

Intro to Web Client Development

Nicola Gervasi

Servizi Integrati Professionali s.a.s.

www.sintpro.com

Contents

- **What is Web Client? Differences between Smart and Web client architectures**
- **Web Client vs Smart Client**
- **Web Client Gotchas: what is not available and what behaves differently**
- **Web Client development: best practices**
- **SintPro WebDialog module**

What is Web Client

- 100% pure HTML
- Ajax and XML: not a bunch of web forms
- it runs server side
- it only requires a web browser

Web Client Vs Smart Client

	Smart Client	Web Client
Deployment	easy install/update	no install/update
Accessibility	ports 8080, 1099	port 8080
GUI	richer GUI	web 2.0 GUI
Coding	fast	fast
Debugging	easy	easy
Support	easy	very easy

Web Client Vs Smart Client

Q: How to choose?

Web Client Vs Smart Client

Q: How to choose?

A: Don't choose, use both!!

Web Client Vs Smart Client - DEMO

The screenshot displays a web browser window titled "SintProSystem - Main - Servoy Web Client - Windows Internet Explorer". The address bar shows the URL: `http://localhost:8081/servoy-webclient/?x=Nksv8FUwAM2YITQlwMDvzA`. The browser's menu bar includes "File", "Modifica", "Visualizza", "Preferiti", and "Strumenti". The page content is divided into a left sidebar and a main area.

SintPro System sidebar menu items:

- Home
- CRM System
 - Portfolio Clienti
- Fatturazione
 - Lista Fatture**
 - Ricerca Fatture
 - Statistiche Fatture
- CustomerCare System
 - Project Manager
 - License Manager
- CMS System
 - Web News
- Settings
 - GUI Settings
 - Invoice Settings
- Administration
 - Gestione Gruppi
 - Gestione Utenti
 - Logins Log
 - Servoy Console
- Framework Settings
 - Menu Configuration
 - Other Settings
- Other Modules
- Hippocrates
 - Prontuario Medico
- Logout

Invoices - List main area:

Rec. n. 1/9 (found recs: 9)

N.	Series	Date	Customer	Total	Payment method	Expiry	Payment
		12-07-2007	Servizi Integrati Professionali s.a.s.			12-07-2007	
1	A	14-02-2007	Batchelor Associates Ltd	€1740,00		16-03-2007	
		27-04-2006	Servizi Integrati Professionali s.a.s.			27-04-2006	
1		23-03-2006	Direct ICT	€95,00		22-04-2006	
2		23-03-2006	Sprint Computer Services s.r.l.			23-03-2006	
3	A	23-03-2006	Sprint Computer Services s.r.l.			23-03-2006	
2	B	24-02-2006	Servizi Integrati Professionali s.a.s.	€780,00		26-03-2006	
2	A	24-02-2006	Servizi Integrati Professionali s.a.s.			24-02-2006	
1	A	24-02-2006	Servizi Integrati Professionali s.a.s.			24-02-2006	

At the bottom of the main area, there is a "Totals" row:

Totals	€2245,00	€370,00	€2615,00
--------	----------	---------	----------

The bottom status bar shows "nick - Administrators", a "New" button, and a system tray with "Pronto", "Intranet locale", and "100%" zoom.

Web Client gotchas

- What is not available:
 - access to the client hardware
 - beans using Swing
 - anchors
 - the Dialogs plugin
 - List Views
- What behaves differently:
 - AutoSave()
 - Navigation: no vertical scrollbars in lists
 - Form In Dialog

Best Practices

- GUI Design: web page or desktop application style?
- No autosave: use Edit/Cancel/Save buttons
- Use a Main form and load other forms in a tabpanel
- Correct usage of Form In Dialog
- Set form sizes correctly and align elements
- Always use CSS styles

Best Practices: GUI design

- GUI Design: web page or desktop application style?
 - use a web page design for simple webclient only projects, use a richer interactive interface for cross-client development
 - be consistent in your GUI!
 - design your GUI for a reasonable monitor resolution
 - test on several Browsers to go cross-platform and cross-browser
 - keep in mind that you're on the web now

