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FileMaker® Pro/PHP Hybrids:

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Session Map

FileMaker Pro/PHP Hybrids

Introduction

When to use a Hybrid

Planning for a Hybrid

Beyond the API

Demos

Review/Resources/QA

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Who am I?

Tech Lead at Soliant Consulting

- What's that?
- Literally:
  - Project Manager + Developer
- The way I see it:
  - Independent Developer + Infrastructure
- (I love my job)
- soliantconsulting.com/jobs

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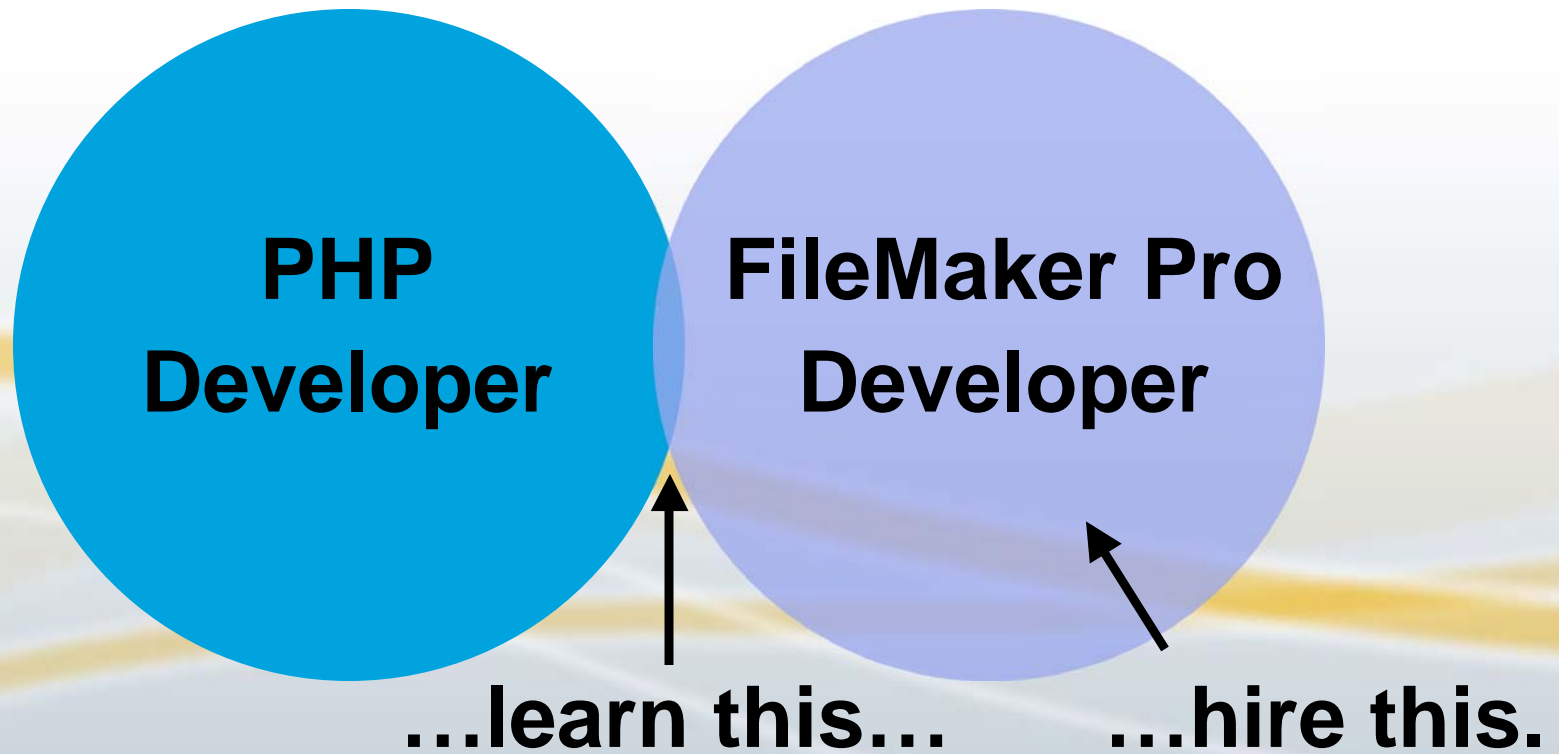CONSULTING.

