



White Paper Series

Process Based Integration

Date: February 24, 2005
Rev 2.0

Information in this document is subject to change without notice and does not represent a commitment on the part of Ingenuus Software Inc.

Copyright © 2003-2005 Ingenuus Software Inc. All rights reserved. This publication, or any part thereof, may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording storage, in an information retrieval system, or otherwise, without prior written permission of Ingenuus Software Inc.

Restricted Rights Legend

Use, duplication, or disclosure by the government is subject to restrictions as set forth in sub-paragraphs (C) (1) (ii) of the rights in Technical Data and Computer Software clause at DFARS 252.227-7013 and 48 CFR 52.227-19.

The product described in this White Paper may be protected by one or more U.S. patents, foreign patents, or pending applications.

Trademarks

Ingenuus, Ingenuus Smart Expediter, Power of the Process, Integration Gateway, Integration Gates, Solution Suites, and Task Flows are trademarks or registered trademarks of Ingenuus Software Inc. in the United States.

All other trademarks or registered trademarks are the property of their respective owners.

This publication is provided “AS IS” without warranty of any kind, either express or implied. All warranties, including, but not limited to, the implied warranties of merchantability fitness for the particular purpose, or non-infringement are specifically disclaimed.

This publication could include technical inaccuracies or typographical errors. Changes are periodically added to the information herein. These changes will be incorporated in new editions of the publication. Ingenuus Software Inc. may make improvements and/or changes in the product(s) and/or program(s) described in this publication at any time without notice.

Table of Contents

Table of Contents	3
Introduction	4
Ingenuus Fusion Strategy	4
Chosen Solution	4
The Architecture	5
Summary	5
Revision History	6

Introduction

Integration done for the sake of sharing data, although helpful, is no longer the solution needed to support the agile organization of the 21st Century. Integration with a purpose, to support critical and non-critical business processes is the new requirement to improve efficiency. Recently referred to as “Business Process Fusion” by Gartner analysts, the linking of process and integration for improved efficiency is not a new idea. Forward thinking companies have led the way showing that expensive backend integration to merge data must give way to process centric integration that makes the goal of the right data, to the right people, at the right time a reality. This white paper will explain how Ingenuus has merged process automation, integration, and content management to provide a software solution that makes Business Process Fusion a reality.

Ingenuus Fusion Strategy

Most companies have several enterprise software applications installed. Manufacturing companies will have either an ERP or MRP package. If it is ERP, there could be several modules: finance, manufacturing, human resources, etc. They could have one (or several) document management systems.

When we install Ingenuus software for change control, normally the result of releasing a change should be written into the ERP/MRP software. This may sound simple, but there are several issues that must be overcome.

What information does Ingenuus need from the ERP and what information does Ingenuus need to write to the ERP? Does the ERP have an API (Application Programming Interface) or do we need to interact with the relational database? What version of the ERP software do we need to communicate with? If we have to interact with the relational database, can we get a copy of the schema? If we hard code this solution and the person who writes it leaves, how do we maintain the code? How long will it take to write the code? How about testing? The issues are many.

Another approach would be to use some kind of middleware. The Ingenuus user interface will make a call to some middleware that can already talk to your ERP software. This is far simpler than hard coding the entire solution. It is easier to maintain and easier to extend.

Given these issues, we have looked at several options and chosen to resell a middleware solution from a 3rd party supplier.

Chosen Solution

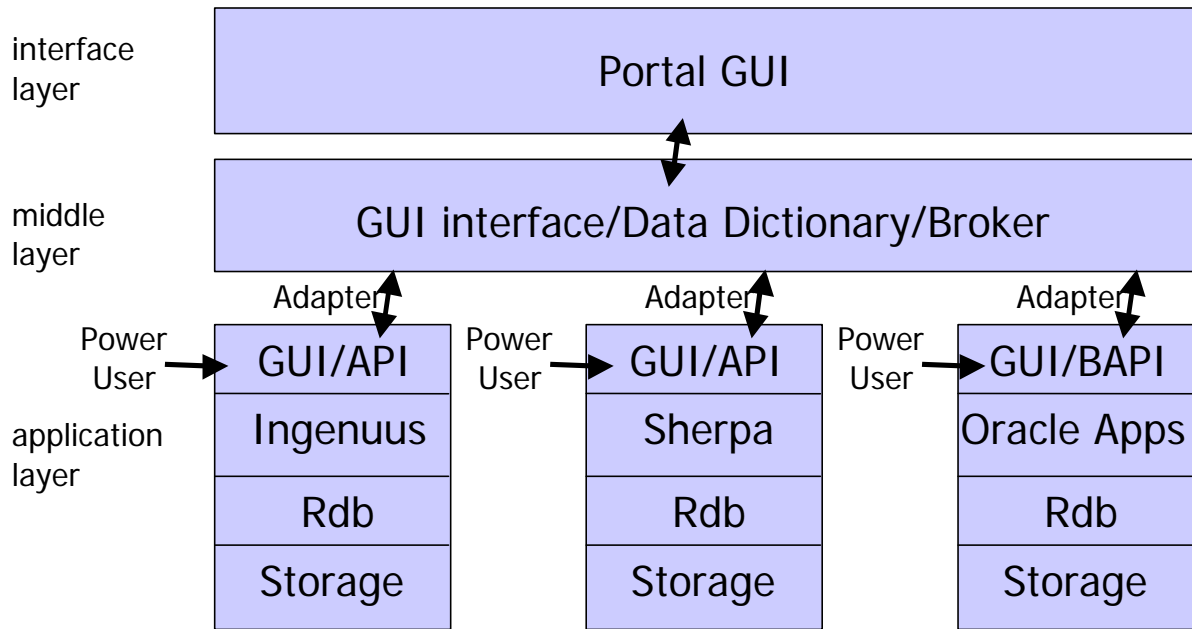
We will resell a product called DataMap from a company in Oregon called CSE. We are choosing this product for several reasons.

We have worked with this company in the past and they have a lot of experience dealing with the many problems that can arise from this kind of integration task.

This product has a data dictionary. In the dictionary, we can define data objects. We can also relate data types. This means that we can relate a part in ERP to an end item in PDM. This is extremely useful when attempting to read/write to other enterprise software applications.

This company already has a stable of adapters to many of the popular enterprise software applications and they have experience in writing custom adapters to a variety of unusual software packages.

The Architecture



Viewing this from the Ingenuus user interface –

There is an adapter for the Ingenuus software that connects it with the DataMap hub. There are adapters (in this case) for Sherpa and Oracle Apps that allows the hub to talk with them. If Ingenuus needs information from either, it sends the request to the hub that passes it to the other applications and returns the data. If Ingenuus needs to write information to Oracle Apps, it sends a write request with the data to the hub and it writes that information to Oracle Apps.

Extending the Solution

In your virtual manufacturing world, you want to pass Bills of Materials to your contract manufacturer's copy of QAD. You would use the QAD adapter to add it to this diagram and perform a write in the same way as described above.

Summary

This is a low cost approach to the problem of integrating with ERP. It is relatively inexpensive to purchase and maintenance is less because it is not a hard coded solution.

This solution is expandable. Not only can you communicate with other enterprise software packages, you can also communicate with other middleware. Further, you can choose to implement a solution taking advantage of XML, CORBA or many other standards.

It is a solution that does not handicap any future growth or changes.

Revision History

Date	Version	Author	Comment
June 14 th , 2001	0.5	Vivek Prasad	Draft for initial review
August 14 th , 2003	1.0	Vivek Prasad	Released
November 29 th , 2004	2.0	Christopher Williams	General edits to bring dates and reference to date, including logo.