





# About Me

- Consultant with an XML/SGML Focus
- Background in Large-Scale Applications
- Senior Editor, *The Gilbane Report*
- Contributing Editor, *Transform Magazine*
- Contributor to *The Seybold Report*
  - “Suddenly, E-Forms Matter”



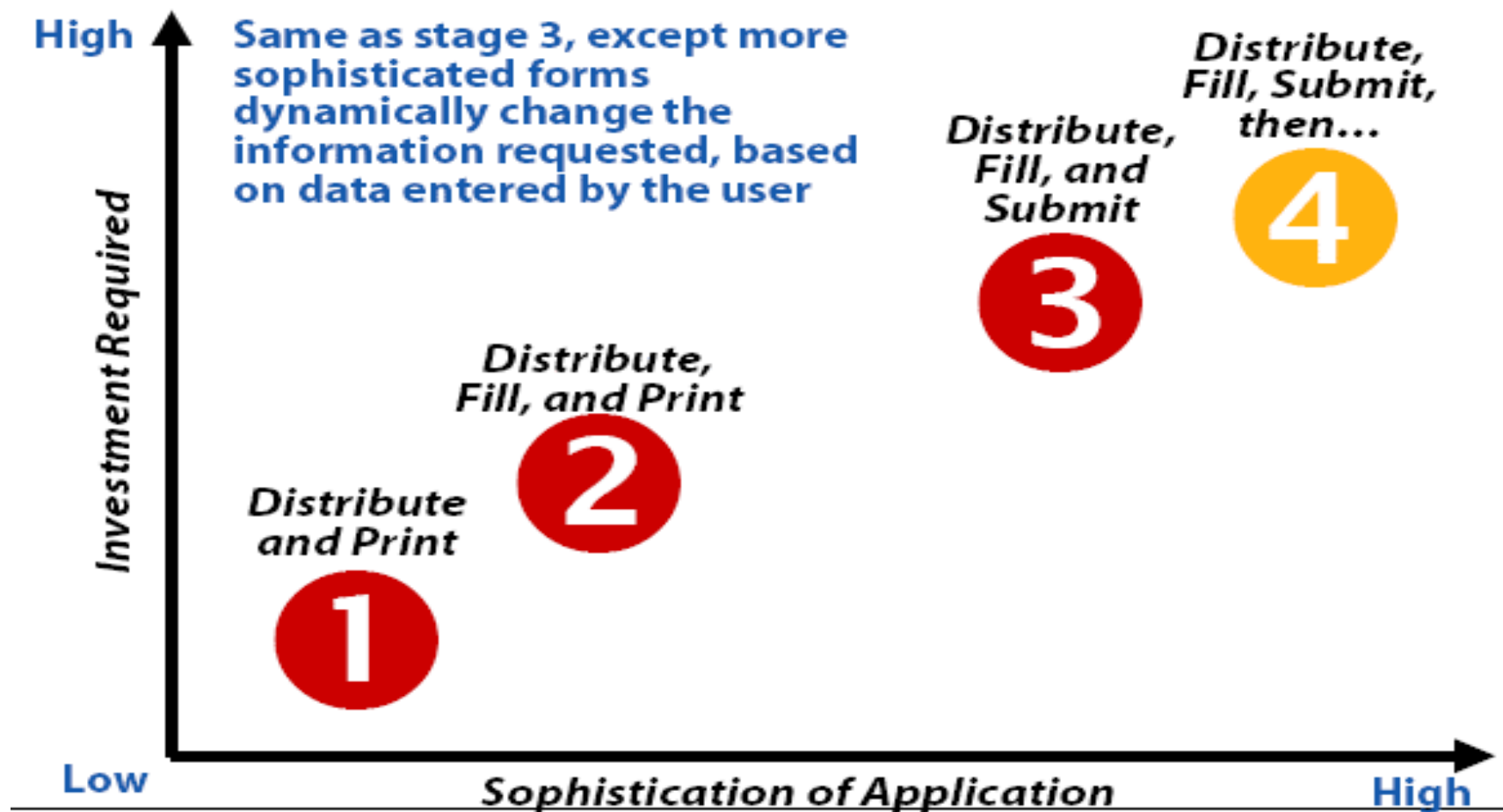
# Outline

- Background
- The New Offerings
- Likely Trends

# eForms Background

- Forms are plentiful and important
  - Data collection
  - Primary interface for customers, constituents
- Paper is still prevalent
- Hybrid modes common
  - Paper collection, scan, and then capture
  - Paper collection, followed by data entry

# One View of Forms Evolving to eForms (courtesy of Adobe)



# Good explanation?

- Certainly explains the movement from printed forms to distributed electronic forms
- So somewhat Adobe-centric
- This does represent many, many organizations
- HTML-forms bypassed phases one and two shown here
  - So HTML forms have come to dominate



