The **Value** of FDI

FDI Package Repository

**Abstract**

FDI (Field Device Integration) is a new device integration technology for process automation designed to integrate field devices into automation networks with the help of standardized, vendor-independent tools and procedures. One challenge that continually confronts end users is software revision management for intelligent field devices.

This article covers the challenges in device revision management and how the FDI technology addresses these challenges by providing access to a single authoritative source for registered FDI Device Packages – the FDI Package Repository.

The audience of this article includes plant operators, maintenance engineers, end users, instrument suppliers, system suppliers, business, and technical leaders in the process industry.

**End User Benefits**

**Simplified Device Revision Management**

FDI Package Repository streamlines the process of device revision management. It simplifies the maintenance task by providing a simple way to obtain the correct device files for your installation.

**Enhanced Patch Management**

Proactive patch management is possible with the help of the FDI Package Repository. A built-in FDI Package update module automatically downloads the appropriate FDI Package. This ensures that the system is always updated with the correct device revisions.

**Push Notifications for timely update (future)**

Push notifications from the cloud based FDI Package Repository to a connected host system informs operators and engineers of available software updates.

**Challenges in Device Revision Management**

Growing numbers of installed smart field devices bring more data to the user, while challenging users to understand how to harness this information for greater benefit. Keeping a system up to date with information provided by smart devices is challenging for plant operators.
In a survey by Control Global, the biggest challenge in device integration is in “dealing with device drivers and revisions”. This is mainly because when the device is replaced with its higher version or with a device from another manufacturer for better functionality, finding the suitable device driver (EDD/FDI Device Package) can be an arduous task. Currently, device drivers are available from various sources including vendor websites, email, system supplier services, foundation registered product catalogs, CD-ROM, and even USB drives.

Maintenance engineers must be trained to choose the right device driver revision from various sources depending on the vendors and communication protocols and update it in the specific system for the device to operate efficiently.

The core of device revision management lies in keeping the system and handheld field communicator aligned with the latest devices and revisions. Problems arise when multiple, non-standardized sources, for device drivers are available.

The FDI Package Repository is a single cloud based distribution source for registered EDD files and FDI Device Packages, irrespective of vendors and protocols. The repository is accessible through an application programming interface (API) that third parties such as systems suppliers, instrument suppliers, software developers, and foundations use to develop applications that access repository packages.

One example of an API accessing the repository is FieldComm Group’s online Product Registry accessible at www.fieldcommgroup.org/product-registry. FieldComm Group’s Product Registry is simply a web-based interface for users to view and download the latest device support files manually.
How does it work?

With the implementation of a cloud-based FDI Package Repository, end users and system suppliers are able to auto update the host system with the appropriate FDI Package without human intervention.

As shown below, the host applications, handheld devices, and custom applications use the APIs in the FDI Repository cloud platform to create applications that can help assure that critical process automation system components are always up to date.

For example, during device replacement/upgrade, a built-in FDI Package update module in the host application or handheld communicator can securely access the FDI Package Repository using the API. On successful connection, the application may search the FDI Package Repository and download the appropriate package version on the system. In order to keep the system up to date, these actions can be triggered on demand or automatically.

FieldComm Group will maintain the API and registered FOUNDATION Fieldbus, HART and FDI Device Packages files in the FDI Package Repository.
Conclusion

In today’s data-driven world, ‘Device Revision Management’ has been a critical and tedious task for the plant engineers. FieldComm Group is focused on simplifying device integration and management in the process automation industry. The secure and reliable cloud platform - FDI Package Repository, acts as a single distribution source for thousands of registered EDDs and FDI Device Packages, irrespective of vendors and communication protocols. FieldComm Group’s new FDI Package Repository offers enhanced device management with minimal effort.