



# 4D User Group

September 25, 2019





# Agenda

1. About 4DMethod
2. 4D News, Jim Sobczak, Ricardo Mello
3. The 4D iNUG E-Digest, Ed Hammond
4. What the Blog?
5. Special topic: Lights, Camera, Actions!  
with 4D for iOS, Will Taylor
6. General Q & A
7. Next meeting - September 4, 2019



# Welcome



## Brent Raymond



4D User Group

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## 4D User Group

- Bring together a scattered community of developers and users
- Use video conferencing for meetings to allow people to participate from anywhere
- Record meetings and presentations to be viewed again or shared with others
- Provide fresh new content and exposure for users and developers everywhere





# zoom







# Shout Out

Mitarbeiter - Mike Beatty



<https://www.patreon.com/4dmethod>





Jim Sobczak

VP of Sales & Services  
OEM Manager

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Ricardo Mello

VP of Inside Sales and Marketing

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# Summit 2020



Loew's Hotel, Chicago

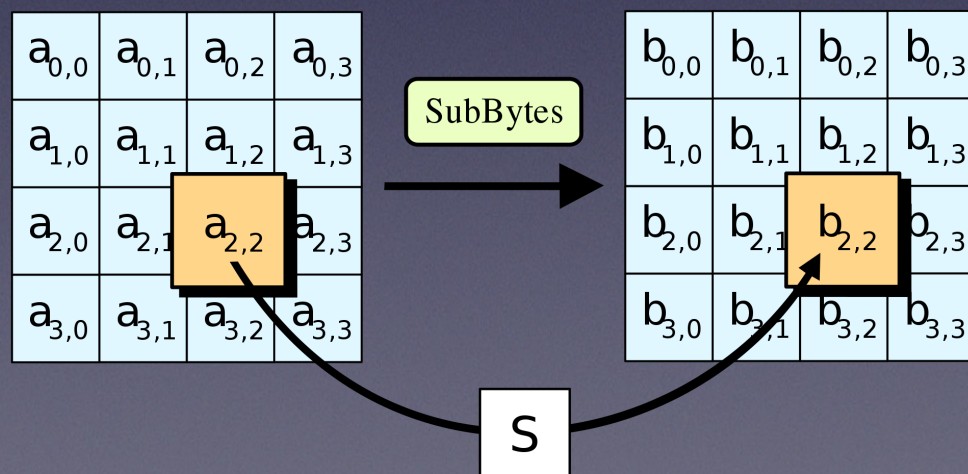
Tuesday 3/31/20 - Thursday 4/2/20





# v17 R5 Released

- Built-in encryption at the table level
- Advanced Encryption Standard
- Approved by the National Security Agency (NSA) for top secret information



See **Encrypting data** section in the *4D Design Reference* for information about data file encryption in 4D.

Two encryption methods are provided in ORDA's datastore object:

⚙️ `ds.provideDataKey( )`

⚙️ `ds.encryptionStatus( )`

- ⚙️ Data file encryption status **New 17 R5**
- ⚙️ Discover data key **New 17 R5**
- ⚙️ Encrypt data file **New 17 R5**
- ⚙️ New data key **New 17 R5**
- ⚙️ Register data key **New 17 R5**







# Table Encryption Tip

- Table Encryption will not encrypt fields stored 'Outside the data file'
  - Objects
  - Text
  - Pictures
  - Blobs
- Not (currently) stated in documentation
- Best to store in data file, not in record





