Building for FileMaker WebDirect

CRE01

Jonn Howell
President, DataExperience, Inc.

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FILEMAKER DEVCON 2019
AUGUST 5-8 | ORLANDO, FL

Who am I?

President of DataExperience

- 27 years of FileMaker development
- Fortune 100 companies
- Construction, Biotechnology, Marketing, PCI Compliance

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Who am I?

Certified Developer

Mechanical Engineer

...

...

Extensive work in [FileMaker WebDirect]

FileMaker 17
CERTIFIED DEVELOPER

FileMaker 18
CERTIFIED DEVELOPER

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Who has helped me with ideas?

Mike Duncan

Brian Ouimette

- https://www.linkedin.com/in/nedbsolutions
- http://fmezcharts.com/

Josh Willing

Josh Ormond

Jonathan Fletcher

Ronnie Higgins

Brad Sanford

…other friends

on several forums

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Who am I?

I am *not* a web developer

I have support from colleagues for:

- HTML
- PHP
- JavaScript

I have a very cool tool…

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FileMaker WebDirect

See separate slide deck (PDF) for details:

- What is FileMaker WebDirect
- Good practices
- Limitations
- Considerations in development
- References (links)
- **https://www.dropbox.com/sh/ue8s6o24jsvx7p3/AADInVNauQQWgTKwvZBe0jd4a?dl=0**

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FileMaker WebDirect

Note:

- I have a choice to go slow and comfortable, or
- Fast and clear, but rich with content
- I cover a lot of material in one hour … points to make!
- Everything is on the PDF or in support files and demos
- We back up against the lunch hour
- I am told we can go over at least 20 minutes for questions

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FileMaker WebDirect Reputation

Product Apprehension in the Community

- FileMaker WebDirect has not been deeply explored by many developers
- People think it is a very limited tool - not true
- This is NOT Instant Web Publishing (IWP)
- Instantly enables the vast majority of FMPA features on the web
- The power is there, if you know the tool

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FileMaker WebDirect Benefits

This is a great tool for limited web skills

- Learn how to deploy it!
- Don’t expect it to be open code
- This product deserves tremendous respect
- creative engineering
- stability

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Performance?

Some actions are actually FASTER than FileMaker Pro client

- WAN actions on cloud server like AWS (even overseas):
- Actions that can be performed by PSoS (perform script on server)

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Server Side Scripting

PSoS - Perform Script on Server

- is your dear friend

Server-side plug-ins are useful

- BaseElements
- 360Works Plastic

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Login Screen

https://myDomainName.com/in.php?myParamName=param

not

~~https://myDomainName.com/fmi/webd#~~

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My history with FileMaker WebDirect

I learned alone, the hard way

- Very large project
- Experienced performance issues
- Discovered latency with concurrent server scripts

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My history with FileMaker WebDirect

FileMaker Server engineer – Jon Thatcher

- He helped me invent approaches
- 3 DevCon sessions on what I learned

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My Projects with FileMaker WebDirect

Issue management & notification

Document management & CRM

Manufacturing & CMO management for biotechnology

PCI Compliance for fund raising - demo

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Development Approaches

Careful planning

- Color palette
- Theme
- Styles

Color 01 #FFFFFF
Color 02 #E6E6E6
Color 03 #DCDCDC
Color 04 #B3B3B3
Color 05 #808080
Color 06 #4D4D4D
Color 07 #83286E
Color 08 #C392B9
Color 09 #BFA672
Color 10 #497126
Color 11 #1921BF
Color 12 #4273FF
Color 13 #E72C0C
Color 14 #97CC66
Color 15 #CA9300
Color 16 #FFD86E
Color 17 #EFFBFF
Color 18 #7286A2
Color 19 #B7C9FF

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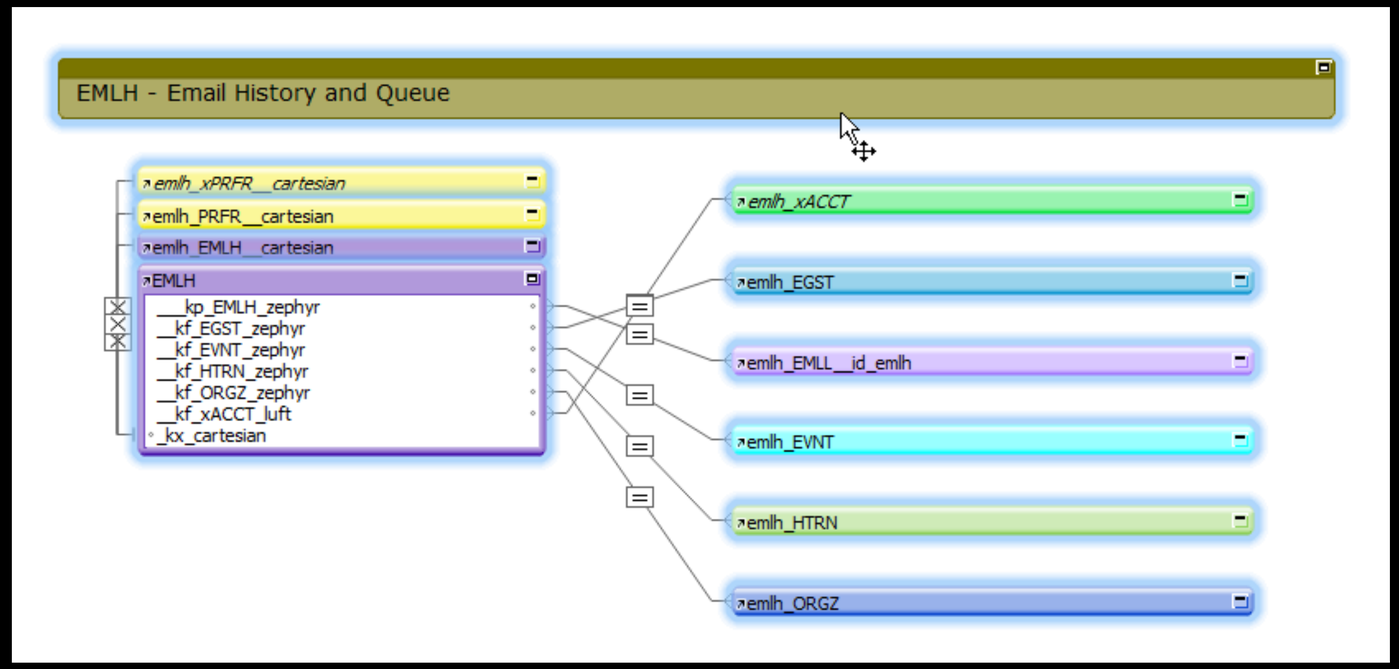
Development Approaches

Careful planning

- Relational architecture
- File architecture
- Navigation

- Dynamic Redirect (?)



