

SEPTEMBER 2021



# Real-Time Data

Mobility Apps  
Empowering Innovation



Transformation by FDT 3.0

# FDT 3.0 Testing and Certification Opens for Next Generation DTMs

Certified DTMs establish interoperability criteria for IIoT and I4.0 applications

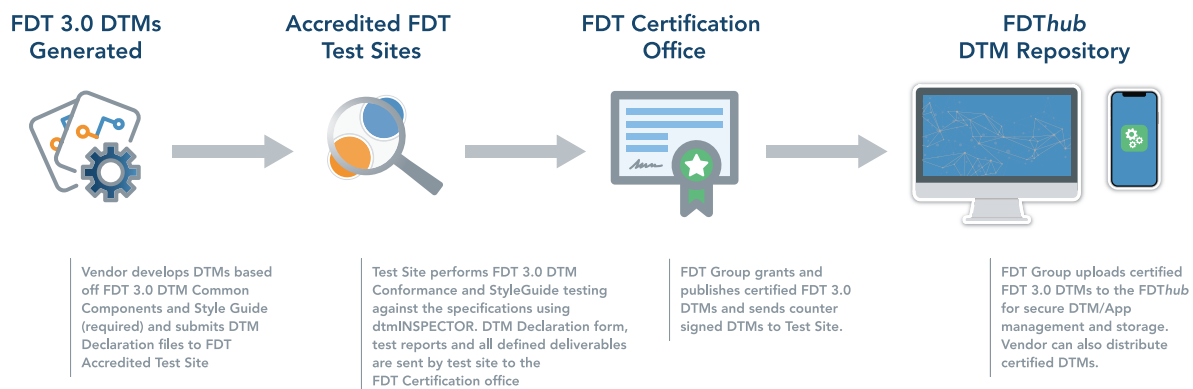
Author: Lee Lane, Chairman of the FDT Board of Directors



**Lee Lane**  
Chairman of the FDT  
Board of Directors

DTM certification has become an essential marketplace factor progressing the cohesiveness of the FDT standard with the new Industry 4.0 world. Executed today as the de facto integration standard for any network, device, or hosting environment, FDT Group began offering a DTM certification regime in 2005 driven entirely by industry demand allowing the user community to freely mix and match best-in-breed devices and hosting environments, offering best interoperability assurance for any process, hybrid, or discrete application.

Through the early certification process, vendors could elect to submit their DTMs to an independent, FDT Accredited Testing Site to determine conformance to the FDT technical specifications. A few years later at the request from the industry, FDT Group released a User Interface (UI) style guide to the marketplace that established a common navigation and information scheme for DTMs regardless of the vendor. As the marketplace demand for style guide compliance grew, FDT Group included optional style guide compliance testing within the certification process. Today, certified FDT 1.x or FDT 2.x DTMs that meet both specification and UI style guide compliance offer the assurance of utmost interoperability and improves the experience of automation end-users for both FRAME/Desktop and Client/Server environments.



Looking forward, we find our industry changing rapidly in support of new innovative and digital-based business models to simplify operations and to increase productivity through IIoT and I4.0 trends. With the release of the FDT 3.0 IIoT Server-based architecture, the standard now finds itself as a core component for any new era automation application. The secure, data-centric, platform independent, browser-based solution now extends a rich information source for IT and OT personnel. Naturally, the certification requirements and process also evolved to support this larger capability and deployment flexibility to ensure greater consistency and interoperability success for next generation applications. This included collaborating with key industry associations such as NAMUR to sculpt the new FDT 3.0 certification requirements.

