



Advanced JavaScript Within Revu: Expanding Your Automation Toolkit

Hands-on techniques for complex workflows

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Manual Entry vs Automated Workflow

[illegible]

Session Roadmap



- **Reading Text Files in PDF's**
- **VBA + Revu**
- **Complex Form Field Interactivity**
- **Optimization & Troubleshooting**
- **Live Workflow**
- **Wrap-up Q&A**

Reading Text Files in PDFs

External data as plain text

JavaScript can read any text file. CSV, JSON, and TXT are just different ways of structuring text:

- **CSV** → e.g., an address book or spreadsheet export
- **JSON** → e.g., U.S. Geological Survey (USGS) seismic data or web APIs
- **TXT** → e.g., a lookup table, notes, or config values

The important part: the file is read in as a text stream, then you decide how to parse it.

```
// Set PDF folder path
var dir = "C:/[username]/DataFiles";

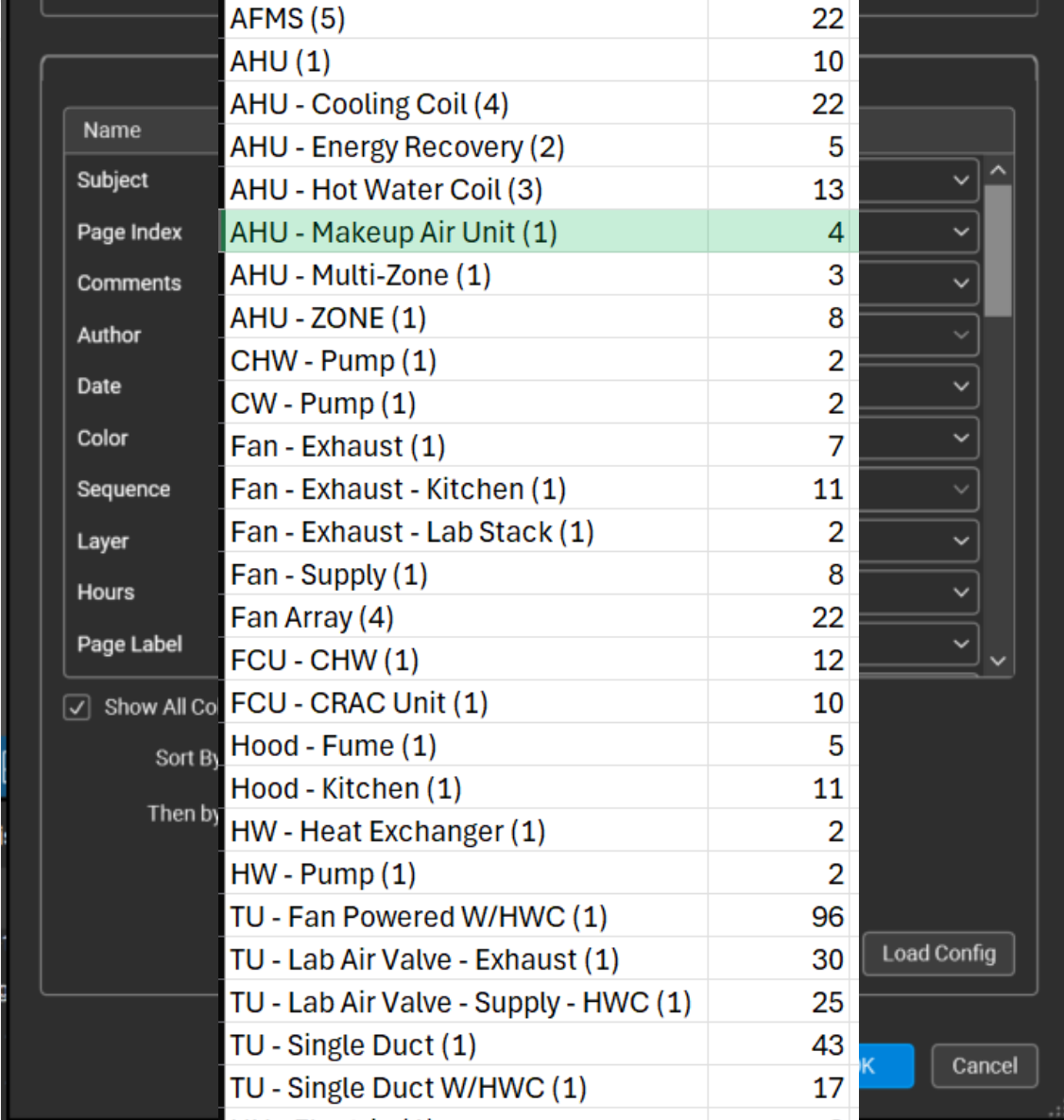
// Generic function to read a text file
function readTextFile(filename) {
    var stream = util.readFileIntoStream(dir + "/" + filename);
    return util.stringFromStream(stream);
}

// Examples
var csvData = readTextFile("sample.csv"); // parse into rows/columns
var jsonData = readTextFile("sample.json"); // parse with JSON.parse()
var txtData = readTextFile("notes.txt"); // use as raw text
```

