

Lotus. software



Workplace, Portal and Collaboration Software

Recognizing the Business Value of Workplace Forms

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IBM

SWG Services Manager - MEEP



The Session at a Glance

- What is Workplace Forms about and the Business Value
- Background
- Workplace Forms Product Set
- Integration
- Demo
- Q & A



The costs of using and processing paper forms in many organizations today is staggering

- A single paper form costs \$30-\$165 to use, enter, process and retain
- \$22.5B is spent on pre-printed forms in the US alone
- 30% of pre-printed forms are wasted

The “Real” Cost of Paper:



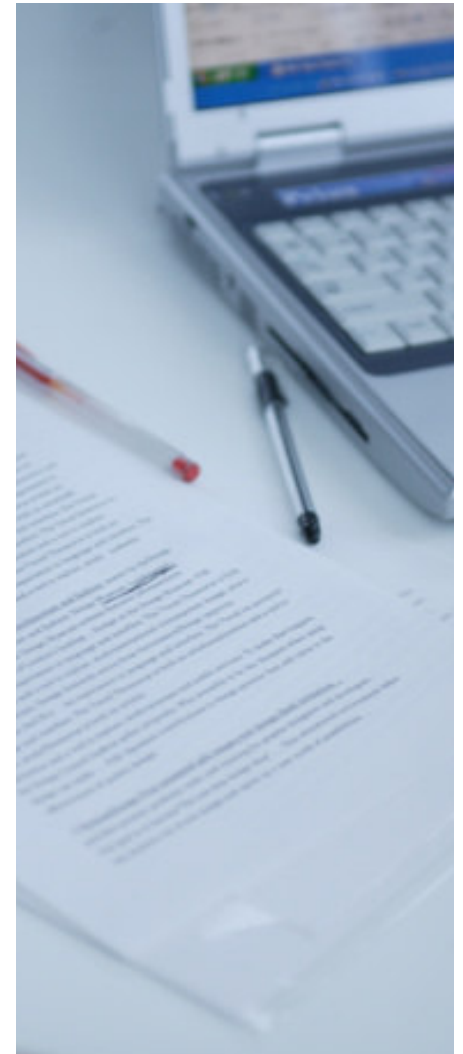
Typical
100
Person
Office

Paper	\$30,000
Printing	\$105,000
Copying	\$135,000
Faxing	\$20,000
Mailing	\$27,000
Courier	\$50,000
Storage	\$70,000
Disposal	\$10,000
	\$447,000



Paper forms also create significant negative business impacts beyond basic processing costs

- **High degree of errors and rework**
 - ▶ Form users fill out forms incorrectly or illegibly
 - ▶ Data entry personnel re-key data into backend systems incorrectly
 - ▶ Optical Character Recognition (OCR) scanners read incorrectly
 - ▶ Mailing or faxing time lengthens business processes
- **Increased call center / Support costs**
 - ▶ Lack of 'wizards' or business logic in paper forms causes increased calls to support centers for clarification
 - ▶ Incomplete or illegible forms require outbound calls to resolve
- **Difficulty proving regulatory compliance**
 - ▶ Difficult to link forms, signatures, and attachments throughout an end-to-end business transaction
- **Decreased business flexibility**
 - ▶ Updating, printing, and distributing new paper forms is costly
 - ▶ Transition to new forms creates a window of increased errors and rework while both 'old' and 'new' forms must be accepted




Clients are more satisfied when they can do business more easily and efficiently with your organization

IBM Workplace Forms **simplifies** forms for end users, saving them **time and effort**

- ✓ *Guided wizards make complex forms easier for end-users*
- ✓ *Error checking is provided at data entry*
- ✓ *Pixel-precise eForms may be completed online or offline*
- ✓ *Pre-populated data from backend systems reduces demands on end-users*
- ✓ *Global eForms in 26 languages allows for greater reach to more end-users*
- ✓ *Rich client or zero-foot print eForms*



Guided wizards make complex forms easier for end-users



Mortgage Pre-Approval Form

Steps

- Mortgage Requirements
- Mortgage Details
- Borrower Personal Data
- Co-Borrower Personal Data
- Finalize Pre-Approval

Mortgage Requirements

Provide the following mortgage information:

Mortgage Amount

Down Payment

Interest Rate

Payment Frequency

Amortization Period Years

Start Date (YYYY-MM-DD)

Mortgage Calculator

Calculate Monthly Payment

1. Purchase Price

2. Down Payment OR

3. Interest Rate 4. Amortization Period Years

5. Calculate Monthly Payment

Calculate Purchase Price

1. Monthly Payment You Can Afford

2. Down Payment

3. Interest Rate % 4. Amortization Period Years

5. Calculate Purchase Price



Browser-based and rich client forms

Form **2290**
(Rev. July 2003)
Department of the Treasury
Internal Revenue Service

Heavy Highway Vehicle Use Tax Return
For the period July 1, 2003, through June 30, 2004

Attach both copies of Schedule 1 to this return.
See the separate instructions.

