CDI's Data Enhancement System™ (DES) (Patent Pending)

COMPU-DATA
International, LLC

The Data Enhancement System™ (DES) (Patent Pending) is a middleware software component of CDI's product suite. DES is comprised of novel computer operated methods and systems which access electronic content stored in Data Sources and Data Generation Sources and enhance the content by using one or more technologies to automatically generate metadata. The enhancements are used by DES to augment the data by adding the automatically generated metadata as properties of the content. DES is designed to interact with one or more Data Sources and Technologies simultaneously allowing for the content to be augmented using the automatically generated enhancements of one or more technologies during one single pass of the content through the DES system.
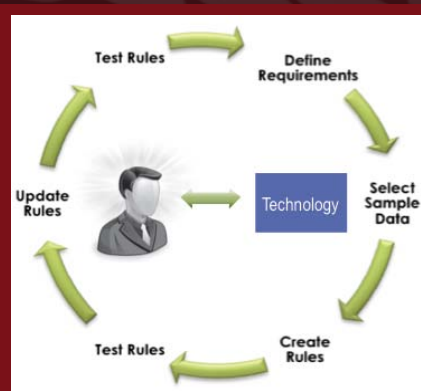
DES provides a distributed and scalable architecture that enables all of its components to be configured across multiple machines across the network. DES takes into account hardware characteristics that enable DES to execute in the particular hardware architecture of the servers it was installed. DES provides for performance tuning and software architectures such as multithreading.

The enhancement of electronic content is managed with rules defined in DES and in the technology (ies) used by the organization. For On-Premise and Cloud Computing ECMs and specifically for Microsoft® Office 365, and SharePoint® 2013, DES is ideally positioned by providing the flexibility and control normally lost in The Cloud. DES is offered as an "on premise" or "cloud" based system simultaneously processing content from multiple configured Data Sources.

Process Description

Depending on the Data Source, DES will use one of its Information Collector components to integrate with the Data Sources and prepare information used for the retrieval and processing of the content by DES' Data Collector component.

DES receives or retrieves the information created by its components in the Data Sources and creates information records in its data base in preparation for processing the content selected from the Data Sources. DES then flags the information record created in its data base for processing by the next step in its workflow.

The information record stored in the DES data base is then processed and the content plus any related metadata is stored in the DES data base. Once all the information needed for the successful processing of the content is ready, the information record is flagged for processing by the next step in the data enhancement workflow.

The content and metadata associated with each information record in the DES data base are prepared for the technologies to process. The content and metadata preparation tasks vary depending on the content format being processed and the technologies used. Once everything is successfully prepared and stored in the DES data base, the information record is flagged for processing by the next step in the data enhancement workflow.

The necessary content and metadata associated with each information record in the DES data base are now provided, by DES, to the technologies configured to process the content. DES works with each technology by providing all that was prepared and waits for a response from each technology. Once a successful response is received, DES updates the information record in its data base with the enhancements and the information record is flagged for processing by the next step in the data enhancement workflow.
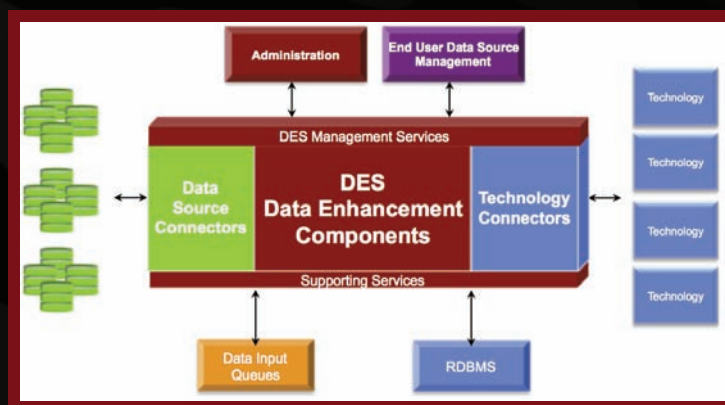
DES now processes the information record in its data base, communicates with the Data Source and causes the necessary updates to happen to the content stored in the Data Source.

If the "Return Address" (location where the content and/or enhancements must be placed) of the electronic content is different from the original Data Source location, DES will cause the necessary updates to happen at the Return Address assigned to the electronic content.

DES maintains information and metrics on all of its transactions, performance and/or errors.

