

EDISPHERE

Mapping Simplified

A comprehensive mapping product that simplifies your complex mapping requirements

EDISPHERE is a comprehensive any-to-any mapping product, having a very intuitive user interface and semantic mapping features, which meets your complex mapping requirement in a simplified manner with very low mapping effort.

Target Audience: Technical Managers

By

Ajay K. Sanghi

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EDISPHERE Software is a privately held company, headquartered in Nagpur, India. More Information is available at it's website <http://www.edisphere.com>

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Executive Overview

Mapping is the most challenging part of your Electronic Data Interchange (EDI) implementation. The mapping capabilities and the ease of mapping in an EDI translator can exponentially increase your EDI implementation timeline from days to weeks or even months.

Traditionally, EDI refers to X12 and EDIFACT data interchange standards, which have been in existence for over three decades. Over period of years, EDI has assumed new meaning since different data interchange formats have been used for B2B. In this document, EDI is used to generically refer to different file formats used for B2B, including XML, proprietary file formats (fixed length, variable length, comma separated value - CSV), databases and is interchangeably used with B2B. Wherever a distinction is necessary, the same is explicitly mentioned unless it is obvious from the context.

Your business applications and EDI interfaces are developed with an eye toward keeping your long-term IT plans in mind. Similarly your EDI software should also adapt to your changing mapping requirements. EDISPHERE is designed to meet your long-term mapping objectives, such as:

1. Easy to create maps

EDISPHERE has a very intuitive and easy to learn user interface, where your maps can be created using “*drag and drop*”, “*point and click*” features. It is loaded with smart and innovative features, which greatly simplifies your complex mapping requirements while significantly reducing your mapping efforts.

2. Mapping messages having dissimilar file types (any to any mapping)

EDISPHERE maps messages from any one format to any other format. Your application-EDI interface may be XML, proprietary file format or database, whereas your partner-EDI interface may be X12, EDIFACT or XML.

3. Mapping messages having dissimilar hierarchies

The hierarchy of message in your application-EDI interface may be very different from that in your partner-EDI interface including cases where:

- (a) One EDI interface has a master-detail segment hierarchy whereas the other interface has all masters segments first followed by detail segments.
- (b) A segment in one EDI interface is required to be mapped to two or more segments in the other EDI interface.

- (c) A field occurring only once in one EDI interface may have to be repeatedly mapped to every line item in the other EDI interface, etc.

EDISPHERE appropriately maps segments in header area, detail area and summary area, including mapping segments of different nesting levels in the source and output messages.

4. Mapping hierarchal loops

Hierarchal loops are top-down, left-right ordered structures like HL loops in X12. EDISPHERE maps hierarchal loops to the appropriate master-detail hierarchy and vice versa.

5. Mapping envelope and trading partner information

EDISPHERE supports mapping envelope data in X12, EDIFACT to the application message. If both the source and output message contains envelopes, as in the case of mapping X12 message to its EDIFACT counterpart, it supports mapping data from one envelope to another. It also supports mapping trading partner information, which do not form part of the source message to the output message.

6. Mapping fields having disparate attributes

EDISPHERE maps fields, which differs in attributes such as minimum and maximum *lengths*, data *types* (one may be alphanumeric, for example, while the other may be numeric), data *format* (one may be a fixed length field padded with space, while the other may be of variable length), data *patterns* (one date pattern may be *yyyymmdd*, while the other may be *ddmmyyyy*), etc.

7. Mapping fixed values

EDISPHERE can map fixed values to fields in the output message for which there is no corresponding field available for mapping in the source message. Different fixed values may also be mapped to the fields in the output message based on different data values (including blank-values) in the corresponding field in the source message.

8. Mapping cross-referenced values

EDISPHERE can map fields, which require data to be cross-referenced into different values during inbound and outbound translations. Such maps are common when mapping product-codes and part-numbers, which may be different for different partners.

9. Ignoring, overwriting and new instance maps

Sometimes a field in the output message is mapped more than once from different fields in the source message. The requirement may be to:

- (a) Ignore the maps if the output field is already mapped
- (b) Overwrite with a particular source field if the output field is already mapped
- (c) Map to a new instance of the segment if the output field is already mapped.

EDISPHERE supports all of these mapping requirements.

10. Mapping based on unusual conditions or situations

EDISPHERE has the ability to map fields based on complex conditions in the source message: *If this situation occurs in the source message then map following fields to the destination message using the following mapping criteria.*

Most situation-based maps can be created using simple qualifier-based mapping approach, which uses *drag and drop, point and click* mapping features, requiring very low mapping effort. Others, which are more complex, can be created using context-free expression-based mapping (semantic-maps) with only a slightly higher mapping effort.

11. Mapping dispersed semantics

EDISPHERE has the ability to map messages which disperse the semantics of information, wherein one unit of information (like Buyer and Shipper Telephone Number, Cell Number, Fax number etc.) is contained in two or more fields, making use of unique qualifier values to distinguish the semantics. Such maps are common when mapping X12 and EDIFACT messages.

12. Mapping notes and comments

EDISPHERE is able to concatenate or combine fields like notes and comments, which occur in multiple instances of the same segment in X12 and EDIFACT messages and map it into one field of the application message. It is also able to do the reverse, i.e. splitting a field to map it into multiple instances of the same segment.

13. Mapping calculation of a result

EDISPHERE can perform calculations on multiple fields such as *quantity* and *unit price* in the source message and map the result to a single *total* field in the output message.

