Kimberly MacDonald
Americas Sales Director at Group
Business Software

Ask The XPages Experts

December 12, 2012

#XPages

@GBSKnows

@TLCCLtd

Highlights - GBS

GBS Quick Facts

- Over 5,000 customers and 4 million users in 80 countries
- Over 150 partners in 45 countries
- Offices in 15 locations in the US, Canada, UK, Germany, Denmark, Bulgaria & India
- Offshore delivery center in Chennai, India
- Winner of over 50 IBM Lotus Awards
- One in every three enterprises using Notes is a GBS customer

Case Study A

- Customer
  - One of the largest and most diversified insurance and financial services organizations in the US
  - Over 10,000 employees

- Environment
  - Over 2,000 Notes Client applications (hundreds business critical)

- Key Challenges
  - Widening gap between users' expectations and application usability & performance
  - Applications not available to web / mobile users
  - High cost of maintaining Lotus Notes clients

- GBS Solution
  - Deep dive, onsite consulting to identify and modernize the most appropriate applications based on user needs, complexity, integration, etc.
  - XPages mentoring for client's Notes Application maintenance team

Case Study B

- Customer
  - Global management consulting firm
  - Engagements with over 1,000 companies across 70 countries

- Environment
  - Long term user of Notes applications (over a decade)
  - Multiple business critical apps

- Key Needs
  - Web-based application environment
  - Meet evolving business needs
  - Upgrade User Interface (UI) to provide users with a Web 2.0 experience
  - Ensure the highest level of data security

- GBS Solution
  - Cost effective modernization project plan
  - Pilot XPages modernization project (Performance Review System) that helped identify and mitigate key challenges

Your Webinar Hosts Today:

Howard Greenberg
TLCC
@TLCCLtd

Paul Della-Nebbia
TLCC
@paulDN

Stay Tuned For 2013! The schedule will be posted at:
http://www.tlcc.com/xpages-webinar

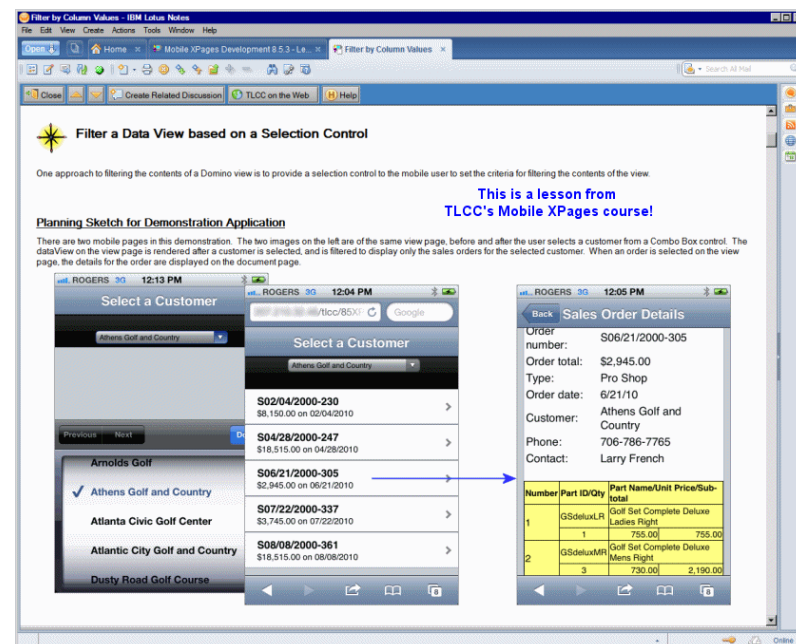Same web page has the recordings of previous webinars

Seven XPages Courses!

– **Coming soon!** Rapid XPages Development using Application Layout and Dojo UI Controls

– **FREE !!** Introduction to XPages Development

– JavaScript for XPages Development

– Developing XPages Using Domino Designer 8.5

– XPages Development 2 for Notes and Domino 8.5

– Mobile XPages for Domino 8.5

– Java 1 for XPages Developers

Self Paced Training

– Learn anywhere!

