

# DATA TRANSFER SOLUTION

UK Water Utilities

2009



## DTS Overview

With the Data Transfer Solution (DTS), AMT-SYBEX has created the most powerful, scalable and robust solution for the management and control of the complex data transfers and associated business processes that operate between participants in the utility markets. Key clients include Centrica, RWE npower, EDF Energy and Bord Gais(Ireland).

Industry Specific tools and applications are integrated with powerful Enterprise Integration platforms

The solution comprises a suite of industry specific tools and applications developed by AMT-SYBEX, which are integrated with powerful enterprise integration platforms such as Sun Java CAPS, IBM WebSphere or SAP NetWeaver. The solution is implemented using our proven methodology to deliver significant improvements in business process and performance.

The DTS solution has been created as a back office application for use in organisations and businesses operating in the competitive utility market. The solution provides support for organisations operating in the following market roles:

- Gas & Electricity Supply & Distribution Companies
- Waste Water & Water Supply Companies
- Metering Companies including Meter Asset Managers, Data Collectors, Data Processors and Meter Read Agents

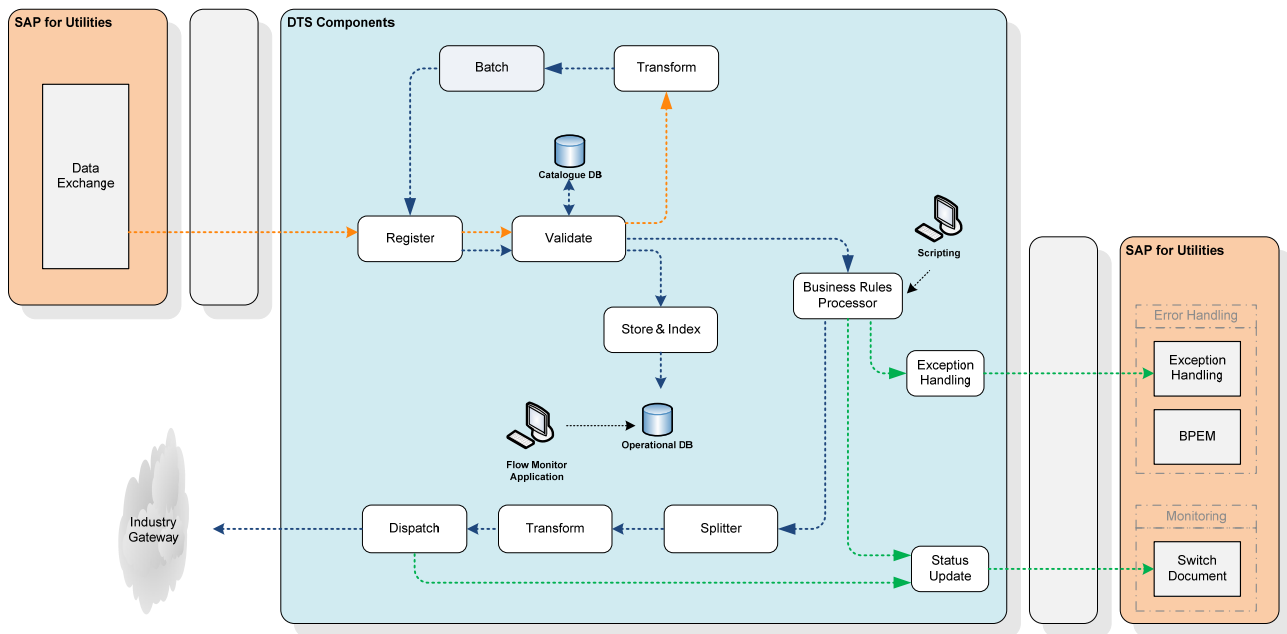
In addition the solution provides a stable yet flexible platform for the management of data associated with other internal business processes.