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Development Approaches

Web Viewers only work in FileMaker WebDirect if protocols match:

- **HTTP** FMS Server is accessing an **HTTP** server hosted website - Web Viewer target
- **HTTPS** FMS Server is accessing an **HTTPS** server hosted website - Web Viewer target
- Do not mix these protocols

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Development Approaches

Web Viewer charting in iFrames (XFrames) requires HTML substitution:

- “#” symbol must be changed to “%23”
- JSON background color declaration:
- FileMaker Pro Advanced: backgroundColor: **[“#1921BF”,”#497126”,”#83286E”]**
- FileMaker WebDirect: backgroundColor: **[“%231921BF","%23497126","%2383286E"]**

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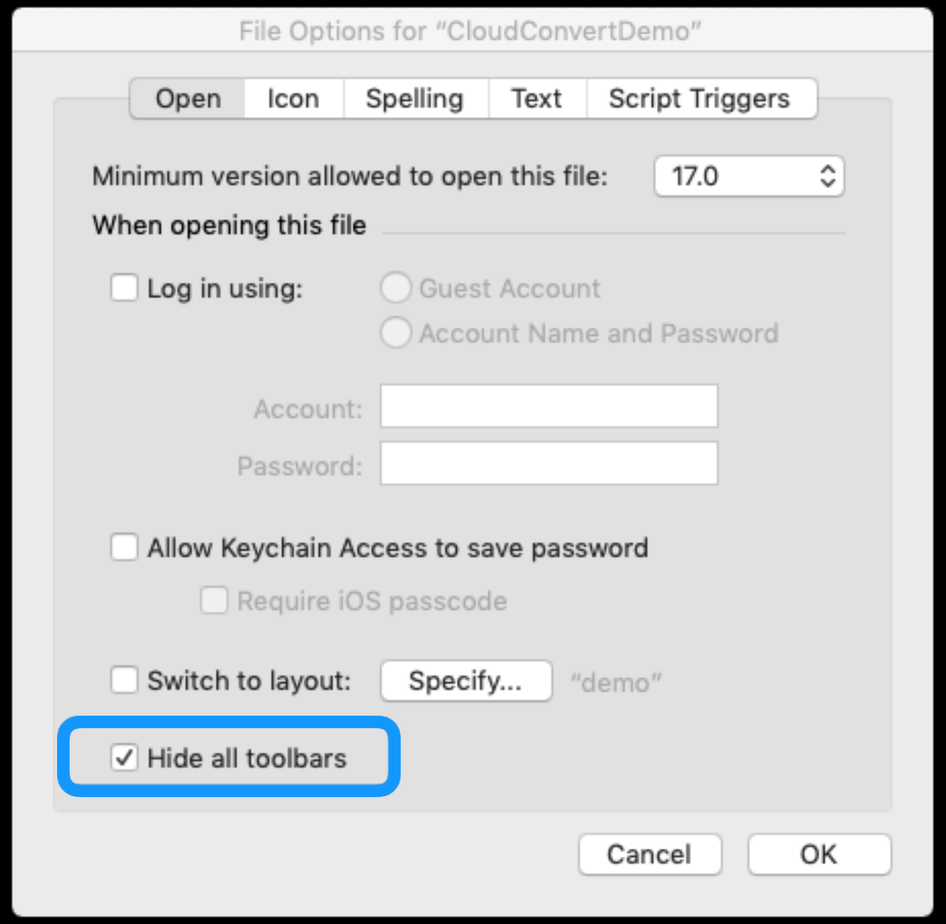
Avoid Screen Flash

Hide all toolbars on file options dialog

- Prevents on-open toolbar screen flash
- You can script to return them later



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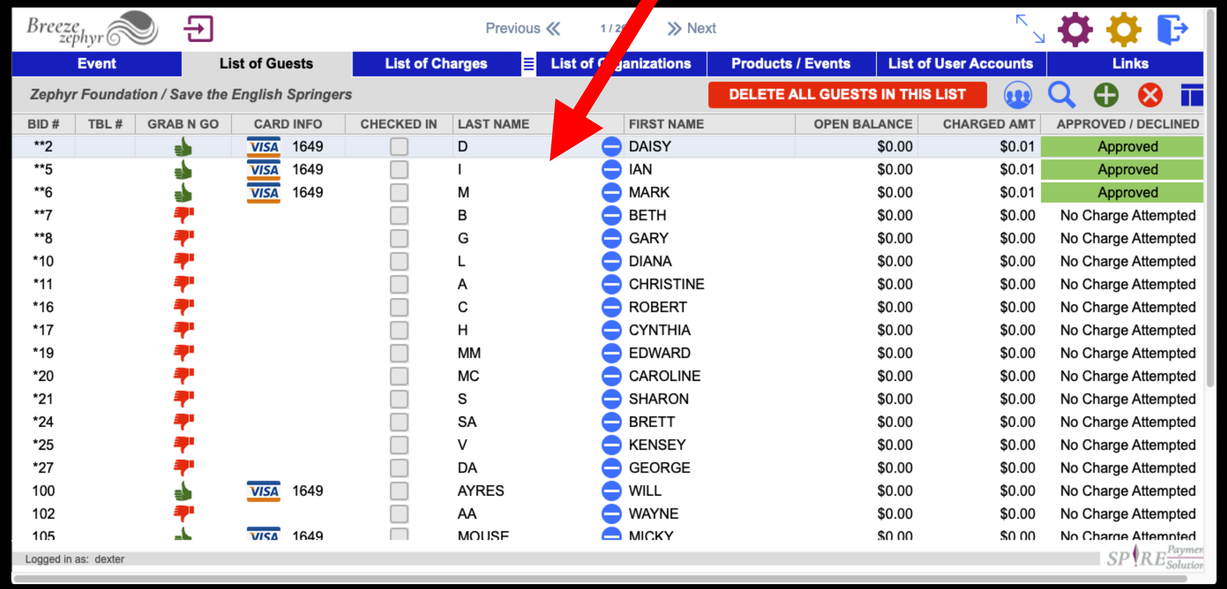
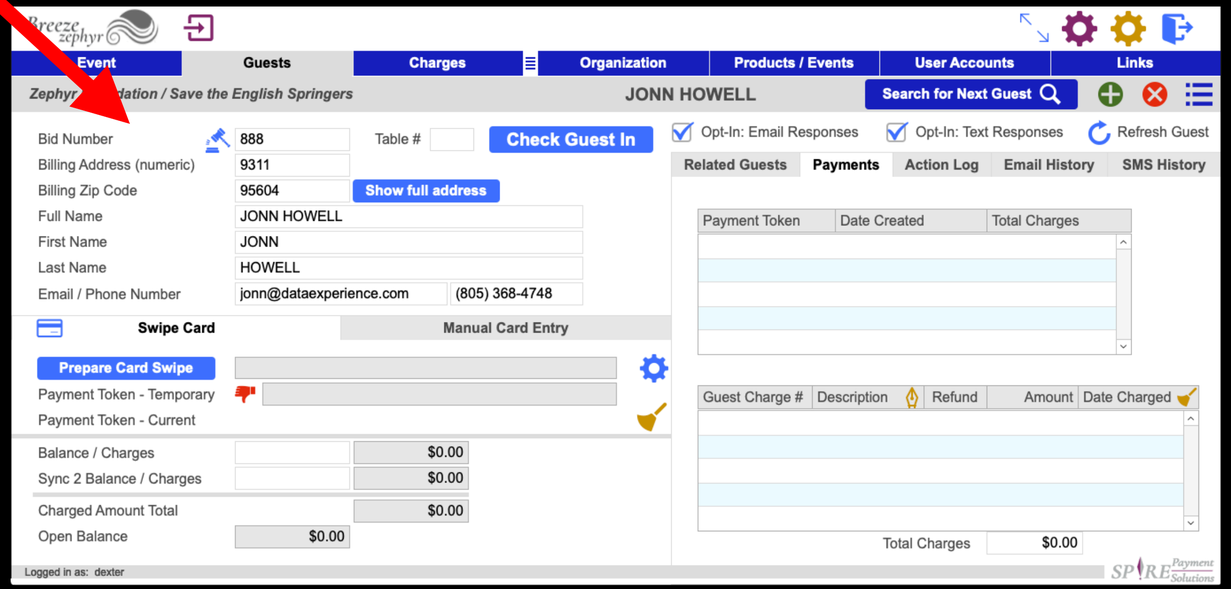
Avoid Screen Flash

