

What is iFusion.net?

The iFusion.net software development platform combines IBM i and Microsoft Windows technologies to form a unified architecture that enables organizations to fuse their IBM i systems with Microsoft solutions like Office, SharePoint and SQL Server, or with applications built with the .NET framework. Achieving fusion means going beyond the limits of previous interoperability solutions – like calling programs, replicating databases or transferring files – to create true composite applications that deliver real-time enterprise data and functionality to people as they need it.

Why do You Need iFusion.net?

Most companies operate a mixed IT environment that is complex to manage and constrains the responsiveness of the IT resources to changing business needs. CIOs need choice in how they build and deploy applications, but the choice is practical only when the IT resources can operate as a harmonized unit. iFusion.net offers a solution by combining the IBM i and Windows platforms into a fused consolidated whole, where you build applications on the most appropriate platform or distribute across both. With iFusion.net you can:

- Take the appropriate action faster when responding to changing business needs.
- Accommodate choice for development options, preferences and available skills.
- Preserve investment in the current assets – both people and applications.
- Combine the best of both the IBM i and Windows platforms.
- Build a flexible roadmap ranging from quick modernization to a full migration
- Enforce data integrity and security at every step.

iFusion.net is the industry's only complete

solution, addressing presentation, business logic and database issues from a single platform.

Examples of iFusion.net Usage

There are many potential touch points between the IBM i system and Microsoft solutions. Some of the most commonly found scenarios include:

- Fusing an e-commerce Web site built using ASP.NET to an IBM i ERP system, thereby publishing up-to-the-second inventory and pricing information along with straight-through order processing.
- Amending live operational data on the IBM i database (DB2) directly from a Windows or Web-based dashboard, without having to launch a terminal session or toggle between multiple screens.
- Improving collaboration and workflow automation by combining tasks that require both Windows and IBM i functionality (including program logic, data queues and access to the IFS) inside a Microsoft SharePoint enterprise portal with support for single sign-on.



ARCHITECTS CORNER
by Richard Lancaster

- Giving Visual Studio.NET developers the authority to perform create, read, update and delete actions on the core databases – without risk of jeopardizing data integrity or security.

What Comprises iFusion.net?

iFusion.net comprises a set of development tools and services for building business applications that operate on IBM i or Windows servers, or that fuse resources from both platforms. The key components are:

- Visual application framework supporting rich-client and Web user interfaces.
- Data services layer to manage, retrieve and maintain data from multiple sources.
- Meta-data repository containing declarative rules and rule engine, separated from code.

Visual Application Framework

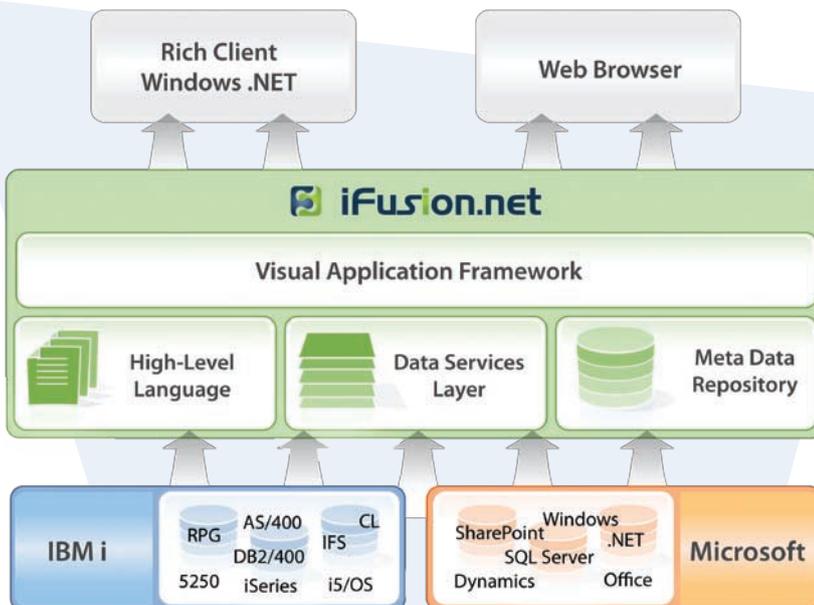
The framework is a tool for building composite applications (or mashups) that combine components from sources such as:

- IBM i DB2 databases
- Microsoft SQL Server databases
- Microsoft Office components
- Microsoft .NET applications
- Web Services
- Maps
- 5250 programs

The framework has a highly graphical user interface, similar in style to Microsoft Outlook. The object navigation pane presents the users with a list of applications and Business Objects, such as Customers, Items and Orders.

Once the user selects a Business Object, for example Customers, another pane provides a choice of filtering facilities, allowing the user to select a subset of Customers, for example, customers whose name starts with the letter B. The search results appear as an Instance List in another pane, from which the user can select a specific customer.

Finally, tabs such as Show Details, View Orders, View Invoices, Get Map are displayed, allowing the user to view data and take action



iFusion.net conceptual architecture.

across the selected instance of a Business Object and its related data, regardless of the source of that data.

