

Technology Infrastructure

Butler Group Subscription Services

Business Process Management

TECHNOLOGY AUDIT

SEEBURGER

Business Integration Server (BIS)

Abstract *SEEBURGER BIS is a robust, flexible, multi-channel integration hub, primarily designed to support complex Business-to-Business (B2B) processes. Not only does BIS provide the necessary level of application integration that you would expect from such a solution, but it also supports complete integration of 'paper'-based processes, including fax and snail mail. BIS can provide rapid, ROI through integration and automation of the document-centric workflows that are typified by high levels of manual processing and hence cost. BIS supports flexible deployment, either locally or as a purely hosted solution, with a clear migration path between the two, should requirements change. On the downside, SEEBURGER needs to focus efforts on creating a more appropriate market presence, and adding process simulation capabilities. These concerns aside, organisations looking for an integration solution to help facilitate improved trade management should give serious consideration to SEEBURGER BIS.*

KEY FINDINGS

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|---|--|
| ✓ Complete solution for B2B integration. | ✓ Supports phased adoption of RFID. |
| ✓ Supports iterative, 'plug-and-play' deployment. | i ROI from the integration of document-based processes can be significant. |
| ✗ Lacks support for ABC and process simulation. | ✗ Product positioning needs to be tightened up. |

Key: ✓ Product Strength ✗ Product Weakness i Point of Information

LOOK AHEAD

SEEBURGER will continue to work on developing more vertical solutions, whilst also seeking new partnerships with both technology vendors and systems integrators.

► FUNCTIONALITY

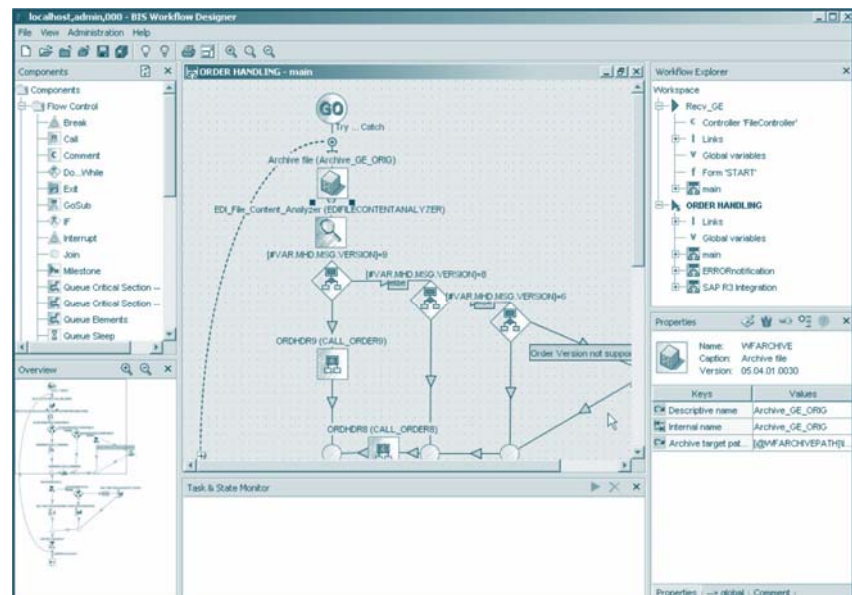
When looking for a process management solution, there is a danger that an organisation will focus product selection too heavily around technical integration capabilities (Enterprise Application Integration (EAI), message queuing, etc.). In doing so, other important process elements can get overlooked, in particular human workflows and processes that revolve around the handling of paper. In a world of Electronic Data Interchange (EDI), eXtensible Markup Language (XML), and Web services, it would be easy to think that all 'big business' is now conducted electronically. In reality, although important progress continues to be made, we are still far from this vision. Most organisations still rely on the movement of paper in one form or another to join process elements.

Handling paper, such as faxed invoices, is a labour intensive, costly, error-prone, and thankless task. There is usually the need to match an invoice with a purchase order and/or delivery note (two way or three way matching as required), with manual re-keying of data. The cost to the business is significant, and thus any solution that can eliminate unnecessary manual intervention whilst also eradicating errors should be a fairly obvious selection.

However, SEEBURGER BIS is not just a tactical piece of software designed to cut costs out of paper-based business processes - it is a process and integration hub, capable of supporting end-to-end Business Process Management (BPM), with application, content, workflow, and human integration. The company's background and domain expertise, allied with the architecture of BIS, skews appeal to B2B integration, with a focus on trade and partner management, Radio Frequency Identification (RFID), and supply chain integration.