Simple to implement

Not a whole new technology to master because…

PHP Developer

FileMaker Pro Developer

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Simple to implement
…the FileMaker/PHP intersection is really small

PHP Developer

FileMaker Pro Developer

…learn this…   **…hire this.**

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So what *is* a FileMaker Pro hybrid?
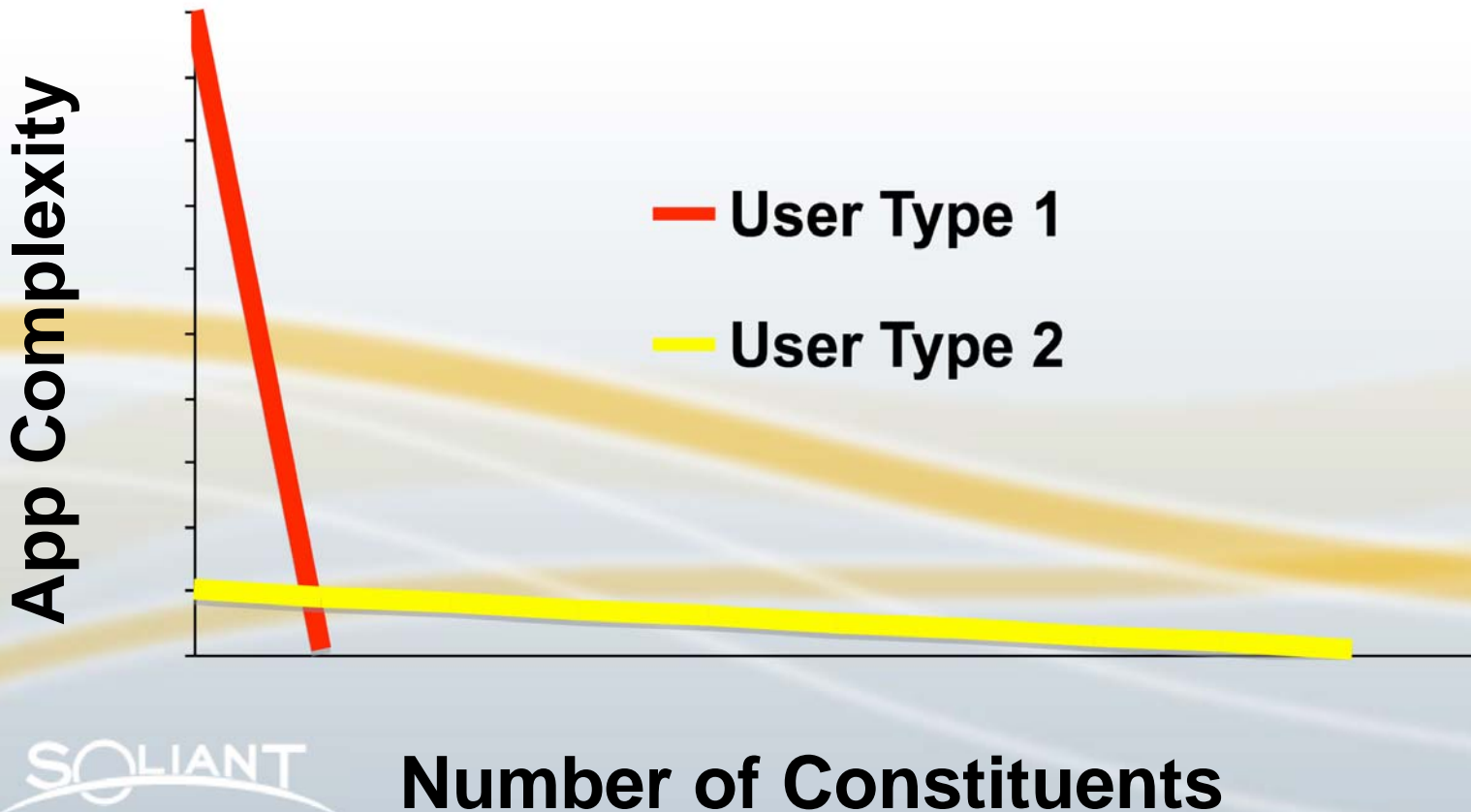
(for the purposes of this session)

