

Hyundai Puts SEEBURGER in EDI Driver's Seat to Electronically Enable All Suppliers to Alabama Factory

HYUNDAI MOTOR COMPANY AT-A-GLANCE

CUSTOMER BUSINESS

AUTOMOTIVE OEM

TYPE OF PROJECT

EDI FOR NEW FACTORY

SOLUTIONS

- **SEEBURGER BUSINESS INTEGRATION SERVER**
- **SEEBURGER HUB&SPOKE**

BUSINESS BENEFITS

- **JUST-IN-TIME MANUFACTURING SUPPORT**
- **100% TRADING PARTNER INTEGRATION**
- **LOW-COST SPOKE SOLUTION FOR NON-EDI-CAPABLE SUPPLIERS**
- **BYPASS VANS WITH AS2-BASED EDI**
- **\$80,000 VAN FEES SAVED BY HYUNDAI ANNUALLY**
- **NO-VAN-FEE OPTION FOR SUPPLIERS**
- **NO MANUAL EDI DATA ENTRY**
- **HIGH SYSTEM RELIABILITY**

TECHNICAL BENEFITS

- **TIGHT SAP R/3 INTEGRATION**
- **ALL SUPPLIERS IN EDI DATA STREAM**
- **HUB&SPOKE FOR SMALLER PARTNERS**
- **INTEGRATED AS2 SUPPORT**
- **ELIMINATE VAN MIDDLEMAN**
- **PRE-BUILT AUTOMOTIVE MESSAGES**
- **PRE-BUILT AUTOMOTIVE WORKFLOWS**
- **PROVEN IN AUTOMOTIVE INDUSTRY**

TECHNICAL ENVIRONMENT

- **SEEBURGER BIS CLUSTER**
- **WINDOWS 2003 SERVER**
- **SQL SERVER 2004**

When Hyundai Motor Company opened its Montgomery, Alabama, factory in 2005, the goal was to become the world's most automated automotive plant. As one step toward that goal, Hyundai mandated electronic data interchange (EDI) for all Tier 1 component suppliers to support the plant's just-in-time and just-in-sequence operations. The stumbling block was electronically enabling a key group of suppliers that lacked EDI capabilities. SEEBURGER's Business Integration Server (BIS) provided a low-cost AS2 Spoke solution for those suppliers, traditional EDI for others, and the ability to eliminate tens of thousands of dollars in annual Value-Added Network (VAN) fees by offering the automotive industry's first integrated support for the Internet-based AS2 communication protocol. Four years later, some of the Spoke adopters are still Spoke users, others have upgraded to full EDI functionality, and SEEBURGER BIS is still enabling mission-critical B2B communications that ensure that Hyundai has the components it needs to keep Sonata sedans and Santa Fe SUVs rolling smoothly off the assembly line.

The Challenge

Non-EDI-Enabled Suppliers

Hyundai Motor Manufacturing Alabama was Hyundai's first assembly and manufacturing plant in the U.S. Long before the factory started cranking out cars, IT managers selected SAP R/3 as the plant's core business software. They then launched a search for a companion B2B/EDI solution enabling real-time electronic exchange of planning and shipping schedules, advance ship notifications, remittance advices and other mission-critical transaction documents between component suppliers and SAP.

SEEBURGER BIS' tight SAP integration gave it an early edge over competitive systems. So did the company's large library of pre-built automotive-specific messages and workflows, extensive customer base of automotive OEMs and suppliers, and then-unique ability to furnish a fully integrated AS2 adapter to allow Hyundai to bypass VAN services and associated fees by transmitting trading data over the Internet. Those features would enable easy, reliable and cost-effective connectivity for two-thirds of Hyundai's Tier 1 suppliers.

The challenge was how to manage communications with the remainder of Hyundai's Tier 1 supply base, consisting of the company's standard suppliers from South Korea who were setting up operations in Alabama to service the plant.

