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Interakt

White Paper

MX AJAX Toolbox
First Degradable AJAX Platform for
Dreamweaver



Introduction

This white paper will introduce you to MX AJAX Toolbox, a Dreamweaver extension developed by InterAKT Online. It will briefly present:

- What MX AJAX Toolbox is and what you can do with it.
- How web developers would benefit from MX AJAX Toolbox
- Top features of MX AJAX Toolbox.
- Some conclusions about the product's market potential and its future.

Web developers and designers can use MX AJAX Toolbox to:

- Build AJAX websites from scratch.
- Update legacy websites with interactive AJAX controls and widgets.

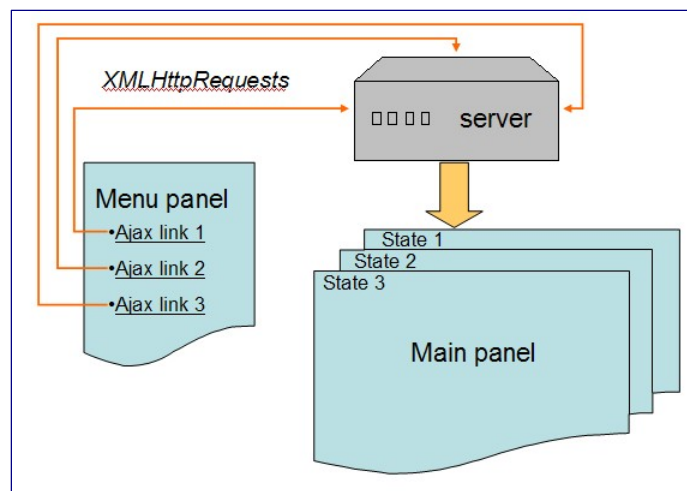
The product provides a visual environment for Rapid Application Development in AJAX, which does not require JavaScript programming skills. The extension can be used with the PHP_MySQL and PHP_ADODB server models, with static HTML sites.

Bringing the benefits of AJAX to Dreamweaver

MX AJAX Toolbox was designed to allow users to build AJAX functionalities into their websites, while sticking to their typical Dreamweaver workflow. Unlike other AJAX frameworks that require users to hand-code, MX AJAX Toolbox integrates perfectly with Dreamweaver, bringing the benefits of AJAX to developers and designers alike. Because the product uses familiar Dreamweaver concepts, it has a lean learning curve, making it approachable by people of all skill levels.

Asynchronous loading of content without page refresh

In MX AJAX Toolbox, the building blocks of any website are the **AJAX panels** – regions of content that users can place anywhere in their site and that change their state independently from the rest of the page. Each AJAX panel has one or more **states** – the actual files included in the website when an AJAX request that calls them is performed. Working with AJAX panels will appear very familiar to developers,



since the approach is similar to using editable regions in Dreamweaver templates, or using master pages in Microsoft Visual Studio.

Reduced loading time and server traffic

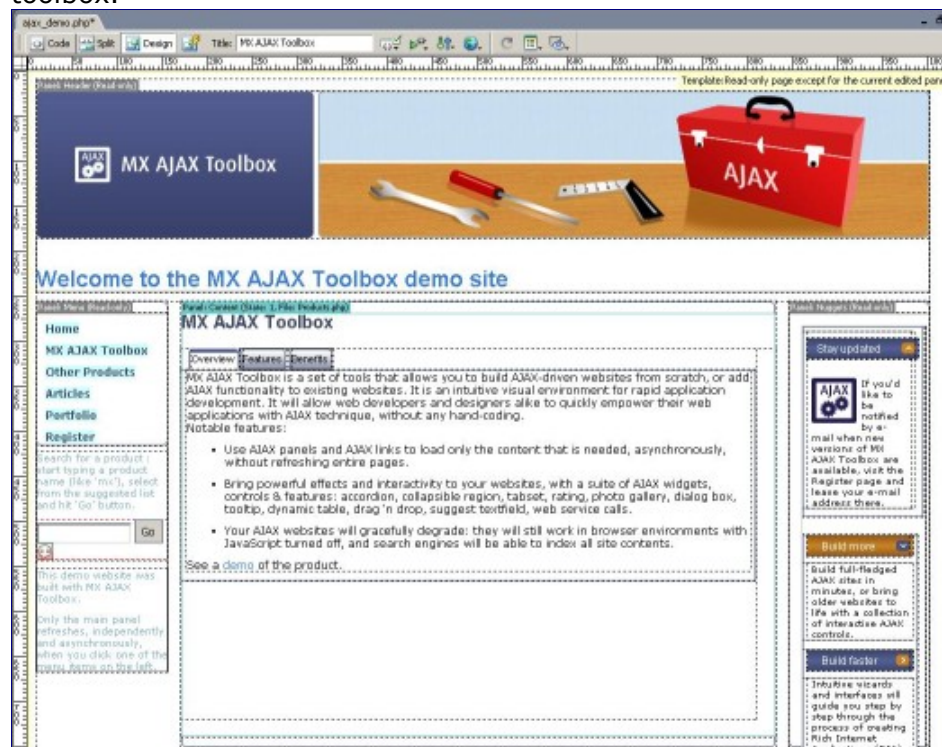
Since only parts of the site are loaded at one time (states of the AJAX panels), the loading time is obviously shorter than if the whole page refreshed. Server traffic is considerably reduced. Because only parts of the page content are sent, the bandwidth usage decreases and websites will appear to load seamlessly.