– An Instructor is a click away

– Instructor Office Hours

Instructor Led (Private)

TLCC Mentoring Services

Integrating existing LotusScript script libraries with XPages

Responsive Layout Frameworks for XPages Application UI

XPages DataSource: Not just from Domino Forms/Views

Using Apache FOP for creating PDF's

Gary Forbis

Chris Toohey

Keith Strickland

Paul Calhoun

Then it will be all about <u>YOU</u> – lots of time for your questions….

Gary Forbis

Best Methods

@gforbis

Chris Toohey
GBS
http://www.dominoGuru.com

@ChrisToohey

Responsive Layout Frameworks for XPages Application UI
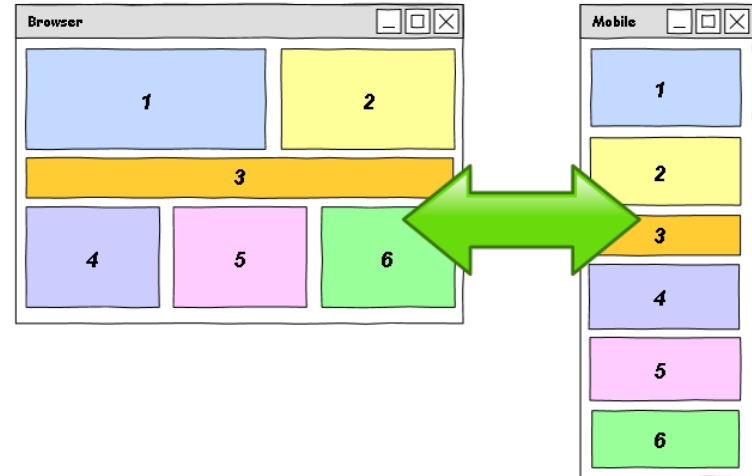
Chris Toohey

December 12, 2012

What we'll cover...

- What is a Responsive Layout?

- Industry-standard Responsive Layout Frameworks.

- Tips for Getting Started!

- Pros and Cons of Responsive Layouts
  - Responsive Layout vs. Progressive Enhancement

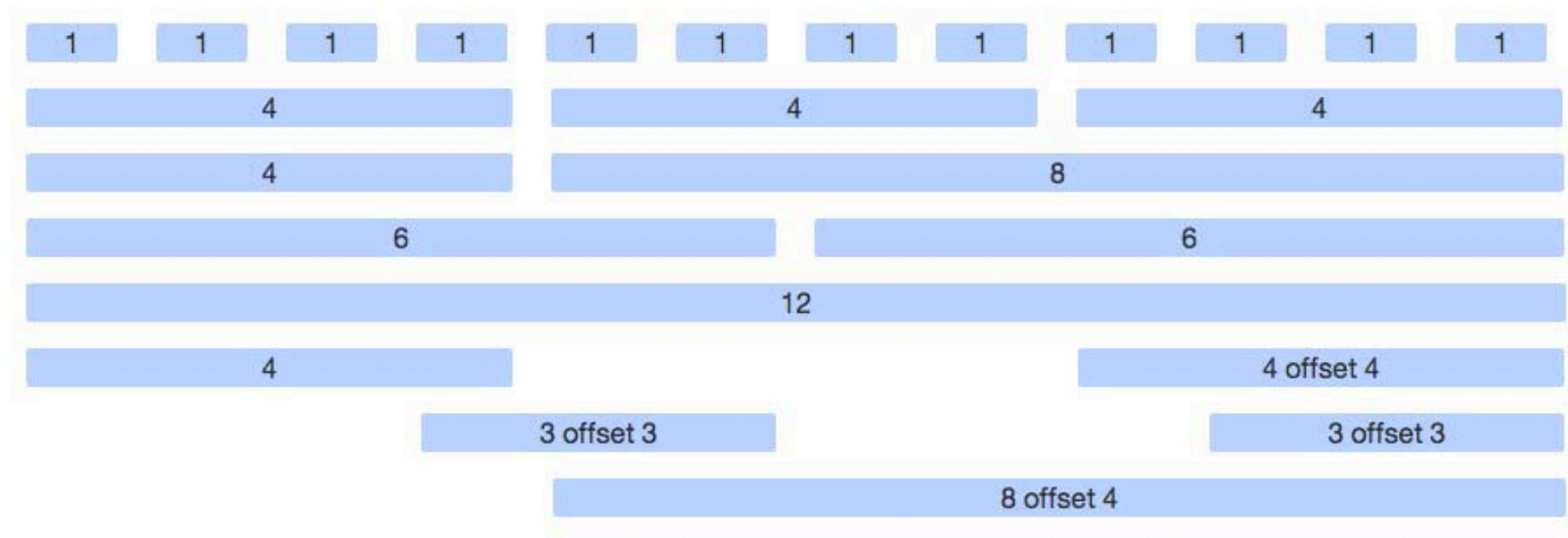# What is a Responsive Layout?