Screen Flash between Detail and List views

- Multiple users editing details - **detail view**
- Screen flash - **list view**





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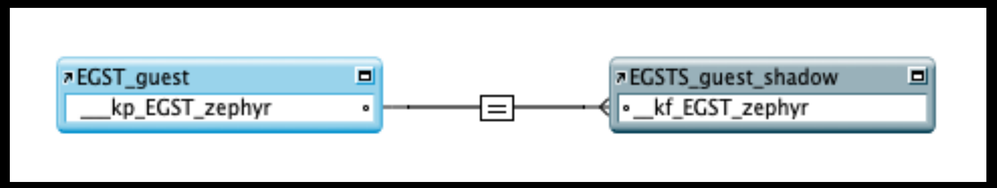
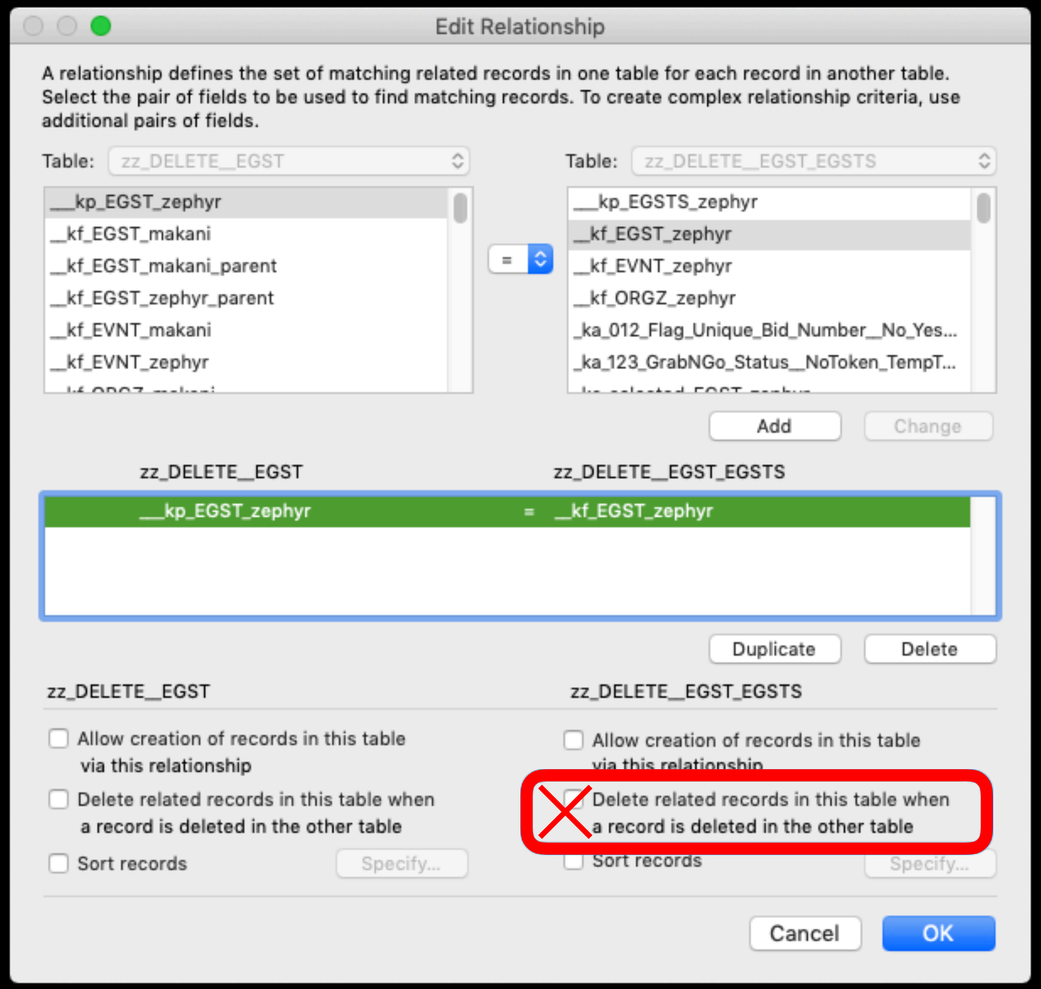
Avoid Screen Flash

Build a list view “shadow table”

- One-to-one relationship
- Minimal fields in shadow table
- Do **not** assign as cascading **delete**
- Do **not** add record on data record **add**





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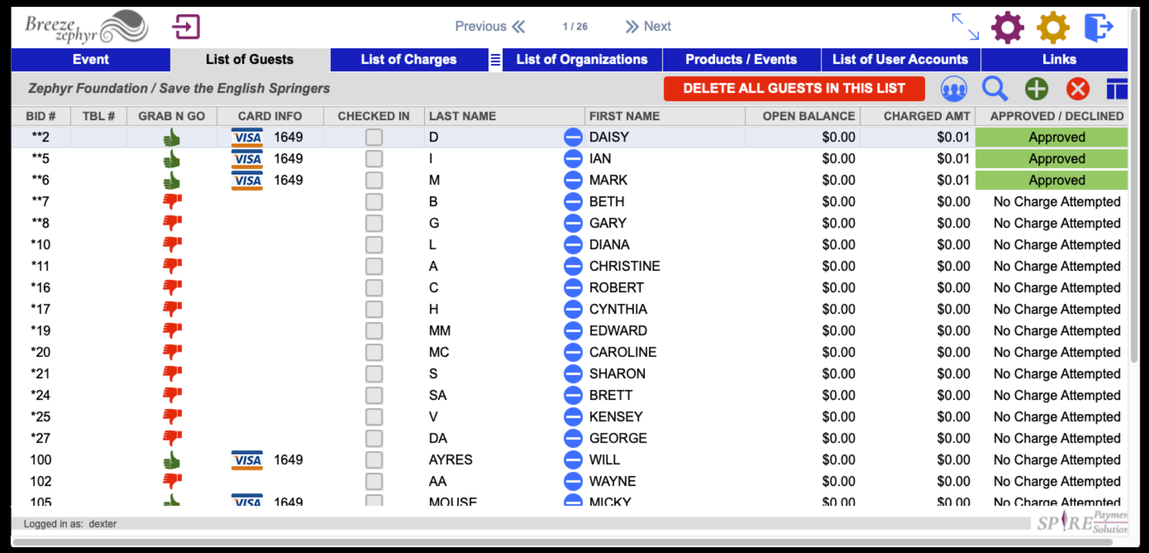
Avoid Screen Flash

