STEP Matching and Linking:
At a Glance

For most enterprises, information about customers, employees, suppliers, patients or other organisations exists in multiple systems and databases across different business units or departments. Lacking the ability to integrate this information and create a consolidated view of each person or organisation leads to inefficient sales and marketing activities, duplicate records or accounts and reduced levels of customer service. It may even contribute to greater credit risk or increased liability.

For these and a myriad of other reasons, resolving records from disparate source systems and generating a single, accurate 'Golden Record' that can be used by everyone for critical business decision-making is, arguably, the most important feature of any Master Data Management (MDM) solution. Advanced matching and linking capabilities provide enterprise organisations with the tools to:

- De-duplicate customer, patient or supplier records that may exist in the same system or across multiple systems
- Ensure that consuming systems can confidently act on trusted, accurate data
- Monitor the data integrity of source systems that contribute records
- Enrich Golden Records with third party reference data from internal and external sources
- Enact enterprise-wide data governance policies and procedures for party data.

Stibo Systems' STEP MDM solution is a single, enterprise capable platform that provides a common set of functionality and operates in a uniform mode across any data domain. STEP's functional richness, strong data modelling and powerful workflow capabilities enable companies around the world to cultivate and maintain a robust information supply chain.

Data Onboarding and Cleansing

For a typical MDM implementation, matching and linking begins in the source systems that contribute party records to the MDM hub. When a record is created or updated in each contributing system, the MDM system should be able to efficiently receive the new or updated record via a real-time or batch onboarding process (depending on the business need), perform data quality operations and introduce the record / update to the matching engine. STEP provides these advanced capabilities to meet enterprise needs for data quality and onboarding:

- Data Quality Import Manager, including Extract, Transform and Load (ETL), to manage bulk updates and perform simple data transformations, such as stripping leading or trailing white spaces from attributes or standardising data formats, as well as more complex data transformations
- Business rules that set up workflows for checking the integrity, completeness and validity of incoming data
- Integration endpoints that specify how real-time data onboarding occurs with specific source systems, including specifying location, transport protocol, data to be exchanged and other configuration parameters
- Data dashboards to measure the data hygiene of each source system that contributes to the hub.

Accuracy Matters

Once new or updated records have been successfully introduced to the MDM hub, they are introduced to STEP's Matching and Linking component, which leverages configurable probabilistic algorithms (dual or single threshold) and clerical review window for stewardship intervention. Thresholds can be configured and fine-tuned using Stibo Systems' graphical user interface.

The matching and linking component allows enterprises to resolve multiple records and identify duplicate records. This capability has been augmented with out-of-the-box features for improved accuracy, along with survivorship rules for composition of Golden Records and messaging to other enterprise systems:

- Uses probabilistic and deterministic comparison functions, including Levenshtein, Damerau-Levenschtein, Edit Distance matching, nested decision tables and more
- Supports three types of thresholds that can be configured and fine-tuned by business users using sample pair analysis in a GUI: auto-link, clerical review and auto do-not link
- Analyses data that is not yet mastered by STEP with overlap analysis
- Checks to see if a record or similar record currently exists using STEP Web Services API
- Re-evaluates linkages based on attribute changes at the member record level
- Workflow driven clerical review of possible matches – examine possible matches and determine whether they are indeed matches.

Golden Record Creation, Enhancement and Export

The main goal of the matching and linking process is to link together records from disparate source systems that have been confirmed as referring to the same party entity to form accurate, high-confidence entities known as 'Golden Records'. Golden Record data can be enhanced by internal or third party reference data such as Dun & Bradsreet or LOQATE. It can also be shared with consuming systems and can be transacted against in real time. STEP's Golden Record features allow enterprises to make informed business decisions based on trusted and accurate information:

- Automated match actions to execute automatic link to Golden Record or workflow-driven clerical review, depending on pre-defined thresholds
- An ability to define a set of survivorship rules that determine which source data (name, attribute, reference) should 'survive' in the Golden Record and is supported by two different principles: most recent and trusted source
- Export Golden Records along with member / source records – the Golden Record and referenced source records are output on different rows in order to allow inspection of whether the match algorithm is working properly.

About Stibo Systems

Stibo Systems is the global leader in multidomain Master Data Management (MDM) solutions. Industry leaders rely on Stibo Systems to provide cross–channel consistency by linking product and customer data, suppliers and other organisational assets. This enables businesses to make more effective decisions, improve sales and build shareholder value. During the last 30 years, Stibo Systems has helped hundreds of companies to develop a trusted source of operational information. A privately held subsidiary of the Stibo A/S group, which was originally founded in 1794, Stibo Systems' corporate headquarters is located in Aarhus, Denmark.

For more information, visit www.stibosystems.com.

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