- Refers to "Responsive web design", or RWD.
- Single design that "responds" to available screen size and/or client type.
  - Standard Web Browsers
  - Mobile Device Browsers
  - Tablet Browsers
  - "Other" Browsers

What is a Responsive Layout?

- "Fluid Grid System" [Often 12 "Grid" Layout]

Industry-standard Responsive Layout Frameworks.

Industry-standard Responsive Layout Frameworks.
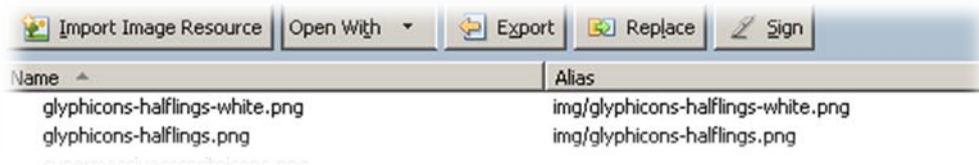
Tips for Getting Started!

- Resource Placement
  - Code Libraries (Client Side JavaScript)
  - Image Resources
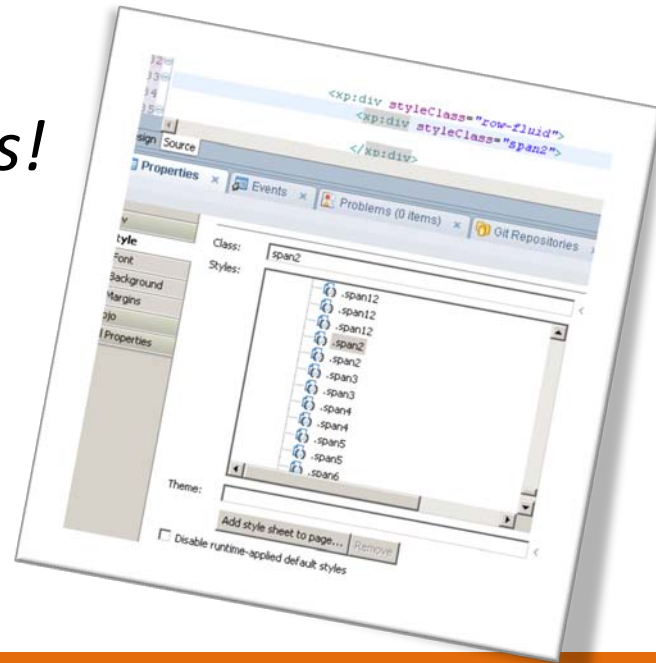 - Stylesheet Resources

  - *Pay attention to the directory structure of resources!*
    - *Use "alias" for pseudo-directory positioning.*

Tips for Getting Started!

- Add *bootstrap.css* & *bootstrap-responsive.css to XPage Resources*

  – *Gives you selectable styleClasses!*

- *"Grid" means spanN*

  – *Use "spans" & "offsets" for positioning elements.*

Tips for Getting Started!