Shadow table update

- Update minimal field data
- Script Schedule
- adds
- deletes
- edits



BID #	TBL #	GRAB N GO	CARD INFO	CHECKED IN	LAST NAME	FIRST NAME	OPEN BALANCE	CHARGED AMT	APPROVED / DECLINED
**2			VISA 1649		D	DAISY	$0.00	$0.01	Approved
**5			VISA 1649		I	IAN	$0.00	$0.01	Approved
**6			VISA 1649		M	MARK	$0.00	$0.01	Approved
**7					B	BETH	$0.00	$0.00	No Charge Attempted
**8					G	GARY	$0.00	$0.00	No Charge Attempted
*10					L	DIANA	$0.00	$0.00	No Charge Attempted
*11					A	CHRISTINE	$0.00	$0.00	No Charge Attempted
*16					C	ROBERT	$0.00	$0.00	No Charge Attempted
*17					H	CYNTHIA	$0.00	$0.00	No Charge Attempted
*19					MM	EDWARD	$0.00	$0.00	No Charge Attempted
*20					MC	CAROLINE	$0.00	$0.00	No Charge Attempted
*21					S	SHARON	$0.00	$0.00	No Charge Attempted
*24					SA	BRETT	$0.00	$0.00	No Charge Attempted
*25					V	KENSEY	$0.00	$0.00	No Charge Attempted
*27					DA	GEORGE	$0.00	$0.00	No Charge Attempted
100			VISA 1649		AYRES	WILL	$0.00	$0.00	No Charge Attempted
102					AA	WAYNE	$0.00	$0.00	No Charge Attempted
105			VISA 1649		MOUSE	MICKY	$0.00	$0.00	No Charge Attempted

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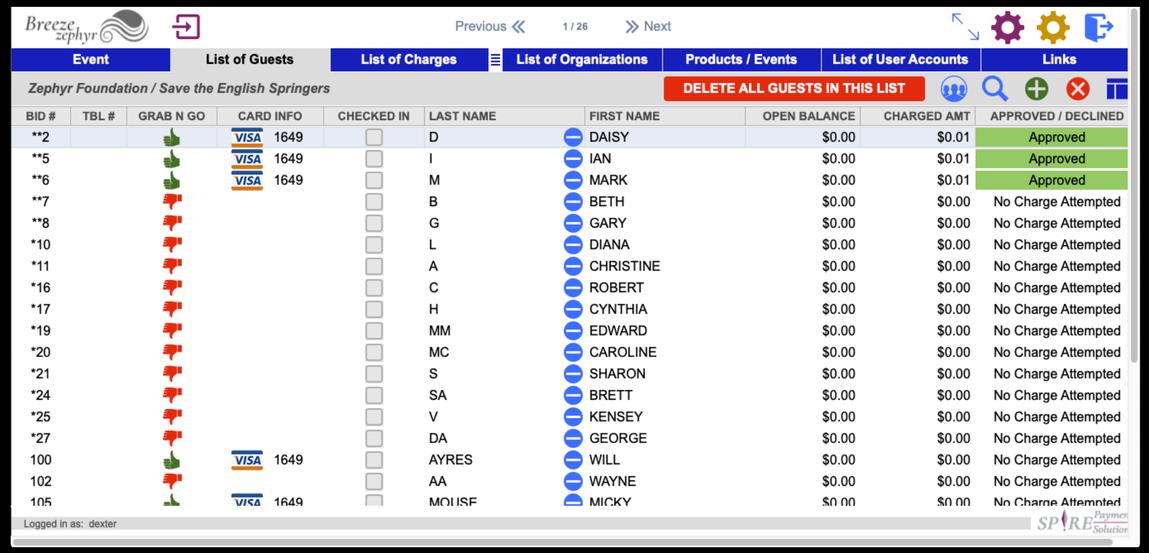
Avoid Screen Flash

Shadow table navigation

- Navigate to detail view - data record
- Navigate to list view - shadow record set



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Window Management

Card Windows

- FileMaker WebDirect doesn't support window styles.

  - Plan an alternate technique

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Popover Demonstration

“Masking Popover” demo is presented here

- “Demo_WebDirectPopover”
  - Account Name = devcon2019
  - Password = devcon2019

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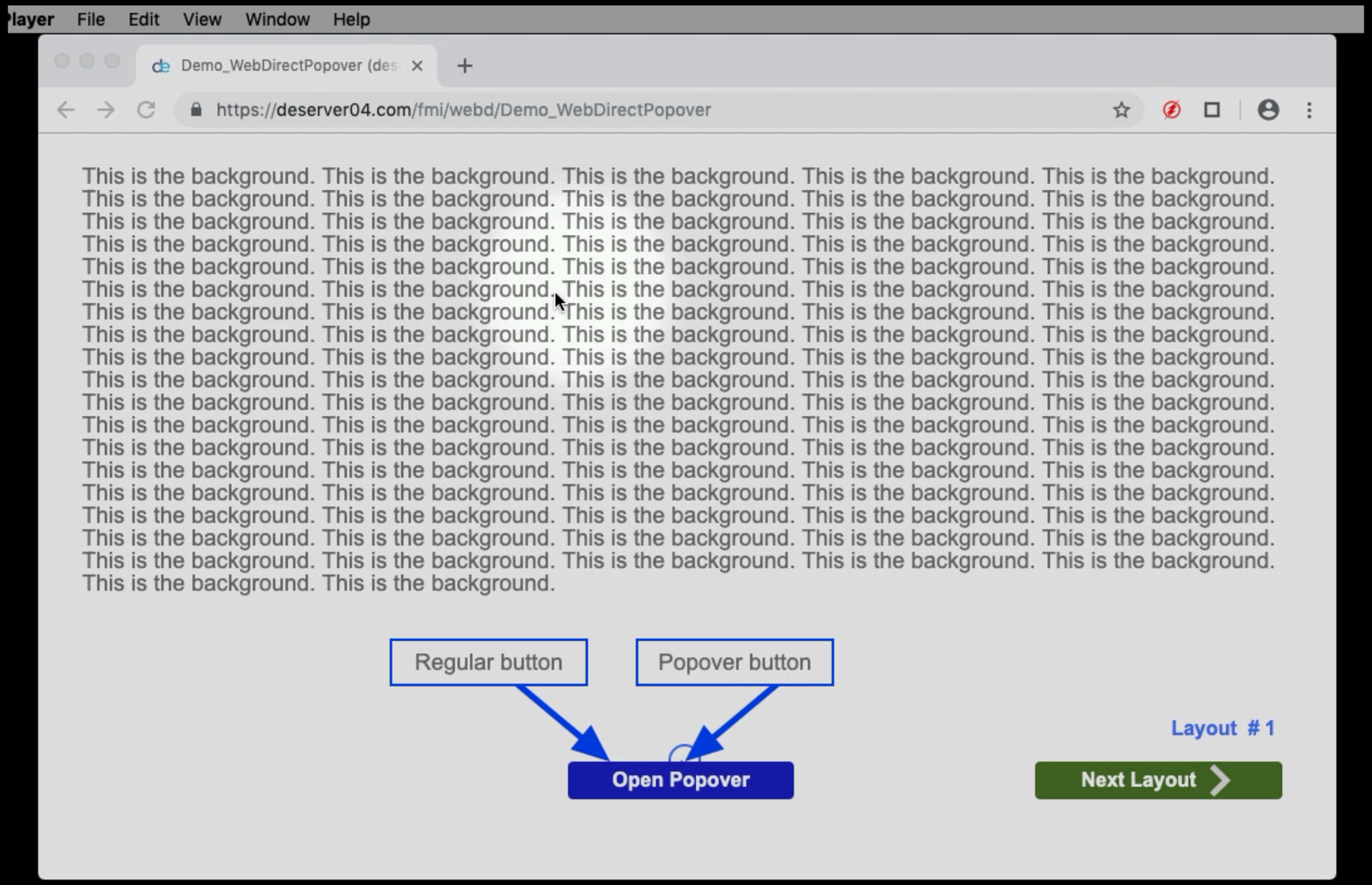
Popover Demonstration