Product Analysis

SEEBURGER BIS is built on the ability to model, execute, and manage business processes that span different organisations, using a range of channels and communication mechanisms. The basis of BIS is the workflow engine, which handles both process definition and process execution. From a modelling point of view, BIS Workflow Designer (shown



below) is based on.

Figure 1: BIS Workflow Designer

Business Process Execution Language (BPEL) and allows simple drag-and-drop of process elements. Full event management functionality is supported, with the ability to define thresholds and embed business logic for the routing of content and handling of exceptions. This allows the organisation to automate processes or process components, safe in the knowledge that problems will be adequately flagged and routed.

Many organisations are finding benefit from incorporating ABC into their process management solutions, providing as it does another mechanism for process optimisation. In particular, ABC allows the business to test and simulate the impact of process changes before rolling them out. In Butler Group's opinion SEEBURGER should therefore look to incorporate ABC and process simulation capabilities into its platform.

In execution mode, the Workflow Engine provides full state management, with support for process rollback, when required. Process data and information is persisted to the underlying relational database, which also acts as the repository for process monitoring and reporting.

In terms of integration and transformation capabilities, SEEBURGER remains dedicated to a strategy of developing its own adapters. This contrasts starkly to the approach being adopted by most of the other players in the EAI and BPM space, which is to move to pure standards-based integration, for example, by exposing applications and application components as Web services within a Service Oriented Architecture. On a positive side, SEEBURGER adapters will clearly be optimised for use with BIS, however, this has to be tempered by the R&D overhead required to maintain such an extensive library of modules, and the potential it creates for vendor lock-in.

Connectors are provided to a vast range of applications including SAP R3, SAP XI, BAAN, JDE, Commerce One, Ariba, etc. Protocol transformations can be performed between an extensive variety of standards, and SEEBURGER is particularly strong in the EDI/VAN space. Examples include, EDIFACT, GXS, IBM-IE, ANSI X.12, XML (xCBL, RosettaNet, etc.), CSV, SWIFT, TRADACOM, and so on. In addition, SEEBURGER provides a software development kit to enable developers to create bespoke integration points with applications not directly supported via adapters.

SEEBURGER BIS uses a proprietary internal messaging format. Other communication mechanisms, standards, and trading hubs supported by SEEBURGER BIS include: AS1, AS2, HTTP/s, ebXML (SWA), RosettaNet, OFTP, X.400, FTP, Mail (POP3, IMAP, SMTP), Ariba, PunchOut, CAP, Papinet, AECMA, SPEC2000(M), SOAP, and Elemica.

These aspects are brought together in the following BIS architecture

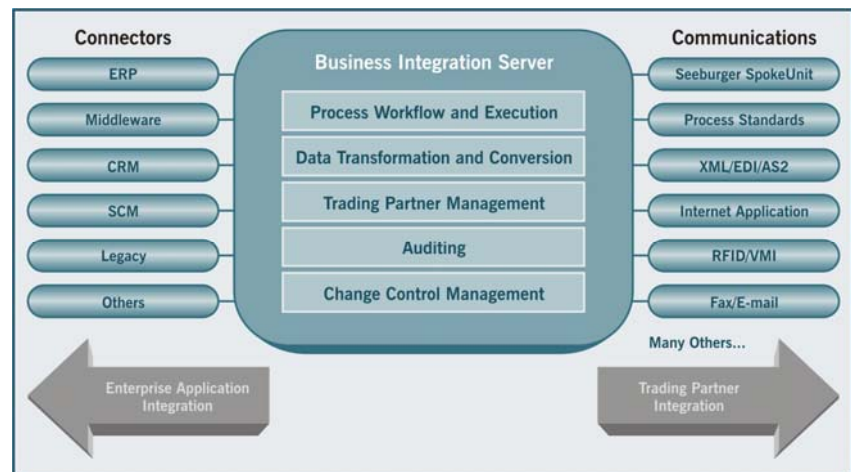


diagram:

Figure 2: BIS Architecture Diagram

Abstracting business rules to a process level allows for changes to be easily made and audited. This last point is critically important, particularly as legislation such as Sarbanes Oxley and the Companies Bill come into effect.

Another related attribute of SEEBURGER BIS is its ability to provide full version control for all workflows, rules, and messages. This allows new developments to be implemented carefully, with the option to return to a previous version or state should the need arise.

