

REMEDY INTELLIGENT STAFFING

Using Microsoft® Visual Basic® programming system, Remedy Intelligent Staffing has created an easy-to-use, scalable line-of-business application that makes key data accessible to all its associates—whether at the company's headquarters, in branch offices across the country, on travel, or at home.

Solution Overview

Industry

Temporary staffing

Business Solution

Front office line-of-business solution

Architecture

Client side: Visual Basic-based application, tightly integrated with Microsoft Office 98, running under Internet Explorer and Windows® 98 or Windows NT®.

Server side: Visual Basic-based application and SQL Server™ database running under Windows NT, Internet Information Server, and Transaction Server.

Solution communicates with a server running a Back office payroll and billing system on a Windows NT/SQL Server platform.

Products

Microsoft Visual Basic v. 6.0

Microsoft Office 97

Microsoft Internet Explorer v. 4.0

Microsoft Windows 98

Microsoft Windows NT Workstation v. 4.0

Microsoft Windows NT Server v. 4.0

Microsoft SQL Server v. 7.0

Microsoft Internet Information Server v. 3.0

Microsoft Transaction Server v. 1.1

Development Resources

20 people (12 technical, 8 functional)

Development Time

One year to develop pilot program and one year roll-out to the field of 400 offices.

Benefit

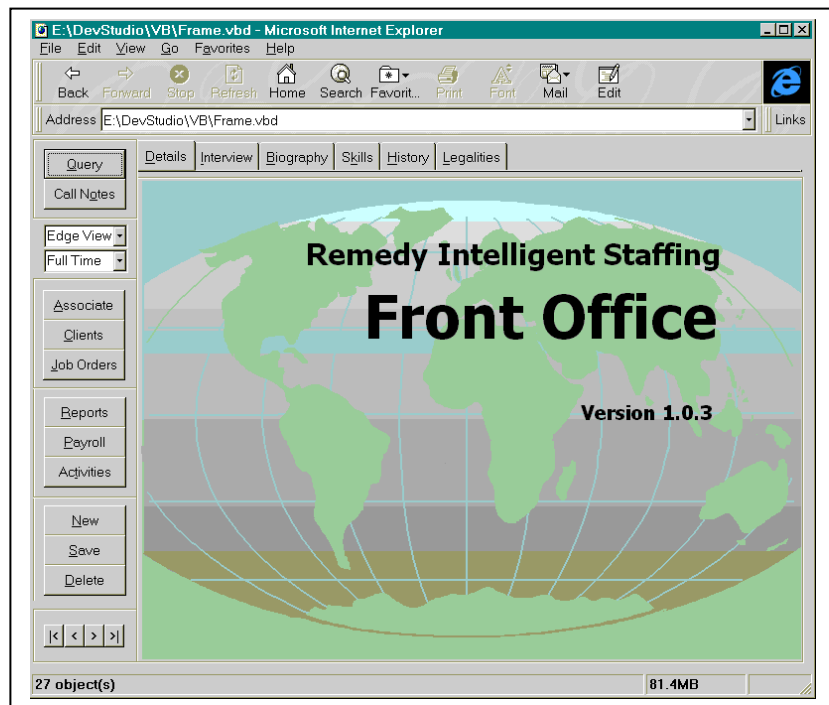
Employees nationwide gain easy access to timely, accurate information from any location. Application is easy to use and administer; makes it easy to change business rules, add new offices, and incorporate new technologies. Company expects solution to increase its revenues and improve its service to clients and temporary employees, resulting in better retention of both.

ow to create a flexible, scalable line-of-business solution that could grow as rapidly as the company grew? That was the challenge facing Remedy Intelligent Staffing, a national provider of temporary staffing services based in Aliso Viejo, California, which expects to grow from its current \$500 million in annual revenues to \$1 billion in the beginning of the next millennium.

Founded in 1965, Remedy operates a network of over 240 offices throughout the United States, plus an additional 160 on-site locations within customers' companies. Each of these offices currently has its own database, with information both about the clients it serves and about the temporary staff it sends out. These databases typically run on an MS-DOS® operating system and are linked to office workstations

by a Novell® LAN (although some offices use a UNIX® platform). Because there is no commonality between the databases used by the different offices, there is no way to share data among them.

Remedy knew it could operate more efficiently if it could set up a line-of-business application that would provide access to a centralized data repository in its Technology Center, allowing client and resource data to be shared by all its offices. A solution of this type would also provide company executives with an overview of all the company's clients and associates. Accordingly, in September 1995, Remedy's IT group began a feasibility study to determine how it might achieve such a goal. The group also began developing a requirements definition. In



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Remedy Intelligent Staffing

September 1996, they received approval to proceed.

