

## Value Proposition for FDT Technology Continues to Increase

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### Summary

True to one of its primary objectives, the FDT Group continues to enhance FDT technology for the future, while maintaining strict backward compatibility. After having achieved the significant milestone in 2009 of IEC 62453

Even after achieving a significant milestone in 2009, IEC 62453 approval, the FDT Group's efforts continue. Under its new leadership, the FDT Group continues to move forward at an increasingly faster pace as more suppliers and users alike embrace the technology.

approval, the FDT Group's efforts continue. Under the leadership of Glenn Schulz, who became Managing Director in July 2009, the FDT Group continues to move forward at an accelerating pace as more suppliers and users alike embrace the technology. Recent initiatives include efforts to obtain approval for the ANSI/ISA 103 standard, which should help further

accelerate FDT adoption in North America; the FDT 2.0 Project, which will advance FDT technology from COM and Active-X technology to .NET; and the important FDI initiative, which will unify FDT and EDDL technologies moving forward.

### FDT Capability: Already Installed

Users can easily deploy FDT Technology for the vast majority of field devices that offer a DTM, regardless of their age or revision level. This backwards compatibility – combined with the broad support for FDT technology by over 70 different field device equipment and automation system suppliers – enables users to adopt a proactive, FDT-enabled, asset management initiative delivering high value for little implementation effort.

FDT Group supplier members have been shipping products with FDT capability for many years. Many process field devices enabled with either HART, FOUNDATION fieldbus, or Profibus digital communication protocol can exchange information with any FDT frame, software application, or control system. With FDT-approved annexes for Interbus, Profinet, CANopen, CIP, and Modbus protocols and more on the way, users in the discrete



industry can enjoy the same communication benefits as their process industry counterparts. While many users do not realize it, FDT capability is already built into many of the devices, engineering, and asset management applications installed in their facilities.

Using FDT-enabled software with DTMs for field devices, users enjoy a standardized device configuration window, regardless of the type of device being configured or the device supplier. The window into the device looks the same on all FDT-enabled control, configuration, and asset management applications.

### **IEC Standardization Reduces Risk for Users**

ARC is a strong proponent of technologies and solutions based on open standards, particularly international standards. These include the approved FDT international standard, IEC 62453, and its sister standard, ISA 103, which is on track for approval in 2010. Although standards alone do not guarantee flawless integration, they do provide suppliers with common specifications, resulting in products that overcome the main interoperability issues. Strict compliance testing for all FDT-certified products provides end users a high degree of assurance that products will interoperate regardless of supplier. Standardization increases demand, helping to ensure long-term product availability and support by suppliers, typically for as long as the user demand remains. Standards, such as the FDT standard, also reduce suppliers' costs and increase their economies of scale by eliminating the need to develop and support different hardware and/or software interfaces driving high value innovation across the industry and to the manufacturing floor in a cost-effective manner.

In 2009, 26 members of national committees unanimously approved FDT as an international IEC Standard. When ISA103 approval is finalized, combined with the previous IEC approval, FDT will be recognized as both an American National Standard (ANSI) and as a CENELEC standard, which will spur adoption in the US and Europe. FDT continues its standards initiatives in major manufacturing regions around the globe and expects to complete the China GB/T standardization by mid 2011.

With an open, standardized, and freely accessible integration technology like FDT, device manufacturers can be sure that all device features are implemented and mapped completely in DCS and asset management systems. This avoids diluting the device capabilities through proprietary integration

technologies, making the full benefits a reality for users and thus increasing the overall value proposition.

### **FDT 2.0 Improves Future Sustainability**

Most recently, the FDT Group turned its attention to improving FDT with new technologies, while making configuration easier and faster than the already robust previous generation. The FDT Group will introduce users and suppliers to the next generation of FDT technology, FDT 2.0, in multiple releases in an effort to shorten the time-to-market and allow them to develop migration strategies and take advantage of increased functionality.

FDT 2.0 will feature a simplified interface to enhance supplier's compliance with the standard, incorporate .NET technology, and include a platform for future applications and features. Work has begun on FDT 2.0 "common components" that will create a library of FDT routines to simplify the development and certification of FDT 2.0 Frames and DTMs.

FDT 2.0 will include support for the emerging Field Device Integration (FDI) standard. FDI is the initiative driven by automation suppliers to consolidate the advantages of FDT and EDDL. This will allow equipment suppliers to provide advanced device integration solutions to meet end user requirements. With FDT 2.0, FDI packages will run directly on FDT applications, ensuring a simplified migration path to future operating system platforms, thus maintaining the integrity of DTM backward compatibility, improved performance, and simplified implementation without user reinvestment

The final specification is expected to be published prior to the end of 2010 with products available soon after.

### **FDT-Enabled FDI Rationalizes Different Standards**

Fueled by many accomplishments, the FDI initiative increased momentum over the last year. With the additional resources of key DCS suppliers, the development of the FDI standard will accelerate and provide the industry a FDI Device Package that combines the best features of DTMs and EDDs – setting the stage for continued progress throughout 2010.

The outcome of these accomplishments is that the host FDT frame application will be able to accept DTMs and FDI packages that consist of the mandatory device descriptor, and optional business logic and graphical

interface to enable backward compatibility of DTMs already deployed, while supporting future product and technology enhancements.

With user and supplier companies working in concert with organization and foundation groups, the FDI standard is planned for release in 2010. The FDT Group is clearly committed to ensuring the success of both FDI and FDT technologies.

## Conclusion

After years of product development and knowledge gained from practical implementations, FDT technology has established itself as a critical technology. Technology will not be the predominant obstacle for future adoption, however. End users must challenge the traditional culture of preventive maintenance and adopt a “manage by exception” process, driven by a holistic, automated, real-time asset management solution that predicts asset health, protects assets in critical conditions, and prescribes appropriate workforce actions. ARC defines this activity as plant asset management (PAM) for the process industries.

Within typical PAM solutions, FDT technology can provide data access for a broad range of assets capable of supporting dozens of factory and process communication networks independent of supplier. Going forward, FDT technology can be the ideal technology to gain access to the energy consumption of equipment as part of an energy management initiative. Since future energy management solutions will require measurement in real time, FDT technology can enable data collection from non-manufacturing equipment, such as heating, ventilation, and air conditioning (HVAC) systems.

End users should follow the progress of FDT and its participation with the FDI enhancements. While much work remains to be done, the steps already taken by the FDT Group, the combined activities within the ECT, and the unified actions within FDI have helped improve the long-term viability and value proposition of implementing initiatives based on FDT technology today and well into the future.

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