DES provides a web based management GUI interface that enables an administrator and Subject Matter Experts to configure and manage the Data Sources and Data Generation Sources with the automatic metadata generation technologies to be used to process the content received. DES provides security and access controls for multiple subject matter experts or administrators. DES provides reporting capability and real-time performance monitoring and management.

DES provides a distributed and scalable architecture that enables all of its components to be distributed across multiple machines without restriction of location in the network. DES takes into account hardware characteristics that enable DES to execute in the particular hardware architecture of the servers it was installed. DES provides for performance tuning and software architectures such as multithreading.
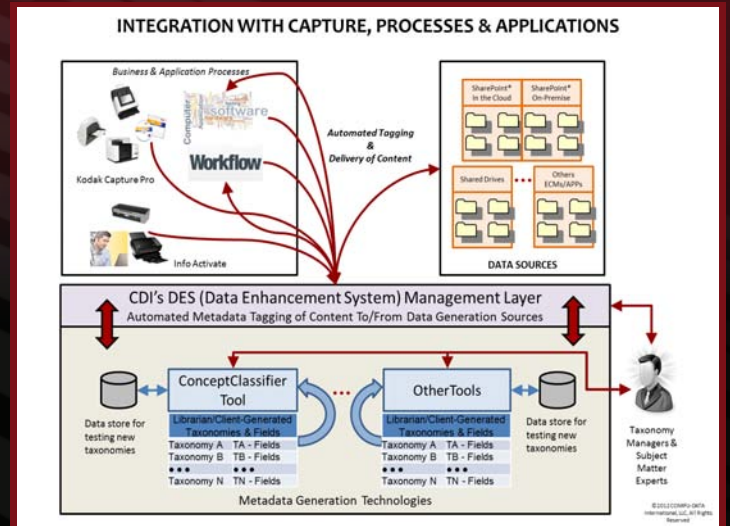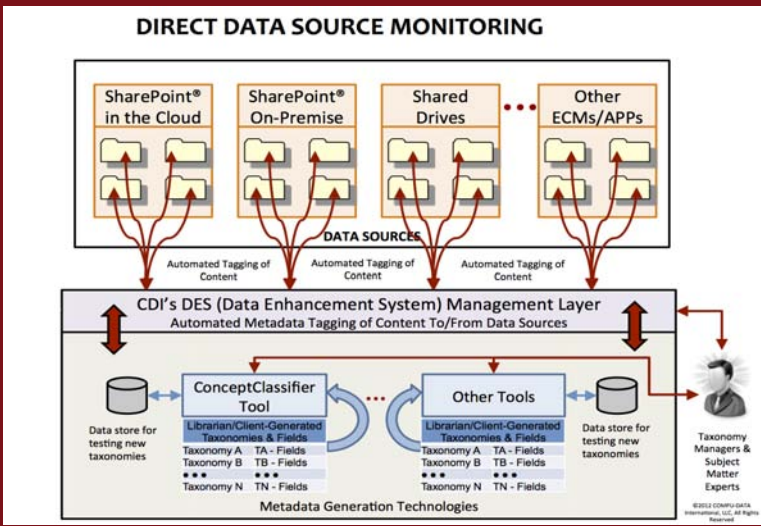
What does DES do for Data Sources?

DES manages the augmentation process of the electronic content found in the locations of Data Sources being monitored. DES monitors each location simultaneously processing the content using the metadata generation technologies configured. In one single pass of the content through the DES process, DES will update the content's property at the Data Source with the metadata generated by each of the technologies assigned.

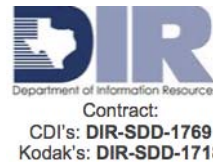**What does DES do for Capture, Automated Processes & Applications?**

DES manages the augmentation process of the electronic content delivered by any Data Generation Source. DES monitors its input queues simultaneously processing the content received using the metadata generation technologies configured. In one single pass through the DES process and subject to the transaction received, DES will (a) update the Data Source with the content received and with the metadata generated by each of the technologies assigned or (b) return the metadata generated by each of the technologies assigned **to the Data Generation Source.**

DIR
Department of Information Resources
Contract:
CDI's: **DIR-SDD-1769**
Kodak's: **DIR-SDD-1718**

CCG
Contract:
CCG-DIS-2010-003

STATE OF TEXAS
Certified
HUB

Microsoft Partner
Silver Independent Software Vendor (ISV)

Microsoft
Authorized Education Reseller