

The New Workplace Rich Client Technology Meets the Real World

...Well, it will soon anyway...

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About Andrew Pollack's Presentations

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☐ **Designed to avoid "Slideware" issues**

- To the extent possible, I have tried to put as much real information in these slides, they are not bullet points
- As they contain more real information, they are likely to contain more errors. If you find any, please send me email – I want to hear about them
- The latest versions of all my presentations, updated to correct any reported errors, are always kept on my web site.

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Agenda

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- Who am I, Why are we here, and other big questions
- Setting expectations – where is this product in its delivery cycle and what can you expect to see and hear about in this presentation
- Why the world needs another workstation client
 - **What is a “Rich Client”**
- Just what is this rich client, and why you should care
- Where Lotus Notes fits in the Workplace Client picture
- Opportunities for Corporations, Partners, & ISV's
- Resources for follow-up

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Big Questions: Who am I? Why are we here?

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- Andrew Pollack -- Northern Collaborative Technologies
 - 2003 IBM Lotus Beacon Award Winner
 - Administrator & Developer since version 2.0
 - Member of the Penumbra Group
 - Firefighter - Engine 1 – Cumberland, Maine!
 - In firefighting, just like Server Administration & Application Development, its all in the planning
- Why We're Here
 - To learn and grow as human being
 - The new Rich Client looks important
 - Its finally time to pay attention to this new stuff

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Setting Expectations

- **This is likely the first – and possibly the only – non-IBM presentation on this technology you'll see before Lotusphere 2005**
 - Within the information available, you'll get an unbiased viewpoint and an attempt to cut through the marketing and talk about the real impact of the product
- **Workplace Client Technology is NEW stuff**
 - To be sure it worked when released, the release has been pushed out to the end of this year
 - Unfortunately this limits live demos severely
- **IBM has been kind enough to make time to let me see the work in progress and talk with the developers**
 - And they've allowed me to share nearly all of what I think is salient with you today
- **As Lotus Notes & Lotus Domino users, our perspective is very different.**
 - So many "new" technologies are things we already do

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Part 1 – Why the world needs another 'Rich Client'

Who is Rich, anyway?

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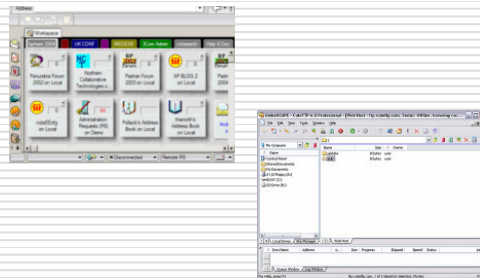
What is a "Rich Client"

- ❑ **Above all, it's a "Client" to something**
 - As in "Client-Server"
- ❑ **A "Client" differs from a standalone application**
 - A client provides a front end user interface to logic or data which resides on a server
 - A client is usually designed to exist in a many to one relationship with a back end server

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Some "Client" Examples

- ❑ **FTP Client Software**
- ❑ **The Web Browser**
- ❑ **IBM Lotus Notes**
- ❑ **Terminal Services**
- ❑ **The Admin tools for almost any relational database**
- ❑ **Network Management consoles**



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The browser as Universal Client

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□ What made the "Web Browser" a winner?

- One client installation provided access to a huge variety of servers and content
- Enough people had them, that a "Customer Base" could be reached without the production and distribution of a purpose built client platform
- Reduced "Cost to Market" and "Time to Market" so deeply, that many ideas became profitable for the first time
- By the late 1990's, the Web Browser has become the "Universal Client"

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The Browser Goes Corporate

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- **In the mid-late 1990's, Corporations begin using the browser for more complex tasks in "Intranets"**
 - Lotus Notes developers shake heads in confusion over the excitement – nothing new here, what's the big deal?
- **HTML quickly found unsuitable for complex user interface requirements**
 - Applets are tried, but Java isn't up to the task yet
 - XML is created for storing data
 - Flash is created for better display control
- **Result: The browser rapidly increases in complexity and bloat, while losing universality as more and more "add-ons" make version control impossible in any user base**

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What is a "Rich Client"

- ❑ **Really means "Richer than the Browser"**
- ❑ **Rich Clients are described in relation to the web browser**
 - To some extent, the web browser IS a "Rich Client" in comparison to a "Dumb Terminal"
 - They fill gaps in the capability of the browser
 - ❑ Security
 - ❑ Session Control
 - ❑ User Interface Complexity
 - ❑ Client Side Storage
 - ❑ Client Side Programmability

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What's wrong with the clients we have