DTS addresses a number of operational problem areas including:

- The End to End management and tracking of data flow transfers between internal systems and between market participants.
- The management of multiple file formats from different market participants including the transformation of files to a standard 'internal' file format
- The management of Data Quality - Internal & External
- The management of exceptions resulting from poor data quality and process breakdown
- Change Management - Internal & External
- The provision of accurate End to End Management Information

## DTS Key Components & Features

The AMT-SYBEX Data Transfer Solution (DTS) is a packaged application that has been specifically designed with the particular demands of industry interaction and market messaging for energy markets in mind. The solution design is based on important principles for market messaging that readily accommodate changing message structures and business rules. The product consists of the following key components:



The core DTS industry module provides the validation capability and an open interface to corporate integration platforms which manage the transport and delivery of market messages/data flows to and from DTS. Individual components can then be selected from the Core Schema and User Applications to create a solution specific to the business needs of the customer.

### External Interface

The external interface adapters provide the transport layer for moving files between DTS and either internal applications or external industry gateways. This interface layer makes use of the Customer's underlying preferred integration technology.

### User Interaction

*Flow Monitor* – allows users to search for and view all data flows sent and received by the system. This includes both valid and invalid flows. The Flow Monitor also provides functionality to manage exceptions raised as a result of DTS catalogue validation or DTS business rule validation.

*Flow Creation* – allows the user to manually create and submit flows to the system for onward routing to internal or external systems

*Admin* – provides the user with an interface to perform system admin tasks such as maintenance of system parameters, maintenance of lookup data and definition and maintenance of user permissions.

## **Market Message Processing**

Market Messages are registered and validated against the appropriate DTS Catalogue definition. The catalogue definition is easily updated to accommodate changes to market message processing without the need to make code changes to any DTS component. The validation includes structural and content validation including look-ups of valid values and checks for valid combinations of values within the messages. The messages are stored in a form optimised for subsequent access in the DTS Repository and a readily searchable index created to provide rapid search access to flows for end users or business rules processing.

## **Business Rule Processor**

This component processes valid files and messages and applies any business rules which have previously been design using the business rules editor. This component also applies any splitting and routing logic to files and messages and tags them with a logical destination before passing them on to the Splitter. The rules composer provides an interface which allows users to define and configure the business rules which are executed against individual messages at runtime.

## **Splitter**

This component takes valid files from the business rules processor and physically splits them according to the logical destinations identified by the splitting and routing mechanism. Once the files have been split they are passed to the Transform component.

## **Transform**

This component applies any transformations required to the split files. As these transformations are entirely dependant upon the processing requirements of the destination systems, this component is delivered 'out of the box' as a simple pass through, however, transformation rules can be assembled as extensions to the DTS catalogue to meet the needs of particular customer implementations.

## **Dispatcher**

The dispatcher component maps the logical destination(s) determined by the routing rules to a physical destination queue.

## UK Water Scenario

### Background

Within the UK Water market, provision of waste water / sewerage and water supply may be carried out by separate companies within the same geographic area. This means that customers may receive separate bills for each element from different companies.

As part of this relationship, the water supply company is responsible for obtaining regular meter readings from the customer – these readings are then passed on to the waste water / sewerage company for calculation of their charges. If no regular meter reading is received an estimated meter reading will be calculated and used in its place.

This relationship also involves the transfer of data relating to:

- Meter Exchanges
- Change of Tenancy
- Change of Customer Details
- Change to Property Details