Data Services Layer

The data services layer manages database access, providing data access controls and data maintenance services for DB2/400 and SQL Server databases. The data management services enforce the business rules that reside in the meta-data repository, to govern the update actions on the data in the databases.

Meta-data Repository

The meta-data repository contains application meta-data including validation rules, conditional rules and business logic. The rules are defined declaratively and can be changed without having to redeploy the applications. Defining the rules in the repository removes the need to code the rules in programs and provides a once, and only once definition of the meta-data.

Transform Your Architecture

iFusion.net can transform your existing architecture into a flexible information management resource, with the ability to respond quickly to changing business needs.

The 5250 screens will move into a graphical user interface, or be replaced, for example, by new truly graphical programs built with iFusion.net or by Web services that collect data from other sources.

The transformation will migrate legacy systems into a modern architecture, with components ready for rewiring into new

applications. Business rules are defined declaratively and maintained outside the code. Developers will configure and orchestrate business processes rather than hard coding them in programs. Programs will work with business objects and do not need to understand the physical deployment of the objects. Business processes will interact with services that provide data through service wrappers that hide the complexity of the data and algorithms that make up the service.

There is no need for a "big bang" conversion from the existing architecture to the modern architecture. iFusion.net allows an incremental transformation, occurring as and when it makes business sense with only affected components needing to change.

A Typical Scenario

A scenario we often see is where data from one or more IBM i-based ERP systems and data from a Windows-based Financial Management System (FMS), need to be consolidated into a single application for use by customer service operators. In addition, customer data that resides in these systems, needs to be managed from a single source.

Using iFusion.net, the solution would be to assemble a composite application that combines:

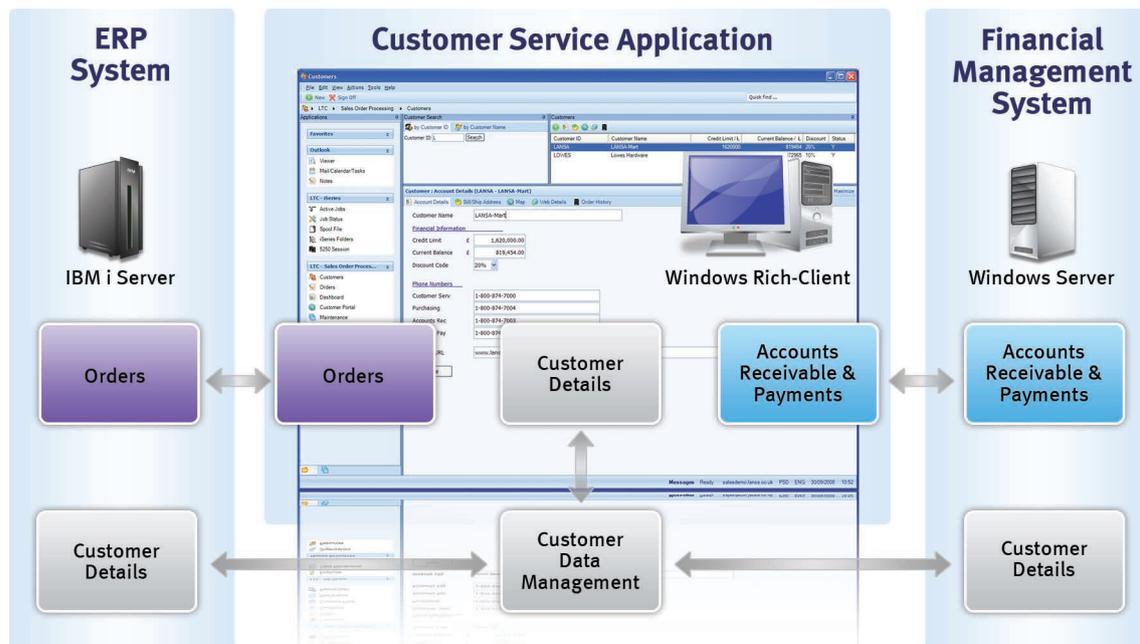
- A newly built rich-client Customer Service Management application (CSM) for maintaining customer information. Updated customer details are automatically and instantly updated to the ERP and FMS systems, using Web services.

- The CSM is built on the iFusion.net framework and contains filter/search facilities for locating customers by name, number or even order number.
- One of the tabs in the CSM gives access to orders. The CSM interfaces with the ERP system via the 5250 application orchestration tools in iFusion.net. The orchestration for orders is aware of the current customer number, manages the screen flow in the ERP, retrieves the relevant orders and presents the orders in a Windows GUI.
- Other tabs in the CSM give access to Accounts Receivable and Payments. The CSM uses Web services to retrieve this information in real-time from the Windows-based FMS.

The CSM hides the different platforms that support the ERP and FMS systems and provides seamless real-time secure access to both. Future extensions to (and replacements within) the CSM are simplified by the component style architecture. For example, the company could take the order entry process to the Web via an order form hosted in Microsoft Office SharePoint Server.

Summary

iFusion.net offers a platform for developing information management systems that can adapt to changing business needs. Software designers work with tools that present a fused view of the IBM i and Windows platforms. Fusing the platforms is the key to building adaptable and agile software applications. ■



With iFusion.net tools you can build a composite application or business mashup.