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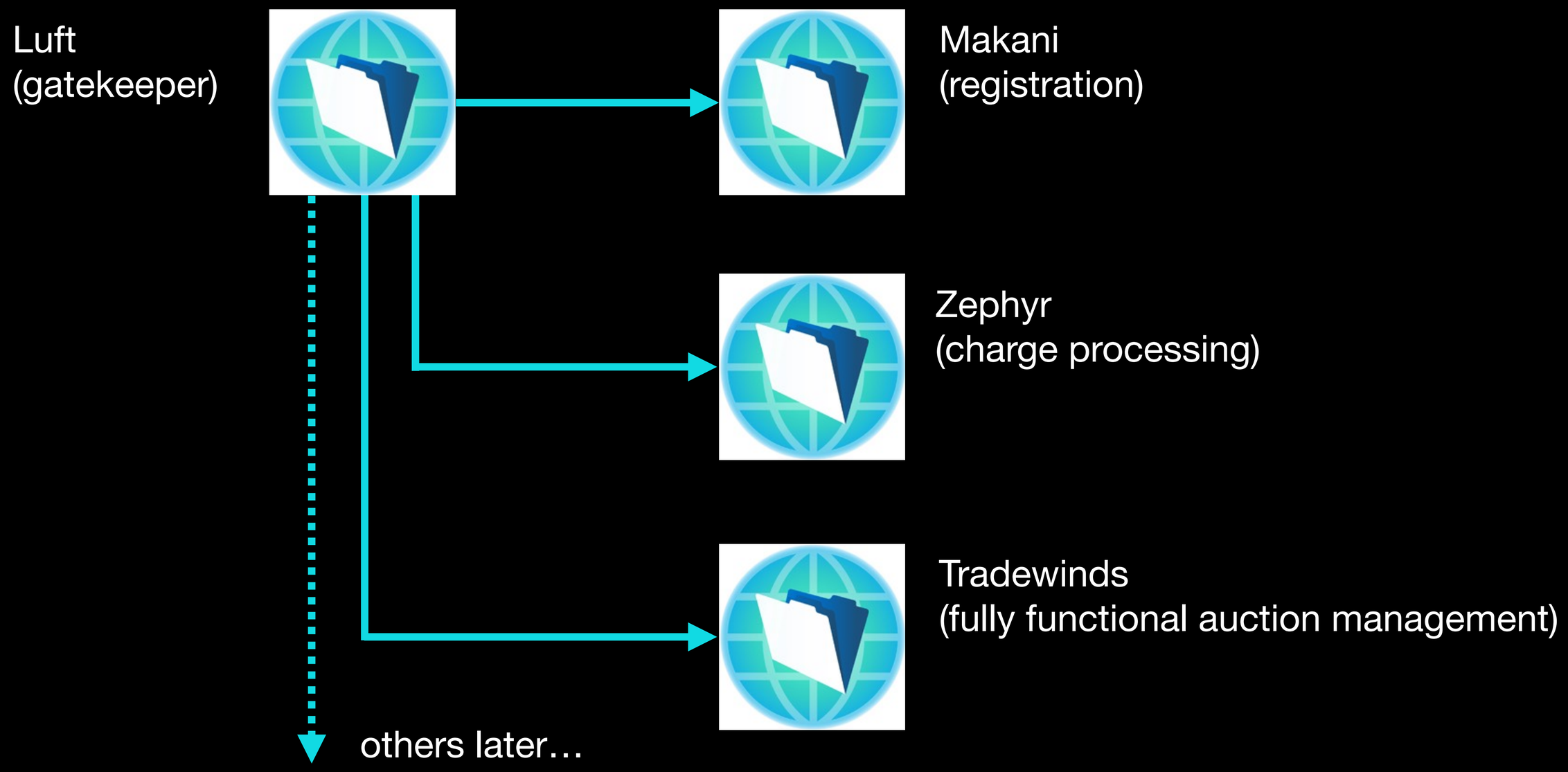

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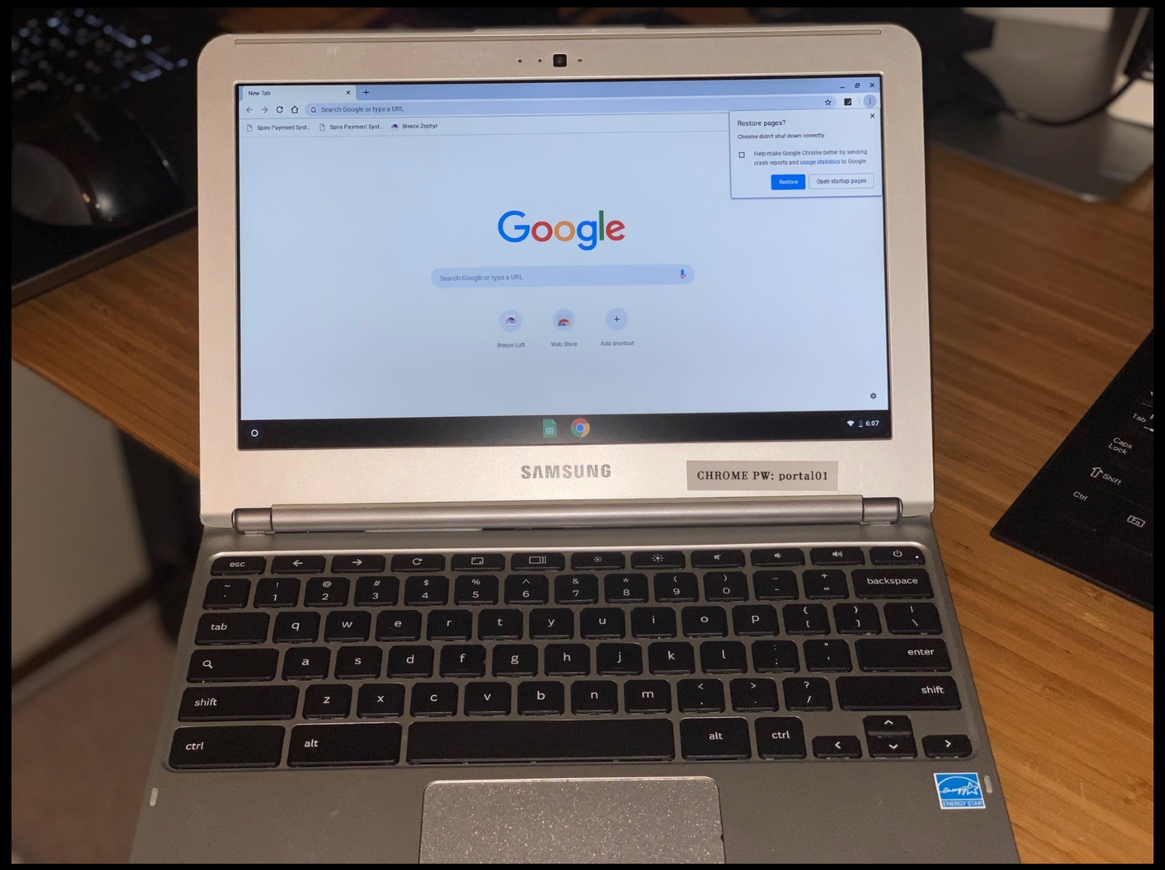
What we are using