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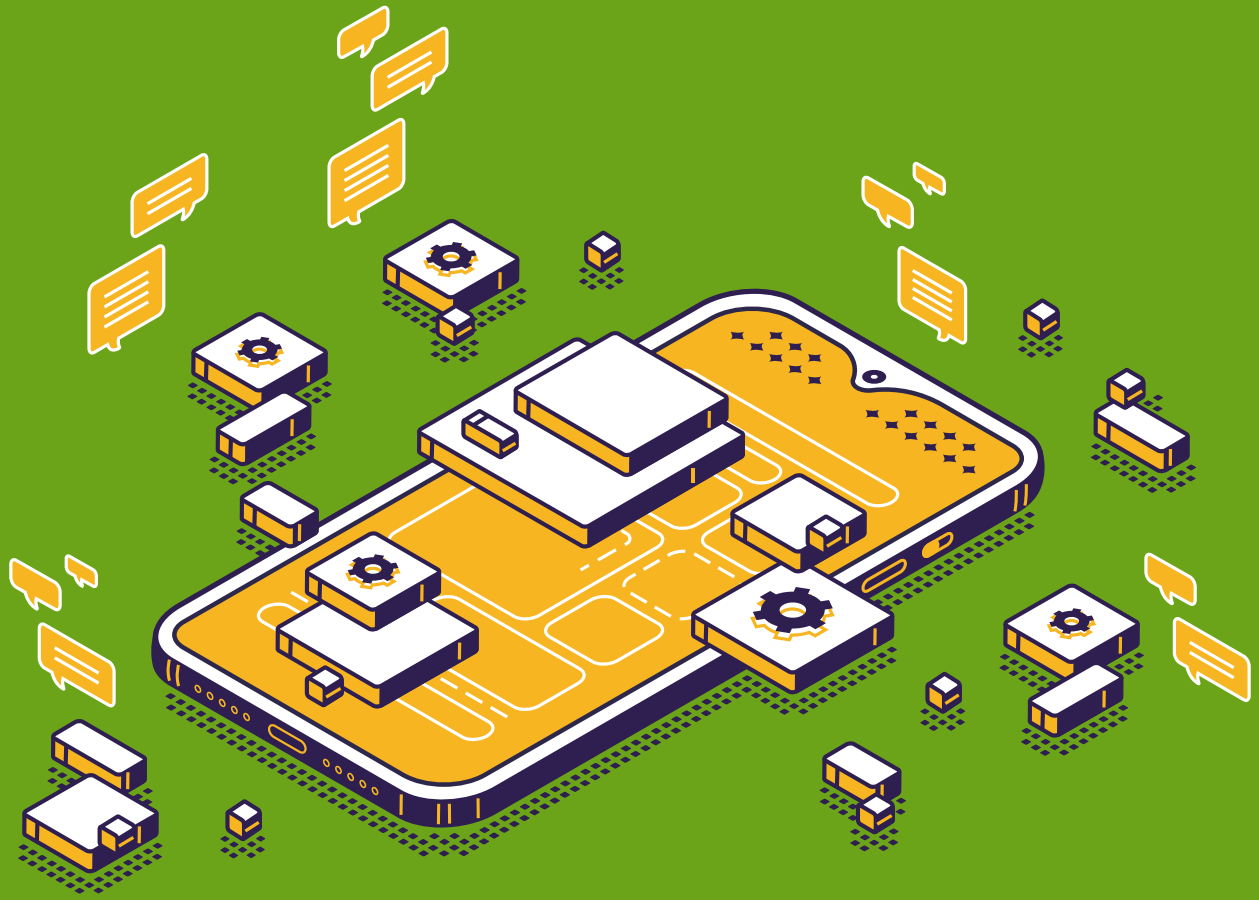
With the hard work behind us, thanks to the tireless work from our Test and Certification Working Group and collaborative efforts with NAMUR, we are proud to announce that the FDT 3.0 certification process has been fully defined and FDT 3.0 DTM testing and certification is now open! Vendors interested in FDT 3.0 DTM Development, Testing and Certification are encouraged to review details on the [FDT development website](#).

In short, the new certification requirements for FDT 3.0 mandate that all DTMs be certified prior to reaching the market. This includes both specification and WebUI style guide compliance ensuring cross platform functionality with a consistent yet responsive UI supporting any mobile device or browser - a key beneficial feature with FDT 3.0. Additionally, all DTMs must be developed using the FDT 3.0 DTM Common Component tool kit. This tool kit includes thousands of lines of digitally signed, pretested code that allows the DTM developer to focus on customized, value-add features for their DTM and less on the nuances of FDT standard compliance thereby allowing the vendor to achieve a quicker time-to-market. This tool kit approach tied with the new automated certification process allows DTMs to pass through the certification regime quickly and more reliably.

I want to highlight that our new [certification process](#) includes procedures that automate the secure availability of FDT DTM's from the new *FDThub* cloud based DTM repository! All FDT 3.0 Server and Desktop environments are *FDThub* capable, enabling automatic device discovery and downloads for matching DTMs, while also enabling notifications when necessary DTM software updates are available. Offline integration where an air-gapped environment is needed is also available. Authenticated applications with access to the cloud based electronic repository of fully certified DTMs is the result of many consultations with industry leaders. Rather than burdening the vendor community with the nuances of publishing their DTM in the *FDThub*, we have integrated the uploading and publishing process with the certification process.

As the first FDT 3.0 DTMs come through our new certification process over the next few weeks, I think you will be pleased with the results. Our vendor and end user communities have generously contributed ideas, hours, and people to bring us to this point; so, on behalf of the Board of Directors of the FDT Group, I thank you for your resolve, talents and results.

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# FDT 3.0 Platform for Innovation Helps Developers Deliver Apps for Diverse Automation Use Cases

New mobility Apps will benefit both device suppliers and end users by transforming industrial optimization and maintenance strategies

Author: Dr. Vivek Hajarnavis – Technical Marketing FDT Group



**Dr. Vivek Hajarnavis**  
Technical Marketing  
FDT Group

FDT Group, an independent, international, not-for-profit industry association consisting of leading companies and organizations active in industrial automation, continues to evolve its open standard for enterprise-wide network and asset integration as a data-centric platform.

The organization recently introduced its updated FDT 3.0 standard, which is accelerating the evolutionary journey into the Fourth Industrial Revolution by enabling an ecosystem of FDT-based solutions to meet demands for Industrial Internet of Things (IIoT) and Industry 4.0 applications. The technology's IIoT ecosystem will unlock universal device integration with mobility and remote access optimizing automated processes and connectivity in the process, hybrid, and discrete manufacturing sectors.

FDT 3.0 empowers the intelligent industrial enterprise with native integration of the OPC Unified Architecture (OPC UA), as well as Control and Web Services interfaces for mobile applications. The technology also employs robust, multi-layered security to safeguard critical automation information and operating data.