- Create a simple "layout.xsp" Custom Control

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xp:view
xmlns:xp="http://www.ibm.com/xsp/core">

<xp:this.resources>
        <xp:script src="http://code.jquery.com/jquery-latest.js" clientSide="true" />
        <xp:script src="/bootstrap.js" clientSide="true" />
        <xp:styleSheet href="/bootstrap.min.css" />
        <xp:styleSheet href="/bootstrap-responsive.min.css" />
        <xp:metaData name="viewport" content="width=device-width, initial-scale=1.0" />
</xp:this.resources>

<xp:div styleClass="container-fluid">
        <xp:div styleClass="row-fluid">
                <xp:callback facetName="header" />
        </xp:div>
        <xp:div styleClass="row-fluid">
                <xp:div styleClass="span2">
                            <xp:callback facetName="navigation" />
                </xp:div>
                <xp:div styleClass="span10">
                            <xp:callback facetName="content" />
                </xp:div>
        </xp:div>
</xp:div>

</xp:view>
```
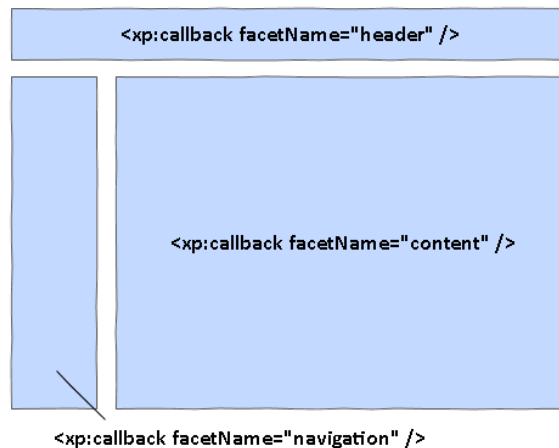

Standard Browser Layout

Tips for Getting Started!

- Create a simple "layout.xsp" Custom Control

```xml
<?xml version="1.0" encoding="UTF-8"?>
<xp:view
xmlns:xp="http://www.ibm.com/xsp/core">

<xp:this.resources>
        <xp:script src="http://code.jquery.com/jquery-latest.js" clientSide="true" />
        <xp:script src="/bootstrap.js" clientSide="true" />
        <xp:styleSheet href="/bootstrap.min.css" />
        <xp:styleSheet href="/bootstrap-responsive.min.css" />
        <xp:metaData name="viewport" content="width=device-width, initial-scale=1.0" />
</xp:this.resources>

<xp:div styleClass="container-fluid">
        <xp:div styleClass="row-fluid">
                <xp:callback facetName="header" />
        </xp:div>
        <xp:div styleClass="row-fluid">
                <xp:div styleClass="span2">
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                </xp:div>
                <xp:div styleClass="span10">
                                <xp:callback facetName="content" />
                </xp:div>
        </xp:div>
</xp:div>