- ❑ **Most are "Dedicated" clients, built to talk with only one kind of server**
 - Production of an application to be used in those clients means changing the server to produce a compatible interface
 - ❑ Example: Creating a Web Browser application for IBM Lotus Domino
- ❑ **More generic clients, like the browser, have limitations that make complex applications difficult to use or manage**
- ❑ **Producing an entire client user interface is an expensive proposition, leading to the use of poor but generic clients like the web browser**

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The Browser is not always good enough

- ❑ **For many applications, a browser does not provide an acceptable user interface**
 - This can be overcome with Applets or extensive JavaScript, however the benefits of a browser are quickly lost in these complex efforts as is universality.
- ❑ **IBM has a customer base with huge numbers of "Line Workers" using data interface applications (e.g. Bank Tellers, Airline Customer Service Representatives)**
 - Traditionally served well by "Dumb Terminals"
 - Terminals are largely gone, but PC's have proven costly to deploy and maintain

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The Universal Rich Client

- ❑ **The Goal of a Universal Client**
 - Create a framework which allows you the important features of a "Rich Client" without having to create a new one for every unique application
 - Unify the massive (and profitable) Lotus technologies base with the traditional IBM customer requirements
 - Unify the user interface and distributed computing benefits of complex client software with the low maintenance cost benefits of the browser or terminal.
 - Unify the security and business logic to a single development effort that supports multiple client types

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The Universal Rich Client Goals

- ❑ **IBM Workplace Client Technologies Rich Edition**
 - Cost of Ownership Like A Browser
 - ❑ Universality of underlying business logic
 - ❑ Deployment and Version Control to the component level through centralized provisioning
 - ❑ Existing user interface components allow inexpensive functionality for simple projects
 - Power Like A Purpose Built Rich Client
 - ❑ Plug-able interface allows specialized components for purpose built components
 - Custom build the parts you need, use the generic tools for the rest of the application
 - Mix standardized parts with proprietary as needed
 - Predictable Client Side Behavior

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Part 2 – What this new Rich Client is made from

It's a java based windowing framework with services added to allow provisioning and communication.

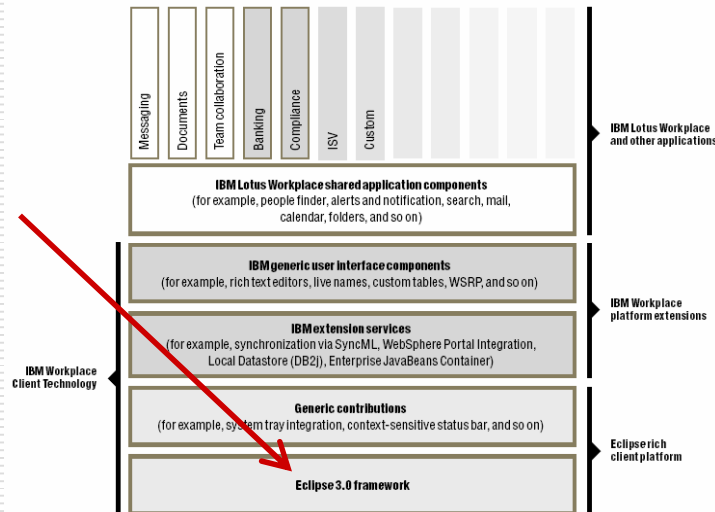
What? You want more than that?

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First, it's built on "Eclipse"

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❑ But what does that mean?



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Built on "Eclipse"

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❑ **IBM, with many others, have produced a universal client framework – Eclipse**

- Eclipse is now released to and embraced by the Open Source community
- Eclipse is not the Java Development Environment, rather, the Java IDE is built on the Eclipse framework
- ❑ This would be like thinking of the Microsoft Foundation Classes for Windows as Visual Studio.
- ❑ Eclipse is a framework for building complex applications – a development environment is one such application
See: <http://www.eclipse.org/projects/index.html>

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Where the Eclipse framework fits

☐ **To understand the value of the Eclipse framework, look at the adoption of Windows**

- To speed adoption of Windows, Microsoft introduced the "Microsoft Foundation" classes for c++
 - ☐ Prior to that point, you had to code every aspect of every dialog box – extremely expensive and time consuming
 - ☐ By using their library, time to market was cut by many months, but cross platform compatibility inherent in pure c++ was lost because the foundation library was Windows only.

