

## BindStudio - First Impression

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### Quick Guide

What it is	Stand-alone modeling tool
You would use it for...	Modeling of public business processes according to UMM (UN/CEFACT Unified Modeling Methodology) and ebXML specifications
... when ...	you pursue an ebXML-based business process integration strategy
Distinctive features	Import of process templates (e.g. RosettaNet PIPs), reuse of business document types (e.g. RosettaNet business document types), Generation of CPPs and CPAs, WSDL generation from business activities
Relationships with other products	BindPartner (not required)
Alternative Products	None (as far as stand-alone tools are concerned)
What to do	Evaluate
Vendor URL	<a href="http://www.bindsys.com">http://www.bindsys.com</a>

### Overview

Business Managers as well as IT Managers are watching developments in the Business-to-Business Integration space with increasing awareness. In particular, the ebXML initiative has made significant progress over the past two years. As it stands today, ebXML will be the only B2B infrastructure left on the table, since RosettaNet has adopted ebXML and many industry groups have standardized on ebXML. Implementations of ebXML specifications are becoming available over time, not only opening up perspectives for inter-enterprise integration, but also for intra-enterprise integration. In addition, Web Services technology appears on the scene, providing a means to achieve technical interoperability with business service implementations.

Technology based on accepted public standards will eventually lead to bringing down the license fees for enabling technology, particularly middleware. There is reason to expect that ebXML infrastructure will be inexpensive, flexible, scalable and interoperable. Execution environments will become available in the \$10,000 range. Most importantly, existing investments in legacy systems can be exploited and integrated with Web services. Moreover, the implementation of ebXML specifications will lead to a significant productivity boost, thus enabling companies to reuse public business process definitions as well as business document type definitions (e.g. document types defined by industry groups, such as RosettaNet, Open Applications Group, Open Travel Alliance, and so on).

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Several vendors have already made available ebXML Registry and Repository implementations, ebXML Message Service implementations, and Business Process Execution Engines (capable of interpreting ebXML Business Process Specifications (BPSs)). As of today, to my knowledge no single vendor can provide an implementation of the entire ebXML stack, thus offering a coherent platform solution. However, this will only be so for a short period of time.

IT Managers are beginning to consider ebXML-based platforms for a good reason: B2B platforms can be used for inter-enterprise and intra-enterprise integration (e.g. integration of different functional areas), whereas it is not possible to use an intra-enterprise platform for inter-enterprise integration.

Bind Systems, a privately held company with headquarters in Dublin, Ireland, is a fairly new player in the B2B arena. In 2001, the company released BindStudio, the first member of an e-Business software product suite.

BindStudio, now at version 1.1, is a modeling tool purpose built for capturing collaborative process semantics, enabling business analysts to model public processes. It supports the Unified Modeling Methodology (UMM), a modeling methodology defined by the UN/CEFACT. The UMM business process and information modeling technique is based on the Unified Modeling Language (UML) from the Open Management Group (OMG).

BindPartner, which has not been officially released yet, is an ebXML Broker. It manages the model driven execution of shared business processes (public processes) within and between organizations. BindPartner encompasses two major components: BindPartner Server and BindPartner Management Console.

### BindStudio Concepts

A business process describes in detail how business partners take on roles, relationships and responsibilities. In ebXML concepts, business collaborations (i.e. public business processes) are defined as models, expressed in XML. The interaction between roles takes place as a choreographed set of business transactions. A business transaction is an atomic unit of work and cannot be decomposed into lower-level business transactions. Each business transaction is expressed as an exchange of electronic business documents, i.e. one or two predefined business document flows.

BindStudio lets a process designer define business collaborations. It closely sticks to the UMM (UN/CEFACT Unified Modeling Methodology). Hence, business collaborations are modeled as UML use case diagrams, using only a few syntax elements: actors representing roles, and activities, representing either business transaction activities or collaboration activities. The choreography (i.e. the process flow) of a business collaboration is defined using a UML activity diagram. Since public processes do not require the association of individual activities with roles, UML activity diagram syntax is adequate.

The business transaction choreography describes the ordering of and transitions between business transactions or sub collaborations within a binary collaboration. In BindStudio, this can be done using a UML activity diagram.

So far, any CASE tool that supports use case diagrams and activity diagrams could be used for the modeling of business collaborations and business transactions. However,

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BindStudio keeps tight links between use case and activity diagrams via activities. Each business transaction activity in the use case diagram is also an activity in the activity diagram. Moreover, the process designer can apply UMM business transaction patterns, such as Query/Response and Request/Response, when defining business transactions. These patterns determine the actual exchange of messages and signals between business partners involved in a business transaction.

The process designer can generate ebXML conformant Collaboration Protocol Profiles (CPPs) and Collaboration Protocol Agreements (CPAs). CPPs can be stored in an ebXML Repository. As of today, a few implementations of the ebXML Registry and Repository specification Version 2 already exist, with more to come in the near future. Even an open source implementation is expected to become available in April.

Process models can be imported in ebXML BPS format, thus eliminating duplicate work. Industry groups will have predefined standardized business processes in ebXML BPS representation, which can be imported in the tool, relieving the process designer from some manual work. Likewise, process models can be exported in ebXML BPS format. A process designer would use the export function to deploy a process model in an execution environment, represented by a Business Process Execution engine.

WSDL generation from business collaborations is a strong feature. Since WSDL definitions are generated from a model, BindStudio uses default settings for generation, presuming that a Web service implementation for a business activity does not exist. However, the WSDL generation wizard allows for extensive customization, thus providing the ability to modify operation names, so that existing Web services can be invoked at run time. As a modeling tool, BindStudio provides no support for the generation of WSDL from existing service implementations.

## Summary

Companies will need a modeling tool such as BindStudio. Of course, a CASE tool can be used for modeling business collaborations and choreography. However, general-purpose CASE tools fall short when it comes to managing the relationship between collaboration and choreography (process flow), and to validation.

BindStudio is an intuitive purpose-built tool that provides all the features required for designing public processes with binary collaborations. Multi-party collaborations are not supported yet. BindStudio has its limitations though when it comes to change management. It is not suitable for the design of private business processes, which is the domain of specific tools, such as ARIS. As a consequence, public and private processes are completely separate from each other, leaving no way to define how private processes link with public processes (for example, Peregrine's Alliance Manager provides this facility).

As for the generation of business service interfaces in WSDL syntax, BindStudio provides for a complementary way in that WSDL can be generated from business activities at the business process modeling level. Designers who use a CASE tool would usually generate WSDL from a class. Developers would use an IDE, such as JBuilder, to create WSDL. Web services are "simple" request/response and thus do not have collaboration semantics. As such, WSDL generation capability is a nice feature for designers who start out with process modeling in a top-down fashion.

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The acquisition of BindStudio will not result in a lock-in situation, since the tool generates XML documents conformant with ebXML specifications and WSDL specifications. Hence, modeling environment and execution environment are generally not tied to each other. However, BindStudio allows to set non-standard attributes that BindPartner can exploit.

With a price tag of \$2,995 per user, BindStudio is adequately priced. Overall, BindStudio should be on the shortlist of business collaboration modeling tools to evaluate.

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