

Introduction

In our previous tech tips issue, we showed you how easy it can be to create sophisticated Web applications using RPG skills. With RPGsp (or RPG smart pages) and its powerful wizards, an RPG developer creates inquiries, file maintenance applications, drill-downs, and other types of applications within minutes.

But what if you want to customize these RPG Web apps? You would be amazed how straightforward this can be. Imagine designing your HTML screens with input and output fields just like you would design green-screens, then writing regular RPG code (without complicated API calls) to display and process these screens. Sounds like every RPG developer's dream, doesn't it? Well, RPGsp enhances the RPG language and provides an excellent SDA-like HTML designer to make that dream come true. Who says that Web Development has to be harder than green-screen development?

So, if you want to modify wizard-created applications, it's no big deal. In fact, you don't even have to use any wizard. Using the RPGsp designer and the RPG language, you can quickly create any Web application from scratch, or you can use the built-in conversion utility to convert existing DDS/RPG code to HTML/RPG code.

Not Your Average Designer

You may have seen generic HTML designers and thought they were good enough; but we're not creating simple HTML pages here. We're creating sophisticated Web applications that execute RPG code to interact with databases and collect information from end-users. RPGsp's HTML designer caters specifically to this kind of RPG-driven development. While it excels at editing the usual HTML, CSS, and JavaScript code, it also offers iSeries-specific benefits not found in other designers, such as:

- **Integration with iSeries files.** This is pretty important since your Web applications are likely to use files that you will store on the IFS. These can be images, cascading style sheets, or external JavaScript files. Other HTML designer programs won't be able to read and interpret them directly from the iSeries.
- **SDA-like Input and Output fields.** By embedding dynamic fields into HTML content, RPG developers can create sophisticated applications—not just static HTML pages. The fields are not limited to simple input and output. For example, an output field can be a dynamic image, or an input field can be represented by a set of option boxes. When using RPGsp for creating Web applications, not only can you put RPG variables and RPG input fields on an HTML screen just like with SDA, you can also embed expressions like `%EditC(QTY * PRICE * (1 + TAX/100) : 'K': '$')`. These RPGLE expressions can calculate and format information on the fly. Moreover, you can create conditional fields or entire sections of HTML that are conditional.
- **Rendering database-driven content.** A generic designer does not do a great job of rendering dynamic content powered by RPG. The RPGsp designer, on the other hand, can handle dynamic content with ease – from placing dynamic images to designing complex input controls like databound drop-down boxes.
- **Split View.** Some developers like the idea of an advanced Visual Designer, but they want more control over the HTML code underneath the design. This is where RPGsp's Split View comes in handy. The Split View provides ultimate control by showing you both code and design in the same window (see Figure 1). Changes made to the code affect your design and vice versa. If you are new to HTML, this is also a great way to learn. The code section of the window provides a nice color-coded HTML editor with complete HTML help text.

The RPGsp Designer is like an SDA (Screen Design Aid) on steroids, but you are by no means locked into it. RPGsp pages use standard HTML, so you can easily open them up in any editor or designer.

The Improved RPG

By now you have picked up on the fact that RPGsp uses RPG as the primary Web development language, which is already a major advantage. But what if I told you that the RPG has been improved to make dynamic Web development easy and more natural? Not only do you have access to all of RPG's operations and built-in functions, you also get a number of new functions that are specific to the Web. RPGsp extends RPG to be a powerful Web development language that intrinsically lets you work with Web Forms, Cookies, HTTP Session Variables, URLs, Query Strings, and much more. RPGsp also enhances RPG's syntax. For example, you can now mix calculation and declaration lines in any order. Likewise, you can easily integrate RPG logic with HTML code, create subroutines out of sections of HTML, or repeat HTML within a loop to create Web subfiles. The dynamic RPG expressions embedded into the HTML are not limited by the length of a factor2 field like in traditional programs, and the expressions allow developers to encode on-the-fly IF conditions.

Even with all the enhancements to the RPG language, when an RPGsp application is compiled, a regular RPG program object is created in an iSeries library. This is nice because you can then use any RPG debugger, including IBM's STRDBG, to debug the Web application.

Testimonials

"In my 25+ years of experience, there is not a product for the iSeries that I have seen that does nearly as much as RPGsp. Within a few months, I created a web order entry system for our sales reps, and hundreds of other useful RPGsp programs. We run 3 companies on our iSeries, and we are utilizing RPGsp for all 3 of them. The product and support has been great!"

- Gerald Dalton, Spa Destinations

"Everybody in my department thinks RPGsp is the greatest thing since sliced bread. I can create working applications in 2 minutes. We are all very pleased with RPGsp!" - Bryan Yates, Collin County of Texas

"We were considering other products but then stumbled upon RPGsp and loved it from the beginning. We didn't need to be convinced - the product proved itself! We were productive immediately. As I work with the RPGsp environment and explore the different features, I am falling in love with it over and over again." - Robert St. Germaine, Pay Systems

"RPGsp is great. It's really powerful. I start with wizards, which build working applications for me immediately. Then, I am able to put RPG code anywhere on an HTML page." - Mike Wilson, ITS Compliance



(Figure 1 - RPGsp Split View)

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