14. Mapping result set of a stored procedure and SQL

EDISPHERE has excellent support for mapping directly to databases. This includes the ability to execute stored procedures and SQLs and map their result set to the output message. EDISPHERE uses database mapping internally for implementing functional acknowledgement and implementation kit features.

15. Mapping alternate elements

EDISPHERE has native support for mapping alternate elements, which significantly reduces the mapping effort in scenarios where, for example, 5 fields like Beeper Number, Telephone Number, Fax Number, Cell Number, Voice Mail Number etc. in your application message are to be mapped to the 3 alternate fields field-2, field-4 and field-6 in the partner message with qualifier values in field-1, field-3, field-5 as “BN”, “TN”, “FX”, “CP” and “VM” respectively. A new instance of the output segment is to be generated if all three fields are already occupied (mapped). Similarly, for the inbound mapping, it is desired that the application fields be appropriately mapped from multiple segment instances in the partner message.

5 application fields and 3 partner fields result in a total of 15 mapping combinations but require only 5 maps to be created in EDISPHERE. Similarly, if there were 20 such application fields and 10 partner fields, there would be 200 mapping combinations but would require the creation of only 20 maps using EDISPHERE.

16. Mapping large messages

EDISPHERE supports mapping large messages having thousands of line items without requiring large amounts of memory.

17. Re-using maps

EDISPHERE supports re-using map files for different trading partners. To facilitate re-use, separate map files may be created for different categories of maps. For example, maps common to several trading partners may be combined in one map file and maps, which are unique to a specific trading partner, may be created in a map file specific to that trading partner.

18. Mapping using multiple parses

EDISPHERE supports using different map files together in one parse or in multiple parses. Multiple parsing is particularly helpful when the structure of the source file is such that it is difficult to map it to the output message in one parse.

19. Ordering maps for execution

EDISPHERE reads a segment of the source file, finds the maps associated with the current segment which satisfies all the conditions for mapping and then maps each one of them to the output message. The default ordering of maps is based on element-order, i.e. based on the position of elements in the source segment. Occasionally a situation will arise in which a map associated with an element occurring later in the source segment must be mapped before an earlier occurring element.

EDISPHERE supports the ordering of the maps for execution, which is also useful in facilitating better performance and better debugging of your maps. For example, a mandatory element in the source segment, which always generates a new segment in the output message, if mapped before other elements being mapped to the same output segment would not only accelerate the mapping process, particularly when mapping thousands of line items, but also assist you in more easily debugging your maps, since a known source element always generates a new segment in the output message.

20. Debugging maps

EDISPHERE has excellent support for debugging your maps, wherein every segment of data being read from the source file is displayed with its

- Layout position
- Nesting level
- Its current instance
- Instances of its parent segments (loop header segments or master segments)
- The element it is mapped to in the output message
- The source data and the transformed mapped data (for example value 3511 of *N2* type data element in *X12* will be mapped as 35.11 to the element of *Real* type and vice versa)
- The nesting level of the output segment, its instance and instances of its parent segments, etc.
- Errors, if any, are also displayed.

EDISPHERE also supports disabling maps temporarily so that partial maps may be executed for debugging.

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Conclusion

EDISPHERE is packed with smart and innovative features, which effectively meet your complex mapping requirements. Most of your maps from different hierarchy, including one-to-one maps, situation based maps, mapping alternate elements, mapping fixed values, mapping cross-referenced values, etc. can be created using the simple drag and drop, point and click user interface with very little mapping effort. Other, more complex maps can be effectively created using semantic mappings.

EDISPHERE simplifies your mapping and helps you to beat your EDI implementation deadline.

Please send your feedback on the white paper directly to the author at ajay.sanghi@edisphere.com. It will be highly appreciated.

About the Author

Ajay K Sanghi is the Founder, CEO/CTO of EDISPHERE Software since its inception in 1995. He is a hands-on executive, who continues to passionately contribute in design and coding of EDISPHERE. Ajay is also very passionate about the Company's CSR program.

Ajay has a Bachelor's degree in Electronics Engineering from India and Master's degree in Computer Engineering from USA. Prior to starting EDISPHERE Software, he has worked with the R&D team of leading Telecommunication companies in USA.

Ajay is a vegetarian, loves to jog and practices yoga and meditation. His favorite place is his hometown, Nagpur, right in the center of India, where he was born and grew up with lots of friends. He may be reached at ajay.sanghi@edisphere.com

About EDISPHERE Software

At EDISPHERE Software, we develop Innovative EDI products for automating supply-chain.

Large companies and governments are using EDI technology to improve their operating efficiency and reduce transaction costs. But the high cost of implementing EDI technology continues to be a major barrier.

EDISPHERE is a comprehensive suite of innovative Electronic Data Interchange (EDI) products for seamlessly integrating internal business applications with external partners, which helps automate supply-chain faster, robustly and more cost-effectively. Based out of India; it's high-quality R&D and low-cost support provides unbeatable value to its customers in US, UK, Singapore, Hong Kong and South Africa. Additional information about EDISPHERE can be obtained at <http://www.edisphere.com>

Contact:

EDISPHERE Software Private Limited
215 Congress Nagar, Nagpur 440012, India

Tel (India): +91 712 246 3314

Tel (USA): +1 408 (649)-5635 (Uses VOIP – call answered by Nagpur office)

Fax: +91 712 246 3315

Email: info@edisphere.com