FileMaker Server 9

+

PHP 5

- The FileMaker API for PHP

An ideal case for a hybrid:
Solutions with two distinct constituencies

The right tool for the job

FileMaker Pro: "Back Office" or Power User constituency

- Narrow and deep
- Requires client desktop infrastructure (licensing etc)
- Workgroup level software support (even if self-serve)
- Requirements may be prone to frequent change
- Constituency benefits significantly from flexibility

Pro: Quickly build sophisticated solution
Con: Requires more infrastructure

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The right tool for the job

PHP for "Casual" or Browser constituency

- Wide and shallow
- Zero deployment; "free" deployment infrastructure
- Hundreds (or thousands) of external users
- Interface requirements easy to define
- Flexibility not a primary requirement
- Generally data submitters or consumers

Con: More time/dollars to build equivalent
Pro: More limited functionality is okay

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The right tool for the job

"Software" or XML constituency

- Special cases
- FileMaker Server's generic API
- XSLT, Flex, Flash, .NET, etc.

Bonus: FileMaker Pro as data source for <u>any</u> "HTTP-spitting/XML-eating" technology

So what's in it for me?

As a developer, why should I make my life more complicated?

What's wrong with:

Pure PHP

or

Pure FileMaker Pro (maybe IWP)

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What's good for what?
FileMaker Pro

- Good for
  - *Rapid* Application Development
  - Lots of user-accessible features "out of the box"
  - Leveraging existing resources
  - Non-developer subject matter experts
- Not so good for
  - Transient or temporary users
  - Thousands of users
  - Zero deployment

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What's good for what?
PHP

- Good for
    - Integrating FileMaker data in existing Intranet
    - Exposing narrow bands of data from back office
    - Thousands of users (within reason)
    - Zero deployment (no client software)
- Not so good for
    - Rapid Application Development
    - Lots of user-accessible features "out of the box"
    - Non-developer subject matter experts