Best Practices: no AutoSave

- No autosave: use Edit/Cancel/Save buttons:
 - you always have to save explicitly
 - you can't find when there is unsaved data, use:
`if(!controller.find()) databaseManager.saveData();`
 - you can't sort when there is unsaved data
 - design a global navigation system and use it all over your solution

Best Practices: use a Main form

- Use a Main form and load other forms in a tabpanel:
 - the default navigator looks ugly on the web
 - you have more control over your forms
 - it's easier to define a global navigation system and prevent users from leaving unsaved data around
 - it's a good workaround for the browsers Back button
 - it's easier to implement different GUI in special situations: `getApplicationType()` is your friend

Best Practices: Form in Dialog

- Correct usage of Form In Dialog:
 - Modal and Non-Modal dialogs
 - show the dialog as the last step of your method
 - use a callback method in the onClose event of your dialog
 - beware of browsers popup blockers
 - always remember that your solution will run in a browser

Best Practices: size does matter!

- Set form sizes correctly and align elements:
 - table views don't auto-extend vertically
 - table views: align fields properly to not exceed the available horizontal space
 - table views: headers sizes are based on the length of the text property of fields
 - limit the usage of horizontal scrollbars
 - always design the GUI for the minimum planned web screen size and rely on anchors for smart client

Best Practices: CSS styles

- Always use CSS styles
 - it's easier to change the look of your solution if needed
 - it's easier to implement changes when new CSS properties get supported
 - it's easier to debug your Web Client GUI
 - it's nice to have separate Web and Smart Client styles and switch them at runtime based on the Client type

SintPro webDialog module

- a replacement for the Dialog plugin
- works both in Smart and Web Client
- supports i18n
- it's free
- it's open source
- available for download shortly at www.sintpro.com

SintPro webDialog module - DEMO

The screenshot displays the Servoy Developer IDE interface. The main window shows the 'Form Design' view for the file 'globals.js'. The code is as follows:

```
514 // Fill the navbar global
515 globals.navBar = 'Rec. n. ' + forms[formName].controller.getSelectedIndex() + '/' +
516 forms[formName].controller.getMaxRecordIndex() + ' ( found recs: ' +
517 utils.numberFormat(databaseManager.getFoundSetCount(forms[formName].foundset), '###.###') + ' )'
518 // Update the rec info global
519 updateRecInfo()
520 // Execute the specific onRecSel form method
521 if (forms[application.getMethodTriggerFormName()].specificOnRecSelection) forms[application.getMethodTriggerF
522 ]
523 /**
524  * @properties={typeid:24,uuid:"6c9a87d4-9a56-4ce4-8d28-4d264761236a"}
525  */
526 function navLoadForm()
527 {
528     var _form = arguments[0]
529     forms.Main.elements.tab_main.removeAllTabs()
530     forms.Main.elements.tab_main.addTab(forms[_form])
531 }
532
533 /**
534  * @properties={typeid:24,uuid:"bd464665-1b33-4d1e-9ac6-d09c2277cbc2"}
535  */
536 function updateRecInfo()
537 {
538     var formName = globals.getActiveForm();
539     // Fill the recInfo global
540     globals.recInfo = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+' on ' +
541     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy')+' '+
542     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on ' +
543     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy')
544     // Fill the recInfoTooltip global
545     globals.recInfoTooltip = 'Created by ' + application.getValueListDisplayValue('users',forms[formName].c_userid)+
546     utils.dateFormat(forms[formName].c_date,'dd-MM-yyyy hh:mm:ss')+' '+
547     'Modified by ' + application.getValueListDisplayValue('users',forms[formName].m_userid)+' on ' +
548     utils.dateFormat(forms[formName].m_date,'dd-MM-yyyy hh:mm:ss')
549 }
550
```

The Properties window on the right is empty. The console at the bottom shows the following error:

Description	Resource	P.	Location
Module sintpro_webdialog_mod which is referenced by project sintpro_console_mod does not exist.	sintpro_console_mod		Unknown

Conclusion

We have learned:

- differences between smart and web client
- best practices for hybrid development
- how to handle dialogs in web client

More information:

www.sintpro.com

Q & A

Next up: Advanced WebClient Development and Deployment - Nicola Gervasi, SintPro