Support for Web services allows customers to expose process elements or applications as services for external discovery and consumption. Examples used by customers range from simple catalogue ordering, to inventory queries, and credit checks.

Administration and process monitoring is performed using the BIS Inspector. This shows the current status of the entire system, including information on all active workflows, as well as the allocation of system resources. Events and exceptions can be communicated instantly via a range of channels, including e-mail, SMS, WAP, etc. allowing the business to act on real time events, where necessary. BIS Messaging Tracking is designed for end users to query the status of the processes relevant to him or her, and can be extended to include selected partners or customers where relevant.

SEEBURGER is able to offer highly targeted solutions, geared for rapid deployment and time-to-value. According to the vendor, these are proving to be tremendously popular entry points for businesses that are new to SEEBURGER.

RFID Solutions

One example is SEEBURGER's offering for RFID, the BIS RFID Workbench. SEEBURGER has correctly identified one of the major stumbling blocks with RFID as being the development of a solid business case, backed up with tangible ROI expectations. Its RFID Workbench is available in three tiers, geared to facilitating a controlled RFID migration.

- RFID Workbench Lite - this is essentially a visualisation engine that works with a customer's data to demonstrate exactly how RFID would look and feel. This is felt to be critical in building a solid business case. In order to further assist with the validation process, ROI measures and calculations are built in to the tool.
- RFID Workbench Standard - following the validation process, should the business decide to move forward with its RFID deployment, SEEBURGER will deploy the standard edition of its RFID Workbench. This incorporates the necessary hardware and front-end development capabilities required to execute the previous visualisations, and is a stepping-stone to the full-blown RFID solution.
- RFID Workbench Pro - this version introduces the ability to complete the end to end integration of the selected RFID hardware systems into the backend system(s) for a fully manageable solution, along with the necessary integration layer, in this case SEEBURGER BIS.

Paper-to-ERP

As previously mentioned, paper and physical documents are used extensively within business processes. Many of the workflow and content management specialists have developed solutions for the routing of electronic documents and content in an attempt to mitigate the volume of paper used. The problem being that it is difficult to manage physical documents with the same level of precision and automation as electronic data, making paper handling a significant cost centre.

SEEBURGER's solution is to bring paper documents, such as faxes, orders, and invoices into the control of BIS, through a combination of scanning, OCR, and some clever workflow/exception handling. Incoming paper

documents are scanned through a scanner or can be picked up electronically, for example, from a fax server, and interpreted.

Once in an electronic format, the content can be routed and automatically processed without any human intervention. Similarly, where information is missing or cannot be satisfactorily interpreted, BIS is able to route the electronic content to the right user, together with all the necessary context, to allow him or her to complete this missing data. The potential savings to the business are clearly significant.

Product Emphasis

SEEBURGER provides integration solutions typified by a need to control B2B processes, with the back up of full trading partner management. SEEBURGER BIS, the company's integration server, can be deployed in a variety of ways, making the technology extremely accessible to small and large enterprises alike. SEEBURGER has identified a number of key market hot spots, in the form of RFID, Elemica, and Paper-to-ERP, that provide excellent entry points into its target audience. The flexible product architecture then ensures that such point solutions can grow and be developed into wider BPM environments.

► DEPLOYMENT

SEEBURGER benefits from being able to offer tremendously flexible deployment options for BIS. At the primary level, customers can opt to install and run BIS locally on their own hardware and network. Alternatively, where trading hubs are involved, BIS can be installed on the hub, with only minimal software required on each of the participating partners. This gives SEEBURGER a distinct advantage over competing offerings that place a software (and associated implementation consultancy) overhead on each of the trading members.

The standalone version of BIS can be deployed on the following platforms:

- Windows 2000, Windows XP, and Windows 2003.
- Alternatively, BIS AS is available on any platform that supports a J2EE application server.

Clearly, deployment in a J2EE environment requires a J2EE application server and BIS supports the following:

- JBOSS.
- BEA WebLogic.
- SAP AS.
- IBM WebSphere.

From a data storage point of view, BIS ships with the runtime version of SQL Server (MSDE) relational database to store all system data. BIS can be configured to support other databases such as Oracle. The database clearly then supports query/extraction to and from any third-party BI products. In the future, we would encourage SEEBURGER to form partnerships with vendors in this space, to provide more direct integration.