Design Criteria

Remedy’s IT group established several key design criteria for the solution. These included:

- **Scalability.** Remedy was growing fast, so its solution had to be highly scalable. Specifically, it had to be able to grow from 400 to 600 sites and 2,500 to 5,000 users the beginning of the next millennium.
- **Flexibility.** The solution needed a flexible communication infrastructure so it could serve users wherever they were located, whether at a Remedy office, a client office, or their home. In addition, it had to easily accommodate changes, since the company might open new on-site offices or close existing ones as its client base changed.
- **Simple administration.** With a large mobile workforce, Remedy couldn’t afford a system that required complicated field support.
- **Adaptability.** Remedy needed a foundation that could incorporate emerging technologies, so the company wouldn’t have to throw out the system to take advantage of the latest advances.
- **Compatibility with Internet technologies.** Remedy wanted the system to be based on the Internet technology—both to simplify communication with mobile users and to allow the company to use the browser and Remedy custom interfaces regardless of whether users accessed the system from the

corporate offices, a branch office, the client, or their home.

- **Centralized database.** The new system had to keep all relevant data in a single database. This included data about clients, temporary employees, and the tests that were given to candidates for temporary positions.
- **Integration with Back office system.** The solution had to integrate seamlessly with the Back office enterprise-level payroll and billing system that Remedy is implementing in sequel—another solution that runs under Microsoft Windows NT and SQL Server.

Automated Workflow Management.

“Our offices are very hectic and fast-paced,” explains Norm Leibson, Remedy’s vice president of information technology. “One moment a sales supervisor is taking a client call; the next she’s calling people to see who is available to meet a need; then she’s greeting a potential candidate or running one through our testing process.” The system needed to provide assistance with managing all these activities to guide the sales supervisors through their day—from posting job openings on the Internet to scheduling appointments to signing up applicants to filling client work orders. “We wanted the system to mirror the workflow of our offices, rather than requiring them to change their workflow to match the system,” adds Sam Arafeh - CEO of SEAM International Corp, the former assistant vice president of the IT group, chief architect and program manager for this project. “And we wanted a seamless environment

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rather than a bunch of separate applications.” Application Architecture
The group selected the Microsoft Visual Basic programming system as their primary development tool for implementing their solution, which has a client / server architecture.

The client side of the Visual Basic-based application runs on an Internet Explorer platform, under either Windows NT Workstation or Windows 98. The Visual Basic-based application is tightly integrated with Microsoft Office 97, providing users with a seamless interface. The client side communicates with the server side via a private intranet.

The server side, which resides on a centralized Web server located at corporate headquarters, includes the server portion of the Visual Basic-based application, Microsoft Internet Information Server, Microsoft Transaction Server, a Microsoft SQL Server database, and Microsoft Windows NT Server. The SQL Server database contains all the information Remedy needs to run its business—client records; prospect files; temporary employee records; data on fees, hours, and rates; the

being accepted; and test results.

This front office server communicates with a back office server running a Back office payroll and billing system on a Windows NT/SQL Server platform. Even though the front office and back office databases contain much of the same data, Remedy decided to set up a separate database for the back office system. One reason was to achieve high performance for both solutions. With hundreds of users accessing the front office database, the IT group was concerned that back office performance might be slowed down if both systems used the same database. A second reason was the mission-critical nature of the front-office solution: the group wanted to be able to keep it going even if the back office system went down. With two databases, there is no single point of failure. The front office server uses Microsoft Message Queue to ensure that any changes to one database are reflected in the other.

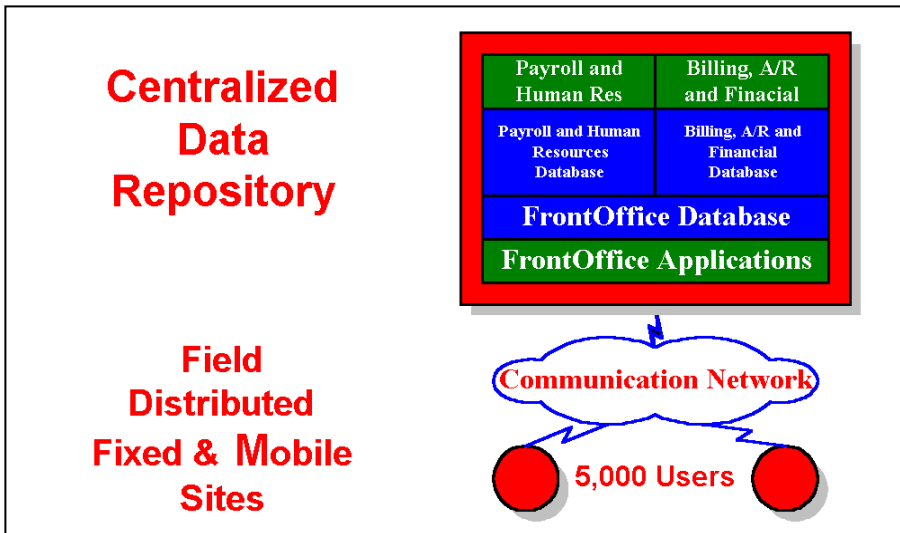
With this architecture, up-to-date data is readily available to everyone who needs it—corporate staff, field staff, temporary employees, and clients.

