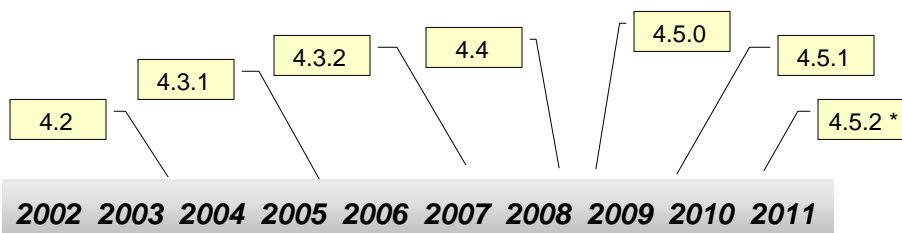


RADS Lite 301

Advanced Screens Made Easy

UNITE
Spring 2011
BIS 4027

RADS Major Releases



- Web Application Screens
 - ICEME Reporting Tool
 - Expanded/Enhanced Toolset
 - More Advanced Web Screens
 - Expanded Data Dictionary Features
 - Enhanced Graph Services



* Version 4.5.2 paired with BIS 11.1 release.



RADS Product Portfolio



- Limited Edition Freeware
- Minimal Training Required
- Basic Application Tools
 - Report, Graph, Data Entry Services
 - Active Data Dictionary
 - Built-in Menu System
 - Import / Export Application Packages
- Both GUI & Web Services



- Full Featured Development Studio
- Professional Training & Mentoring
- Extended Features & Capabilities
 - Drill Down / Data Mining
 - Additional Types of Services
 - User Profiles, Access Control, Auditing
 - Many Additional Development Tools
- ICEME (Web-Enabled PCME)

Lite version fully compatible with and upgradeable to Professional



RADS Lite – Why Use It?

- Why use it?
 - Simple & easy to learn and use
 - Does most of the “grunt” work for you
 - Much easier for new developers to embrace
 - New API features make it even more useful
- Why wouldn't you?
 - It's free!
- Why does ITRS do this?
 - We are passionate about BIS
 - We believe you will love it and want more!



Today's Agenda

Focus On Data Entry Services:

- Edit Rules for Automatic Validation
- Using Web Browser JavaScript
 - JavaScript technology review
 - Using JavaScript to enhance RADS Data Entry screens
 - RADS JavaScript Syntax Tool
 - JSX (JavaScript Examples) Demo App
- New RADS Lite Release
 - Version 4.5.2e
 - External access via new API feature



New! – RADS Lite 4.5.2e

- May 2011 Release
 - 64-bit server & client support
 - Windows 7 / Vista client support
 - GI/MPC 5.4 support (BIS 11)
- New Features
 - External API access
 - Service toolbar configuration
 - Direct Web service access control
 - Configurable Web “Exit” action
 - ICE graph engine for GUI services



RADS Data Entry Services

Form Tools & Edit Rules

RADS Form Tools

The screenshot displays two overlapping windows from the RADS software. The background window is titled "MQS Plus! (Order Entry Form)" and shows a form design interface with fields for "Order Date", "Status", "Ship Date", "Cust Code", "Customer", "Product Type", "Ord Qty", "Unit Cost", "Unit Sale", "Total Cost", and "Total Sale". The foreground window is titled "RADS: Rapid Application Development Studio" and shows the "Screen Form Edit Rules" dialog. This dialog has tabs for "Done", "Design", and "Preview", and a "Global" radio button selected. It lists "Form Fields (ORDERENTRY)" with their corresponding edit rules: Order Date (EDT1), Status (CBX1), Ship Date (EDT2), Cust Code (EDT3), Customer (EDT4), Product Type (EDT5), Ord Qty (EDT6), Unit Cost (EDT7), Unit Sale (EDT8), Total Cost (EDT9), and Total Sale (EDT10). Buttons for "OK", "Help", and "Cancel" are visible at the bottom of the dialog.