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Java renews cross platform development

- ☐ **Java has stayed (mostly) true to its cross platform goals**
- ☐ **AWT, SWING, and SWT provide UI classes for java but are specific to a single application**
- ☐ **Eclipse provides a framework for applications written in Java to run within**
 - Like Windows provides a framework for applications written for its own interface
 - The Eclipse framework offers integration between components independent of the operating system
 - ☐ <http://www.eclipse.org/projects/index.html>

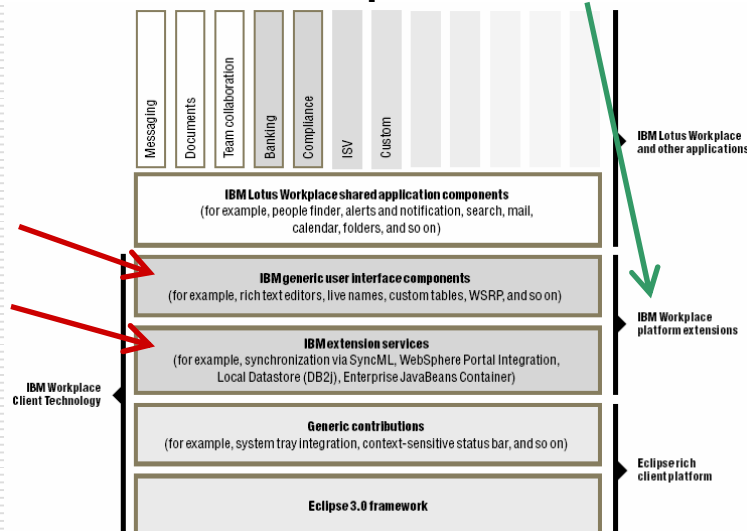
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Workplace Rich Client Extensions

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- Notice that at this layer, it goes from being "Eclipse" to the "IBM Workplace Platform"

IBM Adds proprietary extensions to Eclipse to provide the services that make the Rich Client "Bag of Tricks"



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A confusion of Names

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- IBM Workplace Technology is a Platform**
- IBM Workplace Technology Rich Edition is an environment**
- IBM Lotus Workplace is an application**
- The IBM Lotus Workplace has components which run as an application within the IBM Workplace Technology Rich Edition**
- IBM has stated that Lotus Notes Version 8 will be an application which runs within the IBM Workplace Technology Rich Edition**

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IBM Lotus Workplace

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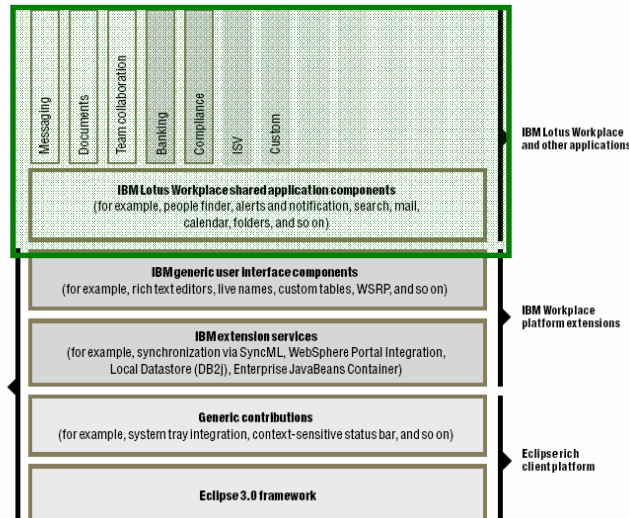
- **IBM Lotus Workplace client is one use of the IBM Workplace Client to talk to a specific server**

There are many possible server specific "Plug-In" clients you can imagine...

Including....

IBM Lotus Notes

IBM Workplace Client Technology

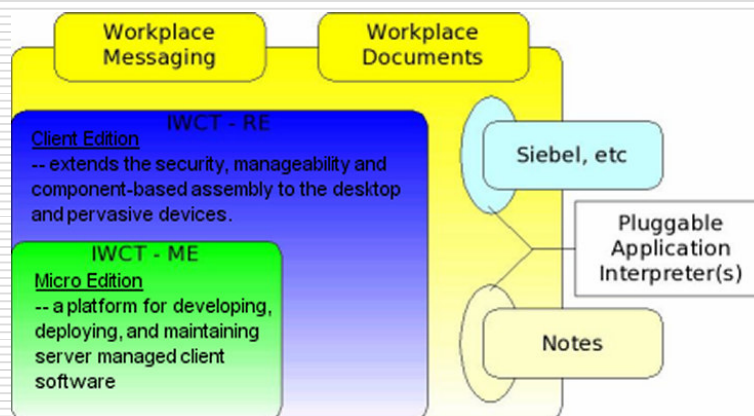


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IBM Workplace Client Technology: Rich Edition

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Another way to look at how the "Rich Edition" provides a place for many "Client" applications to run together



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Part 3 – Where does IBM Lotus Notes fit in the Workplace Client picture?

