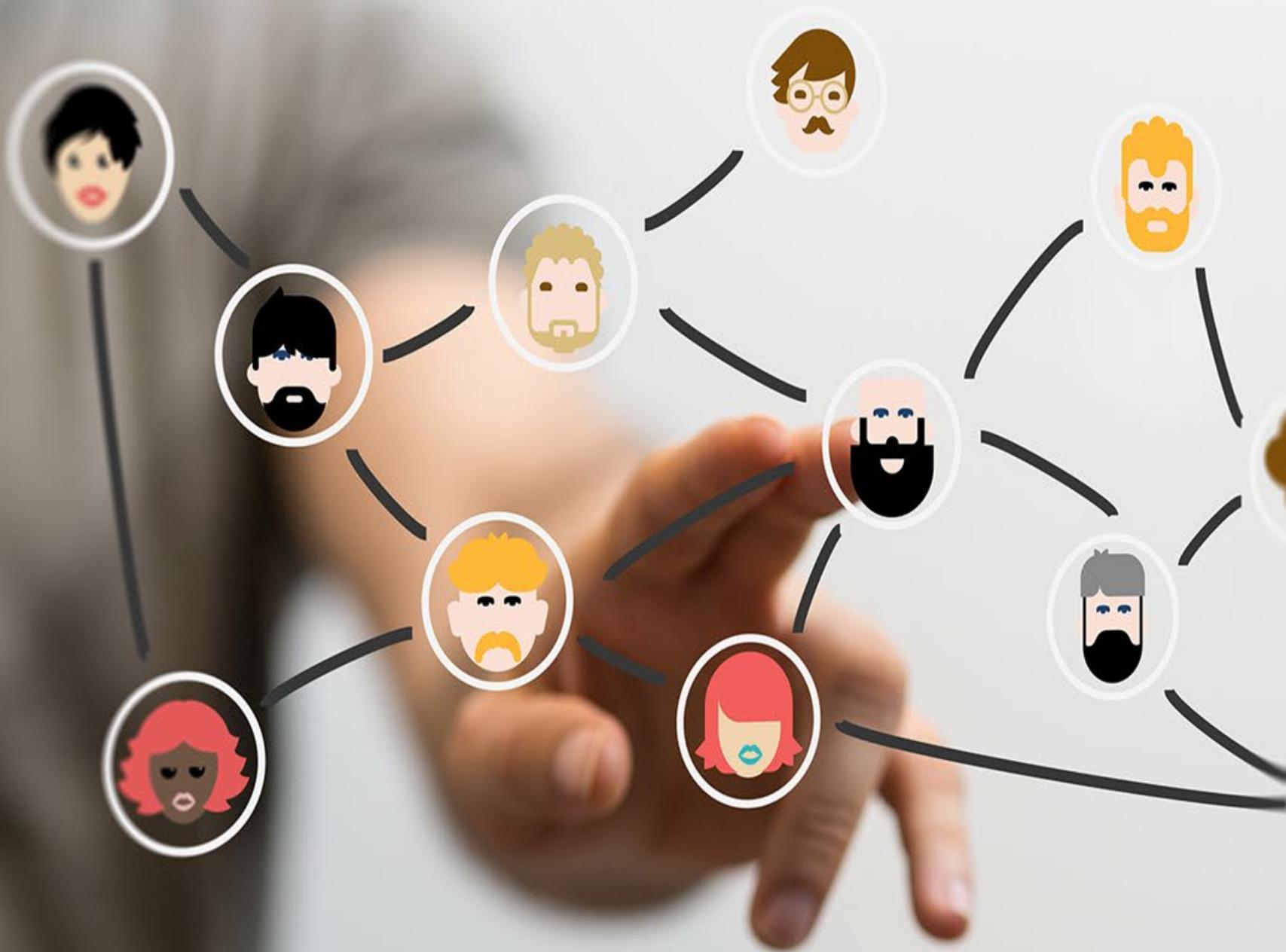


**June
2023**



COLD FUSION
user group **Seattle**



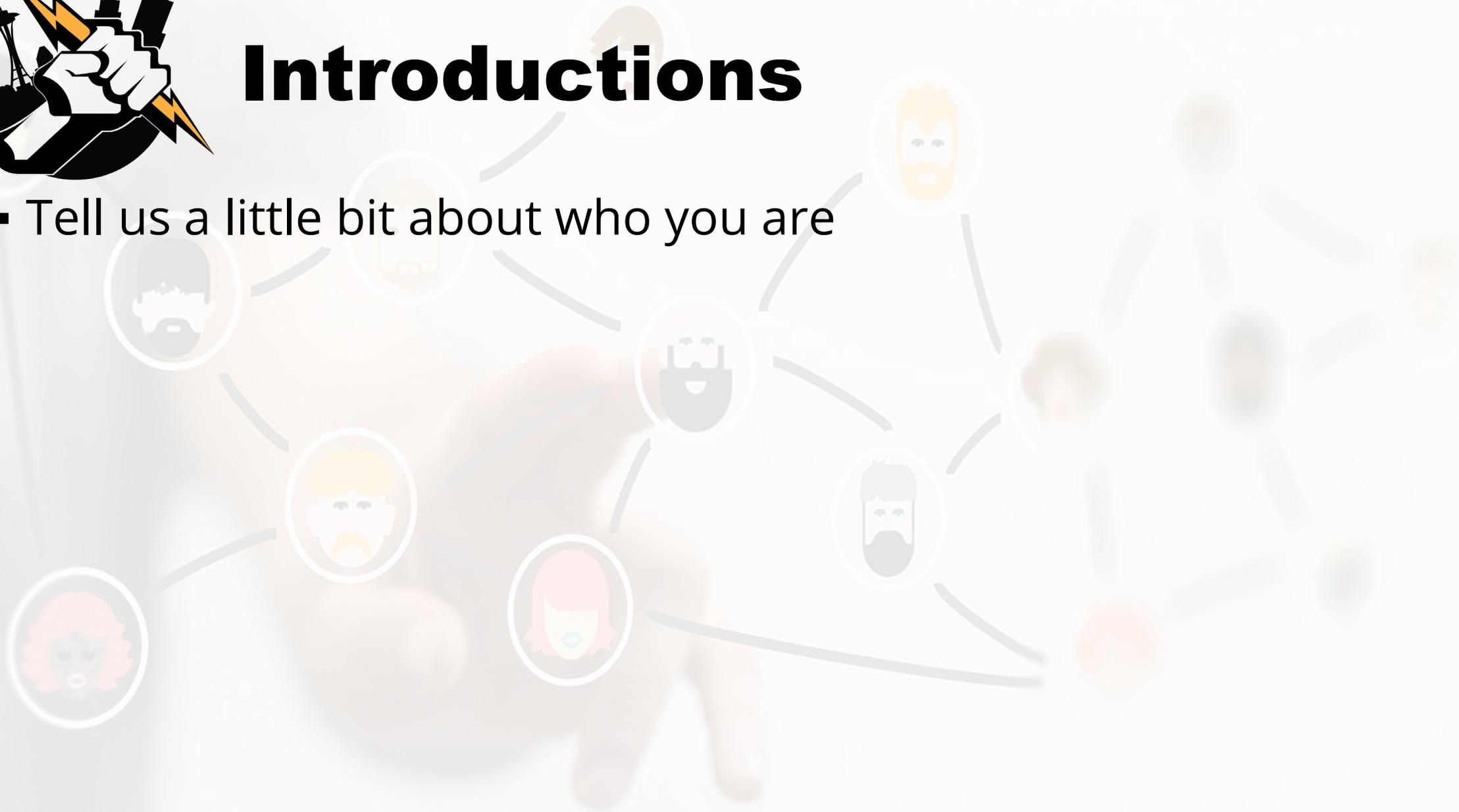
Agenda

- Introductions
- Adobe ColdFusion Summit 2023
- How to gracefully handle errors in your application
- CFML Function 'O Day – Featuring IsValid()
- Questions/Answers/Help Needed
- Next Meeting



Introductions

- Tell us a little bit about who you are





ColdFusion Summit 2023

- Dates: October 2nd – October 4th
- Location: The Mirage Hotel and Casino – Las Vegas, NV
- Opportunity to become a Adobe Certified Professional: ColdFusion
- Early Bird discounts available now through May 31st!
 - \$99.00 for the Session Pass
 - \$199.00 for the Professional Pass (includes access to ColdFusion Certification training on October 4th)
- Link: <https://cfsummit.adobeevents.com/>



How to gracefully handle errors in your application

Presenters:

Leon O'Daniel – Senior Web Application Developer – The Boeing Company

Will Frankhouser – Senior Web Application Developer – The Boeing Company



How to gracefully handle errors in your application

What we will cover

- Gracefully handling missing pages in your application
- Which order does ColdFusion handle server errors (exceptions)
- Gracefully handling application-level exceptions
- Handling Page-level exceptions using CFTRY (try)/CFCATCH (catch)
- A working example – Calculating Washington State sales tax and making sure it returns tax info even if there is an error
- XML Functions: IsXML(), XMLParse(), XMLSearch()
- Getting Specific XML data values using XPath Queries
- <CFError> - do you still like me – I have purpose too ...



How to gracefully handle errors in your application

Gracefully Handling Missing Pages in your application

The *onMissingTemplate* method

- This is a method that can be added to your Application.cfc file
- Will do all sorts of things when it finds a missing CFM file
- Typical use is to redirect to a 404 page
- Example: <https://www.odanieldesigns.com/ilovemissingpages.cfm>
- Where does this approach fall flat?



How to gracefully handle errors in your application

Gracefully Handling Missing Pages in your application

Configuring 404 Error Handling at the Server Level

- This approach will cover all missing pages (and folders)

Microsoft Windows: Setup Error Handling using a web.config file

```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <system.webServer>
    <httpErrors errorMode="DetailedLocalOnly">
      <remove statusCode="404" subStatusCode="-1" />
      <error statusCode="404" subStatusCode="-1" prefixLanguageFilePath="" path="/404.cfm"
responseMode="ExecuteURL" />
    </httpErrors>
  </system.webServer>
</configuration>
```



How to gracefully handle errors in your application

Gracefully Handling Missing Pages in your application

Configuring 404 Error Handling at the Server Level

- This approach will cover all missing pages (and folders)

Apache: Use the ErrorDocuments directive

If you are using a Virtual host file, add the following inside **VirtualHost** tag

```
<VirtualHost>
```

```
...
```

```
    ErrorDocument 404 /error404.html
```

```
...
```

```
</VirtualHost>
```



How to gracefully handle errors in your application

Which Order Does ColdFusion Handle Exceptions?

- Page-level error handling – CFTRY (try)/CFCATCH (catch) – Example of tag and script
 - Think very specific to the logic in place, what functions or connections it is trying to call
 - View the interruption from the end-user point of view. Is it an abrasive STOP or gentle message that allows them to continue on the web site.
 - What about **<cfrethrow>**?
 - Do I really need to use a **<cffinally>**?
- Application-level error-handling (onError method in Application.cfc)

```
<cffunction name="onError">  
    <cfargument name="exception" required="true">  
    <cfargument name="eventName" required="true">  
    <p><cfoutput>OnError - event: #arguments.eventName#</cfoutput></p>  
    <cfdump var="#arguments.exception#" label="OnError: exception">  
</cffunction>
```



How to gracefully handle errors in your application

Which Order Does ColdFusion Handle Exceptions?

- Site-wide error handler (really server-wide) and then if all else fails...
- the ColdFusion Server Generic handler – Yucky – Bad!

The web site you are accessing has experienced an unexpected error.
Please contact the website administrator.

Error Handlers

Missing Template Handler

Specify the relative path to the template to execute when ColdFusion cannot find a requested template.

Site-wide Error Handler

Specify the relative path to a template to execute when ColdFusion encounters errors while processing a request.

The following information is meant for the website developer for debugging purposes.

Error Occurred While Processing Request

The error occurred in C:/ColdFusion10/cfusion/wwwroot/WordML/test.cfm: line 3

```
1 : <script>
2 :     variables.sText = "HELLO World";
3 :     writeDump(createObject("dotnet", "DocumentFormat.OpenXml.Wordprocessing.DocumentType", "C:\Program Files (x86)\Open XML SDK\V2.5\lib\DocumentFormat.O
4 :     /*variables.sHTML = "<p>Hello World</p>";
5 :     writeDump(XmlParse(variables.sHTML));
```

Resources:

- Check the [ColdFusion documentation](#) to verify that you are using the correct syntax.
- Search the [Knowledge Base](#) to find a solution to your problem.