Increased interactivity and responsiveness

With MX AJAX Toolbox, developers can build Rich Internet Applications (RIA) that interact with site visitors, offering them with a unique web experience. Visitors can continue using the website while parts of it load separately and asynchronously. They will enjoy the increased interactivity that comes with a suite of AJAX controls and widgets included in the toolbox. AJAX websites will render fast on their first load, while incrementally loading necessary JavaScript files in the background. This means users on slow connections (such as dial-up) will be able to see and interact with the website immediately after they access it.

Dreamweaver integration

Developers can now offer all these benefits to their clients and site visitors, using MX AJAX Toolbox and Dreamweaver. The two applications are perfectly integrated. This means they can combine any of the default commands and server behaviors from Dreamweaver (recordsets, forms, navigation bars or repeat regions) with the AJAX features provided by the toolbox.



MX AJAX Toolbox comes with:

- A template-based engine for working with AJAX panels.
- A quick-start wizard for generating an entire AJAX website.
- 9 step-by-step wizards and 12 server behaviors accessible from Dreamweaver's Insert bar and Application panel.
- 5 property inspectors for easily changing the properties of AJAX controls.
- An AJAX Panels tab for easy managing site content and structure.
- Right-click menus for editing the content of AJAX panel states.
- A CSS skin that can be customized in minutes using Dreamweaver's CSS Styles panel.

Graceful degradation

A major concern of developers is that AJAX websites are typically not gracefully degradable: because they rely so heavily on JavaScript, they will provide only limited functionality or no functionality at all if JavaScript is disabled. MX AJAX Toolbox has successfully addressed this problem by implementing a fallback mechanism: whenever JavaScript is disabled or missing, the PHP server scripting language takes the load of generating pages correctly and serving them to the client's browser or screen reader.

Graceful degradation is inherently provided by the platform for all AJAX sites and controls, in that developers will not have to duplicate the application logic behind their sites.

Accessibility

Because of the way the platform was designed, web applications built with MX AJAX Toolbox are accessible to screen readers and can be indexed by search engines such as Google. This way, content will become available to people with disabilities and search engine ranking will not be affected by the added AJAX features.

Build more, build faster, build easier

Besides the innovative features mentioned previously, MX AJAX Toolbox comes with a suite of valuable features designed to make developers productive with AJAX.

Bookmarking and browser history

In a typical AJAX website, browser navigation would not work as expected, because most page changes are triggered by various JavaScript events and functions, not by standard URL requests. Websites built with MX AJAX Toolbox successfully address this issue and can be bookmarked and browsed just like any other site, using the browser's Back and Forward buttons. MX AJAX Toolbox encodes in the URL the exact state of the current page.

AJAX widgets and UI controls

Interaction with site visitors is key to the success of any website. MX AJAX Toolbox empowers Dreamweaver users with several AJAX controls and widgets: accordion, tabset, collapsible region, photo gallery, dynamic table with filtering, sorting and navigation, dialog box, tooltip, rating, and suggest text fields.

Layout changes

Developers often need to display bits of content only on certain pages and hide them, otherwise. In MX AJAX Toolbox, they can do this using Layout changes. This revolutionary concept allows them to define events that change the page layout, making content appear or disappear in a specific context.

Drag and drop

With MX AJAX Toolbox, users can drag and drop database records to reorder them or put them into categories. For instance, they can put photos into albums or arrange products in a product catalog by their importance.

Web service integration

Dreamweaver developers with a bit of programming knowledge can use web services built-in the platform to call a server-side function or object method from JavaScript and asynchronously send a response back to the client. Using the AJAX Web Service Wizard, developers can build a variety of form validation routines, such as checking if a username already exists on the user registration form. These routines will work in real-time, before actually submitting the form to the server.

Built on a solid, compact, and extensible library

The core of MX AJAX Toolbox is a mash-up of several popular JavaScript libraries:

- Yahoo UI Library.
- Prototype.
- InterAKT proprietary objects and methods.

The core of MX AJAX Toolbox is in many ways better than other available JavaScript libraries, in that:

- **It is solid.** The library's core functions have been tested by thousands of developers around the world, in different environments and on different frameworks.
- **It is compact.** Unlike other AJAX platforms, the core of MX AJAX Toolbox was designed to keep the overall file size and server load to a minimum.
- **It is extensible.** The core was built around popular AJAX patterns, such as AJAX stub, AJAX micro content and AJAX micro link, in order to provide developers with the easiest way to extend it.

Conclusions and future directions

MX AJAX Toolbox empowers web designers and developers alike with a visual and intuitive way to develop AJAX sites in Dreamweaver. They will be able to build responsive Rich Internet Applications that load faster, are degradable and provide a better web experience to users.

The product is currently in maturing beta development mode and is due to be released in early August 2006. For now, the extension can be used with the PHP_MySQL and PHP_ADODB server models, with static HTML sites, but InterAKT online plans to release a version with support for ColdFusion and ASP_VBScript, as well.