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An ideal case for a hybrid:
Solutions with two distinct constituencies
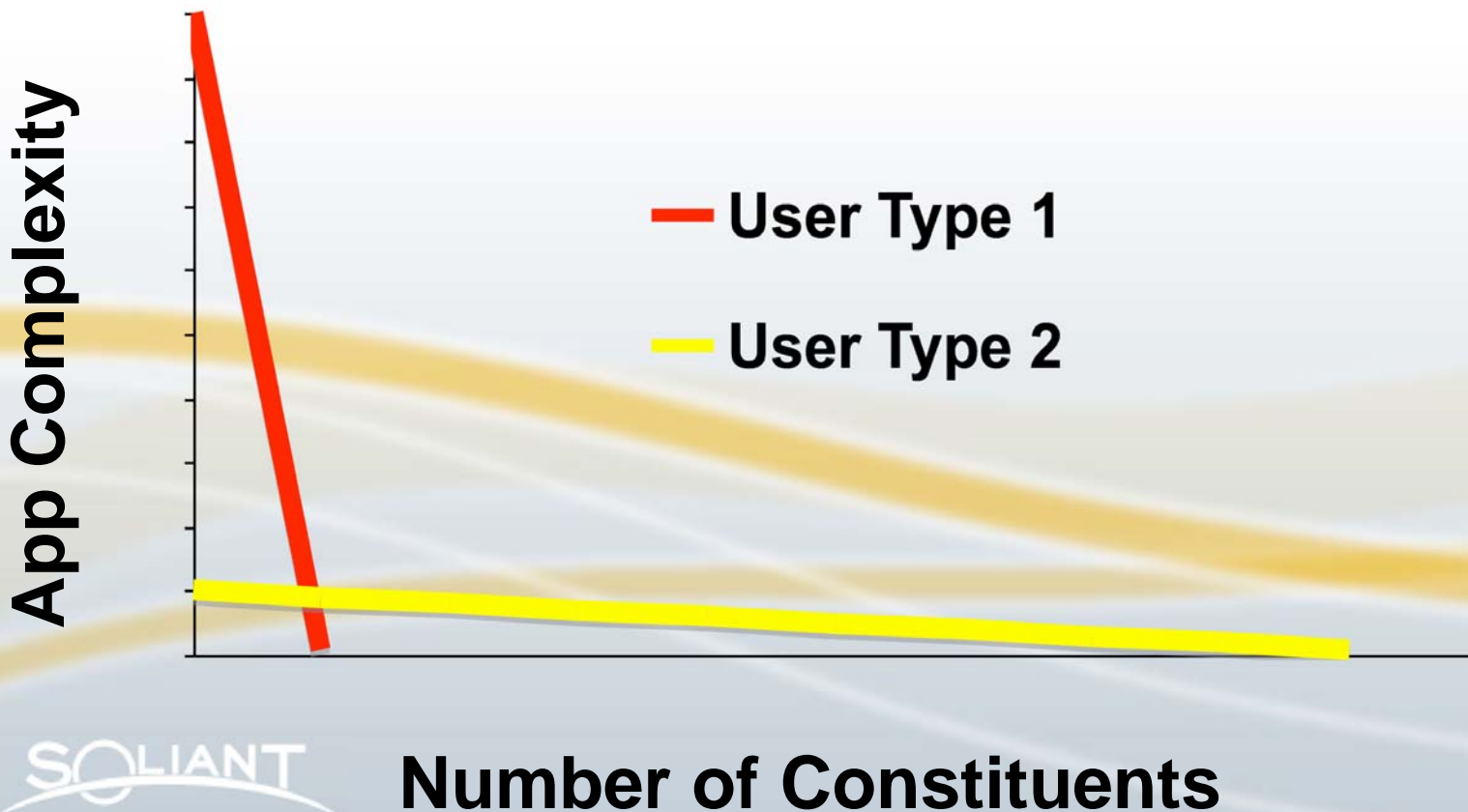
For Example:

Registration/Applications

- Public: submits and tracks application status
- Back Office: processes acceptance lists and wait lists

Marketing Company

- Public: field reps retrieve data & submit data/photos
- Back Office: processes work orders and commissions

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Planning for a hybrid

Some FileMaker Pro Facts

- Integral presentation and data layers
- Not scaleable
- No direct table access
- FMPHP accesses *Table instances* via Layouts
- Think of a Layout as a view
- Can connect to "ESS" (External SQL Source)
  - Microsoft® SQL Server 2000 and Microsoft® SQL Server 2005
  - Oracle 9i and Oracle 10g
  - MySQL 5.0 Community Edition
- Not a SQL database (internally referred to as Draco)
- Take advantage of PHP Site Assistant for learning about API

Planning for a hybrid

Open PHP connector classes

- Compatible with older versions of FileMaker
- Open source wrappers for the XML API (part of CWP)
- SimpleFM.php
- FX.php
- FMandPHP

The FileMaker API for PHP (fmphp)

- Only works with FileMaker Server 9v2 or greater
- Closed source
- Has some extra features beyond the XML API

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Planning for a hybrid
On FileMaker Server 9v2 or greater, look here:

```
antlab:/Library/FileMaker Server/Documentation/English jsmall$ ls
FM9_Instant_Web_Publish_en.pdf    FMS9_AutoUpdate_en.pdf         FMS9_CWP_XSLT_en.pdf
FM9_ODBC_JDBC_Guide_en.pdf        FMS9_CWP_PHP_en.pdf            FMS9_Getting_Started_en.pdf
```

```
antlab:/Library/FileMaker Server/Web Publishing jsmall$ ls
FM_API_for_PHP_Standalone.zip    conf                web-server-support
FileMaker API for PHP Docs       logs                xslt-template-files
IWP                              publishing-engine
```