"Reports of my death have been greatly exaggerated"

Samuel Clemmons (Mark Twain)

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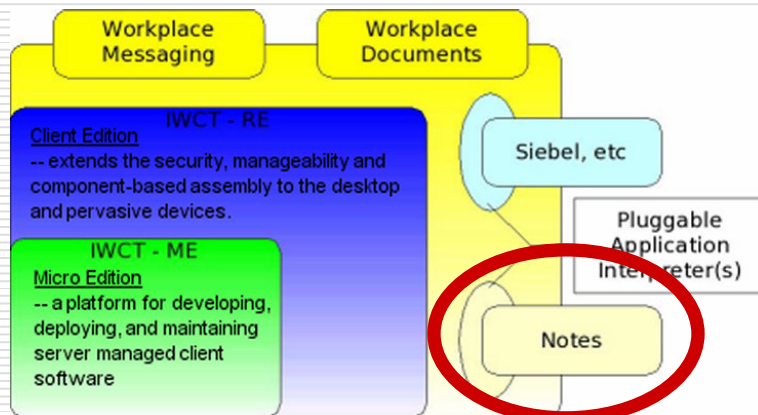
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Lotus Notes isn't going anywhere

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❑ **The Lotus Domino Server, needs a Lotus Notes client to talk to it**

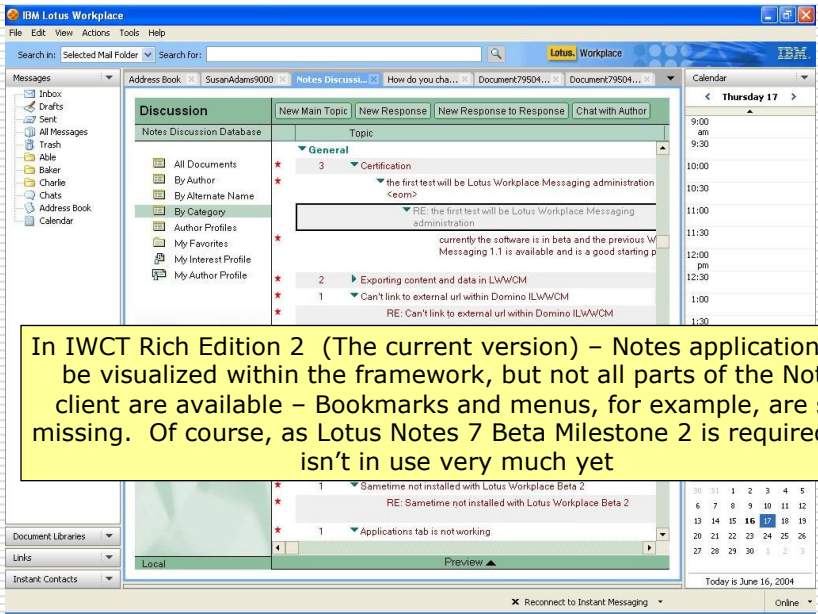
■ The IBM Universal Rich Client will be that client too



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The Lotus Notes Client Fits Right In

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In IWCT Rich Edition 2 (The current version) – Notes applications can be visualized within the framework, but not all parts of the Notes client are available – Bookmarks and menus, for example, are still missing. Of course, as Lotus Notes 7 Beta Milestone 2 is required this isn't in use very much yet

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IWCT-RE version 2.5 promises more...

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❑ IBM Workplace Client Technology – Rich Edition version 2.5 has been targeted for a Q4 release this year.

- This version is targeted to include support for the remaining features of the Lotus Notes Client
- Users of both Lotus Workplace and Lotus Notes should not need to Launch their Lotus Notes client software outside the Workplace Rich Client
- ❑ Keep in mind, this is the stated goal, but may change as the release gets closer!
- At this time, Designer and Admin clients are still outside as standalone applications

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Backwards Compatibility

- ❑ **The Lotus Notes Client "Plug-In" will be a true Lotus Notes Client running locally**
- ❑ **It is NOT being re-written in Java**
 - The core Lotus Notes and Lotus Domino server has always been built to be cross platform. Only operating system specific code has traditionally had to be specially built for each platform
 - The Lotus Notes Client plug-in uses JNI to call the same program code that has always been used
 - A proprietary extension is used to "Re-Parent" native user interface screens from the Lotus Notes client into the Eclipse framework
 - Backwards compatible to a very great degree
 - ❑ In all likelihood, even existing LSX add-ons will still work!
 - A Lotus Notes Client Plug-In version will still have to be created for each platform