Name: _____ Employer identification number: _____

Address (number, street, and room or suite no.): _____

City, state, and ZIP code (For Canadian or Mexican address, see page 3 of the instructions.): _____

Part I Figuring the Tax

1	Was the vehicle(s) reported on this return used on public highways during July 2003? If YES, enter 200307 in the boxes to the right. If NO, see page 3 of the instructions.	1	
2	Total tax. Enter the Totals from Form 2290, page 2, column (4).	2	
3	Additional tax from increase in taxable gross weight. See page 3 of the instructions.	3	
4	Credits. See page 3 of the instructions.	4	
5	Tax as adjusted. Add lines 2 and 3, then subtract line 4 from the total. This is the amount you owe. If paying in installments, go to line 6. If payment through EFTPS, check here.	5	

IBM Workplace Forms Viewer
Embedded in a Web Browser
(Also runs stand-alone without browser)

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5	Tax as adjusted. Add lines 2 and 3, then subtract line 4 from the total. This is the amount you owe. If paying in installments, go to line 6. If payment through EFTPS, check here.	5	\$0.00

IBM Workplace Forms Server
Browser-only rendition of XHTML



Background

- First XML Intelligent Document introduced in 1998 by PureEdge Solutions
- IBM acquired PureEdge Solutions effective August 1, 2005
- PureEdge technology becomes an integrated part of the IBM products as well as remain a standalone component
- Leadership within standards community (e.g., W3C, XML, & XForms)
- Over 5M users across numerous end user organizations including some of the largest enterprises in the world
- Customers have integrated PureEdge component technology ao. with IBM Lotus, DB2, Websphere, and Tivoli middleware



IBM Workplace Forms Products:

■ **IBM Workplace Forms Viewer**

- ▶ feature-rich desktop application used to view, fill, sign, submit, and route e-forms
- ▶ able to function on the desktop or within a browser
- ▶ Enables full connectivity with real-time integration using Web Services
- ▶ Based on open standards to enable Viewer to operate in portal or stand-alone environments

■ **IBM Workplace Forms Designer**

- ▶ an easy-to-use WYSIWYG e-form design environment
- ▶ supports the drag-and-drop creation of precision forms
- ▶ leverages open standards to deliver forms-based solutions, based on XML and XForms
- ▶ XFDL (eXtensible Forms Description Language)



IBM Workplace Forms Products:

- **IBM Workplace Forms Server**

- ▶ Webform Server

- delivers a true zero-footprint solution

- ▶ API

- enables the creation and delivery of XML forms applications
 - provides a common, open interface to enable integration of e-forms data with server-side applications
 - provides an extension mechanism, which enables application developers to extend the functionality of Viewer

- ▶ Deployment Server

- provides Viewer to external users quickly and efficiently within a browser



Workplace Forms – Supported Platforms

Workplace Forms Viewer 2.6

Microsoft Windows 2000 sp2, sp3, sp4

Microsoft Windows XP sp1, sp2

Workplace Forms Designer 2.6

Microsoft Windows 2000 sp2, sp3, sp4

Microsoft Windows XP sp1, sp2

Workplace Forms Server and API 2.6

Microsoft Windows 2000 Server sp2, sp3, sp4

Microsoft Windows 2003

Microsoft Windows XP sp1, sp2

IBM AIX V5.1 or V5.2 on IBM pSeries server

Red Hat Linux 3.0 Enterprise Server

SUSE Linux Enterprise 10 (32 bits) – v2.7

Sun Solaris 2.7 or 2.8 on a Sparc processor



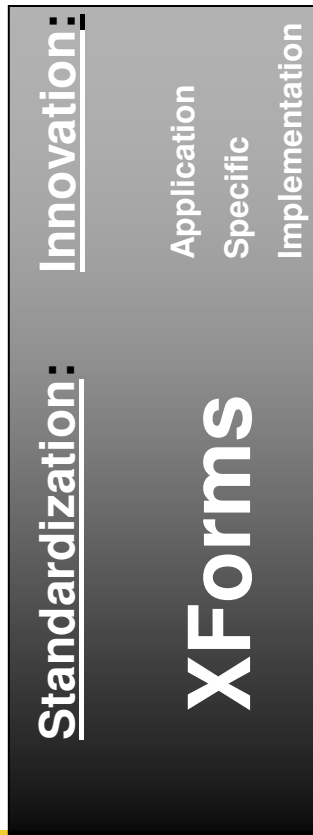
What is XForms?

- **First published by the W3C (World Wide Web Consortium) in 2003**
 - ▶ XForms is a W3C web standard for the creation of the “next generation of Web forms”
 - ▶ Dr. John Boyer, Senior Product Architect for IBM Workplace Forms, is currently co-chair of the XForms Standard
 - ▶ Workplace Forms supports version 1.0, with select features from version 1.1
- **A language for the “next generation of Web forms” - W3C**
 - ▶ Original intent was to improve HTML forms
 - ▶ Grew beyond this once they began to understand complexity of forms
 - ▶ Meant to be used as a conjunction with other languages (XHTML, XFDL, etc..)
- **Supported by numerous companies**
 - ▶ Including IBM, Novell, Oracle, Documentum, SAP, Sun...
- **XForms**
 - ▶ Not an acronym, that’s the full name

