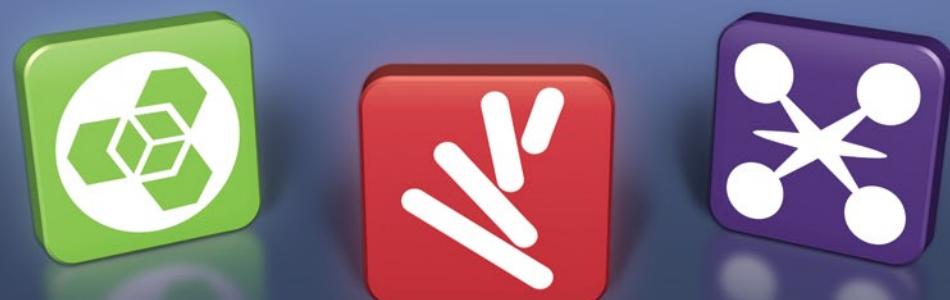**4D**

DATA LIVES HERE.™

4D Web 2.0 Pack

Rich Internet and Mobile applications made simple

4D Ajax Framework

4D Ajax for Dreamweaver

4D for Flex

"4D WEB 2.0 PACK PROVIDES THE NECESSARY TOOLS FOR DEVELOPERS TO QUICKLY – AND PROFESSIONALLY – BRING THEIR APPLICATIONS TO THE WEB. IT'S A REQUIRED PRODUCT IF YOU ARE SERIOUS ABOUT HARNESSING THE POWER OF 4D AND WEB 2.0!"

Steve Orth
President & CEO, The Aquila Group
www.the-aquila-group.com

The phenomenon known as Web 2.0 is more than just the web today.

Reaching far beyond the browser, this name for live, interactive, user-manipulable data has come to define RIAs (Rich Internet Applications) and RDAs (Rich Desktop Applications). These represent a new generation of Internet-compatible applications that can be implemented across multiple platforms on personal computers, as well as mobile devices (PDAs, smartphones, etc.).

Users are demanding more from their solutions today. On top of having stores of reliable data, they want access to it from as many places as possible, by as many means as possible. In an increasingly mobile, connected world, your customers demand the latest technologies to access their data via Firefox, Safari, Adobe AIR, iPhone, Flex, Google Gears, HTML 5, online, offline – you name it!

4D Web 2.0 Pack is the fastest way for 4D developers to get their applications into the Web 2.0 world, often with hardly any new code at all.

In fact, 4D Web 2.0 Pack allows 4D applications go online and mobile without any knowledge of HTML, CSS, JavaScript, Flash, etc. However, it's flexible enough to accommodate those who do know these technologies, allowing them to seriously customize their implementations to deliver beautiful, powerful solutions.
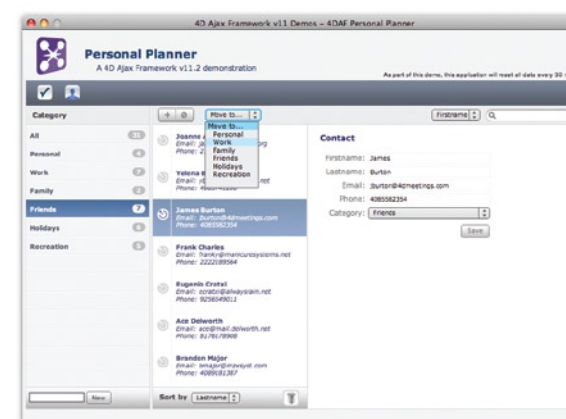
4D AJAX FRAMEWORK

Instantly generate AJAX-powered Web, Mobile and Rich Internet Applications – without any prior knowledge of HTML, JavaScript or CSS.

"Mobile platforms have come of age with the new iPhone 2.0 release. I am very excited with 4D's embracing of this platform to deliver rich mobile applications."

Mike Placko
NowData Corporation
www.nowdata.com

With the advent of AJAX, web applications have gone from static, lightweight versions of "real" applications into full-fledged applications of their own. Now offering more sophisticated interface elements and asynchronous data transfers, web-based applications more closely mimic the look, feel, and speed of their standalone counterparts. Furthermore, they are going beyond the browser into platform-independent runtimes, smartphones, and mobile devices… and even work offline!

Now, thanks to 4D Ajax Framework, you have the ability to deliver your 4D applications to these remote, lightweight platforms - practically out of the box. With only a few minor modifications, your 4D application will have an AJAX counterpart that runs on Firefox, Safari, Internet Explorer, Adobe AIR, iPhone, and so on…

What is AJAX?

