



4D User Group

November 2, 2022



Meeting #60

Agenda



1. About 4DMethod
2. Happy Hour Review - Kirk Brooks
3. 4D News - Jim Sobczak
4. Online Training - Jean-Pierre Ribreau JPR
5. 4D Blog Highlights
6. Of Note in the Knowledge Base - Add Komoncharoensiri
7. Special topic: 4D in Drag... and Drop – Brent Raymond
8. Next meeting - December 14, 2022

Welcome



Brent Raymond



4D User Group

4dmethod.com

4dmethod@gmail.com



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



Be a Presenter

This is your group!

Show off your application, your product, or just some things you've been working on.

2023 open dates:

February 1

March 22

May 10

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



Happy Hour 4D on Tap



- Connect on Zoom Friday afternoons, 3:30 PDT (90 min - 2 hours + depending on the discussion and interest)
- Very informal, not all about 4D but mostly
- Much screen sharing, first hand look at dev
- Bring a problem and get every opinion on how to handle it... free

4dhappyhour.com



Jim Sobczak

VP of Sales & Services
OEM Manager

jsobczak@4d.com



- 4 days, with 120-minute per day plus Q&A with Jean-Pierre Ribreau
- Classes and beyond
- Extreme ListBox & Subforms programming
- Client-Server optimizations
- Moving from Classic to MVC

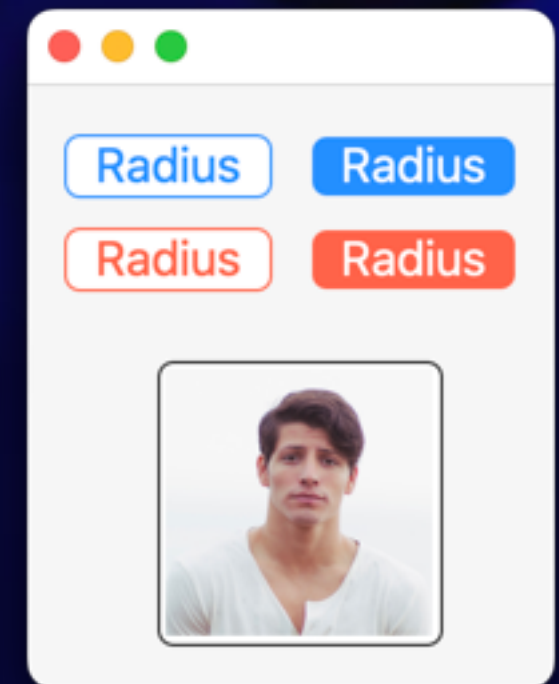
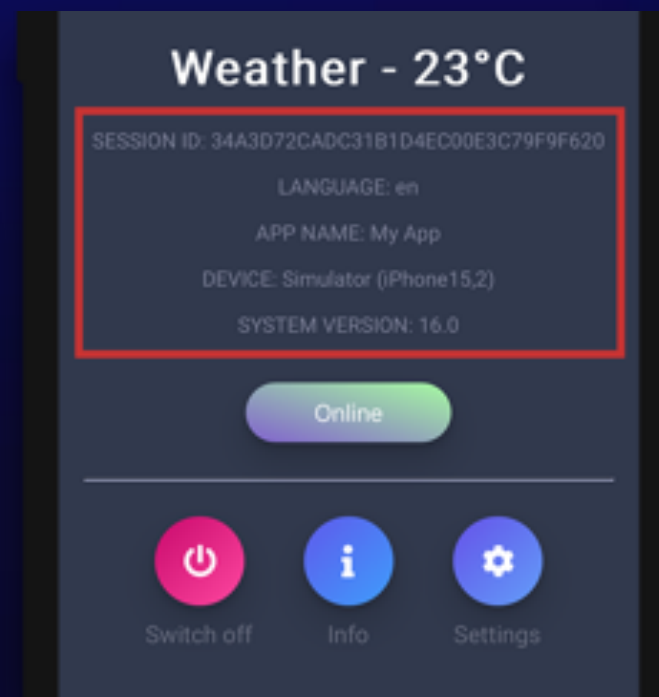
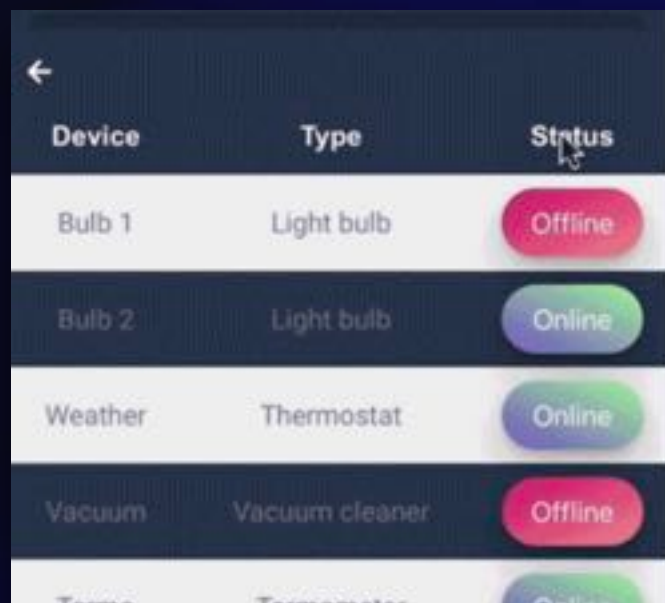
<https://us.4d.com/training/online-training/level-up-your-4d-skills-by-jpr>