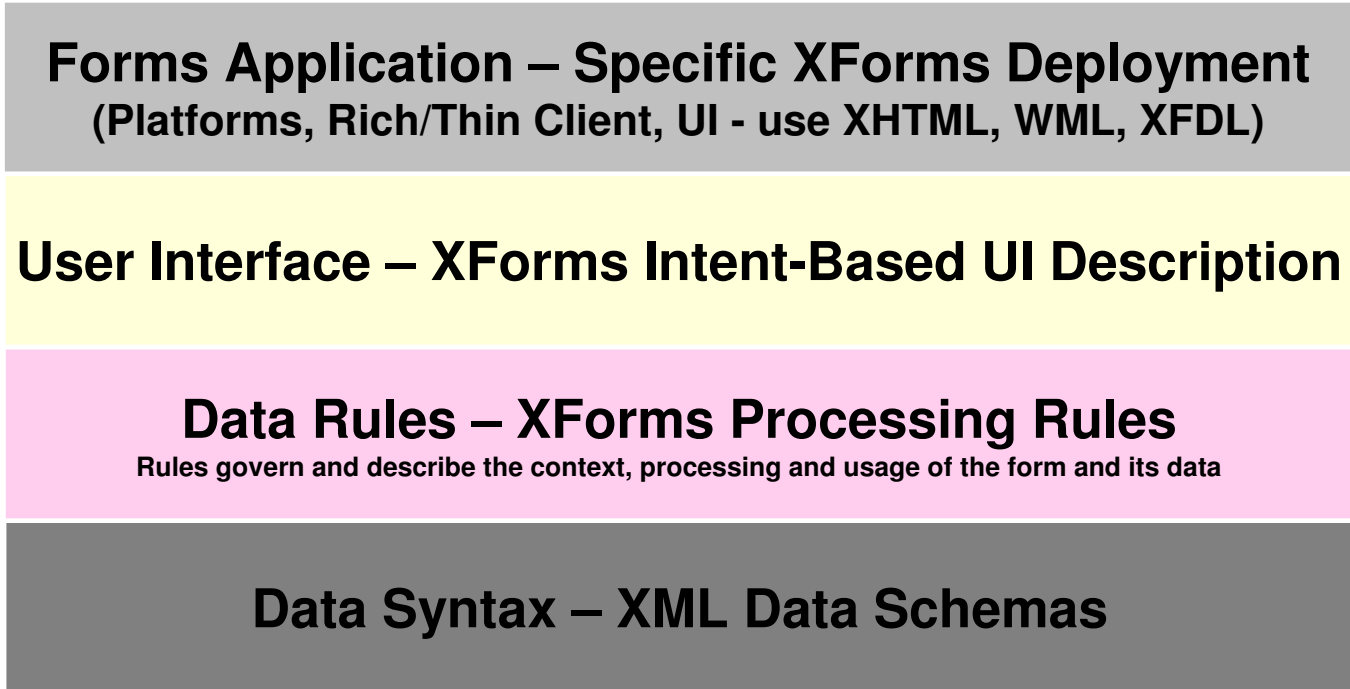


XForms is an open standard

- ***Builds on the syntax of XML data schemas***
- ***Provides Rules and User Interface abstraction***
- ***Enables a forms data processing model***
- ***Ensures interoperability***
- ***Speeds time-to-market***
- ***Reduces costs”***