While there is no official definition of AJAX, the term was first coined as an abbreviation of "asynchronous JavaScript and XML" as a means of creating Web and Rich Internet Applications.

In reality, it goes well beyond those two technologies to include CSS, XHTML, DOM (document object model)… none of which you actually have to learn to use 4D Ajax Framework!

HOW DOES IT WORK?

4D Ajax Framework provides you with a 4D component that automatically enables your application data to be accessed by calls from a web server. This component, like any other, is very easily installed with a simple drag-and-drop into your 4D application. There are no new tables nor new forms to be added to your structure.

The package also provides the ready-to-use HTML, JavaScript, and CSS code (this is the framework itself) that reside on your web server. They combine to form numerous dynamic interface elements – just like in your desktop application – that can retrieve and modify the live data served up by your 4D database. If you're familiar with these technologies – or have a web designer who is – you can mix and match as many of these elements as you like to create a Rich Internet front-end for your 4D application.

Additionally, 4D Ajax Framework includes a basic but full-featured web client that gives your application a browser-based front-end with no coding whatsoever.


Finally, you are provided with both a web-based and 4D-based administration utility so that you can remotely manage your new Web/Rich Internet Application from a browser or another desktop.

All of this comes with support for established standards and for cutting-edge technologies like Adobe AIR for platform-independent desktop runtimes, as well as Google Gears and HTML 5 for offline functionality on browsers and even the iPhone.

www.4D.com/ajax

OBJECTS OF DESIRE

Say goodbye to clumsy web forms – and the error pages that accompany them. In addition to interface objects that faithfully replicate their desktop counterparts (see box), 4D Ajax Framework provides the logic to make these objects work as a user would actually expect. Start entering text in a search field, and the results appear as you type.
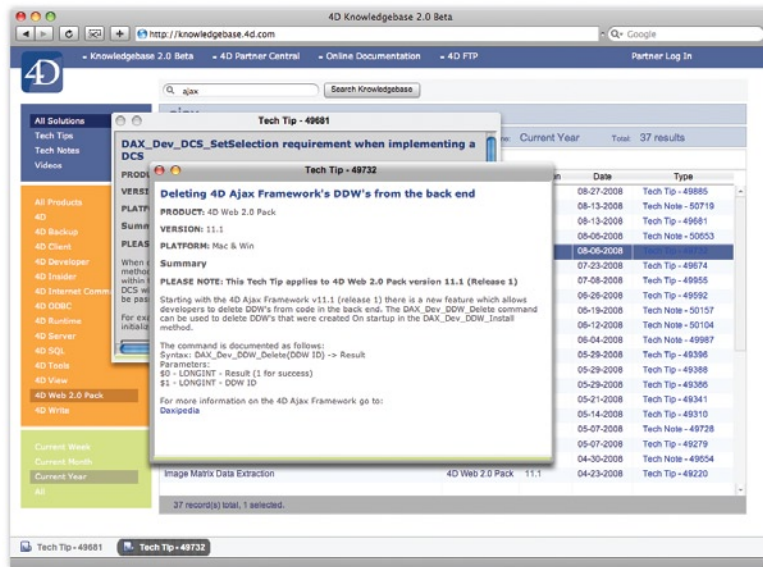
Enter data in a form, and instantly have it validated without pressing a "submit" button. Scroll down a page in a data grid, and have the requested information load in an instant, rather than waiting for pages and pages of data to download first. Pull up a dashboard to get live business intelligence data in an instant.

Not only can all of these objects be mixed and matched with one another to your liking, they can also run alongside objects from other popular AJAX frameworks (i.e. jQuery) so you can build incredibly customized solutions, or integrate 4D with existing solutions.

And – perhaps above all – these objects are functional and beautiful. That way they'll be right at home on the slickest new hardware, from a sleek tablet to a tiny iPod Touch.