QTY/Measurement Data from Bluebeam Revu to Excel

Setting up Export from Bluebeam Revu

- Export as CSV
 - Universal format
 - Stripped excel chart
- Batch Files
 - Vital to ensuring consistency of export
 - Speeds the process
- Subject / Custom Columns
- Bonus: Shared Toolchest
 - Upside: Changes are synced
 - Downside: Changes are synced



The screenshot shows the 'Export' configuration dialog in Bluebeam Revu. On the left, a list of fields is shown with checkboxes: Name, Subject, Page Index, Comments, Author, Date, Color, Sequence, Layer, Hours, Page Label, and 'Show All Columns' (checked). Below these are 'Sort By' and 'Then by' options. On the right, a table displays the export data. The table has two columns: 'Subject' and 'Count'. The 'AHU - Makeup Air Unit (1)' row is highlighted in green. At the bottom right, there are 'Load Config', 'OK', and 'Cancel' buttons.

Subject	Count
AFMS (5)	22
AHU (1)	10
AHU - Cooling Coil (4)	22
AHU - Energy Recovery (2)	5
AHU - Hot Water Coil (3)	13
AHU - Makeup Air Unit (1)	4
AHU - Multi-Zone (1)	3
AHU - ZONE (1)	8
CHW - Pump (1)	2
CW - Pump (1)	2
Fan - Exhaust (1)	7
Fan - Exhaust - Kitchen (1)	11
Fan - Exhaust - Lab Stack (1)	2
Fan - Supply (1)	8
Fan Array (4)	22
FCU - CHW (1)	12
FCU - CRAC Unit (1)	10
Hood - Fume (1)	5
Hood - Kitchen (1)	11
HW - Heat Exchanger (1)	2
HW - Pump (1)	2
TU - Fan Powered W/HWC (1)	96
TU - Lab Air Valve - Exhaust (1)	30
TU - Lab Air Valve - Supply - HWC (1)	25
TU - Single Duct (1)	43
TU - Single Duct W/HWC (1)	17
UH - Electric (1)	2

Continued

- Lookup Charts / Data Sources
 - New Items / Overall Flexibility
- Error Handling
 - When items don't match
 - When list is refreshed
 - Refresh or append
 - If items go past expected length
- Bonus: Named Fields
 - Easier to reference
 - Flexible
 - Worksheet vs Workbook