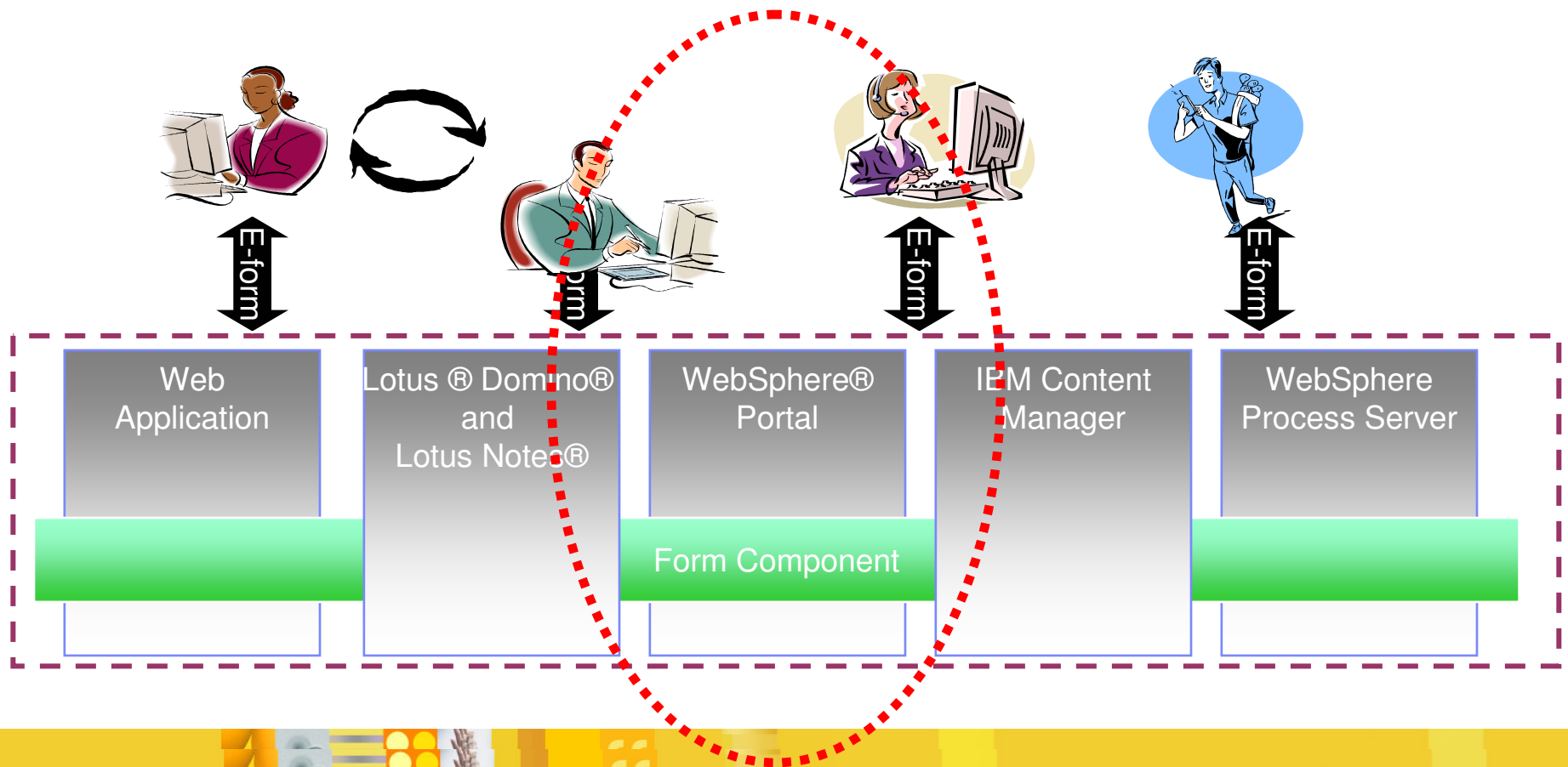


Forms-Based Application



Adapts to your IT Environment

IBM Workplace Forms' open standards foundation helps make eForms a common front-end many different IBM software products



Integrating – Web Application and Forms Server

The image displays two overlapping web browser windows from Microsoft Internet Explorer. The left window, titled "03_Commercial Line_of_Credit.xfdl", shows a form titled "Commercial Line of Credit Account Application" with a date of "21st March 2006" and a "New Account Application" section. The form is divided into three main parts: I. ACCOUNT INFORMATION, II. BORROWER INFORMATION, and III. EMPLOYMENT INFORMATION. Section I includes fields for "Account Applied for" (with "Commercial Line-of-Credit" selected), "Application #", "C.R. Required", and "Credit Score". Section II includes fields for "Applicant" and "Co-Applicant" with sub-sections for "Borrower Information" and "Employment Information". Section III includes fields for "Employment Information" for both applicant and co-applicant. The right window, titled "Wizard Page 1", shows a "Commercial Line of Credit Account Application" wizard with a "Traditional Form" button and a "Next >>" button. The main content area of the wizard is titled "Account Type" and contains a message: "Thank-you for your interest. Please select an account type to start the application process." Below the message are three radio button options: "Personal Account" (checked), "Commercial Account", and "Commercial Line-of-Credit". There is also a "Save Incomplete" button, an "E-Mail" button, and a "Print" button. A small image of a skyscraper is visible on the right side of the wizard page. The bottom of the browser windows shows a taskbar with a "Done" button and a status bar indicating "Unknown Zone".

Integrating Workplace Forms – Portal and PDM

The screenshot displays a web browser window with the following components:

- Microsoft Photo Editor - [1.bmp]**: Open at the top.
- Internet Explorer**: Address bar shows a URL starting with `http://wpsut:9081/wps/myportal/...`
- WebSphere Portal**: Header with navigation tabs like 'Welcome', 'Form Library', 'IBM Workplace Forms', etc.
- Form Application Template Library**: A table listing templates:

Select	Name	Category
<input type="checkbox"/>	Mortgage Pre-Approval Form	Financial
<input type="checkbox"/>	Survey Form	Human Resources
<input type="checkbox"/>	E-Loan Form	Financial
- Documents**: Section for 'IBM Workplace Forms' showing a document 'Mortgage Pre-Approval(submitted).xfd'.
- Mortgage Pre-Approval Form**: A form titled 'Provide the following mortgage information:' with fields for:
 - Mortgage Amount: \$98,000.00
 - Down Payment: *This item is digitally signed and cannot be altered*
 - Interest Rate: 6%
 - Payment Frequency: Monthly
 - Amortization Period: 30 Years
 - Start Date: 2006-01-01 (YYYY-MM-DD)
- Mortgage Calculator**: A sidebar calculator with sections for 'Calculate Monthly Payment' and 'Calculate Purchase Price'.



Workplace Forms – Building Better Records

Workplace Forms are *document centric* not data centric

The screenshot shows a 'Brokerage Account Application' form from Mountain-Sure Investments. The form includes sections for 'INVESTMENTS', 'Applicant Information', and 'Financial'. Annotations include 'Application Requires Docs' (do / show attachments button do / pop up instructions dialog) and 'Application Needs No Docs'. A flowchart shows 'Use Changes Account Type' leading to 'Application Requires Docs' and 'Application Needs No Docs'. XML data is overlaid on the form, showing fields like <name>PureEdge Solutions</name>, <address>, <city>Springfield</city>, <state>MA</state>, <occupation>Doctor</occupation>, and <employer>. At the bottom, there are images of physical documents: 'Bylaws of the American Institute of Organbuilders' and a 'CERTIFICATE OF LIFE MEMB'.

- Workplace Forms capture the entire context of a transaction

Presentation

The look of the form
Colors, fonts, layout
The “fine print”

Data

Information entered by users
Information entered by programs
Electronic signatures
File attachments