Form Design Tool

Edit Rule Mapping Tool

RADS Edit Rule Wizard

Form Field Properties (ORDERENTRY | EDT2)

Local Form Rules | Preview | Change To Global Rule

Width: 8 | Dec Pnt: | Allow Blank: | Min Chr: | Screen Label: Ship Date | Object Type: Edit Box

Minimum Value: | Maximum Value: | Default Value:

Validation:
 None Numeric
 Alphabetic Integer
 Date ... YYYYMMDD
 Database Field
 List Of Values
 Input Mask

Input Type:
 Input Field
 Jump Full
 Popup Calendar
 Popup List
 Drop-Down List
 Yes/No Checkbox

Justify:
 None Left Right

Case:
 None Upper Lower

Update:
 Allowed Read-Only

Tool Tip:

Required Field | Save | Reset | Help | Cancel

Date Formats

- 01 VVMMDD
- 02 DD MMM VV
- 04 VVDD
- 05 DDMMVV
- 06 MM/DD/VV
- 07 Month DD, VVVV
- 08 MMDDVV
- 09 DD/MM/VV
- 10 VVMMDD
- 12 DD MMM VVVV
- 14 VVVVDD
- 15 DDMMVVV
- 16 MM/DD/VVVV
- 18 MMDDVVV
- 19 DD/MM/VVVV
- 20 VVVV-MM-DD

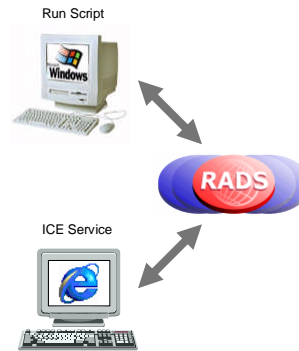
Display Popup Calendar
Select | Cancel



External API Access Overview & Wizard Demo

RADS External API Access

- New Feature In Version 4.5.2e
- Invoke RADS Applications/Services From External (non RADS) Programs
 - GUI BIS run scripts
 - ICE Services
 - Even launch Web services from GUI
- API Wizard
 - Builds code required to call API
- Integrate RADS Services With Any BIS/ICE Application
 - Use powerful RADS tools to create data entry forms, reports, graphs, more ...



RADS Script Tools Environment

The screenshot shows a terminal window titled 'RADS: Script Tools (1A0)'. The terminal output includes:

```
Line 1 Roll -RADSLITE
DATE 31 MAY 11 03:48:13 RID 1A 25 APR 06 THALHUBER
RADS External API Demonstration
*****
GTO END
..... END REPORT .....
```

A yellow callout box points to the 'Roll -RADSLITE' command with the text: 'Start RADSLITE with run script displayed to activate the Script Tools'.

A 'Welcome!' dialog box is overlaid on the terminal. It contains the following text:

Welcome to the RADS Lite Script Tools environment!

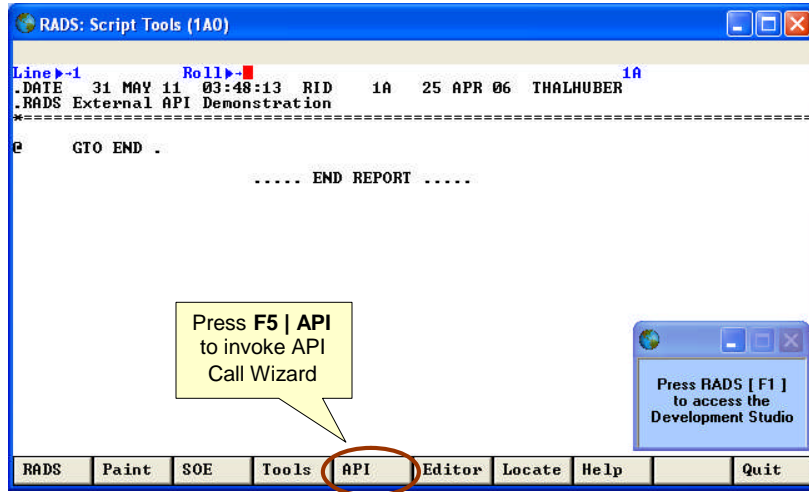
This screen is activated when you display any run script, and then start RADSLITE. A number of utilities are provided here to help you build and maintain your run scripts. Press the Help button for more information about these utilities.

To activate the Development Studio, press the RADS [F1] key.