Browser Mozilla/5.0 (Windows NT 6.1; Win64; x64; Trident/7.0; rv:11.0) like Gecko
Remote Address 127.0.0.1
Referrer
Date/Time 13-May-14 10:39 PM
Stack Trace
at cftest2ecfm1823272215.runPage(C:/ColdFusion10/cfusion/wwwroot/WordML/test.cfm:3)

```
coldfusion.runtime.dotnet.ProxyGenerationException
at coldfusion.runtime.dotnet.ProxyGenerator._executeProxyGen(ProxyGenerator.java:192)
at coldfusion.runtime.dotnet.ProxyGenerator.executeProxyGen(ProxyGenerator.java:149)
at coldfusion.runtime.dotnet.ProxyGenerator.generateProxy(ProxyGenerator.java:118)
at coldfusion.runtime.dotnet.Assembly.generateProxy(Assembly.java:300)
```



How to gracefully handle errors in your application

Handling page-level exceptions in your application using CFTRY (try)/CFCATCH (catch)

- Allows you to customize how your application responds to all sorts of errors (including custom errors) at the page level:
 - application: catches application exceptions
 - database: catches database exceptions
 - template: catches ColdFusion page exceptions
 - security: catches security exceptions
 - object: catches object exceptions

(continued on next screen)



How to gracefully handle errors in your application

Handling page-level exceptions in your application using CFTRY (try)/CFCATCH (catch)

- Allows you to customize how your application responds to all sorts of errors (including custom errors) at the page level:
 - `missingInclude`: catches missing include file exceptions
 - `expression`: catches expression exceptions
 - `lock`: catches lock exceptions
 - `custom_type`: catches the specified custom exception type that is defined in a `cfthrow` tag
 - `searchengine`: catches Solr search engine exceptions
 - `any`: catches all exception types



How to gracefully handle errors in your application

A working example:
the Washington State Tax Rate Service

- [Tag-Based Example](#)
- [Script-Based Example \(with X-Path demo\)](#)



How to gracefully handle errors in your application

**A working example:
the Washington State Tax Rate Service**

- [Tag-Based Example](#)
- [Script-Based Example \(with X-Path demo\)](#)
- Within a method of a ColdFusion Component (CFC)



How to gracefully handle errors in your application

**A working example:
the Washington State Tax Rate Service (XML functions)**

isXML() – checks to see if the content within its parenthesis is valid XML or not – works with both XML Strings and XML Objects.

XMLParse() – converts XML strings to XML objects – makes it easier to use Xpath queries

XMLSearch() – enables using Xpath queries to search XML Objects



How to gracefully handle errors in your application

A working example:
the Washington State Tax Rate Service (XPath Queries)

```
XmlSearch(VARIABLES.getParsedTaxInfo, "/response/rate[1]/@name")
```

XML Object variable

Root Element

1st child
Element

name
attribute



How to gracefully handle errors in your application

XmlSearch example

more info:

https://www.w3schools.com/xml/xpath_syntax.asp

Tax Rate XML Object Info - xml document [short version]

response	XmlText																											
	XmlAttributes	<table border="1"><thead><tr><th colspan="2">Tax Rate XML Object Info - struct</th></tr></thead><tbody><tr><td>code</td><td>2</td></tr><tr><td>localrate</td><td>.036</td></tr><tr><td>loccode</td><td>1700</td></tr><tr><td>rate</td><td>.101</td></tr><tr><td>xmlns</td><td>[empty string]</td></tr></tbody></table>	Tax Rate XML Object Info - struct		code	2	localrate	.036	loccode	1700	rate	.101	xmlns	[empty string]														
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rate	.101																											
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plus4	9156																											
ptba	King PTBA																											
rta	Y																											
state	WA																											
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rate	XmlText																											
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Tax Rate XML Object Info - struct																												
code	1700																											
localrate	.036																											
name	KING PTBA																											
staterate	.065																											

Rate Name - array

1	XmlName	name
	XmlType	ATTRIBUTE
	XmlValue	KING PTBA

`XmlSearch(VARIABLES.getParsedTaxInfo,"/response/rate[1]/@name")`



How to gracefully handle errors in your application

<CFError> - do you still like me - I have purpose too ...

The <CFError> tag displays a custom HTML page when an error occurs. This lets you maintain a consistent look and feel among an application's functional and error pages.