Address C:\Program Files\FileMaker\FileMaker Server\Documentation\English

FM9_Instant_Web_Publish_en.pdf   FMS9_AutoUpdate_en.pdf   FMS9_CWP_XSLT_en.pdf

FM9_ODBC_JDBC_Guide_en.pdf   FMS9_CWP_PHP_en.pdf   FMS9_Getting_Started_en.pdf

Address C:\Program Files\FileMaker\FileMaker Server\Web Publishing

IWP   web-server-support   FM_API_for_PHP_Standalone.zip

publishing-engine   xslt-template-files

Planning for a hybrid

FileMaker Pro file structure

- Option: Create special Web layouts in main file(s)
  - Can be simpler
  - More efficient (less verbose) to only include the fields that you actually need
- Option: Put all Web layouts in dedicated Web file
  - Dedicated "web-only" file allows discreet admin of Accounts & Privileges.
  - Main files don't need to be directly exposed to web

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Planning for a hybrid

Freeze schema naming before starting CWP

- **Make** sure TOs, Layouts and Fields names "locked in" before you start integrating any CWP

Naming convention considerations

- Avoid whitespace, avoid double underscore, etc.

IWP (not!)

- If you think you might want to use PHP, don't think you can roll up from IWP.

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Beyond the API

Creating views for PHP

- FileMaker Pro does not provide direct access to tables
- Views = Layouts
- A Layouts is associated with a specific Table Instance
- A Table Instance defines relational context for view

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Beyond the API
Leveraging the FileMaker Script Client

```php
function addUserRecord($data,$scriptName="")
{

    // create fm object using system account..
    $fm = new FileMaker(FMDB_WEB,FMWPE_HOST,FMWPE_USER,FMWPE_PASS);

    $addReq =& $fm->newAddCommand("web_applicants",$data);
    if($scriptName != "")$addReq->setScript($scriptName);

    $result = @$addReq->execute();

    if(FileMaker::isError($result))
    {
        return $result->getMessage();
    }
    else
    {
        return true;
    }
}
```

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Demo general tour:

Tour of the PHP Site Assistant

Tour of the PHP half of a hybrid solution

Tour of the FileMaker half of a hybrid solution

Demo: hybrid technique

Uploading photos from the browser

- Use PHP to organize uploads in directory
- Reference URL in FileMaker Web Viewer to display
- Easy to display in web page and FileMaker Pro