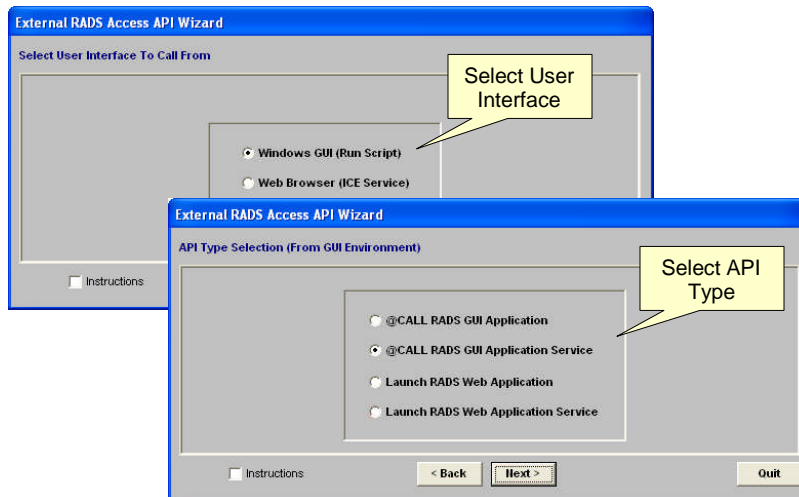
The dialog box has a menu bar with 'Close', 'Help', 'FAQ', 'Print', 'About', and 'Do not show this again'. The terminal window has a menu bar with 'RADS', 'Paint', 'SOE', 'Tools', 'API', 'Editor', 'Locate', 'Help', and 'Quit'.



Invoke API Wizard



API Wizard – User Interface & Type



API Wizard – Select Application & Service

External RADS Access API Wizard

Select GUI Application

Application	Description
ACME	ACME: Medical Decision Support System
DEMOAPP	DEMOAPP: RADS: External API Demonstration Application
JDOE	JDOE: User Interface Modernization

Select RADS Application

External RADS Access API Wizard

Select GUI Application Service (DEMOAPP)

Service ID	Service Type	Service Title
GISORDGRAPH	Report Graph	Customer Order Graph
GISORDQUERY	Runtime Result	Customer Order Query
DATAENTRY	Screen Entry Form	Data Entry Screen
ORDERENTRY	Screen Entry Form	Order Entry Form
ORDERLIST	BIS Report Update	List of Orders

Select RADS Service

IT-RS

API Wizard – Interface Code

RADS: Script Tools (1A0)

```

Line 1 Roll 1A
DATE 31 MAY 11 04:23:45 RID 1A 25 APR 06 THALHUBER 1A
.RADS External API Demonstration
=====
e.
e. Call RADS GUI Service
e.
e. LDU <ACAB>i4=200 . DEMOAPP Application Cabinet
e. LDU,p <PRM>s80=' ' . (No Call Parameters)
e. CALL,<ACAB>.I.100 0001*'DATAENTRY',<PRM>,<XQT>s256) .
e. XQT <XQT> .
e
e GTO END .

..... END REPORT .....
    
```

API code inserted into BIS run script

API code built in Yank buffer

Yank Buffer Initialized

Place cursor on line to insert run script and press CTRL+P.

OK

RADS Paint SOE Tools API Editor Locate Help Undo Quit

IT-RS

API Wizard – Web Service Access Options

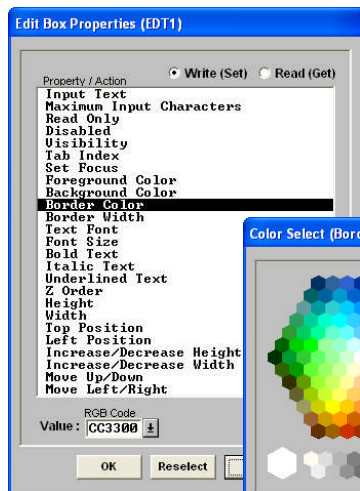
The image displays two overlapping windows from the RADS software. The background window is titled "External RADS Access API Wizard" and shows the "Launch Options" section. It has two radio buttons for "Interface Type": "HTML Hyperlink" (selected) and "JavaScript Function". Below this is a checkbox for "Target Window" with the label "Open New Browser Window".