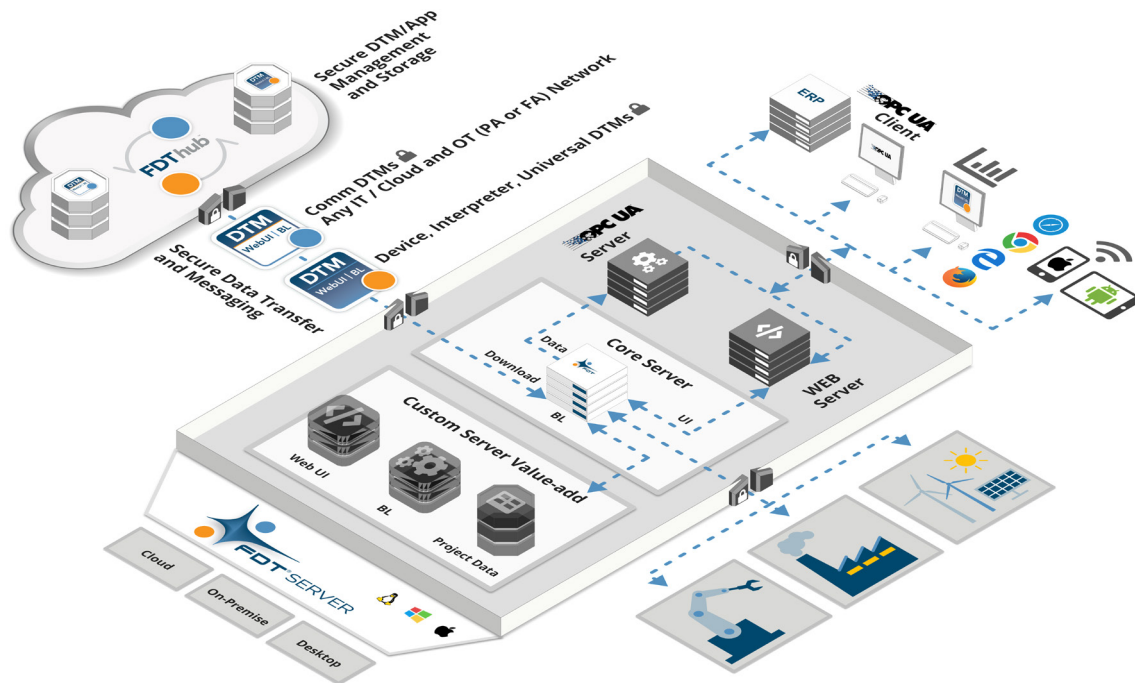


Figure 1: FDT 3.0 Server – Distributed Architecture

## Evolving FDT Technology

With the updated FDT 3.0 standard, the FDT solution has become platform independent by evolving the fundamental technology on which it is built from the Windows based .NET Framework to an open .NET Core as well as HTML5 and JavaScript. The use of HTML5-based development will allow FDT to be deployed on a much broader range of devices than in the past.

Within the FDT 3.0 architecture, Device Type Managers™ (DTMs™) encapsulate all device-specific data, functions and business rules and serve as standardized “drivers” enabled with a customizable Web User Interface (UI), which employs HTML5 and JavaScript for displaying a graphical representation of parameterization, diagnostic, and prognostics across mobile devices and browsers.

FDT 3.0's native integration of the OPC Unified Architecture (UA) and mobile remote access capabilities will have a significant impact on plant and factory maintenance personnel, who are looking for condition-based maintenance solutions to reduce their cost for periodic, scheduled repair, and troubleshooting activities.

At the core of FDT 3.0 technology is the new FDT Server, which natively integrates an OPC UA Server for enterprise-wide data access and a web server mobilizing remote

operations. This innovative solution transforms asset management practices and business system integration for both automation suppliers and end-users.

The FDT 3.0 standard is closely aligned with the NAMUR NE 175 Open Architecture (NOA) initiative, which addresses asset monitoring and optimization requirements in industrial processing facilities.

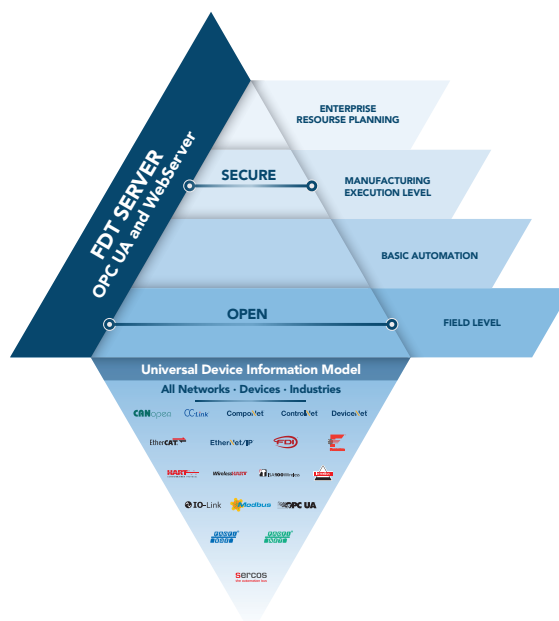


Figure 2: The FDT Server solution encompasses a Universal Device Information Model for seamless integration and communication enhancing monitoring and optimization practices.

Security is both comprehensive and robust with FDT 3.0. Developed for consistency across different operating system platforms, the solution features multi-layered security and leverages vetted industry standards such as Transport Layer Security (TLS) enabling Web Sockets Secure (WSS) and Hyper Text Transfer Protocol Secure (HTTPS) security capabilities. This strategy encompasses: Encrypted communications using TLS, role-based user security, 509v3 certificates for authentication, and on-the-wire-security for enabled industrial control protocols.