# v17 R5 Released

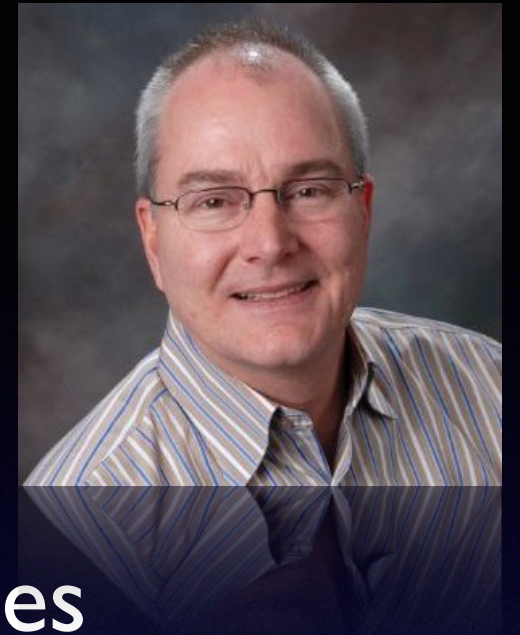


- Object fields via ODBC
- Optimized performance in client/server
- Processor usage is fully optimized in simultaneous read/write accesses
- 4 to 8xs faster performance



# The 4D iNUG E-Digest

## Ed Hammond



- Wide breadth of topics and 4D tech issues
- Take advantage of a wealth of 4D experience and knowledge
- Check out <http://4dmethod.com/e-digests/> for a list of recent topics being discussed in the iNUG
- To register:  
<http://lists.4d.com/mailman/listinfo>
- All discussion accessible online at:  
<http://4d.1045681.n5.nabble.com>





# What the Blog???



- 4D for iOS: What you need to know about iOS 13
- An ORDA Cheat Sheet - Cannon Smith
- Optimize your ORDA code with requests logging
- Order an entity selection with this new ORDA method
- More sophisticated ORDA queries with formulas

```
ds.startRequestLog(10) // Only the last 10 requests will be kept in memory
$first:=ds.Persons.all().first()
$e:=ds.Persons.query("name=:1";"Brown")
$log:=ds.getRequestLog()
ALERT("The longest request lasted: "+String($log.max("duration"))+" ms")
ds.stopRequestLog()
```

<https://blog.4d.com>

## Collection Functions

Please send corrections and suggestions to [an@nccgroup.com](mailto:an@nccgroup.com) or [nccgroup@nccgroup.com](mailto:nccgroup@nccgroup.com)

Mutated means the collection modifies itself. Keep in mind that you can effectively mutate a collection even if the collection returns a new collection by assigning it to itself like this:  
SetExample:=SetExample.filtered. The colored bars are an attempt to visually identify function "type". Don't forget about the new for each syntax.

For each (Object, Collection {begin { } end { } }) (Unit { While { Boolean, Expression } })  
Can iterate through collections, entity selections, and object properties.

	Result Type	Copy Type	Parameter
<strong>Add/Remove Elements</strong>			
<b>push</b> (element { element2 ... elementN }) -> Mutated Appends one or more elements.	Mutated		
<b>pop</b> () -> Element Removes the last element. The removed element is returned by the function.	Mutated (and element)		
<b>insert</b> (index, element) -> Mutated Inserts an element at the specified index.	Mutated		
<b>remove</b> (index { rangeIndex }) -> Mutated Removes a range of elements.	Mutated		
<b>unshift</b> (value { value2 ... valueN }) -> Mutated Prepends one or more elements.	Mutated		
<b>shift</b> () -> Element Removes the first element. The removed element is returned by the function.	Mutated (and element)		
<b>resize</b> (size { defaultIndex }) -> Mutated Resizes the collection, adding null elements if needed.	Mutated		
<b>clear</b> () -> Mutated Removes all elements.	Mutated		
<strong>Combining Collections</strong>			
<b>combine</b> (coll { index }) -> Mutated Inserts another collection into this collection, either at the end or a specific index.	Mutated		
<b>concat</b> (value { value2 ... valueN }) -> New collection Creates a collection from the original collection and with the passed in values appended. Note: If a value being appended is a collection, the elements of the collection will be appended.	New collection	Shallow	
<strong>Searching</strong>			
<b>query</b> (queryString { value { value2 ... valueN } }) -> New collection Returns a new collection with elements that match the query string.	New collection	Shallow	Query String
<b>filter</b> (methodName { param { param2 ... paramN } }) -> New collection Returns a new collection with elements the method returns true for.	New collection	Shallow	Method
<b>indices</b> (queryString { value { value2 ... valueN } }) -> Collection of indices Returns a collection of indices for elements that match the query string.	Collection of indices		Query String
<b>indexOf</b> (search { startFrom }) -> Index Returns the index of the first element the search value is found in.	Index		Value (int, number, boolean, date, null, object, or collection)
<b>lastIndexOf</b> (search { startFrom }) -> Index Returns the index of the last element the search value is found in.	Index		Value (int, number, boolean, date, null, object, or collection)
<b>find</b> (startFrom { methodName { param { param2 ... paramN } }) -> Value Returns the value of the first element the method returns true for.	Value		Method
<b>findIndex</b> (startFrom { methodName { param { param2 ... paramN } }) -> Index Returns the index of the first element the method returns true for.	Index		Method