Why Microsoft Technology?

Remedy’s solution relies heavily on Microsoft technology. Here are the developers’ reasons for each of the technology choices they made.

Visual Basic

The developers chose the Visual Basic development system both to develop the screens and forms for the client side of the application and to create business rules and logic for the server side.



tests that applicants are given before

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They chose Visual Basic for the client side in order to:

- Save development time by incorporating some of the functionality of the Microsoft Office suite into the solution. (Remedy had already standardized on Microsoft Office for its office productivity software.)
- Minimize the need for user training by providing a standard graphical user interface for all their applications.
- Provide users with fast response time.

“We were looking for the best-of-breed standardized approach to use as the basis for an all-inclusive, automated work environment,” says Arafeh. “The tight integration between Microsoft Office suite and Visual Basic provided the foundation we were looking for—and it also provided the developer productivity and end-user performance we needed.”

The developers saw numerous advantages in using Visual Basic for the server side, as well. These included:

- **Rapid application development and fast compilation.** Unlike other rapid application development tools, Visual Basic 6.0 can function as a compiler as well as an interpreter.
- **Easy maintenance.** “It’s much quicker and easier to change a business rule in Visual Basic than in C,” says Arafeh.
- **Ease of finding programmers.** “We’ve found that Visual Basic programmers are available in large numbers,” says Leibson.

Internet Explorer

The developers chose Internet

Explorer as the platform for the client side of the solution. “With Internet Explorer, we’ll be able to make our solution accessible from all three Internet platforms—the Internet itself, our intranet, and an extranet we set up for our customers,” says Leibson. Remedy particularly liked the fact that Microsoft is making the Internet Explorer user interface the standard for both desktop and Web-based functionality—a step that will further simplify training for Remedy. When the IT group learned that Internet Explorer version 4.0 would be available in time to become a part of their solution, that clinched their decision—both because of the teleconferencing extensions in version 4.0 and because of its ability to offer better performance on a narrow, inexpensive bandwidth. “That will help us keep our costs down while ensuring a good response time for our users,” says Arafeh.

Windows NT and SQL Server

Having recently moved from Novell NetWare® to Microsoft Windows 98 and Windows NT for its workstations, Remedy was trying to decide whether to stay with the traditional platform of UNIX and ORACLE® for its back office system or to move to Microsoft Windows NT and SQL Server. The company was leaning toward Windows NT and SQL Server—both because this platform would give them more applications to choose from and because it was a better fit with their workstation software. But, before implementing the solution, the developers wanted to make sure that Windows NT and SQL Server could support the

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volume of transactions they needed. In the next few years, they expected to move from processing 150,000 W-2 forms to 1 million—and from 40,000 checks per week to 200,000. To test the Windows NT/SQL Server platform, they decided to give it a try on a data warehousing project they were working on. “The results of that project gave us confidence that we were on the right track,” said Arafeh. This experience, together with Microsoft’s announcement of the introduction of SQL Server version 7.0 and the strategic alliance that Microsoft had just formed with PeopleSoft, provided all the assurance the group needed. By April 1997, Remedy had settled on Windows NT and SQL Server for their back office platform.

Third-party Support

In developing both the front office and back office systems, Remedy had assistance from several third parties. These included:

- **SEAM International Corp**, an R&D and technology based company, based in Los Angeles, California was the chief architect, program manager, lead technical provider and the prime contractor of the Remedy project.
- **Nadek Computer Systems**, a Microsoft Solution Provider Partner based in Irvine, California, which designed and implemented the SQL Server and network infrastructure solutions for both front office and back office systems.
- **Fulcrum Point Technologies**, based in Dana Point, California, which worked on implementation of the middle-tier business rules for the front office system, as well as

integrating that system with Microsoft Outlook™.

- **SEI Information Technology**, a Microsoft Solution Provider based in Los Angeles, California, which also worked on implementing the middle-tier business rules for the front office system.

Remedy handled the overall management and retained responsibility for design of the system architecture, infrastructure, business processes, enterprise database, client and business rules tiers, applications interfaces, reporting, integration, and intranet communication for both front and back office systems.