Critical Space

Bidding

Subject

Comment

Label

AFMS

AHU - Constant Volume

AHU - Cooling Coil

AHU - Dual Duct

AHU - Energy Recovery

AHU - Heat Pump

AHU - Hot Water Coil

AHU - Large RTU

AHU - Makeup Air Unit

AHU - Multi-Zone

AHU - Multi Header

AHU - Munters

AHU - OAHU

AHU - Piggy Back

AHU - RTU

AHU - Single Zone

AHU - VAV

AHU - ZONE

AHU

Callout

CHW - Chillers

CHW - Cooling Coil

CHW - Pump

CHW - Pump

CHW - Secondary Pump

Critical Room - Readings only

Critical Room

CW - Cooling Tower

CW - Pump

Dehumidifier

Economizer

Electric Duct Heater

Energy Recovery Coil

Fan - Air Filtration Unit

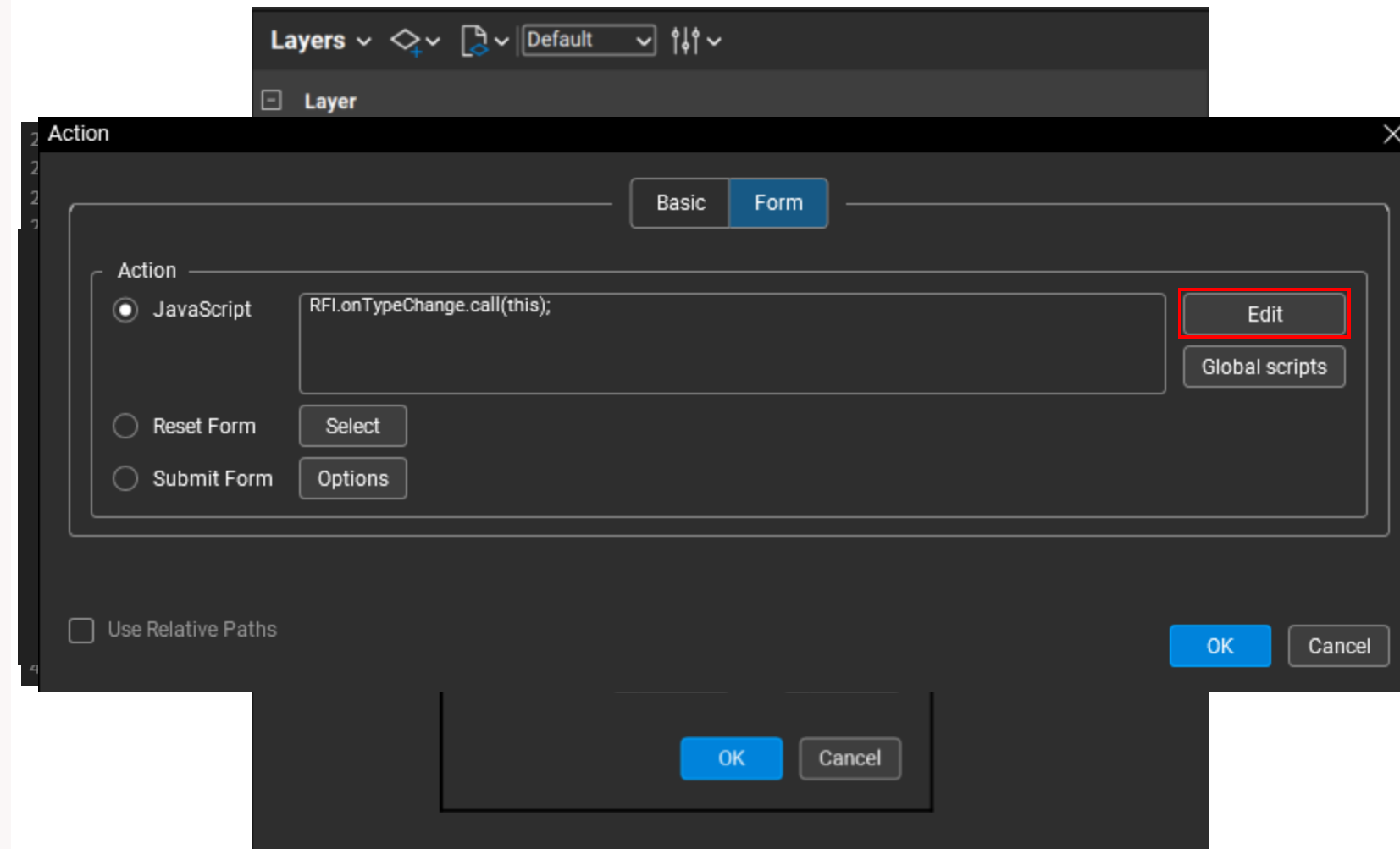
Fan - Dust Collector

N7

</

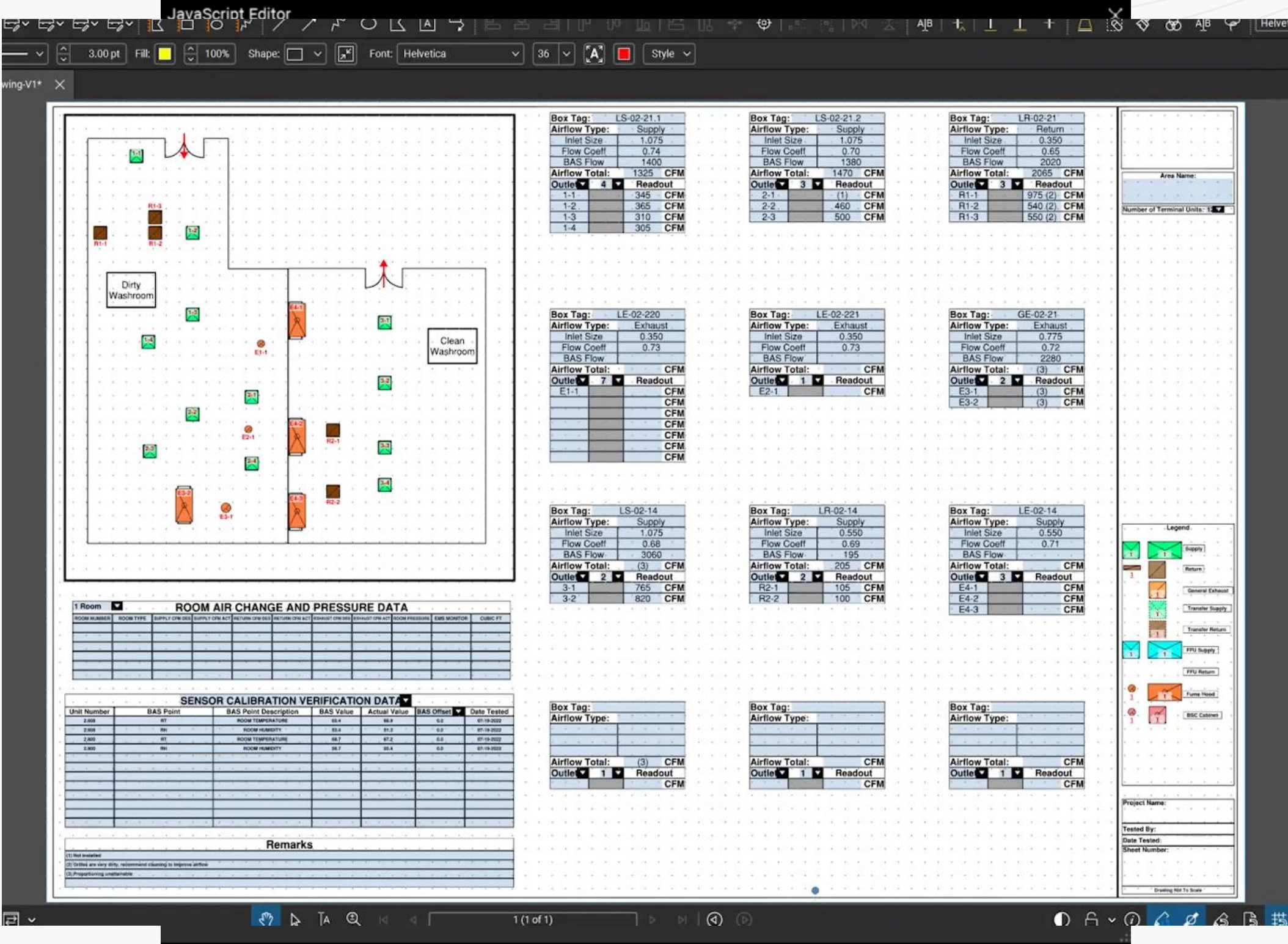
Complex Form Field Interactivity

- Dropdown items and exported values
- Actions Spotlight: “On Blur” vs “Mouse Up”
- Passing arguments to global code
- Layer control
 - State Vs. InitState
 - Single target vs Regex Isolation
 - Templates and issues with layer control
- Calculations, when and how they are calculated
- Pulling data from other forms and creating a pop-up user input form



