



Being an ISV using Magic Software Technology

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Title : President

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- **President/Owner of INDUSTRIOS Software, Inc.**
- **Background in Systems Analysis / Design, and Programming.**
- **Expertise in Manufacturing Systems technical design / implementation.**
- **Using Magic Software products since Magic 5.02 DOS.**



INDUSTRIOS Software



- **Independent Software Vendor since 1995**
- **Head Office in Oakville, Ontario, Canada.**
- **22 employees**
- **Focused on Manufacturing / Operations applications for SMB marketplace in North America**
- **ERP modules spanning entire spectrum of a Manufacturer's Operations, except Accounting modules.**
- **Financial Systems integrations with Sage ACCPAC ERP and Sage PFW ERP**



INDUSTRIOS Products



- **2 major product lines.**
 - **INDUSTRIOS Enterprise Suite**
 - Flagship product. Primary Tool – UniPaaS 1.5
 - Pervasive.SQL Database
 - Customers still using Magic 8.3 versions of our software, in addition to the UniPaaS.
 - Average Install - 30 concurrent users.
 - Little to no code customization. Crystal Reports used for Forms / Reports. Usually 10-15 different reports have minor modifications made to customer's specs



- MSS by INDUSTRIOS
 - Acquisition of smaller competitor. Primary Tool – Visual Basic 6.0
 - Pervasive.SQL Database
 - Average Install – 5 concurrent users
 - No customization.

Being an ISV using Magic Software



- All ISV's have the same business challenges regardless of the technology chosen for their products
- Magic Software's development tools (UniPaaS) have unique capabilities that can make business applications developers highly productive and adaptable to customer / market demands.
- Look at some aspects of UniPaaS and good systems design that can give advantages to Magic ISV's.



Successful Applications

- **Key attributes for winning business management applications to appeal to a broad base of customers, and be commercially successful.**
 - Performance
 - Flexibility
 - Adaptability

Product Configurator

- **INDUSTRIOS first introduced its own Product Configurator using Magic 8.3 in 2005.**
 - Slow
 - Used third party Formula evaluation software (DLL)
 - Not flexible enough.
- **Rewrite from scratch in 2009 using UniPaaS 1.5**
 - Significantly Faster - 500% + improvement
 - More flexibility
- **Key to Speed and Flexibility – UniPaaS features**
 - Evalstr() Function to evaluate formulas and expressions.
 - Vectors to store pre-parsed formulas, expressions, and variable values for fast retrieval by the Evalstr() function.

- **Example Application – Producer of White Boards**
 - Configured to Order
 - Different Sizes, Colors, Add-ons, Shipping options, and more...
 - Over 4,000 user defined expressions dynamically evaluated during the construction of a configured order.
 - Controls display of features / options, and the creation of a BOM/Router required to make the product.

Application Performance

- **Implementing an Application Server concept for your applications can assist in improving performance for batch oriented operations.**
- **All business applications have interactive and batch oriented processes.**
- **An Application Server is a management interface to batch functionality within the application.**
- **Application Server process can be a regular runtime license that runs on the database server itself or on separate computers.**

Application Server

- **Best implemented across your application with a common structure and methodology.**
- **Allows any batch process to be redirected to an application server if desired / required.**
- **Allows you to also abstract other routine tasks like email/fax/printing into any reporting / form printing process.**
- **Can be implemented using a simple data file polling process.**

Application Server

- **Today's Multi-Core servers have significant resources to allow the running of these Application Server processes directly on database servers.**
- **Benefit is faster processing for end users, and better load balancing capability for IT Administrators.**

■ Adding Custom Programs

- Ability to customize without modifying core application code.
- Customers expect customization to survive core system upgrades. Nobody expects to pay to do it over.
- Design application to allow the definition and calling of external routines using Call Public.
- Utilize “Black Box” Objects (re-use) to abstract common functionality from individual application components(Reporting Wizard)
- Components and Events can help significantly.
- Recursion not an issue if designed properly. Public Events, without ECI.

■ Sample Application – Reporting Wizard

- Abstracts common requirements for Print/Email/Fax and providing options for batch processing /reporting tasks
- Allows user to perform tasks immediately or sent to application server.
- Allows user to add in their reports, and “inherit” functionality / parameters from standard system.
- Customization Interface would allow a third party (or professional services team) to add in their own “wizard” screen and processing routine from a separate project (no need to modify core code.
- Benefit – speed/simplicity of development, reliability of core features.

■ Sample Application – Excel Export

- Black Box application that abstracts entire structure and details required to extract to Excel.
- Where required to be used, only needs to have a simple batch program to expose the fields required to be sent to MS Excel, and program raises 2 events that the Excel Black Box handles and sends to Excel.
- DB table to list fields required for Export.
- Benefit – speed/simplicity of development, reliability of core features.

■ Sample Application - Form Customization

- Use Subforms organized on tabs that implement concept of 'Field Handlers'
- Field Handler has a single purpose, and has self contained display and validation logic that interacts with a common engine to receive and update data.
- Can be reused in other parts of the application.
- Having screen definition stored in a database or XML file allows the screen layout and rules to be manipulated without needing to change the core programs.
- Benefit – speed/simplicity of development/QA, reliability of core features.

Application Adaptability

- **Most business applications require methods to import and export data quickly and easily.**
- **Simple Integration Design**
 - Architect your product to read/write from/to a standard interface
 - Create Plug-in (Adapter) for each different integration need. Each Adapter with its own Project.
 - Excel, CSV, or specific application (ie ACCPAC, SAP, Navision, etc...)
 - Create a framework to contain the plug ins, with a transformation facility that allows the data to be modified as it enters or exists your application based on user definable rules.

Application Adaptability

- **Transformations**
 - Utilize common code that can apply transformations to any input/output combination.



THANK YOU