Current Status

By June 30, 1997, Remedy had completed the business analysis and requirements definition for the solution and had developed and validated the front office prototype followed by developing, testing the production version of front office application.

With 20 people working on the front end (12 technical and 8 functional), the group had the alpha version ready and tested in September 30, 1998. They went live January 1, 1999, and planned to have the solution rolled out throughout the company by December 31, 1999.

As for the back office solution, it has now been installed. The developers are currently working on converting the legacy back office systems, as well as on customization and testing. They expect a pilot to be ready in September 1999 and the full system to be in production in January 1, 2000.

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How Remedy Will Benefit

Once its new line-of-business solution is rolled out, Remedy will experience numerous benefits. These include:

- **Easy and rapid communication.** All interested parties—corporate staff, field staff, clients, and temporary employees—will be able to quickly and easily communicate with each other and access the data they need from a single, common database.
- **Good performance.** Even though the application will communicate with users over a WAN, it will provide the same 6-to 20-second response time for data access as users are now experiencing on their LANs.
- **Timely, accurate data.** “Because the front office solution automatically synchronizes its data with the back office system, users will be able count on the data they access being accurate and up to date,” observes Leibson. “That will lead to better strategic decision making, both in the field and at corporate headquarters.”
- **Ease of use.** All technical complexity will be eliminated for end users—including the complexity of installing the application. The first time they log onto the intranet, the Visual Basic-based application will automatically be downloaded. Seamless integration of the application with Office 97 will minimize training as well.
- **Ease of administration.** Today, field personnel in each office spend a fair amount of time each week on the phone to the

corporate Help Desk, trying to solve network problems on their LANs. They also spend time manually synchronizing the data in their database with the back office database at corporate headquarters. These activities will no longer be necessary once the solution is rolled out. Accordingly, Remedy expects to see a 20 percent improvement in productivity in its field offices.

- **Ease of updates.** Visual Basic makes it easy to update business rules, so application maintenance will be easier—and, once created, updates can be automatically downloaded, just as the initial application was.
 - **Ease of adding new offices.** Because the solution is based on Internet technology, it supports Remedy’s goal of a virtual operation. “We plan to grow by adding virtual offices, both at client sites and in employees’ homes,” says Leibson. “This approach will keep our profitability up and help us attain our goal of \$1 billion in revenues in the beginning of the next millennium.”
 - **Ease of incorporating new technologies.** The Internet-based technology that forms the foundation of the solution will make it easy to incorporate new technologies as they come on line. “A lot of the emerging technologies today, such as multimedia, are Internet-driven,” says Leibson. “So having an Internet-based structure will help us more easily adopt new technologies.”
- The bottom line is that Remedy

expects the solution to both increase its revenues and improve its service to clients and temporary employees, resulting in greater retention of both. "The temporary staffing business is highly competitive," says Leibson. "The timeliness of the data we'll get with our new front office solution will help us deploy our temporary employees faster and better meet our clients' needs. And that will help us retain both our clients and our temporary employees."

Future Enhancements

Even though the application is several months away from a complete rollout, Remedy is already looking at enhancements it will add in future updates. For example, the IT group expects to take greater advantage of the teleconferencing capabilities in Internet Explorer version 4.0. to add more multimedia content to its system. Such content could be used for anything from field training of personnel to client presentations.

"The real key for us is the ability of Visual Basic to support line-of-business transaction processing in an Internet/intranet environment," says Leibson. "By choosing a development technology that works well in this environment and investing now in our Internet infrastructure, we're ensuring that we'll be able to keep up with emerging technologies in the future and deploy them faster."

Remedy

A public company founded in 1965, Remedy is a technology-driven business services, offering staffing management services which clients require to realize their business strategies. Remedy specializes in the recruitment selection and placement of intelligent knowledge-based workers for its clients. In 1998, Remedy placed 160,000 employees through 450 offices and customer sites nationwide. Remedy is the 20th largest staffing company in the world. Recently Remedy implemented with SEAM an advanced Information Technology infrastructure to lead into the next century with 5,000 users in 750 locations. Microsoft cited this project, in a press release, as an example of a large enterprise mission critical intranet application.

SEAM

Private company founded in 1976, SEAM (Systems Engineering And Management) is a technology center company specializing in enterprise and R&D mission critical applications using internet, intranet and extranet platforms. SEAM specializes in the transformation of Technology into Business Applications by undertaking turnkey national & international multi-millions dollars projects for Fortune 500, Institutional and Governmental clients. All projects were implemented with careful selection & teaming with key major players including Microsoft, IBM, KPMG and Deloitte & Touche. SEAM is co-sourcing Remedy since 1994.

For More Information

For more information about Microsoft products and Solution Providers, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Customer Support Centre at

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