Query String Syntax (from [d3.js](#) to [query.js](#))

**attributePath comparator value {logicalOperator attributePath comparator value}**

### Comparator

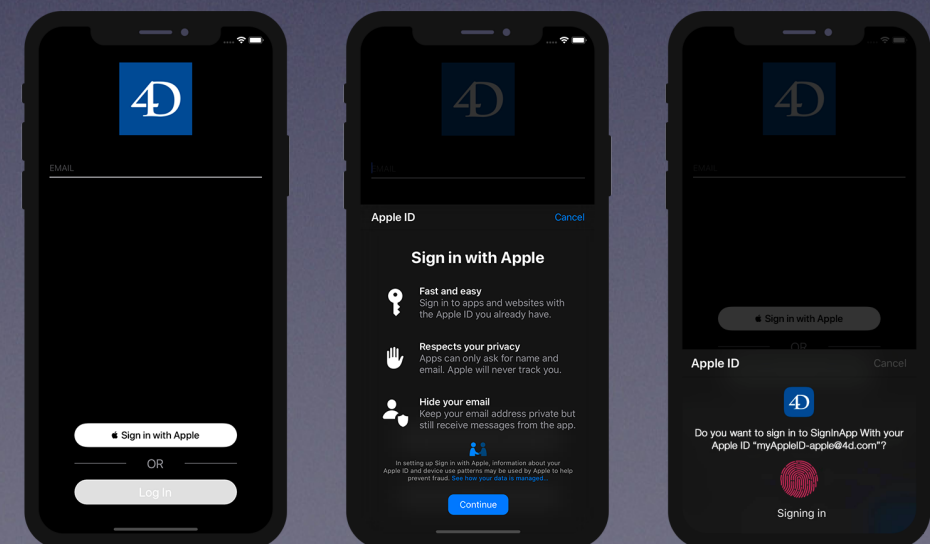
Comparison	Symbol(s)	Comment
Equal to	=, ==	Gets matching data, supports the wildcard (@), neither case-sensitive nor diacritic.
	==, is	Gets matching data, considers the @ as a standard character, neither case-sensitive nor diacritic.
Not equal to	!=, !=	Supports the wildcard (@)
	!=, is NOT	Considers the @ as a standard character
Less than	<	
Greater than	>	
Less than or equal to	<=	
Greater than or equal to	>=	
Included in	IN	Gets data equal to at least one of the values in a collection or in a set of values.
Not condition applied on a statement	NOT	Parenthesis are mandatory when NOT is used before a statement containing several operators.
Contains keyword	%	Keywords can be used in attributes of string or picture type.