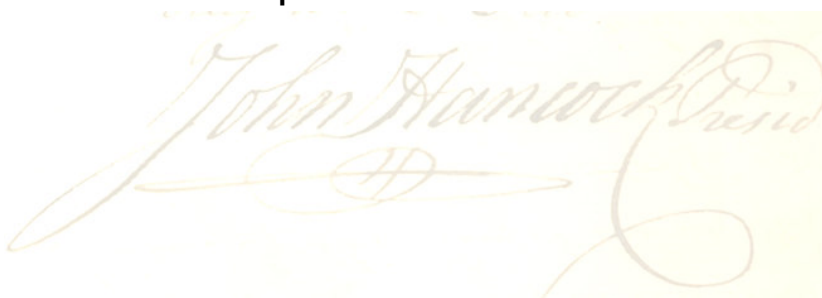
Logic

Business rules controlling form behavior
Calculations, validations

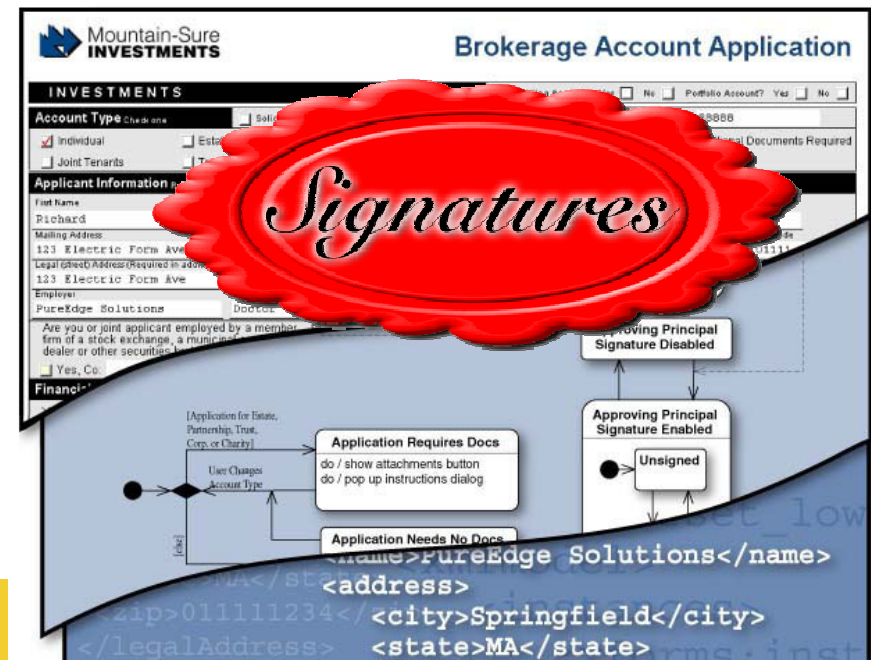
Digital Signatures

Digital signatures

- **Broad support for signature technology**
 - ▶ Entrust, RSA, Verisign, Microsoft, Netscape, WinTab 1.1., Silanis, etc.
- **Flexible signature options**
 - ▶ Different people can sign different parts of the form
 - ▶ **Presentation, Data and Logic** are included in each signature
 - ▶ Use Click-Wrap with or without authentication and reduces reliance on an expensive PKI implementation.



John Hancock



The image shows a screenshot of a "Brokerage Account Application" form from Mountain-Sure INVESTMENTS. The form includes fields for "Account Type" (Individual, Joint Tenants), "Applicant Information" (First Name, Mailing Address, Legal Address), and "Employment" details. A large red stamp with the word "Signatures" is overlaid on the form. Below the form, a flowchart illustrates the application process, starting with "Application Requires Docs" and "Application Needs No Docs" leading to "Approving Principal Signature Enabled" and "Approving Principal Signature Disabled" states, which then lead to an "Unsigned" state. The flowchart also shows XML data elements like <name>PureEdge Solutions</name>, <address>, <city>Springfield</city>, and <state>MA</state>.

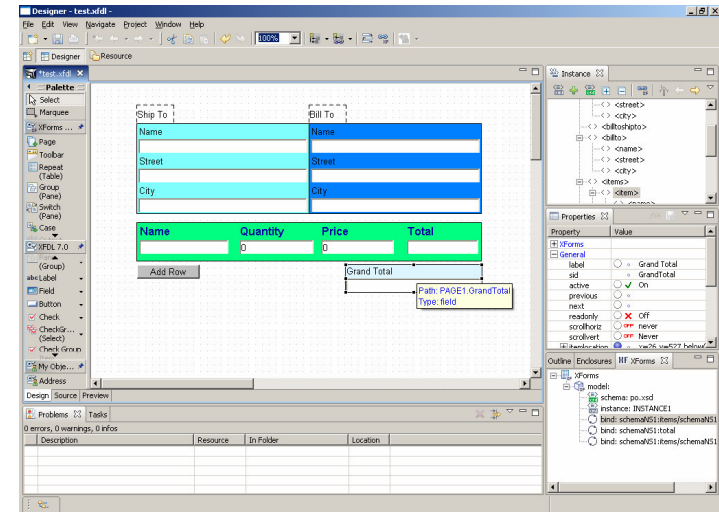
Workplace Designer

Role Based

- **Workplace Forms Designer/Professional** - creates presentation layer
- **Business Analyst** - creates the business rules appropriate to the workflow/process as required - could also be Workplace Forms Designer
- **Data Analyst** - IT interface to get the XML Schemas necessary to integrate information with Back End systems

Integrated Environment

- **All three of these resources can work within the Eclipse Project paradigm and leverage standard Eclipse plug-ins like CVS (for check-in/out for example).**