4D Blog Highlights

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



- > Latest Improvements of the HTTP Client (HTTP class: compressed responses, chunked responses, and redirections, HTTP client logging)
- > 4D for Mobile : Get Mobile Users' Cookies
- > 4D for Mobile : Display Web Pages in your Mobile Apps
- > Say Hello to Rounded Corners



4D Blog Highlights

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



- > LIST BOXES – Say Goodbye to Alt Key!
- > Files, Folders... and now File Handles!



```
$o:=New object()  
$o.mode:="append"  
$o.charset:="UTF-8"  
$o.breakModeRead:=Document with CRLF  
$o.breakModeWrite:=Document with CRLF  
$handle:=$file.open($o)
```

```
$fileHandle:=$file.open("read")  
While (Not($fileHandle.eof)) // eof = end of file  
    $text:=$fileHandle.readLine()
```

Of Note in the Knowledge Base

Add Komoncharoensiri



- Associative Arrays
 - Olivier Deschanel and Abdelhafid Elhour
- <https://kb.4d.com/assetid=79033>

```
"AF": {
  "UUID": "B58E6308EA8A4B3FB1E77928CF4C38F9",
  "name": "Afghanistan",
  "continent": "Asia",
  "isoCode_2": "AF",
  "isoCode_3": "AFG",
  "isoCodeNum": 4,
  "localTime": 4.5,
  "summerTime": 4.5,
  "tinyFlag": "[object Picture]"
},
"AL": {
  "UUID": "AE7E70319DE84248B5CC23547ECFAEC6",
  "name": "Albania",
  "continent": "East Europe",
  "isoCode_2": "AL",
  "isoCode_3": "ALB",
  "isoCodeNum": 8,
  "localTime": 2,
  "summerTime": 2,
  "tinyFlag": "[object Picture]"
},
```

- Working with Tables in 4D View Pro
 - Tai Bui
- <https://kb.4d.com/assetid=79034>

Color	Region	Sum of Sales
☒ Blue		7464
☒ Green		6414
☐ Red		
	East	714
	North	2028
	South	1126
	West	1640
Red Total		5508
☒ Silver		6970
Grand Total		26356

Special Topic: 4D in Drag... and Drop



Brent Raymond

4D Extravagangelist

[linkedin.com/in/linkbrent](https://www.linkedin.com/in/linkbrent)

4dmethod.com



4D in Drag... and Drop

Introduction

- ★ Can make your apps absolutely fabulous!
 - ★ Lots of interesting functionality that is relatively easy to implement
- ★ Drag and Drop is not for everyone
 - ★ Most useful in Desktop apps
 - ★ eg Standalone or client
- ★ Get the demo code...

<https://github.com/4dmethod/4DinDrag>

4D in Drag... and Drop

The OG, so passé

★ DRAG AND DROP PROPERTIES

★ aka `_o_DRAG AND DROP PROPERTIES`
(`srcObject` ; `srcElement` ; `srcProcess`)

★ Get Process Variable if necessary

Parameter	Type	Description
<code>srcObject</code>	Pointer 	Pointer to drag-and-drop source object
<code>srcElement</code>	Longint 	Dragged array element number, or Dragged list box row number, or Dragged hierarchical list item, or -1 if source object is neither an array nor a list box nor a hierarchical list
<code>srcProcess</code>	Longint 	Source process number

Over that! (since v11)

4D in Drag... and Drop

Out of the... box

- ★ Easy drag? Is that a thing? Yes!
- ★ Automatic Drag/ Drop
- ★ Works with Text and Picture
- ★ In 4D or other apps
- ★ Ctrl/ Option keys for copy



<https://doc.4d.com/4Dv19R5/4D/19-R5/Drag-and-Drop.300-5830663.en.html#14175>

4D in Drag... and Drop

4D method

To do it right, you're going to need some skills!