Features List

POWERFUL INTERFACE
- Interactive user interface
- Live data
- Live scrolling
- Tabbed interfaces
- Input and Output forms
- Automatic image handling
- Skinnable interface
- Customizable data formatting
- Immediate field-level validation
- Wildcard searches
- Multiple windows
- Data Grid
- Data Tree
- Calendar
- Data Matrix
- Image Matrix
- Dashboards
- Charts (Canvas, PNG, Image URL, SVG)

USE ANY DATA
- Customize data via 4D or JavaScript callbacks
- Compatible with existing Web applications and frameworks
- Link external sites with local data (Mash-ups)
- Video, Flash or any browser plug-in support
- Extended Character Set Support

RUN ANYWHERE
- Compatible with Firefox, Internet Explorer, and Safari browsers
- iPhone support with additional "offline" mode
- Offline support with Google Gears and HTML5
- Adobe AIR

EASY INSTALL AND CONFIGURATION
- Web native (no browser plug-ins necessary)
- Point and click or programmatic configuration
- No additional objects (Forms or Tables) added to 4D structure
- Preference controls based on 4D users/ groups
- Native or custom password support
- Group-based localization
- Web-based and 4D-based admin client

DEVELOPER CONTROLS
- 4D event callbacks
- JavaScript event callbacks
- Session management controls
- Developer Defined Windows
- Developer Defined Actions

4D AJAX FOR DREAMWEAVER™

Build web applications using 4D Ajax objects without any hand-coding!

4D Ajax Framework makes the process of turning your 4D application into an AJAX-powered web application easy. 4D Ajax for Dreamweaver makes it even easier.

Admittedly, creating a web app from scratch can be a bit daunting for those not familiar with web technologies such as HTML, JavaScript, or CSS. On the other hand, web designers who are not experienced 4D developers may need a little extra assistance in adding 4D Ajax objects into their websites.

Either way, you can easily take advantage of Adobe Dreamweaver™ CS3's WYSIWYG interface. 4D Ajax for Dreamweaver puts all of 4D Ajax Framework's powerful objects in an intuitive tool palette, where you merely have to click once to import a 4D structure, to create a log-in panel, or to insert grids, calendars, hierarchical lists, image matrices, charts, and dashboards.

All of 4D Ajax Framework's powerful interface elements are at your fingertips.

Being that every 4D Ajax object is customizable, adjusting parameters is as simple as filling in the fields of an object inspector.
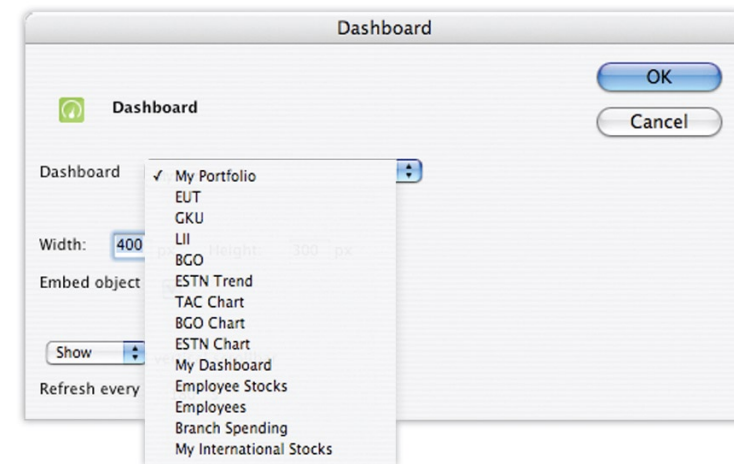
Drag your objects around the screen. Adjust their sizes. Change their appearance. The look of your finished product is limited only by your imagination. Use Dreamweaver's WYSIWYG layout features to mix, match, and place the elements you need, and even use other external sources to create your own "mash-ups."

And if you do happen to know your way around HTML, CSS, and other aspects of web design, the possibilities are nearly endless.

Items supported by 4D Ajax for Dreamweaver™

- Log-in *(using 4D's built-in security or your own scheme)*
- Data Grid
- Data Tree *(hierarchical list)*
- Data Matrix
- Image Matrix
- Dashboard
- Chart

"My passion is for developing powerful client/server applications with 4D, and that's what I like to focus on. But there are times that a project calls for a dynamic Web front-end, and 4D Ajax for Dreamweaver is the quickest way to go from an idea to a fully functional model. From there, I can let my designers work their magic and have a beautiful, full-fledged Web application."

Franck Campagne
4D Developer, Specialist in Web and New Technologies
Arkad Informatique
www.arkad.fr

4D FOR FLEX

4D brings you the world's first commercially available way to connect Adobe Flex applications with a SQL database.

Connecting a Flex client to 4D is an exciting prospect, one that's actually been possible for some time now. Ever since 4D's adoption of Web Services, Flash-based media have been able to access 4D data, whether through the integrated SOAP server or over XML via HTTP. In fact, we like to say that 4D and Flex are "old friends," having had a history of moderate data exchanges .