Samsung Notebook

- Google Chrome OS
- Google Chrome Browser
- 11.6” screen



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What we are using

Hybrid layouts

- FileMaker WebDirect - Good for Notebook (Chrome)
- FileMaker Pro on desktop
- FileMaker Pro on laptop

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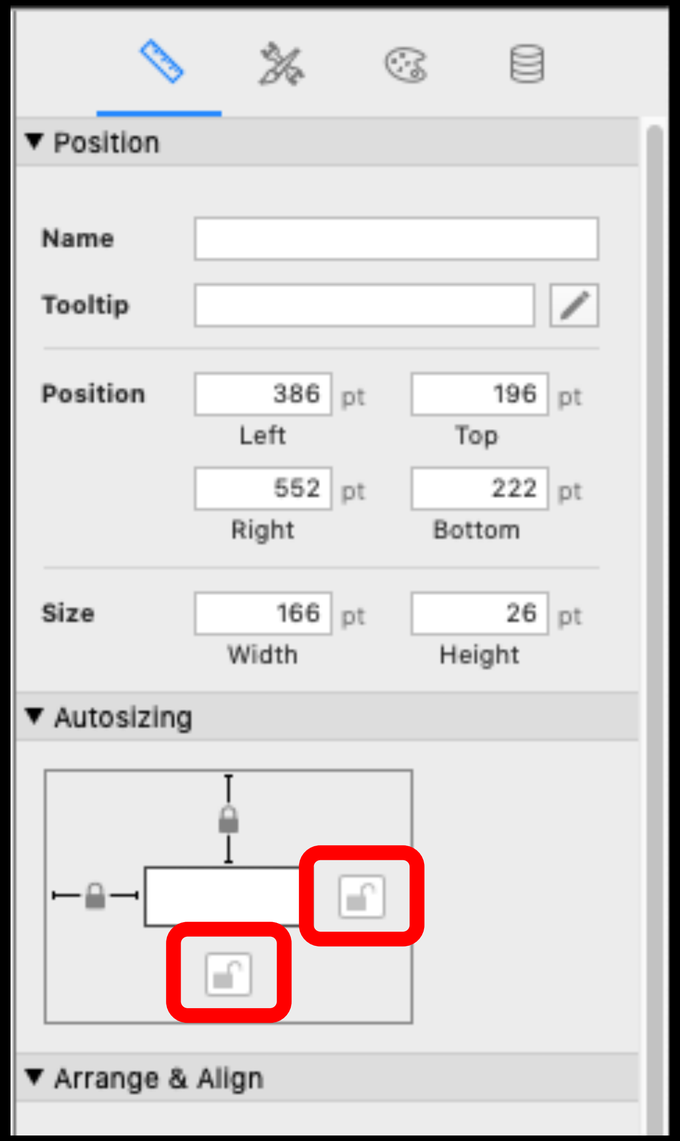
Object Anchoring

Hybrid layouts - FileMaker WebDirect

- do not use object anchoring for stretching or floating
  - right
  - bottom
- only use
  - top
  - left
- else, window resizing will cause polling and screen refresh



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Plan Real Estate

Plan object placement

- **No object click through**
- Shared vs. dedicated real estate
- Object location (especially if shared)
- stacking order
- positioning

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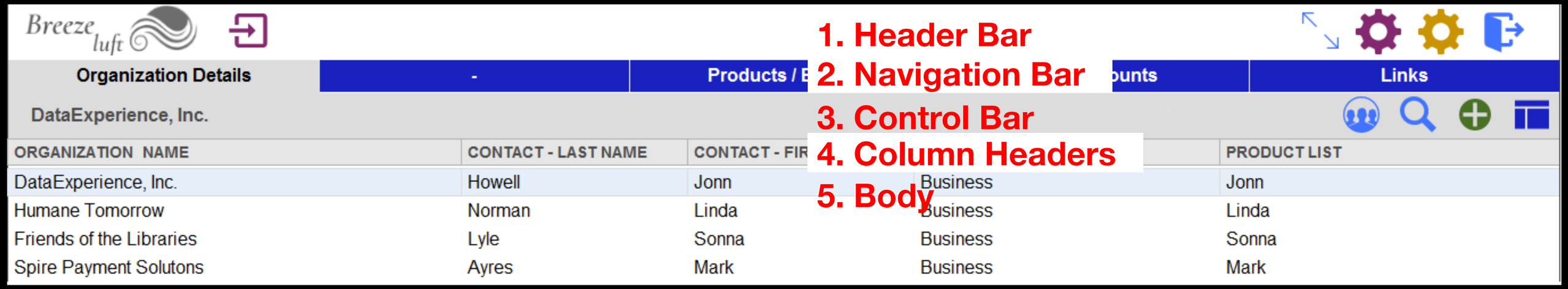
Object Real Estate

Navigation - Variable driven button bars



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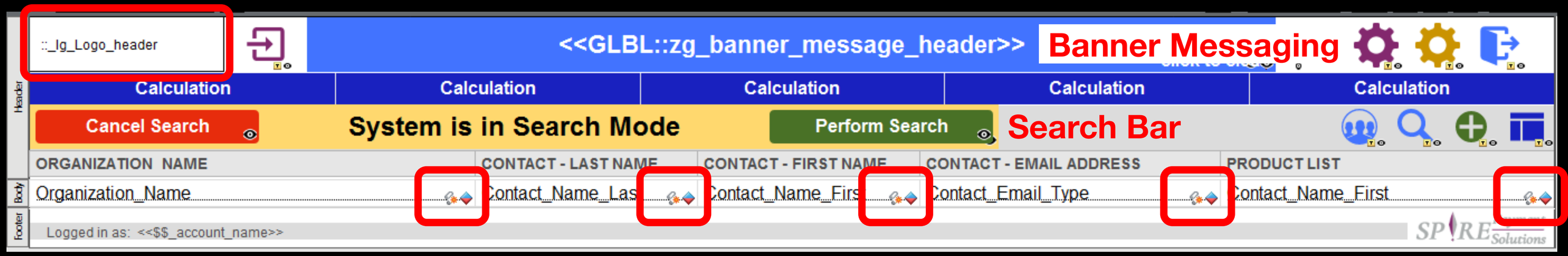
Object Real Estate