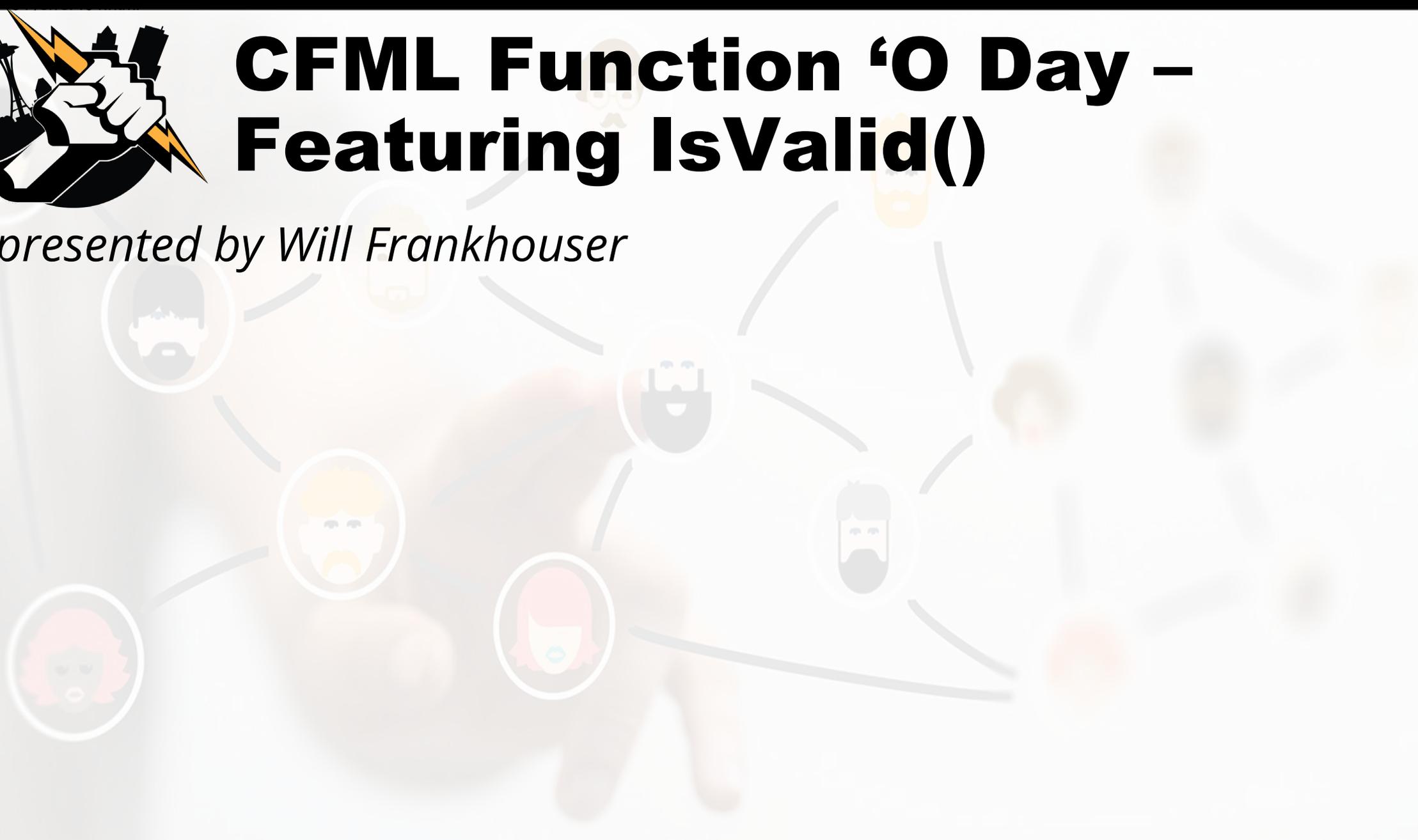
```
<cferror  
template = "template path"  
type = "exception | validation | request"  
exception = "exception type"  
mailto = "e-mail address">
```

More info: <https://helpx.adobe.com/coldfusion/cfml-reference/coldfusion-tags/tags-d-e/cferror.html>



CFML Function '0 Day – Featuring IsValid()

presented by Will Frankhouser





Questions/Answers/ Help Needed

This is your opportunity to ask any ColdFusion question or request help for a ColdFusion-related issue.



Next Meeting

July 19, 2023 – 5:00 PM PDT (online via Zoom).

- Tag or function O' the day – Will Frankhouser
- Topic TBD