What's really exciting and new is that 4D for Flex takes advantage of 4D v11 SQL's native SQL database to provide a direct, speedy, and robust SQL connection between 4D and Flex. Compact data transferred in a binary format allows much larger, higher-traffic projects to be realized, therefore providing you another serious avenue to deliver your applications.

HOW DOES IT WORK?

Rooted in Flash, Adobe Flex is a set of technologies tailored toward the creation and execution of Rich Internet Applications. It is an open-source framework that is comprised of the freely-available Flex SDK and the commercial Flex Builder 3 development Tool.
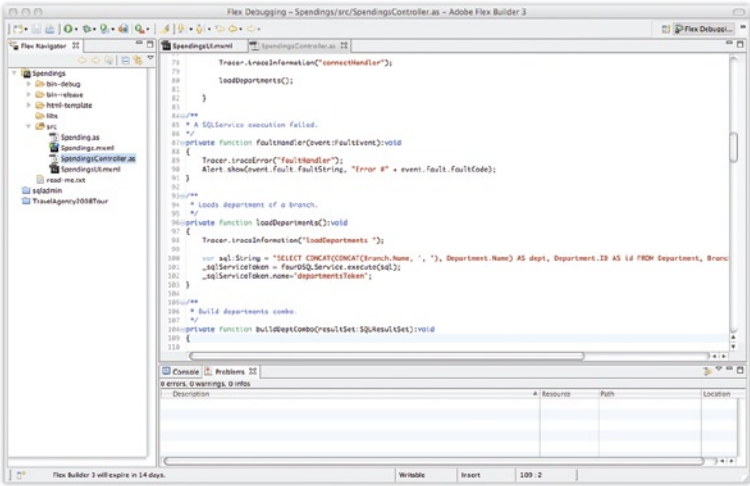
Because of its basis in Flash, applications can be executed wherever the Flash Player is present, and thus run – with very consistent look and behavior – on numerous platforms from browsers to mobile phones to operating systems like Linux.
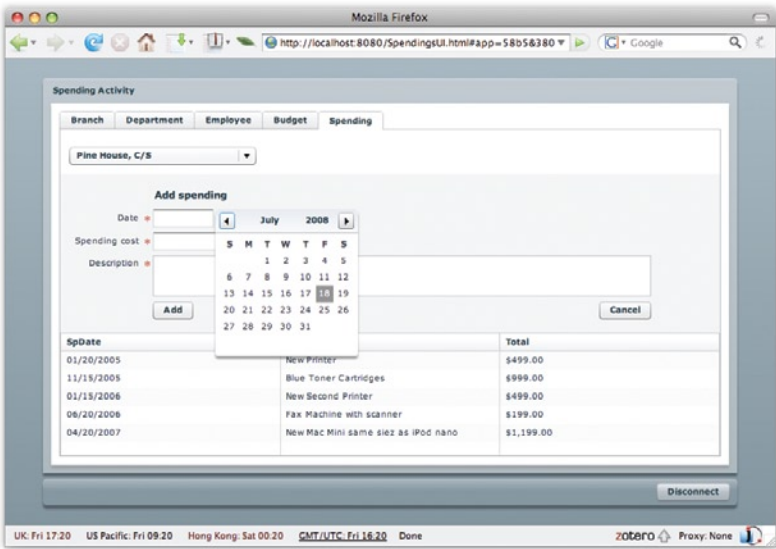
Due to its visual nature, Flex has typically been used as the front-end to three-tier enterprise solutions. Data has essentially been served up from a database application on the back-end to the Flex front-end via a conduit such as a J2EE application server.

4D for Flex changes that, allowing you to build a fully functional Web/Rich Internet application that interacts directly with your core 4D application.

Its 4D component library is referenced directly in the Flex environment. The component invokes a SQL Service that directly executes a SQL request at the 4D Server level, and thus returned directly to the Flex front-end, effectively cutting out the "middle man."

Thanks to the component, the returned SQL result set is natively handled in Flex to be displayed and manipulated in the interface objects provided in the 4D for Flex library. And because the data is handled at a native level, all of Flex's own interface elements are at your disposal.