Objects in Layout mode



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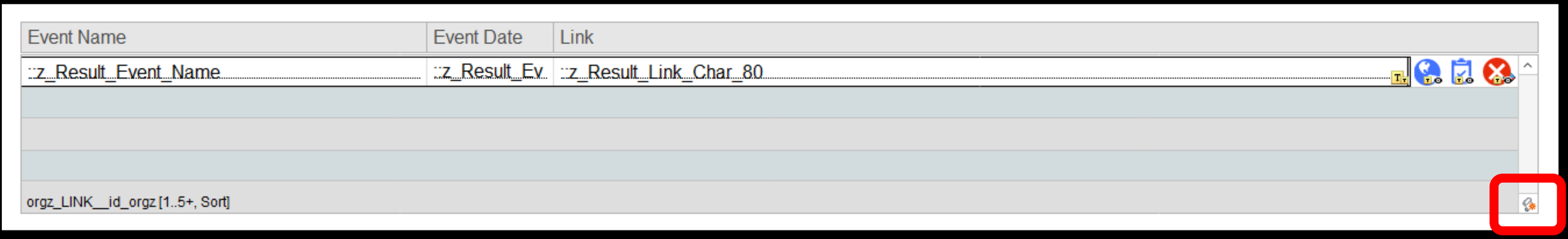
Object Real Estate

Portal rows - onObjectEnter trigger (on portal object)



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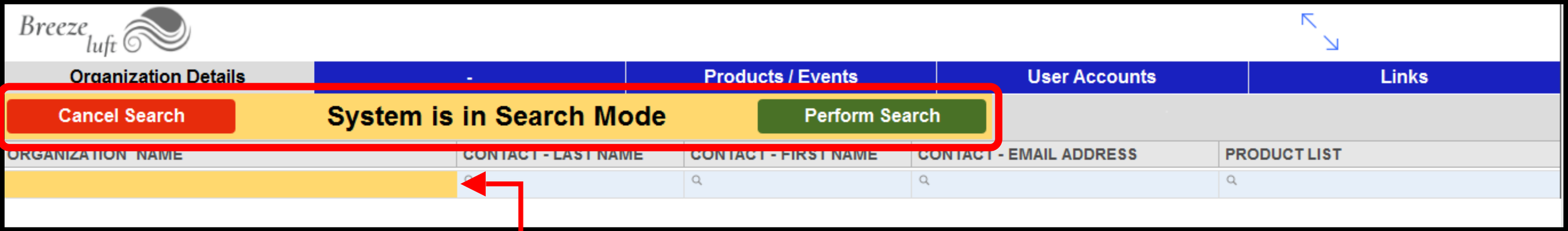
Object Real Estate

Objects in Find mode



In Focus - bright color

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Breeze luft

Organization Details | - | Products / Events | User Accounts | Links

DataExperience, Inc.

Browse

ORGANIZATION NAME	CONTACT - LAST NAME	CONTACT - FIRST NAME	CONTACT - EMAIL ADDRESS	PRODUCT LIST
DataExperience, Inc.	Howell	Jonn	Business	Jonn
Humane Tomorrow	Norman	Linda	Business	Linda
Friends of the Libraries	Lyle	Sonna	Business	Sonna
Spire Payment Solutons	Ayres	Mark	Business	Mark

Breeze luft

Organization Details | - | Products / Events | User Accounts | Links

Cancel Search | System is in Search Mode | Perform Search

Find

ORGANIZATION NAME	CONTACT - LAST NAME	CONTACT - FIRST NAME	CONTACT - EMAIL ADDRESS	PRODUCT LIST

Header

::_lg_Logo_header

<<GLBL::zg_banner_message_header>>

click to clear

Calculation | Calculation | Calculation | Calculation | Calculation

Cancel Search | System is in Search Mode | Perform Search

Layout

Body

ORGANIZATION NAME	CONTACT - LAST NAME	CONTACT - FIRST NAME	CONTACT - EMAIL ADDRESS	PRODUCT LIST
Organization_Name	Contact_Name_Last	Contact_Name_First	Contact_Email_Type	Contact_Name_First

Footer

Logged in as: <<$$_account_name>>

SPIRE Payment Solutions

Breeze luft

Organization Details | - | Products / Events | Links

DataExperience, Inc.

Administrators

ORGANIZATION NAME	CONTACT - LAST NAME	CONTACT - FIRST NAM	CT - EMAIL ADDRESS	PRODUCT LIST
DataExperience, Inc.	Howell	Jonn	Business	Jonn
Humane Tomorrow	Norman	Linda	Business	Linda
Friends of the Libraries	Lyle	Sonna	Business	Sonna
Spire Payment Solutons	Ayres	Mark	Business	Mark

Breeze luft

Organization Details | - | Products / Events | ounts | Links

DataExperience, Inc.

Managers

Add Organization | Remove Organization

Organization Name DataExperience, Inc.

Logo

Breeze luft

Accounts | Logos | System Settings - 1 | Banner Messaging

Configuration

ORGANIZATION NAME	CONTACT - LAST NAME	CONTACT - FIRST NAM	TACT - EMAIL ADDRESS	PRODUCT LIST
DataExperience, Inc.	Howell	Jonn	Business	Jonn

Volunteers

Breeze zephyr

Previous 1 / 14 Next

List of Events | List of Guests | List of Charges

Tuxes & Tails

BID #	ZIP CODE	LAST NAME	FIRST NAME	CURRENT PAYME	OPEN BALANCE	CHARGED AMOUNT	APPROVED / DECLINED
	95603	Howell	Jonn		$0.00	$0.00	No Charge Attempted
	95603	Howell	Buddha		$0.00	$0.00	No Charge Attempted
	75080	Alonzo	Anne		$0.00	$0.00	No Charge Attempted

Managers

Breeze zephyr

Previous 1 / 14 Next

List of Events | List of Guests | List of Charges | Organization | Products / Eve | List of User Accounts | List of Links

Tuxes & Tails

BID #	ZIP CODE	LAST NAME	FIRST NAME	CURRENT PAYME	OPEN BALANCE	CHARGED AMOUNT	APPROVED / DECLINED
	95603	Howell	Jonn		$0.00	$0.00	No Charge Attempted
	95603	Howell	Buddha		$0.00	$0.00	No Charge Attempted
	75080	Alonzo	Anne		$0.00	$0.00	No Charge Attempted

Configuration

Breeze zephyr

Client | Logos | System Settings | Email Configuration | Email | Email History | Banner Messaging

Test Message Banner

Banner Message	Color #	Banner Color	HEX Color

Numbers vs. Excel

FileMaker does not support Numbers as a data import format

Here is how you can import Number files

© 2019 FileMaker, Inc.