## Driving App Development Efforts

The new FDT 3.0 standard will drive customization of Apps to meet both general and specific end-user requirements throughout the process, discrete and hybrid manufacturing markets. Device suppliers will realize new business opportunities from App development efforts focused on customer requirements in the areas of operations monitoring, asset predictive maintenance, etc. Conversely, end-users can leverage FDT technology to create Apps to solve their own unique operating problems.

FDT 3.0's incorporation of HTML5 technology is expected to attract a much larger community of automation software developers, who are accustomed to utilizing the modern and user-friendly features found in this development environment.

The latest advancements in FDT technology will drive a wide range of worker mobility Apps tailored to Information Technology (IT)/Operational Technology (OT) assets. Industrial operating companies can now employ the familiar functionality of the integration standard on common mobile platforms. This, in turn, will provide access to additional data from any location with flexible deployment options.

FDT Group's Technology Marketing Committee, consisting of business strategists and other representatives of major global automation suppliers, has been studying applications and market requirements for FDT 3.0- based mobile Apps. The committee's work is intended to harness the power of new technologies that hold the promise of smart operations. Members of the group are researching and formulating opportunities for the development of a wide range of App solutions.

The advent for FDT 3.0-based Apps will have a significant impact on several key automation industry stakeholders, including plant operators, system integrators, machine/skid builders and device vendors. The initial use cases for the Apps range from design validation and configuration/commissioning of field instruments to optimization of plant and factory operations, troubleshooting and problem-solving of production equipment, and replacement and commissioning of devices.

With the new generation of FDT DTMs providing platform independence, it is possible to use mobile Apps on different platforms and classes of devices. For example, the developer can write a DTM and then provide the same UI on a laptop, tablet, desktop, or phone—no matter the operating system. Since DTM UIs are now portable and can be displayed in browsers on handheld devices, developers can create user interfaces that are completely responsive per the needs of different devices and screen sizes.

## Putting New Solutions to Work

The FDT 3.0 platform for innovation will benefit both control and instrumentation suppliers and end-users by transforming industrial optimization and maintenance strategies. FDT-based mobile apps can be created to meet unique operational requirements and access specific information from individual DTMs. This might include an operational-type app showing any devices with a "Needs Attention" status, or a management-type app providing hourly production results from a given line or facility. These tools can be developed independent of the Distributed Control System (DCS) or Programmable Logic Controller (PLC) application. FDT's open interface makes it possible to extract data from devices and report it in the app without the need for any additional coding.

In addition, FDT 3.0 enables the inherent features of mobile devices and apps to be integrated to achieve even more powerful capabilities. For example, this solution allows end-users to deploy near-field communications using GPS for geo-location purposes. They can utilize mobile location service capabilities to confirm whether technicians performing a particular task are physically located in an environment where they are authorized to work.

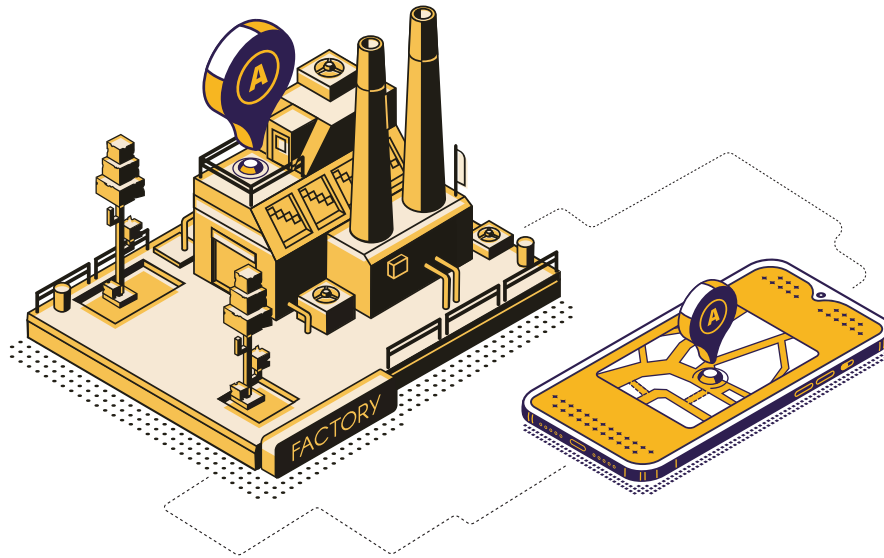


Figure 3: FDT Apps empower innovative business models to simplify operations and increase productivity.

With apps employing FDT Web Services, maintenance technicians are no longer bound to a centralized tool or handheld device connected to an individual instrument; instead, they can use tablets, smart phones, and other mobile devices to carry out their daily activities. This includes solutions bringing FDT data much closer to the engineer or technician and enabling troubleshooting and monitoring of instruments' critical operating parameters to be performed remotely to ensure they are functioning according to specification.

Mechanisms such as QR codes can also be employed with smart phones to share information with remote workers as part of collaborative maintenance activities. Field workers can take pictures with their secure, authenticated smart phones or tablets to provide a host of device-specific details. Programmers have the option to write algorithms to simplify reporting. Apps can even be embedded in plant floor machines to perform certain functions.

Furthermore, it is possible to bring together multiple apps into one overarching app so that end-users can move from basic tasks like the configuration of instruments to broader, more ambitious initiatives around digitization and Industry 4.0. For instance, an app could be created to monitor and optimize energy consumption at a manufacturing site. The facility operator would be able gather data from all the AC drives controlling motors, or boilers used for steam generation, to monitor and control the facility's energy footprint and green operating performance.