- ★ See Managing Pasteboards

- ★ The main events



- ★ On Drop database event - from outside 4D

- ★ On Begin Drag Over - source object

- ★ On Drag Over - destination to indicate accept

- ★ On Drop - destination to handle accept

<https://doc.4d.com/4Dv19R6/4D/19-R6/Managing-Pasteboards.300-5911235.en.html>

4D in Drag... and Drop

House of the Drag-in



★ Database Method: On Drop

- ★ Drag files onto 4D to open
- ★ Into MDI, 4D dock/ desktop icon
- ★ Mac needs Option+Command

★ Get file from pasteboard

Get file from pasteboard (xIndex) -> Function result		
Parameter	Type	Description
xIndex	Longint →	Xth file included in drag action
Function result	String ↻	Pathname of file extracted from pasteboard



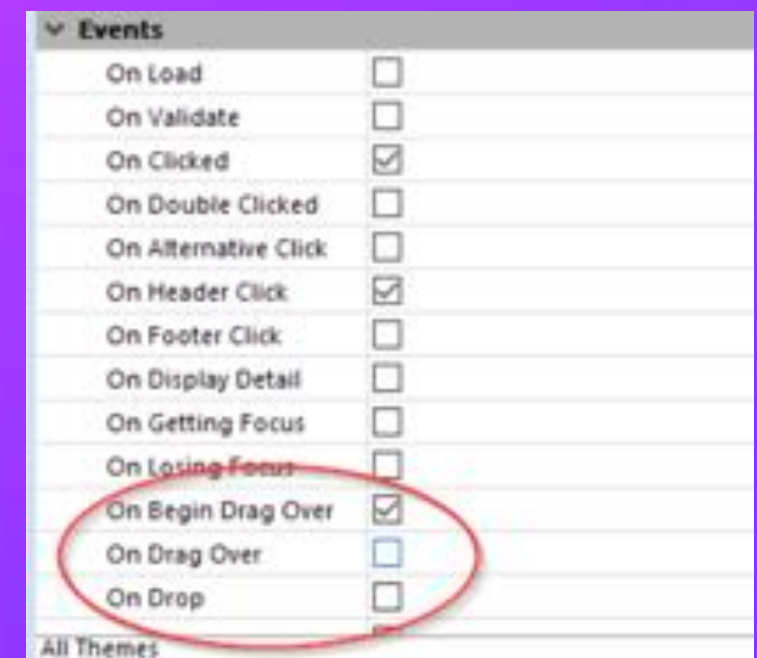
<https://doc.4d.com/4Dv19R6/4D/19-R6/On-Drop-database-method.301-5911410.en.html>

4D in Drag... and Drop



Drag on Over. Let's get ready

- ★ Draggable + On Begin Drag Over
- ★ Called within the context of the source object
- ★ Thanks Automatic Drag, but maybe I should drive
- ★ Not your ordinary pasteboard
- ★ This is where you get creative