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The Longevity of Notes & Domino

- ❑ **The Lotus Notes client will continue to exist and grow as the client to the Lotus Domino server**
- ❑ **The Lotus Domino Server is still the best back end architecture for Workflow and Collaboration – and will continue to be for some time to come**
- ❑ **IBM Workplace Technologies provide a framework for a different kinds of applications**
 - Relational Database front ends
 - Transaction Based Systems

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Lotus Domino & Lotus Workplace Overlap

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There will be overlap between the applications built for Lotus Domino and those built for Lotus Workplace

- Not all customers want Lotus Domino
- Not all customers want Lotus Workplace
- The IWCT Rich Client provides a common base for both platforms which will enable cross platform applications to be built which leverage both technologies
- **At present, the IWCT server is required to distribute (Provision) the Rich Client to the desktop, however this may not always be the case**
 - It will likely be required to take advantage of centralized provisioning and version control

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Part 4 – The Future

What opportunities does the new Rich Client open for corporations, partners, and ISV's?

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Where To Integrate

- ❑ **Never have so many opportunities been present for confusion by so much information all at once**
- ❑ **Integration with IBM Lotus Workplace is not required for integration with IBM Workplace Technologies Rich Edition**
- ❑ **Both Lotus Workplace and Lotus Notes integrate with IWCT-RE**
- ❑ **Integration will range from “On the glass” only, to full scale integrated applications**

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IBM's Description of Integration Options

Lotus Notes is “Re-Parented” initially to live nicely within the Rich Client – Deeper integration to come later

Lotus Workplace is built from the ground up to “Exploit” the full potential of IWCT-RE

Coexist	Accommodate	Leverage	Exploit
no programming work	client side UI	provisioning, repository	exploit workplace constructs
<ul style="list-style-type: none"> ▪ Installed to same desktop ▪ No specific integration features beyond what is inherent with operating system (e.g. cut/copy/paste) 	<ul style="list-style-type: none"> ▪ Very light, on-the-glass integration ▪ Basically provides for visual context sharing 	<ul style="list-style-type: none"> ▪ Use of some of the platform, but still some seams ▪ Uses provisioning system as a carrier ▪ If app already supports replication, tied into sync UI ▪ Light component intercommunication 	<ul style="list-style-type: none"> ▪ So tightly integrated that seams disappear ▪ Fully componentized ▪ Server provisioned ▪ Allows other components to extend ▪ Leverages SyncML ▪ Deep integration with component-component communication bus

<http://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/redp3883.html?Open>

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IWCT-RE is Good for ISV's

- ❑ **The issues for ISV's are the same as for any other application developer**
 - Even at the least level of integration, the Rich Client provides a solid framework the ISV doesn't have to build
 - Increased levels of integration provide advantages to the ISV in leveraging the framework for provisioning and version control
- ❑ **Lotus Notes ISV's rejoice!**
 - No longer need to choose custom user interface or integrated look and feel – can have both
 - Integrate on the screen through the Rich Client, and at the back end through the Java classes.
- ❑ Example: Pull view data through the java classes, and display in a 3D user interface on the same screen

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Resources

- ❑ **Strategy White Paper: IBM Workplace Client Technology**
[ftp.software.ibm.com
/software/lotus/pub/lotusweb/clienttech/
IBMWorkplaceClientTechnology_StrategyWhitePaper_May2004.pdf](ftp://ftp.software.ibm.com/software/lotus/pub/lotusweb/clienttech/IBMWorkplaceClientTechnology_StrategyWhitePaper_May2004.pdf)
- ❑ **IWCT-RE Technical Overview**
[http://www.redbooks.ibm.com
/redbooks.nsf/RedbookAbstracts/redp3884.html?Open](http://www.redbooks.ibm.com/redbooks.nsf/RedbookAbstracts/redp3884.html?Open)
- ❑ **IWCT-RE ISV Integration Guide**
[http://www.redbooks.ibm.com
/Redbooks.nsf/RedbookAbstracts/redp3883.html?Open](http://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/redp3883.html?Open)
- ❑ **The Eclipse site:** <http://www.eclipse.org>
- ❑ **My own site:** <http://www.thenorth.com>

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Thank you for playing!

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- ☐ We're all trying to figure this stuff out together-- please ask your questions so others can here the answers
- ☐ For those playing the home game, direct questions & comments to:

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<http://www.thenorth.com>
- ☐ We might even get some IBM people from the audience here to speak up with answers
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