These suppliers - furnishing key components such as batteries, insulation, climate controls and door frames - had no EDI experience in South Korea because the technology is rarely used there. Nor did they have the IT resources to install and maintain in-house EDI systems as startups in the U.S. Yet manually exchanging trading documents by fax or phone was not an option in Hyundai's just-in-time manufacturing environment. It was, in essence, EDI or bust.

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The Strategy

SEEBURGER Hub&Spoke

Hyundai found the answer in SEEBURGER Hub&Spoke, a BIS add-on system designed to connect non-EDI-enabled trading partners to the normal EDI data stream. Any supplier could be connected to the SEEBURGER BIS (the Hub) installed at Hyundai's data center with a small Java application (the Spoke) installed on their own IT system. Each Spoke unit would be pre-configured to:

- Exchange transaction messages with the Hyundai hub utilizing the EDIINT AS2 (EDI over Internet) protocol for secure message transport, eliminating VAN fees for both Hyundai and the trading partner.
- Translate purchase orders and other documents received from Hyundai into human-readable format for easy interpretation on the partner's side.
- Send SEEBURGER-supplied forms manually populated with ASN data by the supplier as ASN 856 documents for integration with SAP on Hyundai's side.
- Allow automated updates and/or version control to be centrally managed by Hyundai, relieving partners of EDI maintenance responsibilities.

Hyundai trading partners who were not EDI-capable could also choose a traditional in-house SEEBURGER installation or a different EDI solution entirely. But for Hyundai, the important point was that SEEBURGER's Hub&Spoke system provided an affordable and manageable strategy for complying with the factory's EDI mandate. Most of the affected suppliers chose the Hub&Spoke option for that reason.

"EDI is imperative for our just-in-time operations as well as for just-in-sequence backup in case one of our live data feeds goes down, but we don't dictate which software the supplier has to use. It's entirely their decision," said J.T. Hu, Application Development Manager, Hyundai Information Service North America. "On the other hand, we knew we couldn't expect our South Korean suppliers to invest in a conventional EDI system out of the gate considering they were entering the U.S. market with only one customer: us. SEEBURGER's Hub&Spoke model provided a practical and innovative alternative."

The Benefits

100% Trading Partner Integration

For Hyundai, offering SEEBURGER's Hub&Spoke option helped smooth the path for enforcing mandatory EDI use for all Tier 1 suppliers, including those with limited IT resources and budgets. The ability to integrate all trading partners into the EDI data stream was critical to achieving just-in-time component delivery across the board. It also eliminated the inefficiencies, errors, bottlenecks and handling costs associated with manual data entry.

Suppliers, in turn, benefited by having access to a low-cost, low-maintenance and secure solution for complying with Hyundai's EDI requirements without having to pay VAN fees for every transaction.

Leveraging SEEBURGER's Hub&Spoke functionality was also part of a larger money-saving AS2 strategy that made Hyundai the first automotive OEM to standardize on the Internet-based transport protocol for all EDI documents, including those exchanged by traditional EDI. That decision – following AS2 adoption pioneered by Wal-Mart – is saving Hyundai's Alabama factory an estimated \$80,000 in annual VAN fees as well as the additional costs of manual document handling.

"Like any business, we are always interested in minimizing operating costs. SEEBURGER's AS2 support gave us the opportunity to do that by cutting out the middleman in the EDI process: the Value-Added Network," Hu said. "SEEBURGER was able to provide integrated AS2 services at a time when other EDI vendors could not. That was only one factor in choosing their BIS gateway, but it was an important one."

Hyundai went live with the SEEBURGER system when the Alabama plant opened for business in 2005. Since then, EDI transaction messages have been running through the gateway as smoothly as a well-tuned car engine. "We can't live without EDI, and we can't tolerate dropped messages or service interruptions," Hu noted. "You look for high reliability in a mission-critical communications system, and SEEBURGER has delivered."