

EDISPHERE

Application Integration

Integrates Internal Applications in the Format Desired By the Applications

EDISPHERE can seamlessly integrate with your internal business applications in many different ways, such as common file format and common database, which does not require any programming. Applications can also be integrated through Application Programming Interfaces (APIs) using web-services, Java Messaging Server (JMS), COM, Java API, etc. Even though EDISPHERE runs on Windows, it can seamlessly integrate with business applications residing on any platform through common folder, ftp and APIs.

EDISPHERE is being enhanced for software as a service (SaaS) architecture, which is expected to be released in 2008. EDISPHERE SaaS release will expose web services conforming to service oriented architecture (SOA) so that enterprise application integration (EAI) can be achieved through programs written in business process execution languages (BPEL). EDISPHERE roadmap is absolutely state of the art and it ensures that your investment will never be obsolete.

Target Audience: Technical

By

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August 2003

Last updated: November 2007

www.edisphere.com

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

Your business applications are developed keeping your long-term IT plans in mind. If Electronic Data Interchange (EDI) software imposes restrictions on the file formats it accepts or it is inflexible in accommodating your application's unique requirements for application to EDI integration then your long-term IT plans may be affected and the gains expected by the use of EDI may not be fully achieved.

Traditionally, EDI has referred to X12 and EDIFACT data interchange standards, which have been in existence for over three decades. Over a period of years, EDI has enhanced its scope since additional data interchange formats have been used for B2B (*Business to Business transactions*). For the purpose of this document, the term "EDI" will be used generically to refer to a number of file formats used for B2B, including X12, EDIFACT, XML, SAP IDOCs, 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.

EDI = X12, EDIFACT, XML, SAP IDOCs, Proprietary formats, Databases

This documents starts with first describing the problem associated with application integration and then describes how EDISPHERE solves each of those problems.

Problem Statement

As the business grows, businesses invest heavily on a range of business applications for their supply chain management (SCM), enterprise resource planning (ERP), human resource (HR), customer relationship management (CRM), etc. Very soon the entire organization is well connected 'internally' but through different applications which are not interconnected. Either some manual effort is required to exchange data back and forth between these applications, which is slow and error-prone; or a proprietary program has to be written for integrating internal applications. The problem becomes more severe when external partners are to be integrated with different internal applications and the cost of doing business with 'external' partner starts becoming a significant factor. The heavy investment in internal applications is now highly underutilized for the lack of seamless integration between internal applications and external partners. Also, when businesses acquire different businesses, the need for integrating different applications again arises.

Solution

EDISPHERE solves these problems by acting as a central hub between these internal applications and external partners, exchanging data in the format desired by them.

The following document describes why your investment in EDISPHERE's EAI capabilities is safe.

1. Integration of multiple business applications in a heterogeneous environment

EDISPHERE currently runs on the Windows platform but is able to integrate different business applications residing on operating systems other than Windows also.

One installation of EDISPHERE can act as a hub for integrating several of your different business applications to facilitate the exchanging of messages among themselves and also for your trading partners. EDISPHERE has excellent routing capabilities enabling it to route messages from your trading partners to any of your business application.

2. Interoperability with different EDI technologies

EDISPHERE enables interoperability between different EDI technologies by performing the appropriate conversions. Your application message can continue to remain in its current format, the one best suited to your business application's data format, while the corresponding partner message may use a number of EDI formats. For example, one of your trading partners might require XML, another X12, another EDIFACT, and so on. Your application-integration remains unchanged for your various partners including your future partners, who may utilize some newly standardized EDI format.

As a value-added-service provider, you may require converting XML-based purchase orders from one subscriber into an X12-based purchase order for another subscriber, either directly (mapping without value-addition) or by initially converting it into your own format (XML, proprietary or directly into your database), perform some process on it (your value-addition) and then convert it into X12. For more information on interoperability capabilities in EDISPHERE, please refer to the white paper – *Mapping simplified using EDISPHERE*.

3. Adapting to your application file format

EDISPHERE is very flexible in adapting to the file format, which is most convenient to your business application. It employs a very intuitive and easy to learn user interface to create layouts of your application files. It provides 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. It contains features to import the schema of your database and also to upgrade your layouts and associated maps, if the interface between your database and EDISPHERE changes. In fact EDISPHERE uses its own database mapping technology internally, for implementing features such as Functional Acknowledgement and Implementation Kit.

4. Adapting to your partner file format

EDISPHERE assists you in creating layouts of your partner messages in the same manner as it does for your application file formats. In addition, it provides prepackaged layouts of standard EDI messages in X12 and EDIFACT formats so that you do not have to create these layouts from scratch. EDISPHERE's future plans include the prepackaging of layouts for other popular partner layouts such as XML layouts for Rosettanet, Chem eStandards, etc. Users are therefore encouraged to request popular partner layouts from EDISPHERE.