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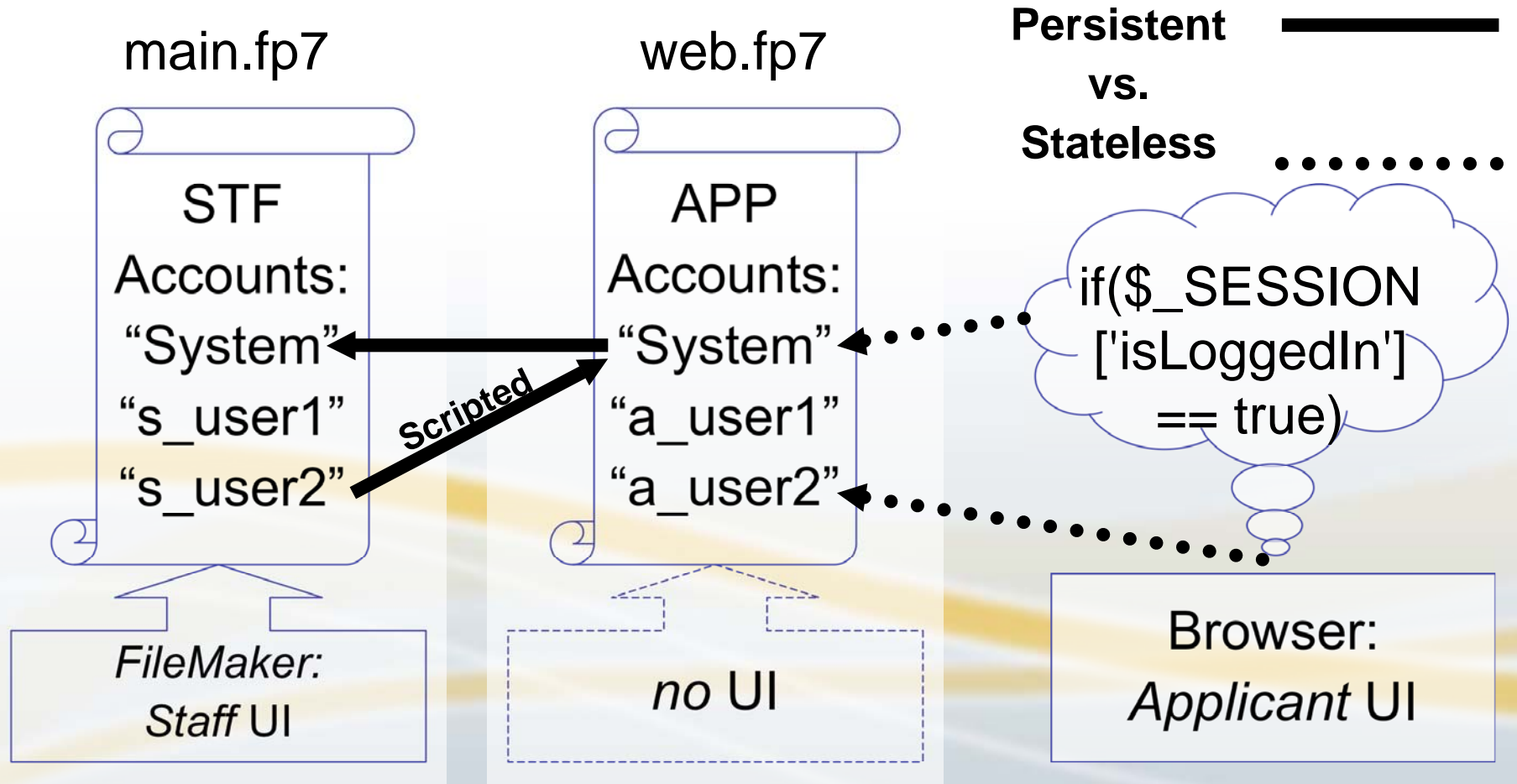
Demo: hybrid authentication

PHP Session Management

- The stateless connection to FileMaker Server
- Using PHP sessions with a system account
- Not a FileMaker session

Demo: hybrid authentication

Authenticating Web Users with FileMaker

- Decide on how/where to maintain accounts
  - Issued by admin
    - Easier to design
    - Can use External Authentication or FileMaker Pro accounts
    - Ongoing chore for administer
  - Created by users (self serve)
    - Trickier to design/program
    - Must be FileMaker accounts
    - Easier to administer
    - Allows "self-serve" account creation and maintenance

Demo: hybrid authentication

main.fp7

web.fp7

Persistent vs. Stateless

STF
Accounts:
"System"
"s_user1"
"s_user2"

Scripted

APP
Accounts:
"System"
"a_user1"
"a_user2"

if($_SESSION ['isLoggedIn'] == true)

FileMaker:
Staff UI

no UI

Browser:
Applicant UI

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PHP Developer   **FileMaker Pro Developer**