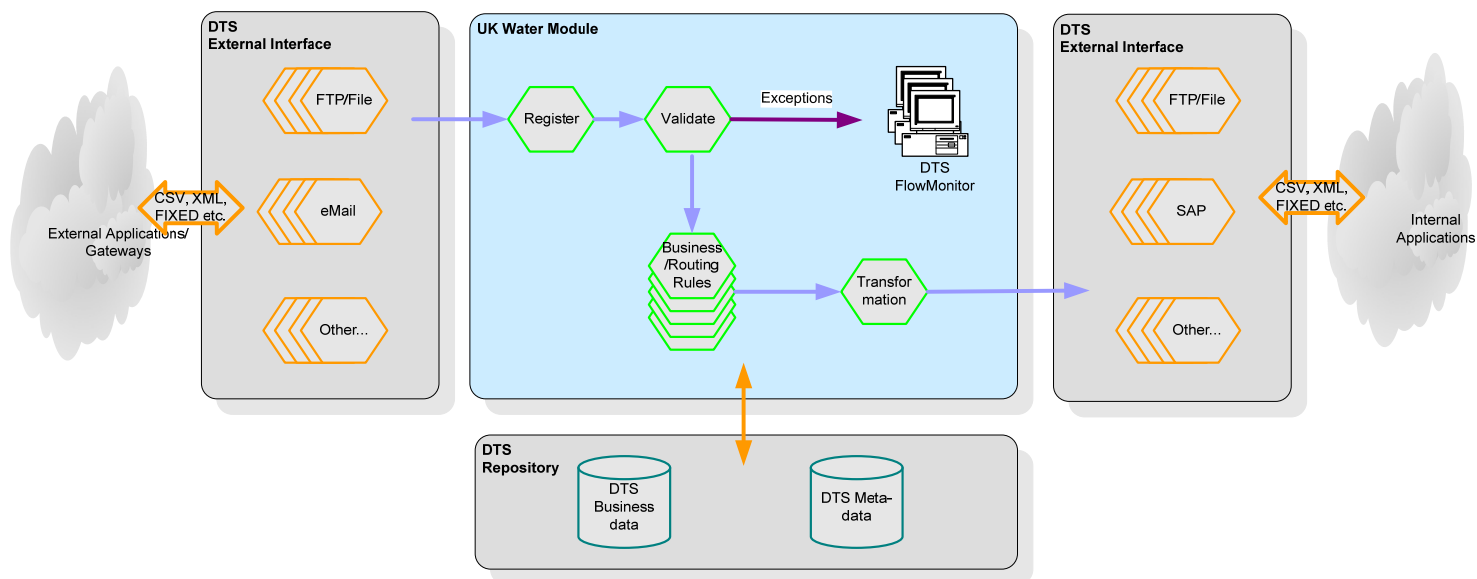
### Business Issues

Due to the large number of participants involved in the water market and the lack of industry wide processes, some of the business issues faced by companies include:

- the management of multiple industry relationships within one geographic area with each relationship operating under a separate business process with separate data file definitions.
- non standard file transfer with files being received by E-Mail, Fax, Magnetic Tape, CD / DVD etc
- high level of manual intervention required to validate and process meter reading files and handle any resulting exceptions.
- requirement to transfer all meter reading input files into a standard format for processing by an internal billing system e.g. SAP

### Outline Solution

The following diagram highlights how the DTS UK Water Module can address the issues / requirements detailed above.



- Meter Read information is received from a market participant and picked up by the DTS External interface. Files may be received in CSV, XML or fixed format using a variety of communications methods including e-mail or FTP
- Information will be registered and validated by DTS with any exceptions being highlighted to the user via the Flow Monitor application
- Following validation, files are passed to business rules for any further business specific validation or process specific activities. Destinations for routing are also determined at this stage.
- Finally files are transformed to a standard format (CSV, XML, IDOC etc) prior to being routed to their final destination.

## Business Benefits

DTS provides automation to many of the key data transfers operating in a competitive utility business

The implementation of DTS to manage data transfers within the UK Water Market offers the following key benefits:

**More Accurate Billing** - through improved data quality and better alignment of meter reading and billing cycles, leading to a higher percentage of bills being issued on time and error free. These factors in turn can lead to better customer payment performance and improved cash flow.

**Integrated Infrastructure** - provides an 'open' and highly scalable enterprise platform for support of multi product, multi supplier operations and delivers mission critical reliability, guaranteed message delivery and recovery from system failure. Provides flexible capabilities for existing and future IT infrastructures and support for major data migration requirements and industry change.

**Better maintenance of Data Quality** - improved data integrity through a centralised store of secure and valid data to support all of the business processes. Enforced validation of all incoming and outgoing data to ensure future integrity.

**Reduced Cost** - through the lack of manual intervention required to process data files and manage resulting exceptions from validation or business process exceptions. In addition the solution removes the need to make costly changes to internal systems e.g. SAP to handle industry specific data transfers.

**Visibility & Control** - increased visibility and control of the End to End processes allowing a more timely and accurate response to be provided to queries. Tighter control of processes resulting in improved process cycle times. Greater control of commercial contracts and non-contractual relationships between participants, and improved visibility of participant performance

**Improved and more timely management decision-making** - through improved Reporting and Management Information based upon a central view of the end to end process data and the use of powerful reporting tools.



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