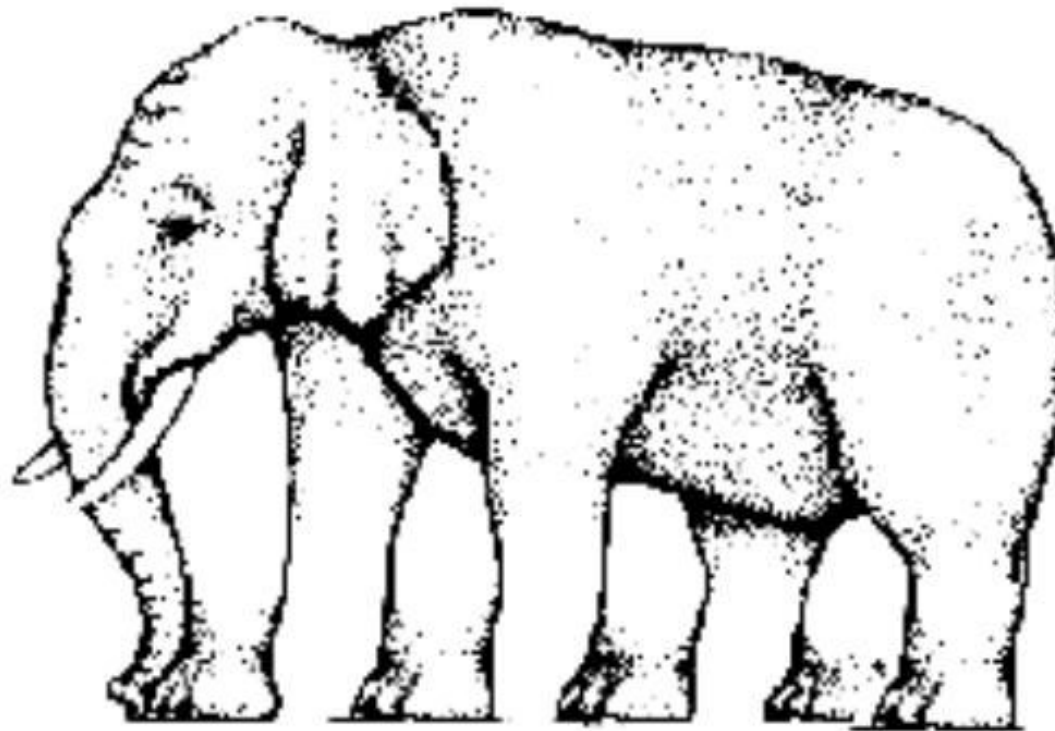


Example: A forms designer can layout a form while a data analyst extracts XML Schemas and makes them available for the forms designer to bind to fields and build logic on.

Team members can tailor their Eclipse Perspectives as required to optimize their environment



About Webform Server



How many legs does this elephant have?



About Webform Server



Webform Server overview

- **Webform Server is a zero footprint forms solution**
 - ▶ Forms are rendered directly in a web browser as DHTML
 - Uses same XFDL files as Viewer
 - XFDL forms are converted to DHTML, then sent to user
 - DHTML is converted back to XFDL when user submits form
 - ▶ Forms look almost exactly as they do in the Viewer
 - Most notable difference - the Webform Server toolbar
 - ▶ Removes the need to deploy and manage the Viewer
 - Forms are accessible to all users, including general public



Webform Server overview



- **Works as either a servlet or a portlet (JSR 168)**
 - ▶ Code a servlet/portlet that extends the Webform Server framework
 - ▶ Servlet/portlet processes the XFDL form
 - ▶ Translation of form to HTML is 'invisible' to the servlet/portlet application
- **Automatically detects Viewer**
 - ▶ If the end-user has the Viewer installed, it will serve XFDL – if not, HTML
 - ▶ You can force HTML if you prefer
- **Provides accessibility support**
 - ▶ Provides support for enhanced focus indicator (as in Viewer) and JAWS screen reader



Webform Server interface

BAA - Microsoft Internet Explorer

Address: http://localhost:8085/translator/Translate?pwsAction=open

SUBMIT SAVE PRINT CANCEL

Mountain-Sure INVESTMENTS **Brokerage Account Application**

INVESTMENTS Check Writing Account? Yes No Portfolio Account? Yes No

Account Type Check one Solicited Unsolicited Office: _____ AE#: _____ Account #: _____

Individual Estate* Partnership* Custodian for a Minor Collateral * Additional Documents Required
 Joint Tenants Trust* Corporation* Charitable Organization* Investment Club

Applicant Information Required by MSRB Rule G-8(a)(xi) and NASD Rule 2310

First Name _____ Middle Initial _____ Last Name _____ SSN _____ Date of Birth _____ Business Phone _____

Mailing Address _____ City _____ State _____ ZIP Code _____

Legal (street) Address (Required in addition to P.O. Box #) _____ City _____ State _____ ZIP Code _____

Employer _____ Occupation _____ City _____ State _____ Citizenship _____

Are you or joint applicant employed by a member firm of a stock exchange, a municipal securities dealer or other securities broker or dealer?
 Yes, Co: _____ No

Are you or joint applicant a director, 10% or greater shareholder or policy making executive officer of a publicly traded company?
 Yes, CUSIP: _____ No

I want my name, address, and securities positions disclosed to companies in which I own securities that are registered in nominee or street name.
 Yes No