Thanks to FDT 3.0's modular and flexible platform, the FDT Group can deliver tools that the developer community needs to advance solutions for device configuration and monitoring and other crucial applications. The objective is to provide an interface that allows automation companies to design a wide range of FDT-compliant apps, whether they be for general distribution to customers or to solve a problem for a particular industrial organization.

## Conclusion

FDT Group's standard is now empowering the global industrial sector with flexible deployment and mobility solutions intended to optimize facilities with agile operations. With the latest FDT 3.0 advancements, the technology maintains its core communication and diagnostic capabilities, but also offers robust, multi-layered security to enable secure remote access to data through mobile devices and apps.

The FDT 3.0 standard enables automation developers to employ a user interface that is versatile enough to accommodate a host of plant and factory operating requirements, including device configuration, commissioning, real-time monitoring, information sharing, and other important tasks. At the same time, the flexibility of the FDT solution allows end-users to provide valuable input on the app development process to meet their specific use case requirements.

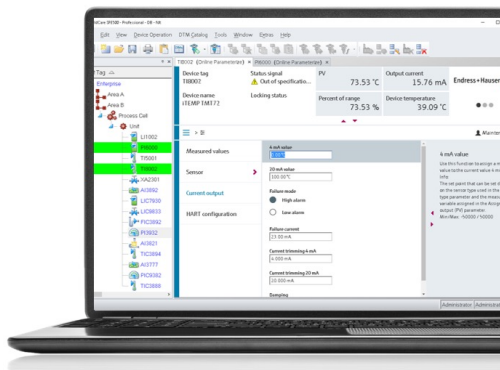


# Improve Operations with Access to Plant-floor Data Using DTM Enhanced HART I/O Modules

## THE COMPACTLOGIX PLATFORM PROVIDES BETTER VISIBILITY TO PLANT PERFORMANCE IN REAL-TIME

Rockwell Automation, a leading provider of I/O solutions for smart devices, provides the ability to scale control and I/O solutions to match your application requirements. In today's rapidly changing manufacturing environment, remote access to real-time data and plant performance metrics has never been more important, and it starts (all this information originates on the plant floor) in the field.

That is why we are committed to providing access to device data with updated DTMs for all existing I/O platforms. With DTM enhancements users can gain better visibility into the I/O platform performance, while enabling remote connectivity to information-rich field devices to manage configuration and monitor the diagnostic information according to the NE 107 recommendation from NAMUR, a global association of process automation end users.



The CompactLogix™ system is designed to provide industry specific sized applications, including small and mid-size applications. Accessing and connecting to field devices, like temperature sensors and valve actuators, across the

enterprise is easier than ever before. The CompactLogix platform brings together the benefits of a common programming environment, common communication networks, and common control engine in a small footprint with high performance. 1769 Compact I/O™ is a highly reliable and flexible chassis-based I/O solution and can be used as local and distributed I/O for the CompactLogix™ family of controllers including those offering industry leading features for Process Automation, Safety and Information applications.

HART enabled I/O platforms are able to provide information that originates on the plant floor to both the real-time control and safety systems as well as the information-rich monitoring, analysis, and business systems. Using this standardized device health information allow teams in the plant and across the enterprise to make informed decisions.



1769SC-IF4IH



1769SC-OF4IH

The [FactoryTalk® Linx CommDTM Getting Results Guide](#) will help you to set up the asset management system to guide you through the configuration.

To download the latest FactoryTalk® Linx Comm DTM and the 1769 Gateway DTM, please visit our [Product Compatibility and Download Center \(PCDC\)](#) click on "Find downloads" and search for "DTM"

## Netilion Health

Reduce unplanned shutdowns  
with health monitoring.

Netilion Health is a digital asset-health management service that puts your maintenance team a step ahead of problems. It provides diagnostics from your field devices anywhere at any time, so you can have remedies ready when you need them.

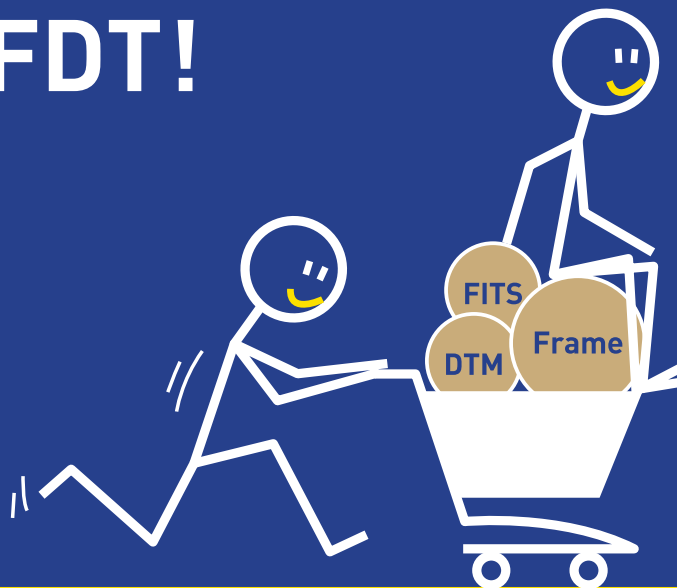


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# “Quick Monitoring by DTM” for Machine Condition Monitoring Applications

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## DTM PROVIDES FUNCTIONS SUCH AS GRAPH DISPLAY, TREND DISPLAY, AND LOG ACQUISITION TO VISUALLY CONFIRM CHANGES IN SOUND LEVELS AND FREQUENCIES

Yokogawa Electric provides the wireless noise surveillance system, which improves plant safety by remote monitoring technology. This system is a new digital HSE system consisting of WN 30 noise map software and multiple WN 100 wireless sound level meters that provides a real-time noise monitoring system for high-noise environments such as offshore platforms. It was developed to prevent hearing impairment of workers and to optimize working hours limited by noise levels.