# HTML Forms “Dominate”?

- I don't have formal numbers here
- Conservative guess: most of the last 10,000 forms I have filled out are HTML
  - The rest have been paper
- Why?
  - Browser is ubiquitous
  - HTML is relatively easy to create
  - Combination of HTML and scripting are widely known

# Why a need for something new?

- Validation, logic not cheap with HTML
  - Scripting, post-processing
- Not as dynamic as they could be
  - Personalization, reformatting based on input
- Not true WYSIWYG
  - And WYSIWYG is critical in some applications
  - Look and feel, and WYSIWYS
    - What You See Is What You Sign
    - Compliance, eCommerce
- HTML is not XML



# Why is XML important?

- Not merely a religious impulse
- ***Interoperability is meaningful***
  - XML is the de facto standard for *data* interoperability
    - Messaging, database transformation
  - XML is the emerging standard for *application* interoperability
    - Service oriented architectures, SOAP, etc.
  - The emerging programming methodologies are all XML-centric
    - Java 2 Enterprise Edition (J2EE)
    - Microsoft .NET

# XML is Natural for eForms

- Named elements, with attributes
- Validation of syntax
  - DTD and schema
- Validation of semantics
  - Schema, especially
- Content separate from presentation



# XML forms emerge: XForms

- Same impulse as the development of XML
  - More formal data representation
  - Ability to apply validation
  - Separate form from content
  - Make more programmable
- Significantly, XForms:
  - Does not describe a presentation layer
    - Can be mapped to XHTML, WML, SVG
  - Takes advantage of established programming interfaces such as the Document Object Model (DOM)
  - Required validation performed by the browser



# XForms Status

- 1.0 is a *W3C Recommendation*
- 1.1 Requirements Document has been released
  - Addresses security among other areas
- A number of companies have emerged with XForms products
  - You'll hear from at least one today
  - Enough for Micah Dubinko to publish "Ten Favorite XForms Engines" on [www.xml.com](http://www.xml.com)
- The long-term path is for XForms to be part of XHTML

# Not lost on Microsoft and Adobe

- ***Clearly a key market for Adobe***
- Protect and expand Acrobat/PDF franchise
- Increase focus on server side of business
  - Acquisition of Jetforms/Accelio in April 2002
  - Adobe Reader Extensions Server
    - PDF Collaboration and Management
- ***Increasingly a key market for Microsoft***
- Protect and expand Office franchise
- Develop new focus on electronic documents and electronic document distribution



# So what has Adobe done?

- Within Acrobat, increasing eForms functionality
- Acrobat 3 brought a plug-in for filling out eForms
- Acrobat 4 included FDF, the forms equivalent of PDF
  - Accessible through an SDK
- Acrobat 5 brought XFDF
  - XML Forms Data Format Specification
  - XML-based, but a single DTD
- Acrobat 6 allows users to bind a PDF form with any XML schema
- Adobe eForms = PDF and (any)XML



# Beyond Acrobat

- Adobe acquired the Jetforms/Accelio business
  - Forms server technology
  - Separate forms designer from Acrobat
- Forms Designer 6, now called Adobe Designer 6, is now in beta
  - More of an Adobe product
  - Familiar interface for creative users of Adobe products
- Single interface for creative and technical developers
  - Developers can do scripting, data binding on the designed form
  - Suggestive of a realistic workflow



# What this suggests

- Before moving on to Microsoft, worth noting what the Adobe (and Microsoft) offerings mean
- XML Centric, yet presentation is often very important
- Validation and user interface need to improve
  - Can I validate as the person types?
  - Calculate and update inline
- Interoperability is key
  - XML on output
  - Ability to pass results of form to other forms and processes

# So what has Microsoft done?

- Worth noting that Microsoft is not new to eForms
- Microsoft Access and SQLServer
- Word as Forms Designer
- Microsoft FrontPage
- Visual Basic on top of Microsoft Office