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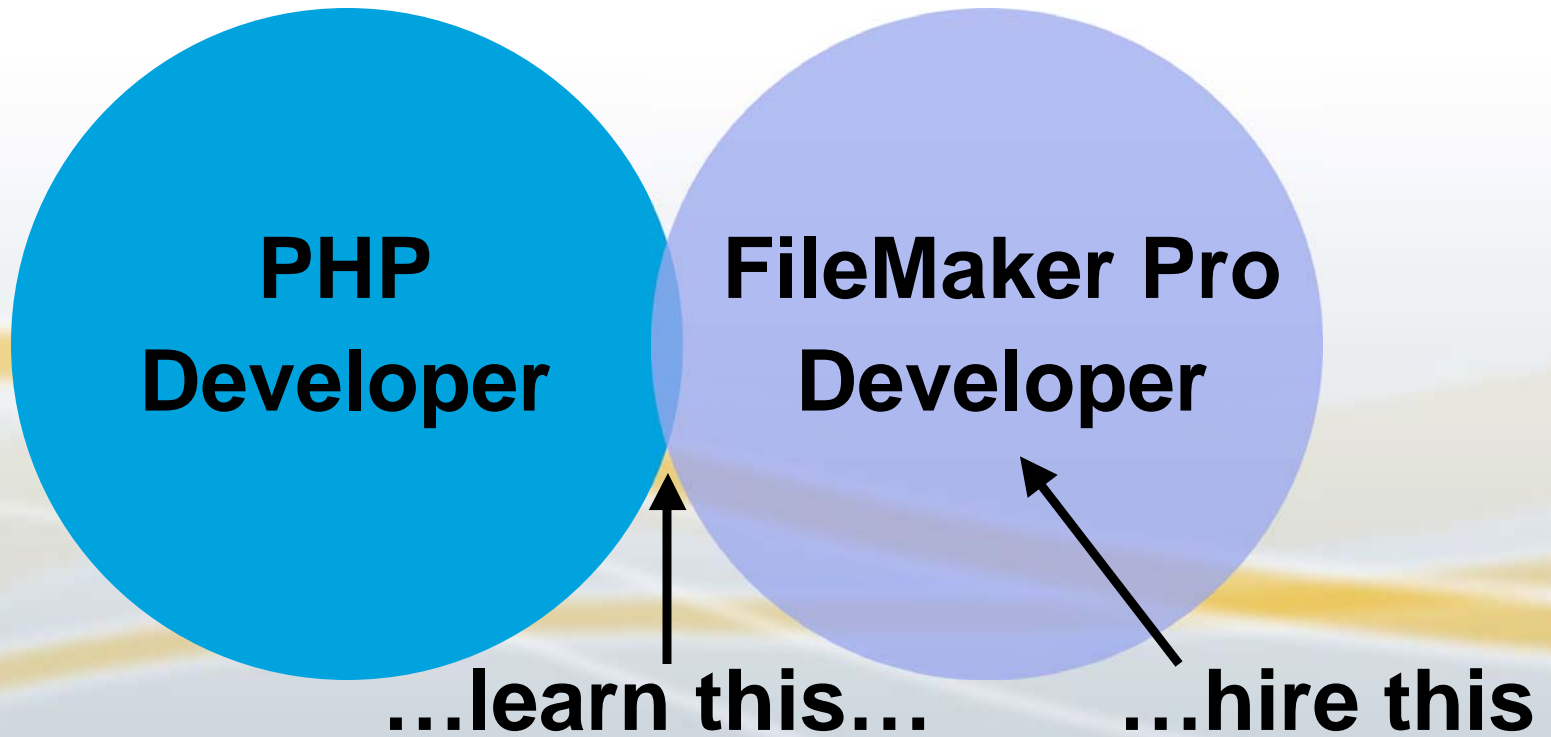
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FileMaker, Inc.

- filemakertrial.com
- filemaker.com
  - ./technet/
  - ./downloads/ (existing FMS installs: get latest standalone fmphp)
    - fmdl.filemaker.com/MISC/PHPAPI/win/FM_API_for_PHP_Standalone.zip
    - fmdl.filemaker.com/MISC/PHPAPI/mac/FM_API_for_PHP_Standalone.zip
  - ./downloads/pdf/fms9_cwp_php_en.pdf
  - ./support/technologies/php.html

Thank You!

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