</xp:view>
```
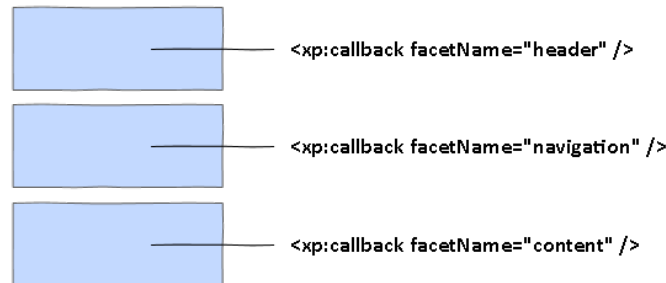
<xp:callback facetName="header" />

<xp:callback facetName="navigation" />

<xp:callback facetName="content" />

Mobile Browser Layout

Pros and Cons of Responsive Layouts

- *"Let them eat cake!"*
  - *Most RWD frameworks deliver all markup, and let the client render the UI.*
    - *Mobile Access can mean less bandwidth*
    - *[Potentially] slower*
    - *Less control over UI/UX!*

Responsive utility classes

For faster mobile-friendly development, use these utility classes for showing and hiding content by device. Below is a table of the available classes and their effect on a given media query layout (labeled by device). They can be found in `responsive.less`.

Class	Phones 767px and below	Tablets 979px to 768px	Desktops Default
.visible-phone	Visible	Hidden	Hidden
.visible-tablet	Hidden	Visible	Hidden
.visible-desktop	Hidden	Hidden	Visible
.hidden-phone	Hidden	Visible	Visible
.hidden-tablet	Visible	Hidden	Visible
.hidden-desktop	Visible	Visible	Hidden

When to use

Use on a limited basis and avoid creating entirely different versions of the same site. Instead, use them to complement each device's presentation. Responsive utilities should not be used with tables, and as such are not supported.

Pros and Cons of Responsive Layouts

- *What is Progressive Enhancement?*

  *Combination of **Graceful Degredation** and **leveraging client type specific functionlity**.*

Pros and Cons of Responsive Layouts

- *What is Progressive Enhancement?*

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Pros and Cons of Responsive Layouts

- *What is Progressive Enhancement?*

  *Combination of **Graceful Degredation** and **leveraging client type specific functionlity**.*

Achievement unlocked
5G - Progressive Enhancement Guru

Pros and Cons of Responsive Layouts

- *Ask yourself two important questions:*
  - ***Who*** *will use my application?*
  - ***How*** *will they use my application?*
- *Content Delivery vs. Interactive Applications*
  - *Most RWD success stories are from publications…*

Pros and Cons of Responsive Layouts

Pros and Cons of Responsive Layouts

Pros and Cons of Responsive Layouts

Be Warned!

If we used the standard RWD "refactor" tactics, you'd be asking for the *2nd Personal Email Address* **11 lines before** the New Contact's *Phone Number…*
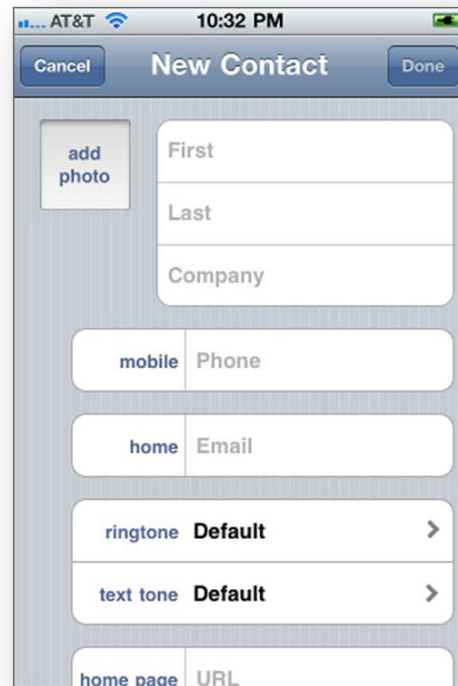
Pros and Cons of Responsive Layouts

Be Warned!

If we used the standard RWD "refactor" tactics, you'd be asking for the 2nd *Personal Email Address* **11 lines before** the New Contact's *Phone Number…*

Takeaways…

- Twitter Bootstrap
  - http://twitter.github.com/bootstrap/
- Combine RWD with Progressive Enhancement
  - Better User Experiences with XPages applications
  - Leveraging the features of while accounting for potential limitations of the user client / device.

Keith Strickland

Red Pill Development

http://www.keithstric.com

XPages Datasources

Not just from Domino Views and Forms

About Me

Keith Strickland

- Co-Founder/Software Engineer - Red Pill Development, LLC - http://www.redpilldevelopment.com
- Lotus Community Blogger since 2002 - http://www.keithstric.com
- Lotus Domino Developer for 14 years, last 3 years doing XPage development only
- Author of OpenNTF Projects: User Administration Utility, XBlog, XPages Calendar
- 2013 IBM Champion

Datasources: The NSF