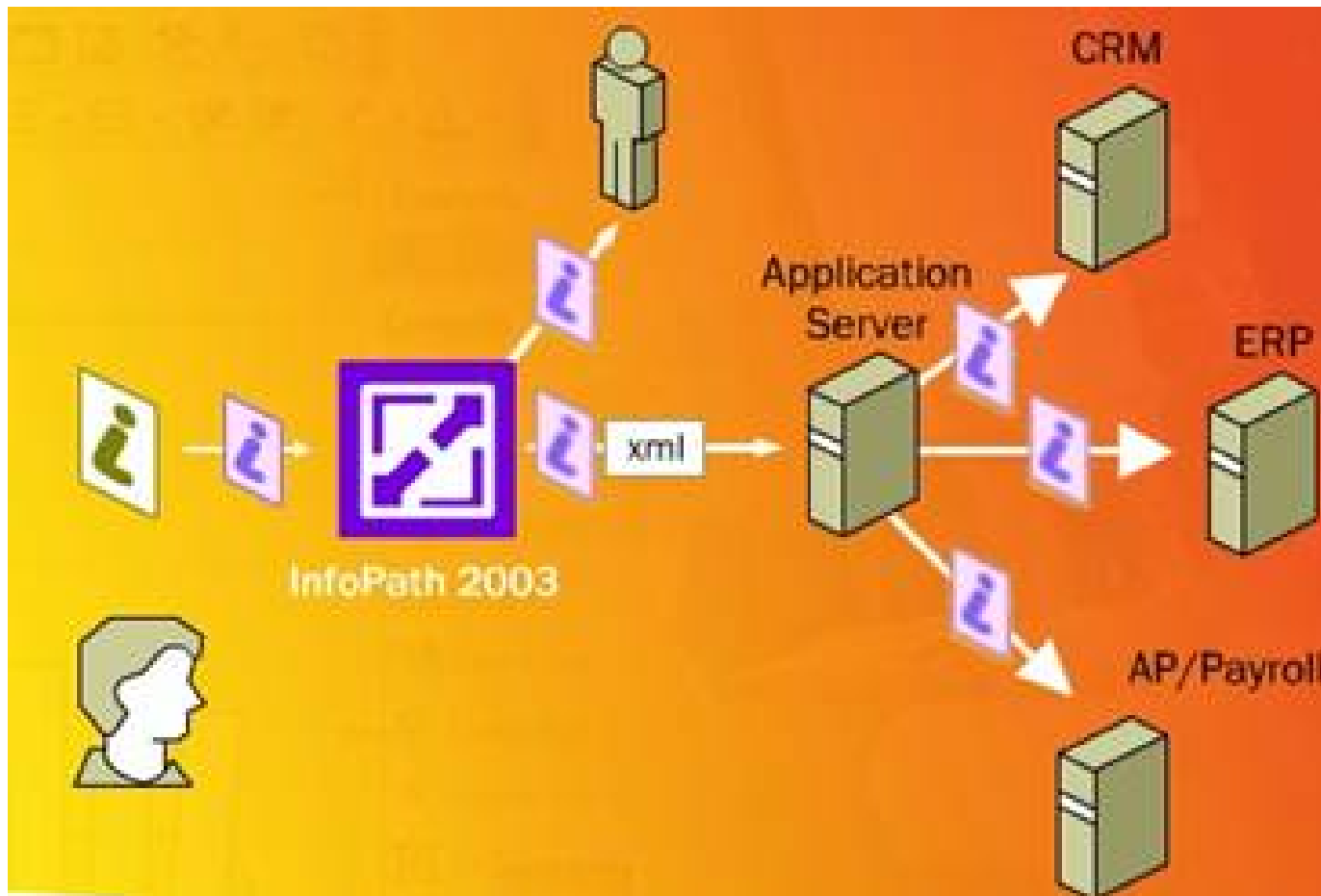
# Microsoft Desktop Interface Development pre-Office 2003



# Enter InfoPath

- New product offering
- Windows Client
- Uses XML as the data layer
- Uses XSLT for “views” into the data and presentation
- Provides developers with environment for widgetry
  - Rich text formatting
  - Client tools such as spell checking
- Microsoft eForms = InfoPath and (any)XML

# Microsoft Desktop Interface Development with InfoPath





# Upshot

- XForms is thin client, all XML
  - Not yet supported in the browser, so relies on “player” software
- Adobe is PDF client with arbitrary XML
  - And Adobe’s fervent wish you buy their servers as well
- Microsoft is InfoPath client with arbitrary XML
  
- All do XML



# Is it a coin-flip then?

- No
- Requirements vary
  - WYSIWYG?
  - Online vs, offline usage
  - Platform support
  - Deployment cost
  - Level of validation
- Prior usage, affinity with products and vendors



# Potential Trends

- Microsoft is here; everyone else go home
- Standards carry the day; the browser does everything
- Adobe's heavy bet on PDF continues to pay off
- All of the above—it's a big world out there
- Moreover, don't dismiss:
  - Other XML-forms companies (PureEdge)
  - Traditional eForms vendors (Cardiff)



# Resources

- eForms Resources
  - <http://nmpub.com/blog/presentations/eformsresources/>
- [www.xml.com](http://www.xml.com)
- Micah Dubinko's blog
  - <http://www.dubinko.info/blog/>
- *Transform* magazine
- *Gilbane* Report
  - *Leave a card for an eForms article*



Thank you!

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