The foreground window is titled "RADS: Script Tools (1A0)" and shows a code editor. The code contains a header with system information and a JavaScript function. A callout box labeled "Interface Type Selection" points to the radio buttons in the wizard. Another callout labeled "Hyperlink" points to the HTML code: `<a href="<GURL>Category=DEMOAPP&Service=DATAENTRY">Click Here`. A third callout labeled "JavaScript Function" points to the JavaScript code block: `[script language="JavaScript"]
function LAUNCH()
{
var URL = "<GURL>Category=DEMOAPP&Service=DATAENTRY"
top.location.href = URL
}
[/script]`

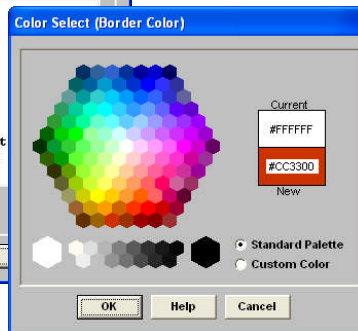
The bottom of the RADS: Script Tools window shows a menu bar with items: RADS, Paint, SOE, Tools, API, Editor, Locate, Help, and Quit. The iTRS logo is visible in the bottom right corner.

Enhanced Data Entry Screens Using JavaScript

RADS JavaScript Syntax Tool



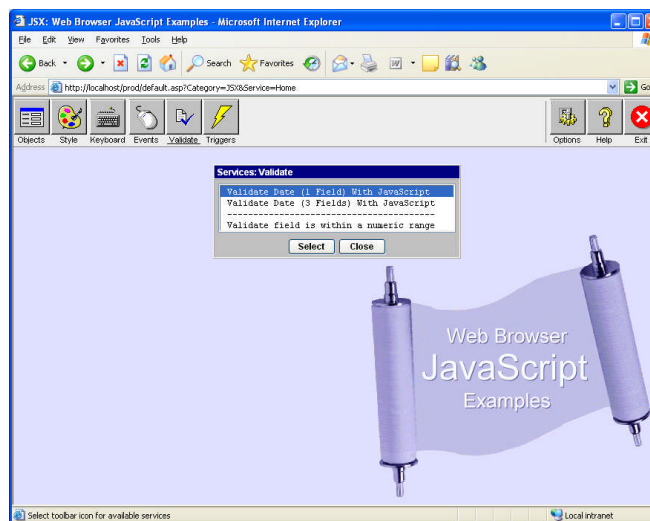
- Builds JavaScript syntax for you
 - Lists all available Properties
 - Available items vary by Object type
 - Avoids most common coding mistakes like using incorrect case



```
EDT1.style.borderColor = "#CC3300"
```



JavaScript Examples (JSX) Demo App



Web Browser JavaScript

Basic Concepts & Syntax

Basic HTML Document Structure

```
<html>
<head>
<title> page caption </title>
</head>
<body>
<form>
</form>
</body>
</html>
```

Header Section
Control Information

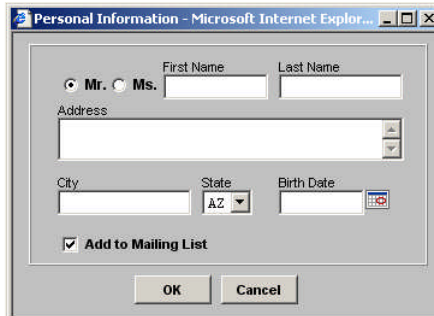
Input Form Objects

Document Body
Displayed Content

HTML Form Object Types

Very Similar To GUI

- Form (@WIN)
- Text (@EDT/s)
- Textarea (EDT/m)
- Checkbox (@BTN/c)
- Radio (@BTN/r)
- Select (@LST)
 - Single & multi-select
- Image (@PIC)
- Button (@BTN/p)