In addition, the application of the wireless noise surveillance system has been expanding not only for the HSE application but also for equipment condition monitoring. In this article, we introduce “Quick Monitoring by DTM”, which is expected to further expand applications.

### Increasing expectations for machine condition monitoring applications

As a original specification, the wireless noise surveillance system has allowed for area-by-area noise maps, sound levels per WN 100 and constant monitoring of the frequency analysis data.

However recently, there has been requests from customers to utilize the sound level data and frequency analysis parameter of WN 100 as the data for noise monitoring and diagnosis of equipment failures and abnormalities with limited measurement targets in a minimum configuration consisting of WN 100 single unit and ISA 100 wireless communication.

## WN100 ISA100 DTM

To meet the customer’s requests, Yokogawa’s new WN 100 ISA 100 DTM provides functions such as graph display, trend display, and log acquisition. This makes it possible to visually confirm changes in sound levels and frequencies without depending on the host system.

Combining the WN 100 ISA 100 DTM with the WN 100 makes it relatively easy to graphically display sound-level DATA and Trend displays via the ISA 100 wireless infrastructure or infrared communication with devices, as well as graphically display frequency analysis DATA. Thus, the difference between the normal condition and the abnormal condition can be noticed from, for example, the noise from the equipment such as a compressor, the noise from the surrounding environment, and the change of the frequency, and it becomes possible to correspond to the predictive maintenance.

### Available sound level parameters

WN100 ISA100 DTM can shows three kinds of frequency weighted sound levels: LAeq, T (A characteristic time average sound level), LReq, T (C characteristic time average sound level), and LCpeak (C characteristic peak sound level). The A characteristic is a frequency curve which is the same as the sensitivity of the human ear, and the sensitivity becomes low in low frequency and high frequency band. The C characteristic has a relatively flat shape compared with the A characteristic. LAeq, T and LCpeak are mainly used as a parameter for noise exposure limit and environmental noise. Moreover, the application as a conditioning monitor which detects the failure and abnormality of the equipment by the sound generated from the equipment is noticed from the change information of the frequency component by LReq, T and LCpeak, 1/3 octave band analysis.

Figure. 1 and 2 show screen examples of a sound level viewer and an octave band viewer, respectively.

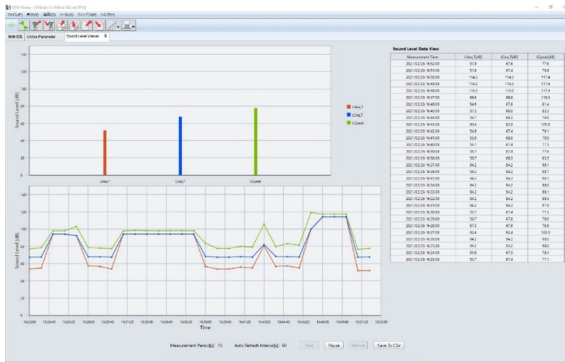


Figure 1: Sound Level Viewer

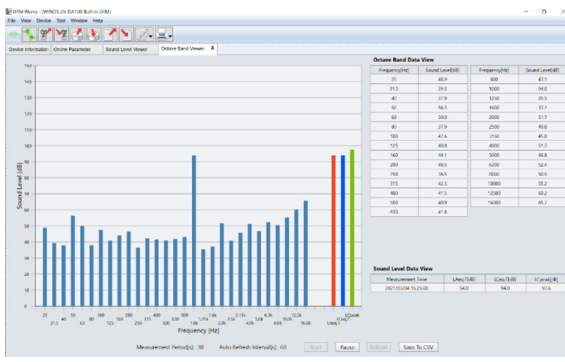


Figure 2: Octave Band Viewer

### System configuration

Figure. 3 shows an example of the system configuration of the package solution. WN 100 ISA 100 DTM is a standard package of FieldMate software installed on PCs. WN100 ISA100 DTM receives measurement data via ISA100 via wireless infrastructure or via infrared communication.

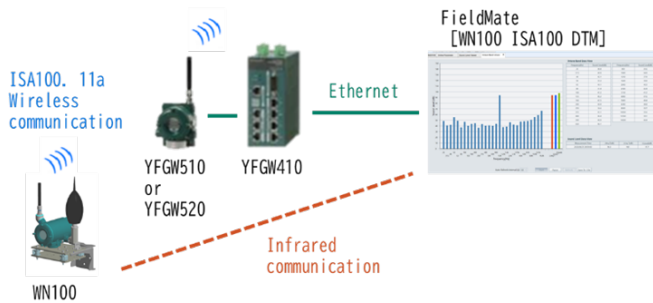


Figure 3: Package Solution System Configuration

The WN 100 is wireless, battery-powered and can be easily installed anywhere, so that combination of the wireless device and DTM is suitable for quick data monitoring and data acquisition for machine condition monitoring.