With the NSF being the database which XPages are built on IBM has provided easy ways to bind data stored in an NSF to an XPage.

- Robust Document based database
- Security built in
- Flat structure
- Easy to use Document and View datasources from the NSF

Datasources: Everything else

We are no longer constrained to using data only from the NSF. We can use data from anywhere and with the proliferation all the different databases our choices and ability to use these databases are limitless.

- MySQL
- MSSQL
- Oracle
- Mongo
- Graph Databases (Neo4J)
- Couch
- Others....

Datasources before XPages

- Difficult to include data from other platforms
- Was possible but required a lot of work
- Including data from other databases was accomplished via non-standard techniques

Datasources after XPages

XPages allow us to surface data from multiple platforms, servers, NSFs, etc on a single page and appear to work together.

- JDBC
- Custom Connectors
- REST
- 3rd Party Connectors/Platforms
- Database vendor provided connectors (i.e. Java API, REST API, JS API, etc)

Introducing the DataObject Interface

The Extensibility API brought us the DataObject interface. This interface provides us the ability to:

- Define custom data sources
- Standard methods to interact with data (getValue, setValue, getType, isReadOnly)
- Include business logic within the data source when it makes sense to do so
- Easy to use one class for all form based data sources
- Expression Language for form field values
- Easy to include Business Logic into the getValue, setValue and save methods
- Easy to connect to and manipulate data from other data containers
- Can be included in an NSF or via an OSGi Plugin

Conclusion

While the information I provided is a very high level overview, by taking a look at the DataObject this should get you started at implementing your own custom data source.

You can learn more information on
- my blog at http://www.keithstric.com
- episode #11 (http://www.mindoo.com/web/blog.nsf/dx/18.03.2011104725 KLEDH8.htm?opendocument) on Karsten Lehmann's blog which has a very good overview of the DataObject along with a custom implementation.
- The XBlog source code available on Bit Bucket
- The sample database I did for this webinar

Contact Information

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- Blog: http://www.keithstric.com
- Skype: keithstric

Sample DB Instructions

1. Download the sample database from http://www.tlcc.com/admin/tlccsite.nsf/files/dataobj.zip/$file/dataobj.zip
2. Copy the DB to your *development* server that contains the current version of the Extension Library (do not use on production system)
3. Edit your %Domino%\jvm\lib\security\java.policy file and add
   grant{
       permission java.security.AllPermission;
   }
4. Sign the database with an ID that has permission to run XPages
5. Ensure you have permission to write files to the Domino program directory
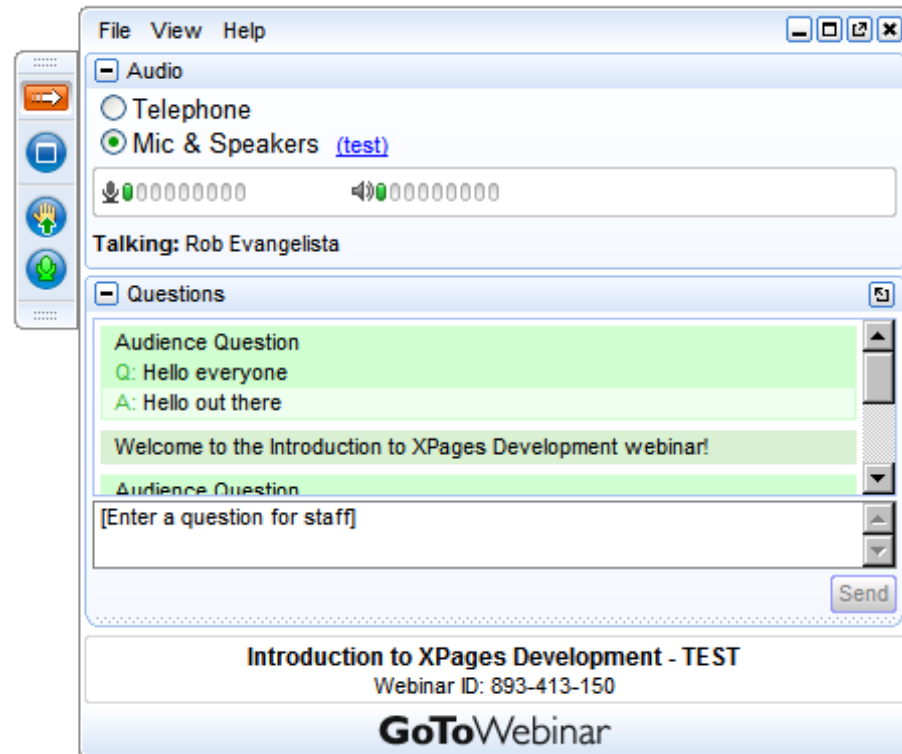
Paul Calhoun

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Questions Time!

Type in your questions

Question and Answer Time!

Gary Forbis   **Chris Toohey**   **Keith Strickland**   **Paul Calhoun**

TLCC Year End Sale until 12/31
www.tlcc.com/webinar

Coming soon - Rapid XPages Development course
- Available in January
- Booking private on-site classes now for next year

TLCC Questions?

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GBS Questions?

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