Financial Information

Years of Experience _____ Tax Bracket _____ % Beneficial Account Owner _____

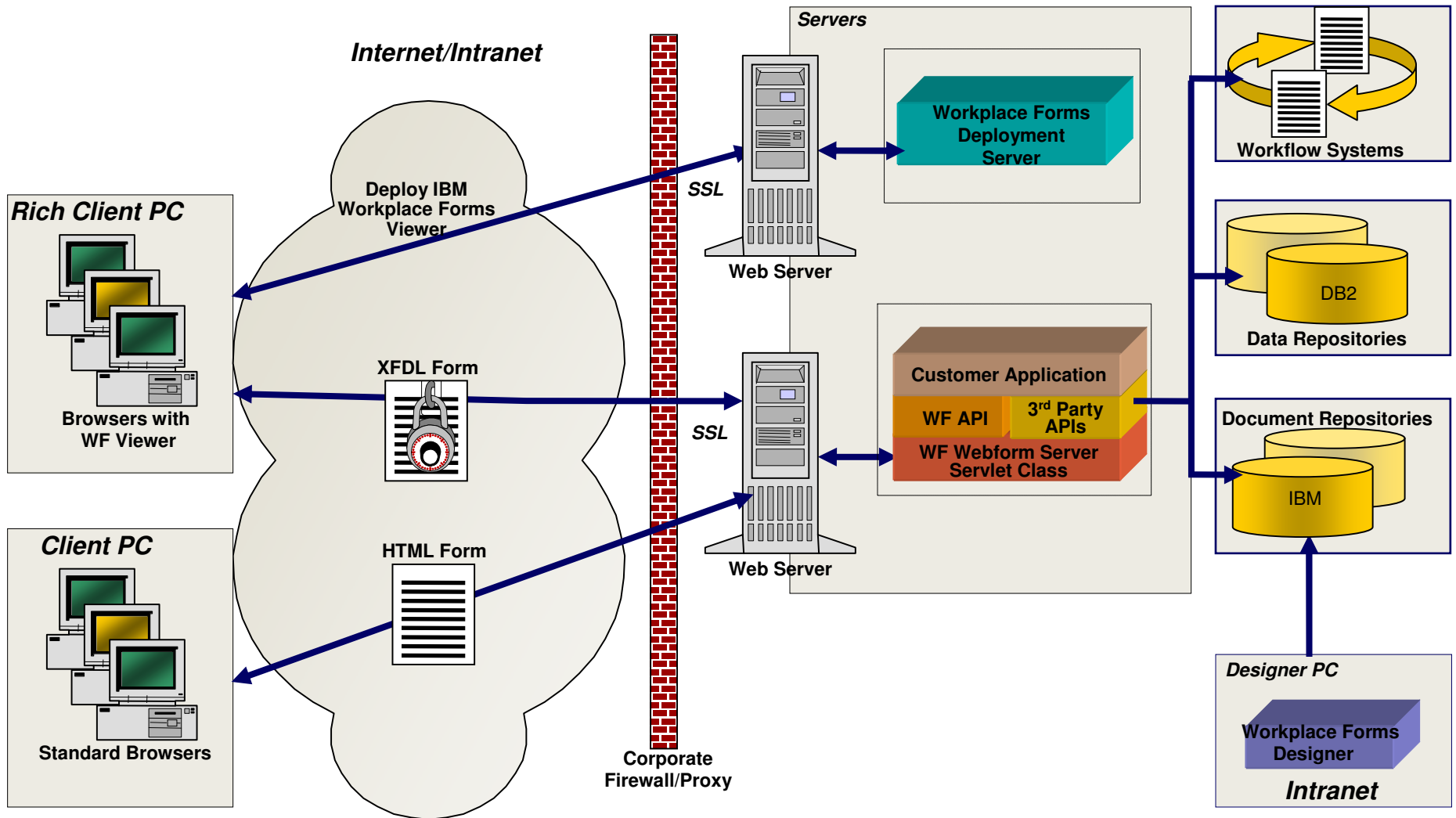
I have the following investment objectives:
 Preservation of Capital (Investment Grade Bonds) Speculation (Options & Equities)
 Capital Appreciation Tax Advantaged Income

Annual Income (in \$1,000's): _____ Liquid Assets (in \$1,000's): _____ Net Worth with Residence (in \$1,000's): _____

Done Local intranet



“Hybrid” Viewer and Zero-Footprint Deployment



Banking case study: MidFirst Bank



▪ Business Challenge

- ▶ Wire Transfer request process needed to move large amounts of money between banks
- ▶ Process needed to comply with government rules and regulations
- ▶ Complex internal processes required multiple approvals
- ▶ Existing process was a manual, paper-based system which was exceedingly slow and prone to human error

▪ Workplace Forms Solution

- ▶ Wire Transfer Request online forms processing via Workplace Forms
- ▶ 36 bank branches and over 2,000 employees using the solution

▪ Benefits / Results Achieved

- ▶ Ensures the security and compliance of transactions
- ▶ Decreased time required for transfers from teller to the Federal Reserve's FedLine System
- ▶ Creates an audit trail for each transaction
- ▶ Digital signature approvals for security and accountability



U.S. Army

The new program will provide the Army with the means to "develop one single enterprise solution for automating functional business processes for the entire Army's use." - Jeanne Harman, chief, Army Publishing Division, Alexandria, Virginia

The screenshot shows the U.S. Army website interface. At the top, there is a navigation bar with the U.S. Army logo and links for HOME, LEADERS, ORGANIZATION, OPERATIONS, CAREER MANAGEMENT, WELL-BEING, and REFERENCES. Below this, the main content area is divided into several sections. On the left, there is a 'Soldiers Online' section with a search bar and a 'Quick Links' dropdown. The central 'FEATURE PHOTO' shows a soldier in a green uniform kneeling and working on a large, treaded tire of a vehicle. To the right of the photo, there is a 'FEATURES' section with a '2006 Army Posture Statement' and a list of links including 'The Army Vision: Relevant and Ready Landpower in Service to the Nation', 'Civilian Stories', 'Sergeant Major of the Army Recruiting Team Program', and 'New Professional Writing Selections'. At the bottom right, there is a banner for 'WWW.ARMY.MIL/RACING'.