Script Optimization

Cut the fat



Script Optimization

Cut the fat



Regex & Filtering

Depends on logical naming
Perfect for applying changes to a set of objects



Arrays

Stores multiple individual values as a single variable that can be called and accessed



Helper Functions / Globalization

Functions that can be used repeatedly in a “shorthand” method. I.e., getting field names in the document, decreasing the amount of code needed and making easier to manage

Global code is more efficient, does not have to be loaded into multiple locations



Hidden Fields

Can store information in a pseudo global state, even after the document is saved.
Great for keeping track of active fields, save locations, time stamps

Troubleshooting

Bug Zappers

- Double-check field names.
- Use console output to trace values.
 - `consolePrintln`
 - `app.alert`
- Use console to test individual methods and functions
- Keep backup copies of scripts before major edits.
 - If using AI, prompt to create version and updates section
- Notations, notations notations
- Rubber Ducky Method



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Live Workflow

DRL to RFI

U\BOUND

Contact Sheet (Demo)

	Company Name	Contact Name	Contact Email	CC:
Architect	Plan & Simple Architects	Skye Line	skye.line@plan-simple-architects.example	☒
Engineer	Shear Luck Engineering	Gus T. Factor	gus.factor@shear-luck-engineering.example	☒
Mechanical	Air Apparent Mechanical	Ari Flow	ari.flow@air-apparent-mech.example	☒
Controls	Setpoint & Match Controls	Pia Dee	pia.dee@setpoint-match-controls.example	☒
Plumbing	Pipe Dreams Plumbing	Piper Trapp	piper.trapp@pipe-dreams-plumbing.example	☒
Electrical	Current Affairs Electric	Watson Ampere	watson.ampere@current-affairs-electric.example	☒

Add RowDelete RowAdd SheetGenerate RFI'sImport RFI's

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DRL Demo Document

Contact File Address: C:\Users\ihamed\Documents\Bluebeam Unbound 2025>Contact Sheet.pdf

#	User	Date	Trade	Status	Response
1	ihamed	2025-09-02	Electrical	Review	Receptacles on north wall duplicated across circuits
2	ihamed	2025-09-02	Architect	Review	Room tags clipped by door swings
3	ihamed	2025-09-02	Engineer	Review	Beam opening too narrow for 24x18 duct
4	ihamed	2025-09-02	Mechanical	Review	RTU curb size listed as TBD
5	ihamed	2025-09-02	Controls	Review	VAV boxes shown without control diagram
6	ihamed	2025-09-02	Plumbing	Review	Condensate termination missing for RTU-2
7	ihamed	2025-09-02	Electrical	Review	Lighting circuit doubles back across grid
8	ihamed	2025-09-02	Architect	Review	Equipment tags collide with grid lines
9	ihamed	2025-09-02	Engineer	Review	ADA turning radius blocked by casework in 115
10	ihamed	2025-09-02	Mechanical	Open	Exhaust fan EF-2 lacks backdraft damper note

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Smart RFI Cover Sheet (Demo)

General Information

DisciplineArchitectural

Subject:

Date of RFI:

Needed By:

Routing

To:

CC:

Question / Issue

Proposed Solution:

Impacts

Impact Cost:

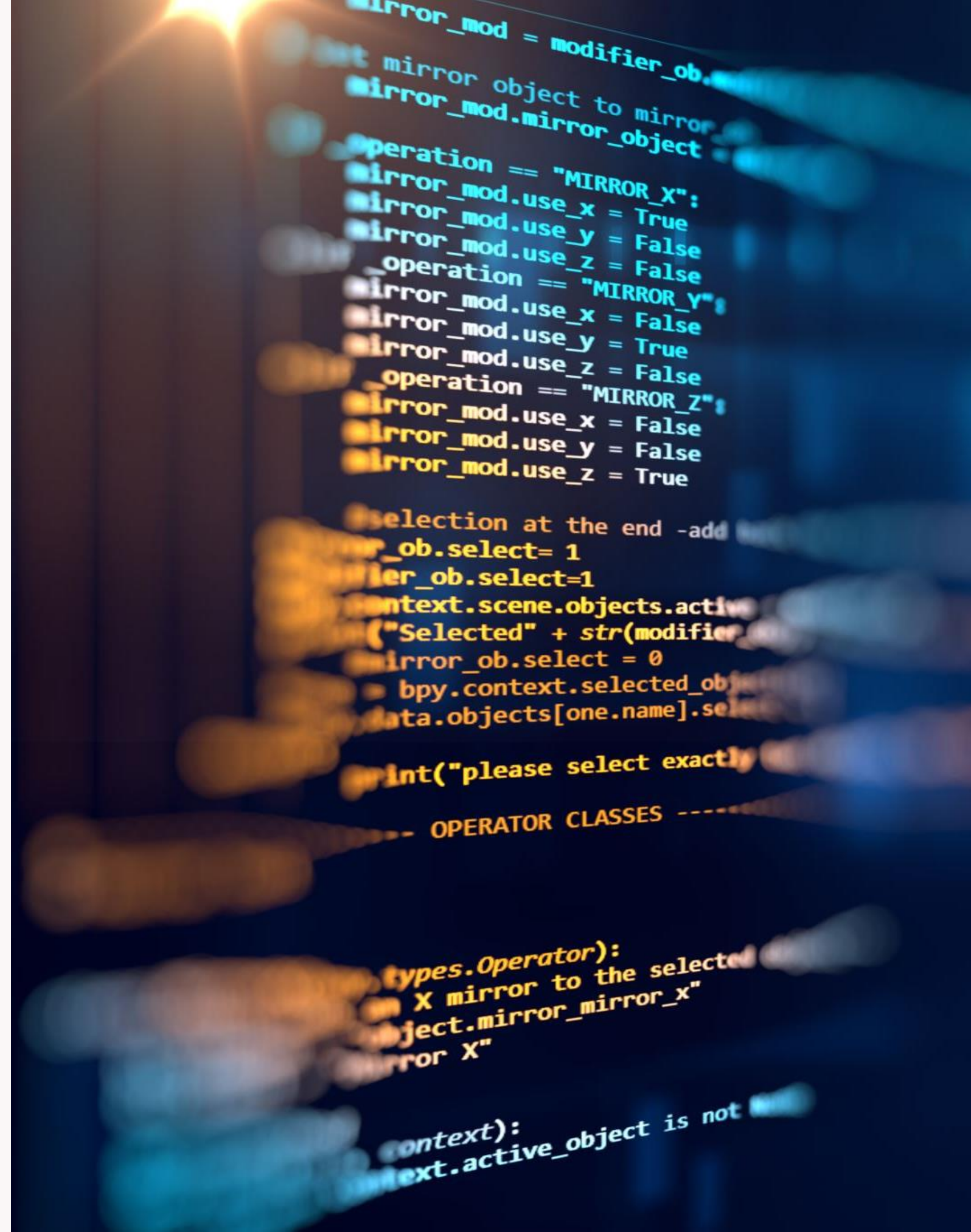
Impact Schedule:

Submission

Resources

Important **FREE** resources to get you started:

- **Bluebeam JavaScript documentation**
 - [put link here when it's released]
- [PDFscripting.com](https://pdfscripting.com) – lots of examples, but some of them may be outdated
- **Sublime Text or Notepad++**
 - *Good free text editors that highlight your code to make it easier to read and format*
- [FreeCodeCamp.org](https://freecodecamp.org) – learn JavaScript
 - **Course name:** *JavaScript Algorithms and Data Structures*
 - Necessary: *Basic JavaScript, Basic Algorithm Scripting*
 - Optional: *Regular Expressions, Intermediate Algorithm Scripting*
- JavaScript Syntax Checker - jshint.com
- [Optional] Regular expression checker - regex101.com
- [Optional] JavaScript beautifier - beautifier.io



Q&A