Numbers vs. Excel

“CloudConvert” demo is presented here

- “CloudConvertDemo”
  - Account Name = devcon2019
  - Password = devcon2019

© 2019 FileMaker, Inc.

“Breeze” - FileMaker WebDirect - Demo

“Breeze” demo is presented here

- Spire Payment Solutions

© 2019 FileMaker, Inc.

Breeze Zephyr

File Edit View Insert Format Records Scripts Tools Window Help

1 / 34 Found (Unsorted) | Records | Show All | New Record | Delete Record | Find | Sort | Share

Layout: AAAA__Config_Detail_... | View As: | Preview | Edit Layout

Breeze zephyr

Client | Logos | System Settings | Email Configuration | Email Template | Email History | Banner Messaging

Breeze luft | Breeze makani | Breeze tradewinds

Gateway Configuration - TEST | **Import Headers - Guest** | Imports and Exports | SMS Settings | Plug-in for Card Processing | Charting Code (JavaScript)

Column 01 Values	Bid Bid Number Bid# Bid # Bid Num	Column 05 Values	Guest City City	Column 09 Values	Email Address Email
Column 02 Values	Guest First Name First Name First	Column 06 Values	Guest State State	Column 10 Values	<N/A> not used at this time 7/25/2019
Column 03 Values	Guest Last Name Last Name Last	Column 07 Values	Zip Code Zip Postal Code		
Column 04 Values	Guest Address Address	Column 08 Values	Phone Number Phone # Phone# Phone		

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Log-out Browser Redirect

Redirect within the same window can be coded

- PHP
- HTML
- Session variables
- (implied JavaScript)

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Log-out Browser Redirect

“FileMaker WebDirect Redirect” demo is presented here

- “Demo_WebDirectRedirect
  - Account Name = devcon2019
  - Password = devcon2019

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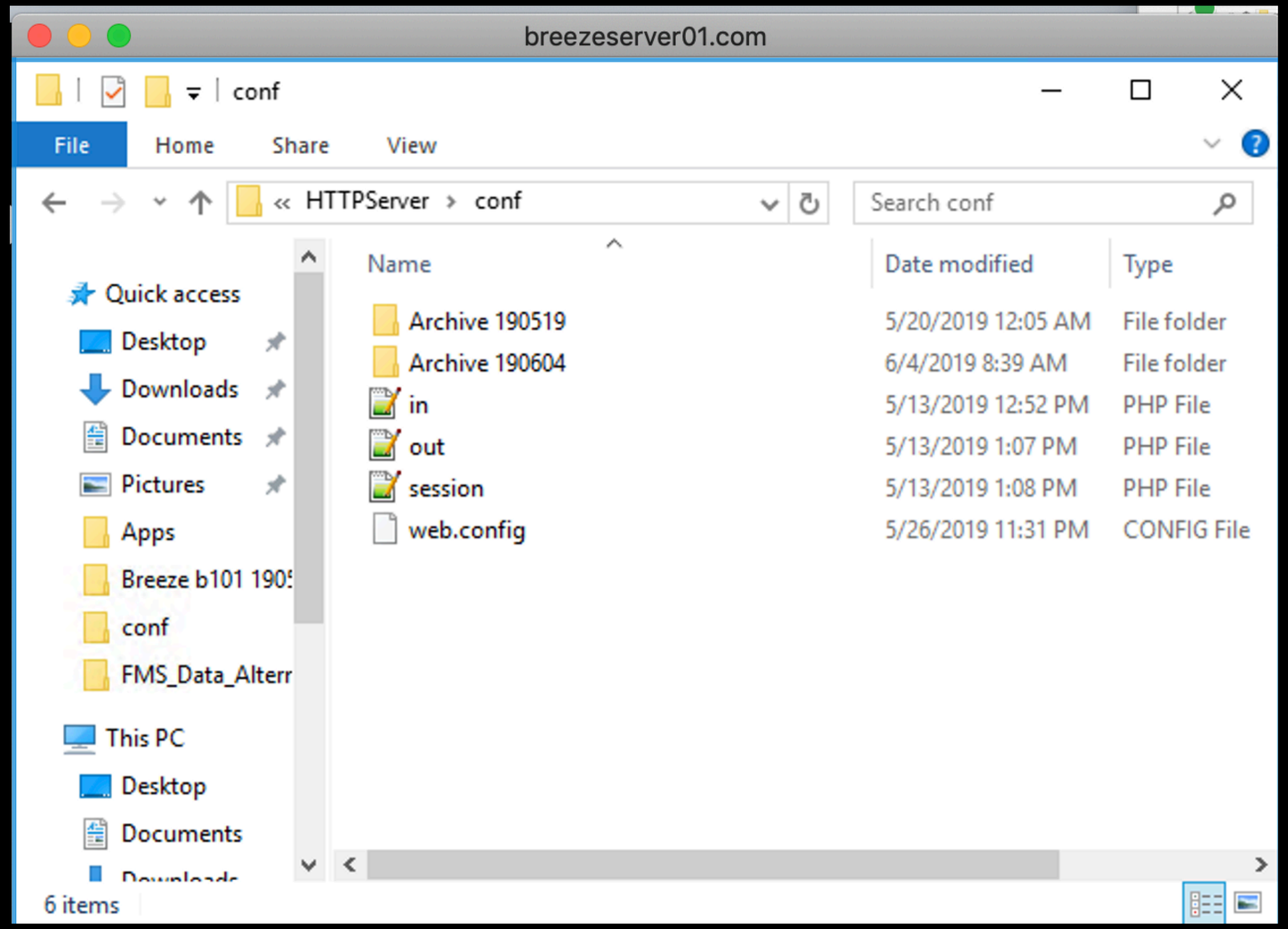
PHP Files for Browser Redirect



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System Demonstration

“Style Naming” demo is presented here

- “Demo_Styles”
  - Account Name = devcon2019
  - Password = devcon2019

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Future Features

Future release will include

- Tablet
- iPhone
- Android

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Future Features

SMS messaging

- 2-Way SMS communication
- SMS contextual robot replies
- Using code from **fmSMS - https://www.fmsms.com/**

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Demo Files - for You to Have

FileMaker Pro Advanced 18 (.fmp12)

- CloudConvert
- Styles
- WebDirectPopover
- WebDirectRedirect

PHP files

- in
- out
- session

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Demo Files - for You to Have

Dropbox link to demo files:

https://www.dropbox.com/sh/ue8s6o24jsvx7p3/AADInVNauQQWgTKwvZBe0jd4a?dl=0

jonn@dataexperience.com

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Session Updates

This session WILL have updates.

www.filemaker.com/devcon/speaker_updates

(This is also listed in DevCon2Go)

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Thank You!

Please remember to fill out the session evaluation at:

www.filemaker.com/devcon/evaluations

© 2019 FileMaker, Inc.

Thank You!

Please remember to fill out the session evaluation at:

www.filemaker.com/devcon/evaluations

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