### Logical Operator

Conjunction	Symbol(s)
AND	&, &&, and
OR	,   , or

### Attribute Path

**Examples**  
"country = 1", "Canada"  
"country.name = 1", "Canada"  
"country.name = 1", "Canada"





Special Topic:  
AJ Suite of Components, Gabriel Inzirillo

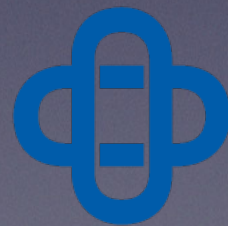
**Gabriel Inzirillo**

**Software Developer**  
**AJAR SA**

<https://ch-fr.4d.com/aj-suite>

<https://www.linkedin.com/in/gabriel-inzirillo-173306105/>

[www.my4dexperience.com](http://www.my4dexperience.com)

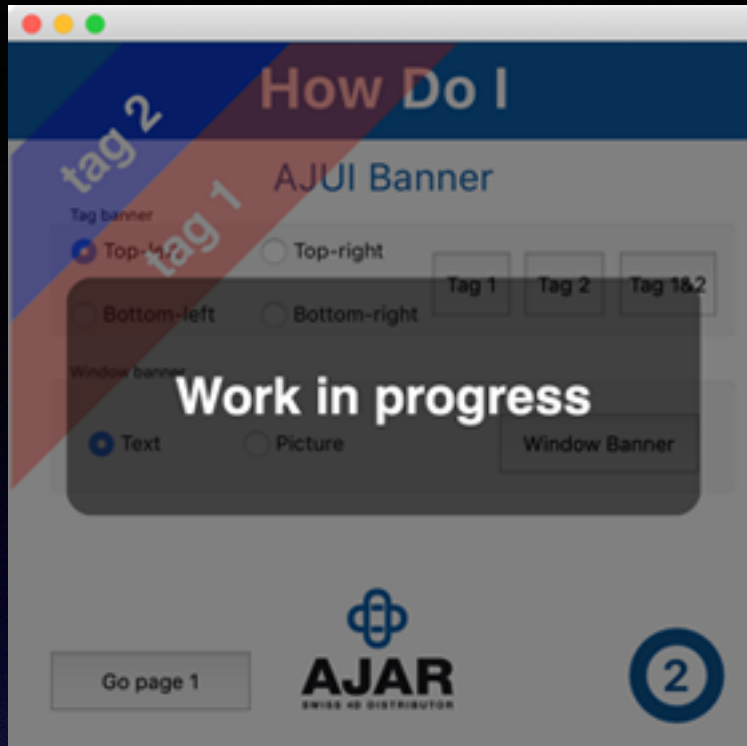


**AJAR**

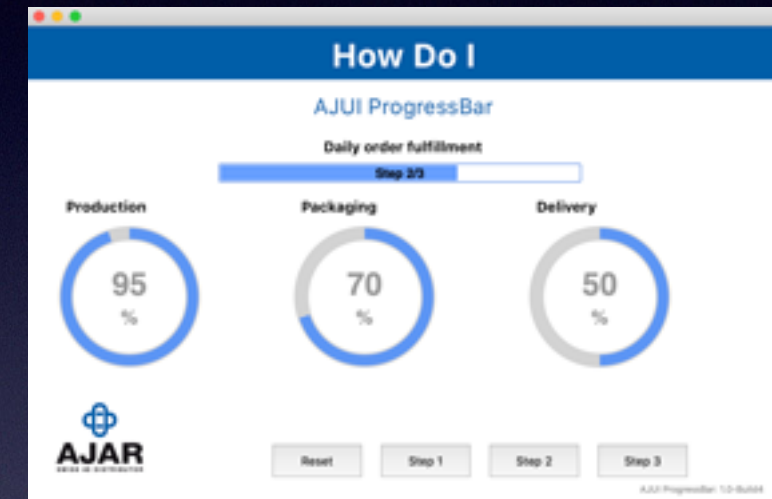
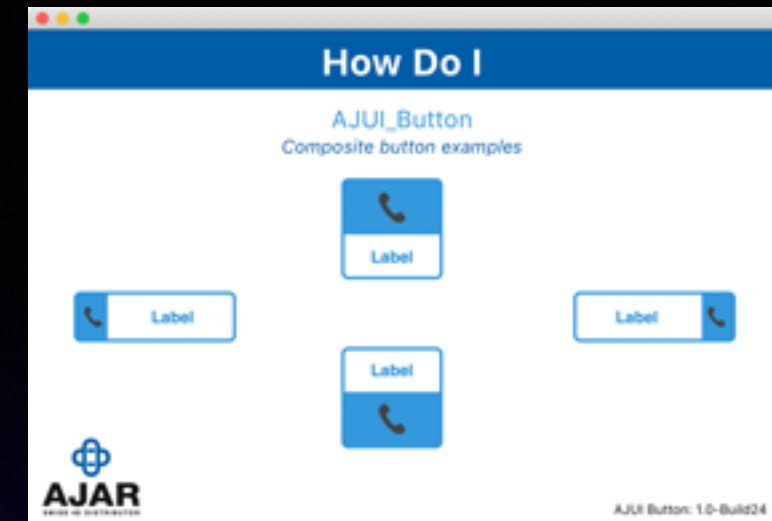