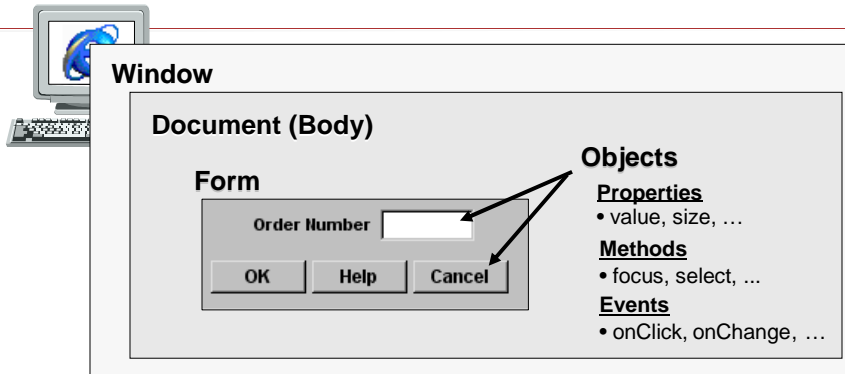


HTML Form Object Properties

```
<input type="text" name="EDT1" size="12" value="ABC">
```

Property	Description
<code>type</code>	Object Type "text" defines a single-line input field
<code>name</code>	Object Name <ul style="list-style-type: none">• Contents of field will be loaded into BIS script variable with this name (<EDT1>)• Also used to identify object with JavaScript
<code>size</code>	Field Width
<code>value</code>	Object Value String displayed or typed into field

HTML Document Structure / Object Access



Accessing Form Objects:

- Using typical JavaScript:
`window.document.WIN1.EDT1.value = "1234"`
- Syntax simplified In RADS:
`EDT1.value = "1234"`

Object pointer - similar in concept to GUI Handle.



Screen Object Events

JavaScript can be invoked on:

- Mouse Click
 - `onClick`, `onDblclick`
- Keystroke
 - `onKeyDown`, `onKeyUp`, `onKeyPress`
- Receive, Lose Focus
 - `onFocus`, `onBlur`
- Value Change
 - `onChange`
- Mouse Action
 - `onmouseover`, `onmouseout`
- Document Load Completion
 - `onLoad`

RADS lets you to add your own JavaScript to react to these events.



JavaScript Variables

- **Variable Types**

- String
- Number
- Boolean (true | false)
- Object Pointer
- Arrays

- **Variable Name Rules**

- Must not begin with number
- Must not contain spaces
- Case sensitive

- **Variable Assignment**

x = 123 (assign number)

x = "abc" (assign string)

x = true (assign boolean)

Preferred Method:

var x = 123



JavaScript Common Operators

- **Math Operations (numbers only)**

x + y (add)

x += 5 (add value to x)

x - y (subtract)

x -= 5 (subtract from x)

x * y (multiply)

x++ (increment x after operation)

x / y (divide)

++x (increment x before operation)

- **String Operations**

x + y (concatenate strings)

x += "abc" (append string to end)



JavaScript Declaration & Comments

- **Must Be Enclosed Within `<script>` Tags**

```
<html>
<script language="JavaScript">
  /* must be surrounded by <script> tags */
</script>
</html>
```

- In RADS modules, JavaScript is placed in the Output Area and sent as -0 to the form display service.

- **JavaScript Comment Formats:**

```
// ignore everything through end of line
```

```
/* ignore everything between */
```



JavaScript Conditional Test

- **If / Then / Else Logic**

```
if ( conditional expression )
{ /* execute this script if true */ }
else
{ /* execute this script if false */ }
```

- **General Rules**

- Surround conditional expression(s) with parenthesis
- Surround conditional script with braces { }
- May be nested any number of levels



JavaScript Conditional Operators

- **Conditional Operators**

- `if (x == y)` (test equal)
- `if (x != y)` (test not equal)
- `if (x > y)` (test greater)
- `if (x >= y)` (test greater or equal)
- `if (x < y)` (test less than)
- `if (x <= y)` (test less than or equal)
- `&&` (logical and)
- `||` (logical or)
- `!` (logical not)



JavaScript Built-In Functions

Built-In Message Functions

- `alert("message")` - Simple OK Message Box
- `confirm("message")` - OK/Cancel Message Box

Example:

```
if (confirm("Press OK to continue") == true)
{ /* do this if OK pressed */ }
else
{ /* do this if Cancel pressed */ }
```



More Information

- For more information about RADS,
or to obtain a copy of RADS Lite:

Email: RADS@it-rs.net



- Contact ITRS:

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East Setauket, NY 11733

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