Furthermore, 4D for Flex allows users to execute 4D application logic from the client end. 4D methods can be set to be "Available through SQL," and a Flex client can send the SQL request to execute the method.
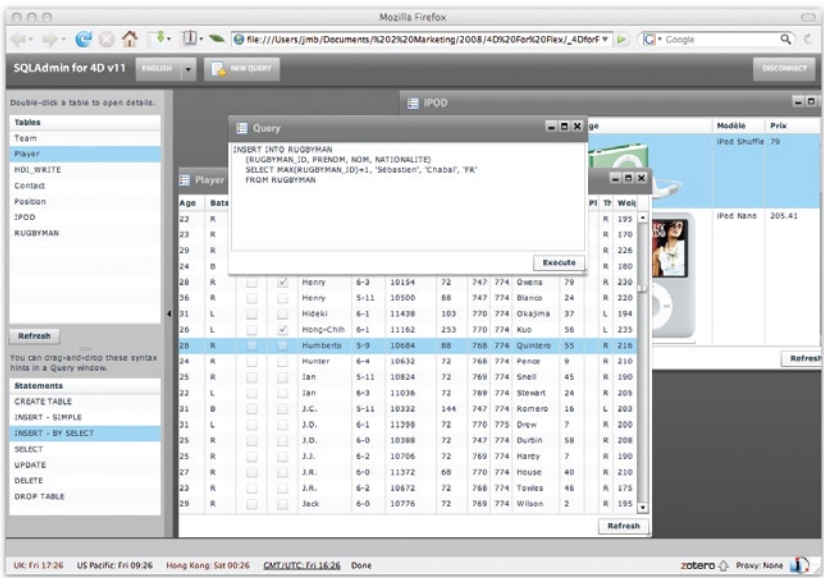
For the 4D developer, setup is extremely simple. One need only open a port on 4D Server reserved for SQL connections, and the database can be used without a single modification to the code. Security continues as before – just as the 4D administrator has intended.

Despite its simplicity, there is a lot of power involved. Using the lingua franca of SQL, data can be totally manipulated on the Flex side by using powerful commands. Data can be batch-updated with the "Bulk and Modify" function, or collected for a consolidated transaction by the "Select for Update" function. With 4D's SQL core and 4D for Flex acting as a conduit, the power of SQL is right there in any Flex application.

OPPORTUNITIES ABOUND

Flex applications, unfortunately, do not develop themselves. Creating a Rich Internet version of your application will require not only 4D for Flex, but the Flex Builder SDK and the knowledge of how to use it.

Fortunately, Flex is a hot technology with a very eager development community. Not only are there many developers who can help you build your new Rich Internet Application, but your 4D applications are an opportunity for them as well.

4D for Flex brings together two huge, passionate groups of developers who can mutually benefit from one another's talents. Flex developers can find in 4D developers the kind of robust, rapid back-ends that are the result of years of dedicated work; 4D developers can find in Flex developers a creative, dynamic channel to bring their applications into even more users' hands. A front-end developed with Flex will be immediately available as a fully functional application in any browser, as a standalone application generated for Adobe AIR runtime.

Of course, the concept is exactly what you should expect from 4D. Keeping in line with our longstanding philosophy, 4D for Flex is another way for you to use your one, core application and deploy it in various ways. We're delighted to bring Adobe's Flash and Air technologies into the family.
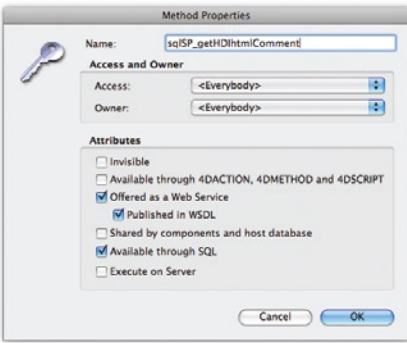
SYSTEM REQUIREMENTS

4D AJAX FRAMEWORK

DEVELOPMENT
- 4D Developer Edition 2004.7 or 4D Developer Professional v11 SQL
- 4D Server Developer Edition 2004.7 or 4D Team Developer Professional v11 SQL

DEPLOYMENT
- 4D Server 2004.7 or v11 SQL
- 4D Web Server 2004.7 or v11 SQL

BROWSERS
- Internet Explorer 7
- Mozilla Firefox 2
- Safari 2
- iPhone or iPod Touch (firmware version 1.1)

4D FOR FLEX

DEVELOPMENT
- Adobe Flex Builder 3

DEPLOYMENT (Server-side)
- 4D Server v11 SQL

DEPLOYMENT (Client-side)
- Adobe Flash Player 9
- Adobe AIR

4D AJAX FOR DREAMWEAVER

- Adobe Dreamweaver™ CS3

4D Web 2.0 Pack is available for one-time purchase, with regular updates and expansion on a subscription basis. It carries a development license, with a no-hassle deployment feature. You can take advantage of the existing Web and SQL connections allowed by your current 4D deployment product. Please contact your 4D representative for pricing information.

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