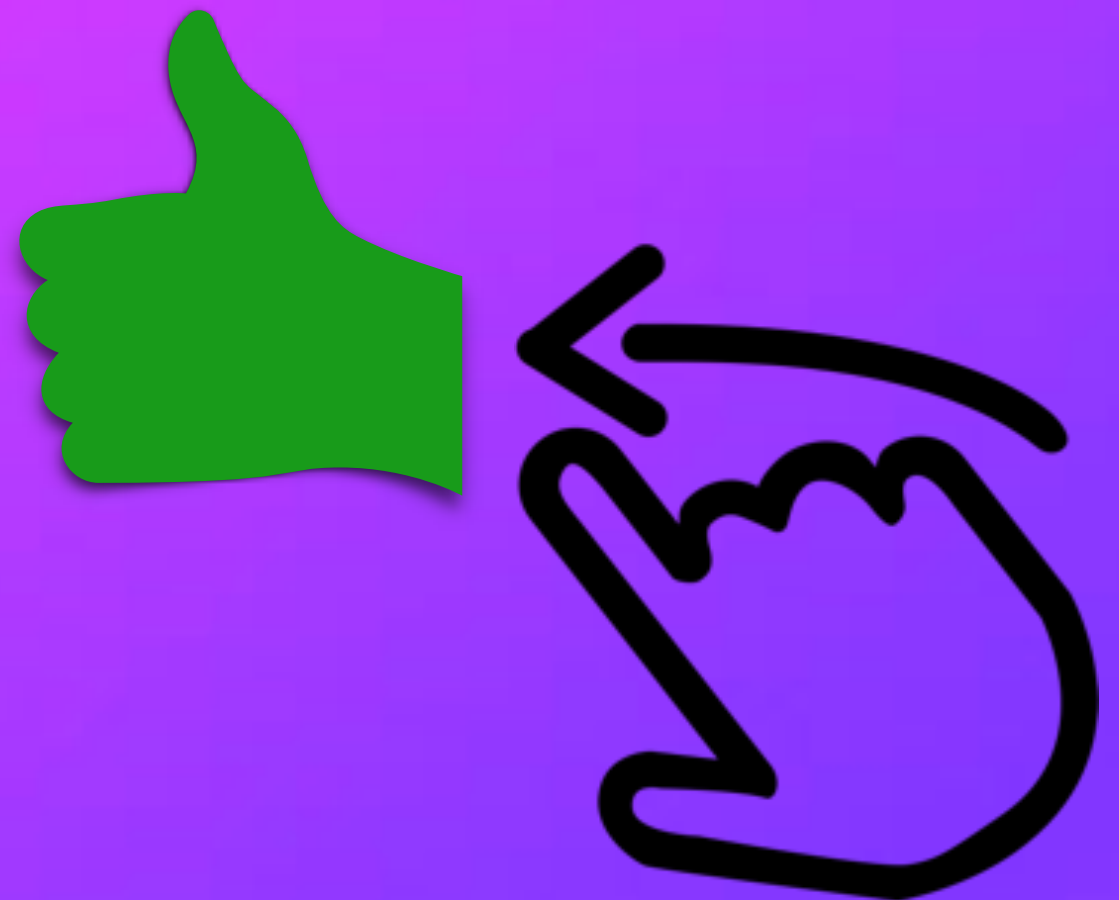
<https://doc.4d.com/4Dv19R6/4D/19-R6/Drag-and-Drop.300-5910910.en.html#4090692>

4D in Drag... and Drop

4D method

Be a drag Icon

- ★ Customize the drag appearance depending on what is being dragged
- ★ READ PICTURE FILE
- ★ 4D SVG component to build on the fly



**Dragging
23 Student
Records**

4D in Drag... and Drop



Get the Picture? It looks good.

- ★ SET PICTURE TO PASTEBOARD
- ★ GET PICTURE FROM PASTEBOARD
- ★ GET PASTEBOARD
DATA("com.4d.private.picture.gif";...).



<https://doc.4d.com/4Dv19R6/4D/19-R6/SET-PICTURE-TO-PASTEBOARD.301-5911239.en.html>

4D in Drag... and Drop



Drag around town

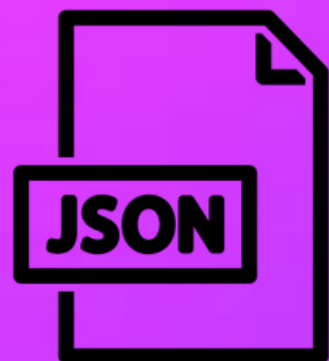
★ Drag custom text (to spreadsheet/ json)

★ SET TEXT TO PASTEBOARD

★ Drag to file (create file on the fly)

★ SET FILE TO PASTEBOARD

	A	B	C
1	Sales	Expense	Profit
2	16379	12441	3938
3	51830	20669	
4	28398	10487	
5	15426	6481	
6	64409	18079	
7	49040	16869	
8	30833	1523	
9	56376	7113	
10	18976	19282	
11	19612	11453	



```
SampleRecords.json
1  [
2    {
3      "trackid": "AA-1234",
4      "reported_dt": "12/31/2019 23:59:59",
5      "longitude": -111.12500000,
6      "latitude": 33.37500000
7    },
8    {
9      "trackid": "BB-7890",
10     "reported_dt": "12/31/2019 23:59:59",
11     "longitude": -113.67500000,
12     "latitude": 35.87500000
13   },
14   {
15     "trackid": "CC-4545",
16     "reported_dt": "12/31/2019 23:59:59",
17     "longitude": -115.57500000,
18     "latitude": 37.67500000
19   }
20 ]
```