AJUI Tip is a 4D Component Tooltip to enhance your 4D application with a magnificent full featured interface.

# Questions?



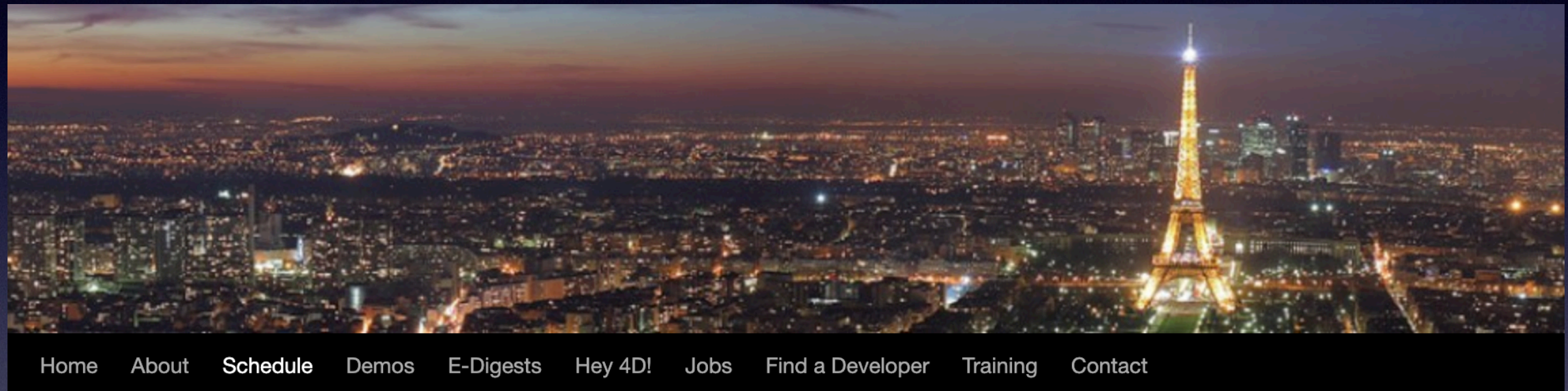
Aj Sweet



A screenshot of the AJUI FloatingLabel component interface. It features a blue header with the text "How Do I" and "AJUI FloatingLabel". Below the header, there is a form with fields for "Title" (Mister), "Price" (1234.5), "Specific Location (optional)" (Paris), "Birthday" (04.10.1978), "Birthday time (optional)" (12:00), and "Description" (Test). The bottom of the interface includes the AJAR logo, a "Reset all" button, a question mark button, and a "Close" button.



# Next Meeting



<http://4dmethod.com/schedule/>



# Next Meeting

Wednesday, November 6, 2019

*Art Institute of Chicago Data Hub Public  
API, Nikhil Trivedi & Illya Moskvina*

Calling for speakers who would like to demo  
some of their work or applications.

Open dates include:

- 2020... dates to come



# Wrap Up

Other questions?

Discussion

Feedback is appreciated



<https://www.patreon.com/4dmethod>