5. Setting application-EDI interface

EDISPHERE is written in C++. It is very easy to seamlessly integrate with your business application written in a language other than C++, such as Java, Visual Basic etc. All you need to do is configure a common directory for the shared common file, which EDISPHERE will use to automatically pick up your outbound files generated by your business application. Similarly, it will use an inbound directory configured by you to deposit the inbound files received from your trading partner following their translation (mapping). Another method for achieving application integration is by configuring EDISPHERE with the Data Source Name (DSN) for the shared common database.

EDISPHERE currently operates on Windows platform. If your business application is residing on a different PC using an operating system other than Windows, seamless application integration can be achieved by exchanging your application files using a common directory on a network file server, email or FTP for which EDISPHERE includes native support. If you wish to use any other communication method, then configure EDISPHERE for exchanging messages using a common directory and use the communication method that best meets your need.

6. Application Programming Interface (API) support for Application Integration

Your business application written in any programming language can easily integrate with EDISPHERE using several different APIs, such as web-services, Java Messaging Server (JMS), COM, C, and Java. Your business application may even invoke EDISPHERE for translation from within your SQL stored-procedures. EDISPHERE also supports your multiple applications making API calls simultaneously.

7. Automatically exchange messages with the business application (no human intervention)

Translator's multithreaded architecture uses separate server threads for receiving messages from different sources, sending messages to different destinations, and for scheduling translations etc., which enables the Translator to operate in 24x7 unattended mode.

EDISPHERE periodically polls the directories, which have been configured for the pickup of the outbound files from the business application. Similarly, EDISPHERE automatically translates and

deposits the inbound files into a directory prepared for the business application. This negates the need for human intervention.

8. Application data reliability and business rules

EDISPHERE exhaustively scrutinizes your application data and business rules before mapping for syntax integrity, conditional or situational requirements, validation of data against external code sets, etc. For more information on data validation support in EDISPHERE, please see the white paper – *Data Reliability using EDISPHERE*.

9. Cross reference and database lookups

EDISPHERE supports the use of partner specific cross reference tables with which your application data can be cross-referenced with the corresponding partner's specific data. Such cases are common in situations where partners use dissimilar product-codes and part-numbers. Lookups can be performed on the data received from your partner for the presence of these data values in the lookup tables. Corrective action can then be taken; such as inserting default data or an error can be flagged if the look up fails.

10. Supplying information not present in your application message

Some partners may require certain fields to contain mandatory information for which there is no corresponding field in your application message. Static information such as name and address, telephone numbers, etc. can be easily supplied using fixed-values. Dynamic information can be supplied by querying the application database.

11. Notify the business application of translation status

EDISPHERE has the capability to notify your business application of the status of inbound and outbound translations by using the Alarm and Notification feature and by logging the status of translations in a status file. You can design your own acknowledgement message for notifying your business application about the translation status of your outbound messages. Translation status can also be viewed from the translation logs.

12. Support for testing application integration

Sample messages are required to test application-EDI interface for many different scenarios. Your business application may not be ready for supplying sample data yet. Manual creation of messages is difficult and time consuming, in addition to being error-prone. EDISPHERE can generate test data in the desired EDI format. Further, it is possible to provide customized data or a list of customized-data for random or sequential generation from the list. It is also possible to vary number of instances required for generating a particular segment or loop, for example, to generate hundreds of line items.

EDISPHERE has the capability to generate test data in all supported EDI formats including the ability to generate test data directly into your application database.

13. Support for evolving business applications

Businesses are always evolving, resulting in situations such as:

- a) Changes to the business application,
- b) The addition of new Trading Partners,
- c) The addition of new messages with existing Trading Partners,
- d) Changes to mapping structures with the existing Trading Partners, etc.

The EDI implementation and testing of the same is often delayed due to synchronization issues since the business application or the remote Trading Partners may not be ready to send and receive messages. This presents you with a dilemma – How can you test new maps even when the EDI system is unable to communicate with either business application or Trading Partners?

EDISPHERE has the capability to simulate your EDI implementation (test new maps) without communicating with either your business application or with your Trading Partner, including the capability to automatically feed data files for round the clock continuous testing. This results in a well-tested and robust EDI implementation.

14. EDISPHERE Roadmap

EDISPHERE is being enhanced for software as a service (SaaS) architecture, which is expected to be released in 2007. EDISPHERE SaaS release will expose web services conforming to service oriented architecture (SOA) so that enterprise application integration (EAI) can be achieved through programs written in business process execution languages (BPEL). EDISPHERE roadmap is absolutely state of the art and it ensures that your investment will never be obsolete.

Conclusion

EDISPHERE seamlessly integrates with your internal business applications in many different ways and quietly processes transactions in the background. It helps you to design your business application messages in a manner designed to assure achievements of your long-term IT goals without the added concern about future modifications required by the data formats of your new and existing trading partners.

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

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; its 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>

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