<https://doc.4d.com/4DvI9R6/4D/I9-R6/SET-TEXT-TO-PASTEBOARD.30I-59II238.en.html>

<https://doc.4d.com/4DvI9R6/4D/I9-R6/SET-FILE-TO-PASTEBOARD.30I-59II237.en.html>

4D in Drag... and Drop

4D method

Drag everything everywhere all at once

- ★ APPEND DATA TO PASTEBOARD
- ★ Multiple types at once
 - ★ Set picture, text, and file
 - ★ Result depends on destination
- ★ Custom data type
 - ★ Pack and go
 - ★ Object/ Collection perfect for record data

<https://doc.4d.com/4Dv15/4D/15.6/APPEND-DATA-TO-PASTEBOARD.301-3818540.en.html>

4D in Drag... and Drop



Too Much Info?

- ★ Advanced approach for dragging large amounts of data
 - ★ Pass object with window ref and dragged object name
 - ★ On Drop: Create Signal and .wait()
 - ★ Call Form via window ref, pass Signal
 - ★ Get large data and .trigger() Signal
 - ★ Consume at destination

<https://doc.4d.com/4Dv19R6/4D/19-R6/CALL-FORM.301-5910890.en.html>

<https://doc.4d.com/4Dv19R6/4D/19-R6/Semaphores-and-signals.300-5911385.en.html#4110532>

4D in Drag... and Drop



Multi-line listbox drag

- ★ Drag multiple listbox rows with collection/ entity selection
 - ★ Without modifier keys
 - ★ Shadow selection copy
 - ★ or... use v19 R7. Thank you!!!
 - ★ <https://blog.4d.com/list-boxes-say-goodbye-to-alt-key/>

4D in Drag... and Drop

CITI Examples



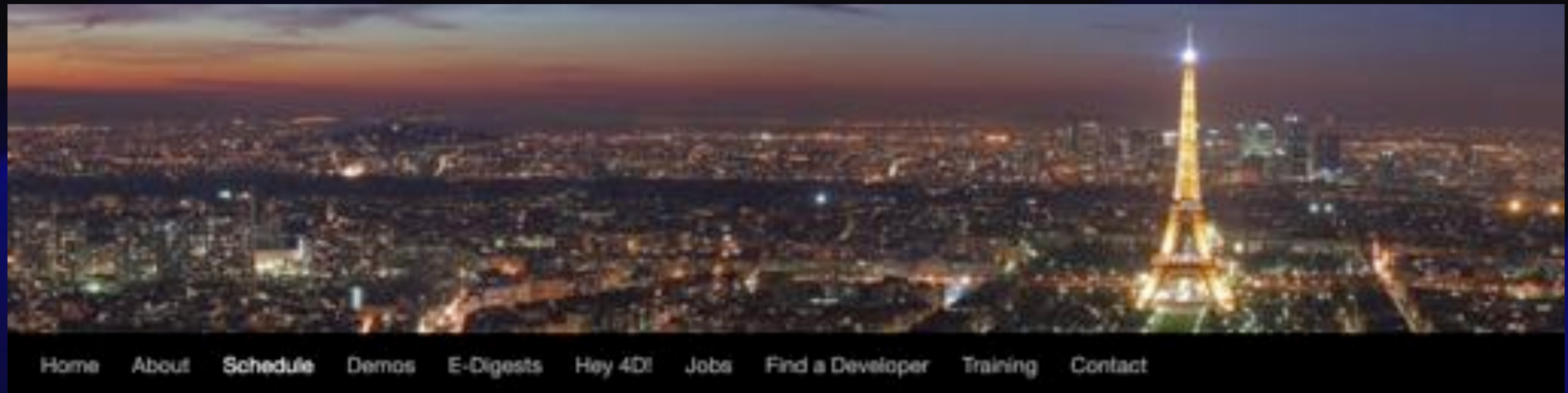
A few examples in the CITI application
at the Art Institute of Chicago

Questions?



4D method

Next Meeting



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

Next Meetings

December 14 - Deploying Across Platforms
– Erick Lui

2022 open dates

February 1

March 22

May 10



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



Wrap Up

Other questions?

Discussion

Feedback is appreciated



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