<http://www-306.ibm.com/software/success/cssdb.nsf/CS/JKIN-6F3NYF?OpenDocument&Site=wp>
<http://www.army.mil/>

Workplace Forms customers are achieving significant cost savings and operational efficiency

The Client



The Solution

Enterprise Workplace Forms deployment: 18,000 forms, serving 700,000 employees globally

The Return on Investment

ROI \$50 Million annually. (Army is estimating \$1 billion+ payback, serving 1.5 million users)



Securities & Exchange Commission (SEC)

Financial disclosure Workplace Forms solution serving 27,000+ publicly traded companies within US Markets

Estimated annual cost savings to taxpayers of \$1.8 million



Woodmen of the World

Intuitive wizard based Workplace Forms solution guiding insurance agents through policy application process with real-time data validation

Policy application process time reduced from weeks to hours with electronic e-Pad integration



Collaborating with 2000 suppliers using online Workplace Forms

Estimated savings of 60,000 person hours in first six months from one e-form alone



Key Features of IBM Workplace Forms

- **Dynamic, intelligent, wizard-driven user interface**
 - ✓ Simplifies and enables the design of complex dynamic presentation within forms. Users are guided through completion of the form.
- **Support W3C Open Standards**
 - ✓ Workplace Forms is based on XForms 1.0
- **Off-line manipulation**
 - ✓ Improve productivity through off-line access to initiate, complete, or review forms and documents.
- **Zero-footprint (validated HTML) delivery option**
 - ✓ Extend reach of core processes to customers or business partners without sacrificing data quality, security or precise layout and printing.
- **Pixel-precise layout and printing**
 - ✓ Flexibility and detailed control of forms design. Comply with regulations and standards.
- **Integration with Back-end systems**
 - ✓ Flexibility through API using JAVA, .COM and .NET



Thank you!



IBM home page

ibm.com

Lotus software home page

ibm.com/lotus

IBM Workplace home page

ibm.com/software/workplace

Workplace Forms home page

ibm.com/software/workplace/forms



Finding your way through the maze of software solutions for “web based forms”



How do I provide a mechanism for passing form contents to

Webform Server overview

- **Cross-platform fill experience**

- ▶ Supports both Windows and Macintosh
 - IE 6.0, IE 7 for Windows XP sp2
 - Firefox 1.5 and 2 for Windows (and should work on Macintosh)
- ▶ Provides a cross-platform front-end for forms applications
 - Can be used as a forms front-end for applications, just like Viewer



抵押预审表

步骤	申请人
申请人 个人资料	姓名: <input type="text"/> 身份证件号码: <input type="text"/> 年龄: <input type="text"/> 电话号码: <input type="text"/> 电子邮件地址: <input type="text"/> 教育程度: <input type="text"/>
共同申请人 个人资料	申请人地址列表 + - 地址生效日期: <input type="text"/> 申请人是否拥有所有权: <input type="checkbox"/>



Webform Server interface

- **Browser forms appear almost exactly like Viewer forms, except:**
 - ▶ Some differences in form appearance due to nature of HTML widgets
 - ▶ Only 6 buttons are available on the toolbar

- **Intended to replicate look and feel of Viewer**
 - ▶ Maintains “sign what you see” philosophy
 - ▶ Forms signed in Webform Server will look the same when inspected in Viewer, and vice versa



Reach more form users with global eForms in 26 languages

The image displays two overlapping browser windows demonstrating the IBM eForms application in different languages.

Top Window (Japanese): Titled "運転免許試験申請書" (Driving License Exam Application Form). It features the IBM logo and navigation options for "学科試験" (Theory Exam) and "技能試験" (Practical Exam). The form includes fields for "名前" (Name), "生年月日" (Date of Birth) with a calendar picker, and "住所" (Address) with a dropdown for "都道府県" (Prefecture).

Bottom Window (English): Titled "Europe (EMEA)". It shows a multi-language header: "Welcome | Willkommen | Benvenuto | Recepción". The form is for "Anlage I/2 zu VV BauPrüfVO Blatt 1" and includes sections for "An die untere Bauaufsichtsbehörde" (To the lower building authority) and "Eingangsstempel der Bauaufsichtsbehörde" (Entry stamp of the building authority). It offers options for "Bauantrag" (Building application) and "Antrag auf Vorbescheid" (Application for preliminary decision), with a "Vereinfachtes Genehmigungsverfahren" (Simplified approval procedure) section. The form also includes fields for "Bauherrin / Bauherr / Antragstellerin / Antragsteller" (Applicant) and "Entwurfsverfasserin / Entwurfsverfasser" (Designer), along with address and contact information.



IBM Workplace Forms Roadmap

Mid 2006

IBM Workplace Forms 2.6

- **Eclipse**-based Designer
- **XForms** 1.0 Support
- **Web Forms Server**
 - Dynamic Fill (based on AJAX)
 - Mac support (Firefox)
- **Localization** to **
 - Designer: Group 1 *
 - Viewer: Groups 1, 2 & "Also" *
 - AIX 5.1-5.3 on P-Series

2007

IBM Workplace Forms Future

2007

- **Macintosh** viewer
- **Localization** to remaining G2 languages (Arabic **Bi-Di**)
- Ongoing **user-centered design**

Also

- **XForms-only Viewer** (IE Plug-in)
- **Multi-Platform Viewer** based on demand e.g. **Linux, devices**
- **Converge** Web Forms Server capability w/ Viewer (AJAX / Web 2.0)
 - e.g. Browser-based Digital Sig.
- Redaction
- Deepen **standards** support e.g. DSign, SVG, Industry-aligned

Integrations

* Language Groups:

Group 1 = Chinese (simplified & traditional), Japanese, Korean, French, German, Italian, Spanish & Portugese (Brazil).

Group 2 = Arabic, Czech, Danish, Dutch, Finnish, Greek, Hungarian, Norwegian, Polish, Portuguese (Portugal), Russian, Swedish, Turkish.

Also Romanian, Slovak, Slovenian & Croatian

** No Bi-Di support (Arabic) in 2006

