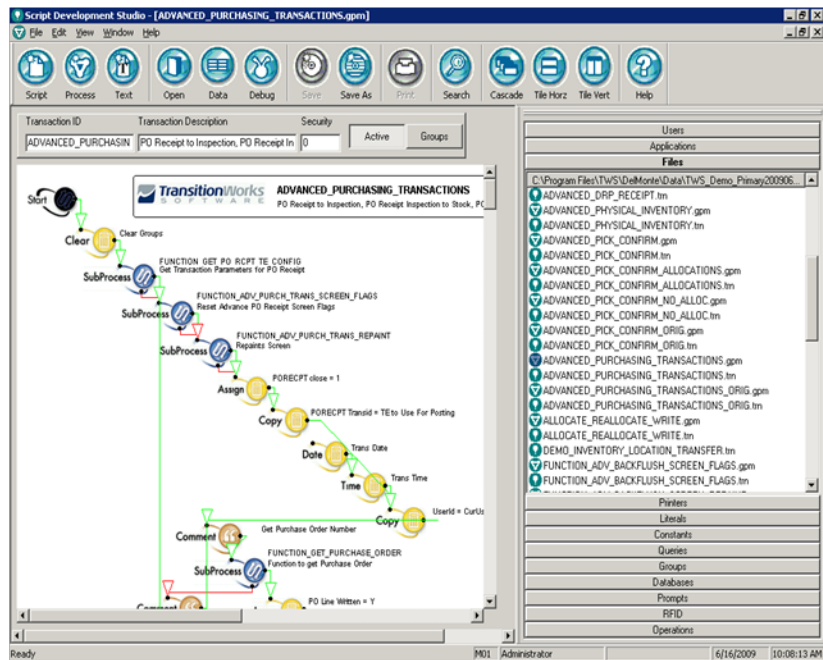
Mobile information workers. The Mobile Device Engine, enables internal front and back-office workers to collect data or view real-time data analysis, as well as the mobile workforce who use Wi-Fi and web browser edge devices, including smart phones and tablets.

Systems of record integration. TouchPath has numerous integration capabilities to retrieve or update multiple back office systems, both packaged and custom ERPs, MES, Quality, and legacy systems. TouchPath's solutions are crafted using intuitive design, draw and deploy methodology that quickly turns raw data from edge devices into useful information for the information worker and system(s) of record. From graphical design to graphical presentation, TouchPath brings consistency and structure to the development process for AIDC and mobility transactions. TouchPath's software platform (TransitionWorks) technology products are TWS – DT (Design Time), TWS – RT (Run Time), and TWS Mobile.

TransitionWorks Design Time – TWS-DT

TWS-DT provides a business analyst/developer with the tools necessary to design, draw, debug and deploy business processes within the enterprise. Everything the developer needs to create business process applications is readily accessible via a series of tool bars and palates. From user and device profiles to nearly 100 preconfigured business operations for dragging and dropping into a business flow, TWS-DT shortens development time from months to days. Additionally, TWS-DT provides a comprehensive debugging capability that supplies the developer with greater visibility and maintainability of the process and data flow as the developer reviews the execution of the application in this component. This eliminates the guess work and hours of frustration during the debugging process.

TWS-DT allows the business analyst/developer to focus on the required business process flow and appropriate validation without being concerned with user interface form factors, device communications or application integration methods as the platform abstracts the business process from these typical difficulties. At the same time the developer has the flexibility to create and insert separate presentation layers and style sheets for use on different devices without having to alter the business logic of the application. This capability provides the developer with a genuine ergonomic deployment of application to device for the most efficient use in the field.



TransitionWorks Run Time – TWS-RT

TWS-RT provides the infrastructure for the execution of the business rules and processes designed in TWS-DT. It renders the user interface to the different form factors being used by information workers, such as Windows Clients, smart phones, and tablets as well as browser-based devices such as bar-code handhelds, VMU's and PCs. In addition, TWS-RT integrates with the different types of edge devices, such as RFID readers, printers, bar-code equipment, PLCs, scales, sensors and many more. It serves as the edge server for the processes built with TWS-DT and supplies the system administration functions for user management, device management and monitoring, and the numerous integration abilities native to the platform. TWS-RT supports a number of integration methods. Service Oriented Architecture (SOA) integrations can be done through Web services with Simple Object Access Protocol (SOAP). TWS-RT supports API and RFC integrations and ODBC connectivity. It also supports message queue integrations through commercial products such as Microsoft Message Queuing (MSMQ), WebSphere® MQ, and iSeries™ Data Queues, as well as other Java Message Service (JMS) queues.