Another deployment alternative is to have SEEBURGER host the entire solution out of its data centre in Germany, via an ASP/outsourcing model. This is provided as a complete managed service. However, due to the nature of the BIS platform, should a client decide to 'insource' the service, it is simply a case of moving the existing implementation from

one infrastructure to the other. This gives clients the option of starting light and small before scaling up their use of BIS, and is indeed to be commended.

Down at the module level, BIS supports a plug-and-play approach to deployment, allowing customers to add new functionality/capabilities as and when necessary. This helps from a cost management point of view, as clients need only pay for the functionality that they need, and helps spread deployment over a number of controlled iterations. BIS is typically implemented by SEEBURGER certified consultants. However, SEEBURGER offers an extensive set of training courses that have been designed to allow customers to implement and customise their own solutions.

Clearly, actual implementation times depend entirely on the scope and requirements of the customer. However, as a guide, SEEBURGER claims that a basic AS2 implementation could take 3 days, whilst a solution requiring 100 mappings connecting to multiple VANs and eMarkets would take several months.

Training can be classified into 2 areas - operational and development. Operational training is aimed at individuals who will use BIS within an administrative and operational role. The advanced courses are for individuals who want to be self sufficient with BIS or require a deeper understanding, so that future configurations can be made without assistance from SEEBURGER. In terms of delivery, the company provides training onsite, at a SEEBURGER Training Centre, or alternatively via a WebCast.

The SEEBURGER support organisation supports customers with product problems, whilst SEEBURGER professional services offers ad hoc and project-based consultancy.

► PRODUCT STRATEGY

SEEBURGER BIS has a flexible, modular architecture, with over 1300 different modules. This gives SEEBURGER an excellent opportunity to combine certain relevant modules and form both horizontal and vertical solutions.

This strategy has three key benefits. Firstly, it makes it easier for the vendor to explain its value proposition to different markets; secondly, it helps to reuse consulting and deployment experience from successful projects, and thirdly and perhaps most importantly, it would reduce the time-to-value for customers.

Existing important vertical markets include:

- Aero and defence.
- Automotive.
- Chemicals.
- CPG/Retail.
- Energy & Utilities.
- Finance.
- High Tech and Telecomms.
- Insurance.
- Logistics.
- Manufacturing.
- Paper.
- Pharma.
- Healthcare.

The flexible deployment strategies offered by SEEBURGER make it suitable for all manner of business sizes, with the hosted option providing an attractive option for the SME space. In addition, SEEBURGER is working hard to develop and implement a channel strategy to augment its direct sales efforts.

The key technology partnership for SEEBURGER is currently with SAP.

Standard maintenance is charged at 20% of license costs and the company has 3 support levels - basic, standard, and extended. Details on the specific attributes of each level are available from the vendor.

► COMPANY PROFILE

SEEBURGER is headquartered in Bretten, Germany. It was founded in 1986 by its CEO Bernd Seeburger to provide EDI solutions to the automotive sector in Germany. To this day, the company remains under his guidance and also remains self-financed. SEEBURGER currently employs just over 400 people, the vast majority of whom are based in Germany. 10 Staff are located in the UK, an area set for rapid expansion.

In all, SEEBURGER has a presence in the following countries/territories:

- Germany.
- Spain.
- Austria.
- Hungary.
- UK.
- Portugal.
- Australia.
- Switzerland.
- US.
- The Netherlands.
- Italy.
- Sweden.
- France.
- Asia Pacific.
- Bulgaria.

SEEBURGER has a heavy focus on R&D, reflected by the 110 staff that make up this function. This is no doubt influenced by the vendors desire to undertake development and support of its own library of application and transformation adapters, at a time when other adapter vendors are doing their utmost to shrug off such baggage.

SEEBURGER plans to continue growing, both in revenue and employee terms. Headcount is anticipated to grow by another 50 over the coming year.

Revenues for the past three years show a steady and positive increase, and SEEBURGER is tremendously proud of its record of never having reported a loss over any financial year.

SEEBURGER claims to have 6,000 global customers, and key clients include:

- Corporate Express.
- Kraft.
- Hyundai.
- VW.
- Roche.
- Dunlop.
- UPS.

► SUMMARY

The integration and management of B2B processes requires a different approach to internal process management. Issues surrounding service

level agreements, supply chain integration, business rules, and process ownership need to be closely managed within an environment designed for secure trading partner integration. What is more, paper-based touch points need to be brought under control, ideally within the same integration hub, in order to reduce unnecessary wastage and deliver a consistent, uninterrupted service to suppliers and customers alike.

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