The WN 100 ISA 100 DTM is provided as bundled software with FieldMate, the device adjustment, configuration and management software used for device deployment, making it easy to deploy without adding other software or devices.

### Case study

Here is a successful example of a machine conditioning monitoring.

Two units of WN 100 and WN 100 ISA 100 DTM were introduced as packaged solutions for monitoring blower and compressor conditions at a customer site.

As a condition monitoring kit with Yokogawa’s vibration sensor (FN510-C/LN01), it is used for periodic condition monitoring of blowers and compressors and is attached to other equipment every few days to weeks. Since the WN 100 is a wireless device, it can be easily moved and installed in various places. Using sensors and devices with DTM mechanism on the same network, data comparison on the same time base becomes possible. With DTM technology applied, it can be used to install and monitor only for the period necessary for the judgment of normality and abnormality. Since the DTM runs on a PC, it is suitable for the use of data acquisition by connecting only for the necessary period. Thus, a packaged solution is an ideal system for condition-based monitoring.

### Conclusion

The current packaged solution graphically displays the data received from the field. By comparing the value with the threshold value at the site, the user can judge the failure or abnormality. By accumulating these successful examples, we hope to further develop the system so that it can automatically determine abnormalities and failures, report signs, and predict the period until abnormalities occur. The packaged solution aims to contribute further to the safe operation of the plant for a long period of time by monitoring the condition of equipment in the plant when necessary and automatically detecting failures and abnormalities.



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The Yokogawa FieldMate Versatile Device Management Wizard is a FDT compliant PC-based integrated software tool that handles parameter setting for intelligent field devices, regardless of their make or field communication protocol. FieldMate speeds up device configuration and problem solving, and automatically stores a work log for a traceable field maintenance database that consolidates the maintenance work flow and facilitates the sharing of maintenance know-how. In addition, FieldMate synchronises seamlessly with Yokogawa's PRM Plant Asset Management solution.

[yokogawa.com/Fieldmate](http://yokogawa.com/Fieldmate)

**YOKOGAWA** 

# From HART Device to Smart Device

## THE FIELDPORT SWA50 BY ENDRESS+HAUSER CAN UPGRADE INSTRUMENTS TO WIRELESS COMMUNICATION MAKING THEM IIOT READY

The HART devices in your plant are no longer bound to transmit information only via cable. Endress+Hauser has introduced a small but powerful adapter for retrofitting HART instruments: the FieldPort SWA50 connects the field devices to wireless communication. It enables them to communicate via Bluetooth and /or WirelessHART. The user has more options to access the field device data — even a cloud connection is possible which unlocks the potential of IIoT.



The FieldPort SWA50 converts the HART signal of the connected HART field device to a reliable and encrypted Bluetooth® or WirelessHART signal. The Endress+Hauser SmartBlue app or the Endress+Hauser Field Xpert can be used to configure the FieldPort SWA50. Remote configuration via the DTM using WirelessHART network is also possible.



HART field devices can be connected to the Endress+Hauser IIoT ecosystem called Netilion. The edge devices FieldEdge SGC200 or FieldEdge SGC500 are needed for this scenario. An IIoT connection gives you digital access to the retrofitted field instruments. Using a smartphone, tablet or desktop PC, you can view measuring data, instrument diagnostics and life cycle data. It is even possible to transfer the data into your own systems or clouds by using an API.

The FieldPort SWA50 opens up to new possibilities of digitalization — a powerful adapter for retrofitting HART field devices.



Learn more about our FieldPort upgrade.

# TeSys island – Full Tool Integration into EcoStruxure Control Expert Supporting M580 Controller

AUTHORS:  
 Norbert Gehre - Marketing Offer Range Manager

Dominique Leduc - Device Life Cycle Marketing Manager

## FDT DTMS MAKES IT EASY TO ENGINEER, MANAGE AND MAINTAIN ALL YOUR LOADS, REDUCING DOWNTIME

The TeSys island load management solution has extended its FDT DTM based tool with more functionalities and optimized integration into the Control Expert engineering suite of Schneider Electric!

TeSys island is the fully digital load management solution for Direct Online Loads (DOL) like asynchronous motors or any other AC electrical load up to 80 Amps. With the object-orientated approach of TeSys island all loads are managed as a digital twin, called TeSys avatars. This makes it easy to engineer, manage and maintain all your loads. With the availability of all relevant load data like diagnostic data, warnings, maintenance messages, load current, energy and power data, it is now possible for OEMs and end-users to monitor, optimize and maintain its application while reducing downtime. TeSys island support several fieldbuses like EtherNet/IP, Modbus TCP, PROFINET and PROFIBUS.

TeSys island configuration tools are built upon FDT DTM technology including controller specific function block libraries. The DTM based tool gives full control to the TeSys island configuration and is seamlessly integrated into the EcoStruxure Control Expert. The function block libraries are dedicated to the different functionalities and data available within TeSys island. This means that you have structured



function blocks for tasks like avatar (load) control, load and system diagnostics, power and energy monitoring, communication management and asset management. With the availability of these libraries the programming effort to control and monitor AC loads are simplified, and engineering efforts are minimized.

All files are available for free download without the need of registration and licensing.