TransitionWorks Mobile

TransitionWorks Mobile provides the ability to execute business processes developed in TWS Design Time on a device running Windows CE or Windows Mobile operating systems. This gives developers the freedom to deploy business process applications on a wide variety of devices, ranging from handheld barcode readers to smart phones, for operation when a network connection is not available.

TransitionWorks Mobile allows Windows Mobile devices to run in an intranet detached “store and forward” mode allowing data to queue up between the mobile device and the server. Data synchronization occurs when the mobile device comes within Wi-Fi access range and communicates with the server. If the mobile device has internet connectivity to the server and has a web browser, no client software is necessary. Internet connectivity to the server also allows managers and supervisors to monitor and manage assets/inventory while on the go. Customers using TWS Mobile can rest assured their **mobile work force** will have the tools to get the job done efficiently and effectively.

TouchERP Mobile Platform



TouchERP mobile platform was created to bring the ease of use, reach, and flexibility of the smart phone to your ERP system. The platform was designed to support a variety of Android and iOS native apps that will meet particular needs within the industrial manufacturing and distribution sectors. Mobile apps can be a more cost effective and efficient solution when used in specific business areas, such as sales, field service, machine service/maintenance, and CRM. TouchERP puts the power of ERP in the palm of your hand.



Technology Features:

- Drag and Drop business process flow development
- Connection to an unlimited number of data sources
- Device management and monitoring
- 'Web UX with HTML, CSS & JavaScript
- RFID Engine with configurable environment for readers, antennas, and tags
- End user input validation
- Flexible PLC / Scale input and output
- Complete traceability by user/device
- Integrated security and user authentication
- Multi-lingual support based on user login

Specifications:

TouchPath accepts data captured through:

- 1D Linear or 2D barcodes
- RFID – UHF, HF and LF, UWB, 433 mhz (passive and active)
- PLCs
- Scales
- Sensors
- Biometrics
- Conveyors / Diverters
- Automatic Guided Vehicles
- Robotic Picking Systems

Interface Methods:

- XML, JSON, Pipe delimited,
- ODBC, flat file, MQSeries, iSeries Data Queues, TCP/IP
- Web Services Support
 - ◊ SOAP XML
 - ◊ HTTP REST API with XML or JSON
 - ◊ HTTP Form URLEncoded
- API (Application Programming Interface) standard and custom via direct calls, SOAP and HTTP Rest Web services, OAG standards
- SAP BAPI (Business Application Program Interface) and iDocs
- COM Object Support
- LDAP Support (Lightweight Data Access Protocol)
- eMail Operations

Integrations (partial list):

ERP Systems

SAP
Oracle
Infor ERP-LX/BPCS
Infor XA/Mapics
Infor M3/Lawson/Movex
Microsoft Dynamics
Sage
Bespoke/Legacy Systems

MES Systems

Crossroads RMC MES
Werum Pas-X

Databases

Microsoft SQL
Oracle
Any ODBC compliant database

TouchPath Solutions

- TouchWMS
- TouchInventory
- TouchMES
- TouchSales (Browser Based)
- TouchERP for Sales (Mobile App)
- TouchAsset
- Equipment Maintenance
- Entrance Control
- Facility Evacuation
- Integration Capabilities – ERP-LX/ BPCS, SAP, Oracle, JDE, M3, MS Dynamics, Werum, LIMS, Legacy Systems, etc.

About TouchPath:

Control at your fingertips!

In the warehouse, distribution center, or on the manufacturing shop floor, TouchPath's solutions streamline your processes and operations. With a single touch, you can capture essential shop floor data, manage warehouse processes and better control your inventory and assets. We believe "one size does not fit all", which is why we deliver custom off-the-shelf (COTS) solutions that support your operations, apply your rules and speak your language. In fact, all our solutions are multi-lingual enabling a standard corporate solution to be rolled out globally with no program changes. With TouchPath, you will make better decisions, gain efficiencies, increase customer satisfaction and boost your bottom line.

For more information
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