**TeSys island — EcoStruxure Control Expert Classic Quick Start Guide**



**EcoStruxure Control Expert 2021 — TeSys™ island Library**



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**TeSys island DTM Library (Version 2.2.2)**



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# Your One-Stop-Shop for FDT

## PLANNING, REALIZATION AND OPERATION OF DIGITAL BUSINESS MODELS

M&M Software is a technology and consulting company for industrial software and belongs to the co-founders of the FDT technology. Due to its services and products, M&M is established as a technology leader in the FDT area and participates in key working groups of FDT Group.

As a specialist for technical industrial solutions, M&M acts as a system partner for its customers and supports them in the planning, realization, and operation of (digital) business models. Therefore, M&M is characterized by the holistic integration of system solutions from the sensor to the Cloud. Software applications from M&M are created based on certified know-how in the relevant technologies and the associated tools. For the realization, M&M consistently relies on the use of state-of-the-art software technologies.

### FDT Services

#### Consulting

M&M Software provides professional and comprehensive consulting on the topic of device integration and helps to find a customized and future-proof device management strategy. This strategy also takes the latest technology innovations and trends, such as FDT 3.0 (FITS), FDI and EDDL, web-based parametrization, Edge computing, etc., into account.

#### FDT Desktop Integration

M&M assists in the integration of the official FDT DESKTOP Common Component ([fdtCONTAINER](#)) for desktop applications into existing host systems.

#### FDT Server Integration

M&M offers integration support to add the official FDT

Server Common Component into existing systems. This also includes extending the FDT Server by adding individual features that make software solutions unique and ready for a new era of automation.

#### DTM Development

M&M develops DTMs, including FDT 3.0 DTMs that are accessible on web/mobile, for field devices and communication components quickly and efficiently based on our development platform [dtmMANAGER](#). We also convert DD / FDI packages to a DTM ([basicDTM](#)).

#### Development Tools

M&M offers FDT specific development tools, which allow customers to fully concentrate on the essentials — their own software solution. Using [dtmMANAGER](#) reduces the complexity of developing a DTM to a minimum. The [fdtCONTAINER](#) is the reliable and future-proof basic framework of every FDT Desktop application.

#### DTM Test & Certification

M&M is an official FDT Accredited Test Site for all your DTM testing needs. As the developer of the official toolset for testing, we assist you in preparing your DTMs for the testing procedure to avoid any conformance issues.

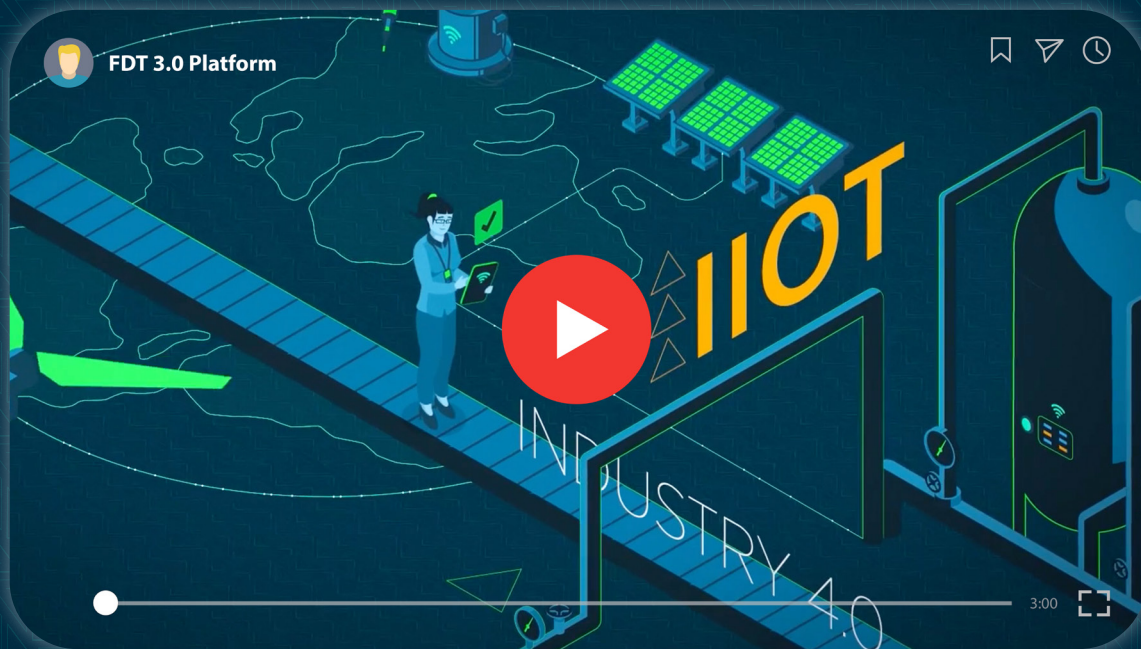
As one of the official FDT Accredited Test Sites M&M performs testing and certification of DTMs. In addition, we assist in preparing DTMs for testing. This avoids potential problems and delays.

For more information, please visit: [mm-software.com/en/](http://mm-software.com/en/)



Test-drive the current  
FDT DESKTOP application.

# Open Automation Transformation with FDT 3.0



The FDT 3.0 distributive platform is accelerating the evolutionary journey into the Fourth Industrial Revolution with its newly released data-centric, server-based architecture empowering IT/OT harmonization and web services mobilizing the industrial workforce. FDT 3.0 is a completely platform-independent, single-server, cloud-based solution offering the freedom to use innovation to support new and existing manufacturing infrastructure through a smart, connected ecosystem of integrated machines and devices for the process, hybrid, and discrete industries.



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