

CASE STUDY

"AutoTrader.com found Mediacurrent to be an extremely valuable resource during the implementation of the drivenbyyou.com site launch in Drupal. Throughout the process, the Mediacurrent team worked diligently to make sure the business objectives of the site were exceeded. Mediacurrent's experience and knowledge in building enterprise-level Drupal sites was obvious. The best proof of the success around our collaboration was that they delivered what they said on-time and within budget, and most importantly, that our client "Loved it."

Tom Gage
Product Strategy
Autotrader.com



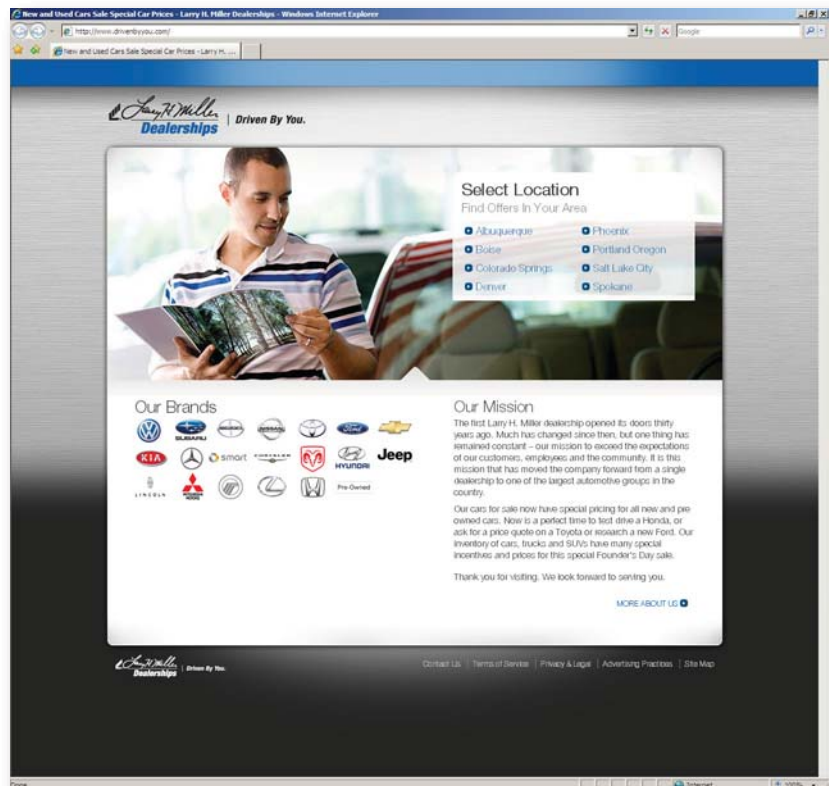
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Finding Deals on New & Used Cars the Drupal Way

SUMMARY

Autotrader.com is the ultimate online solution for buying and selling new, certified and used cars. As a pioneer in automobile marketing on the Web since 1998, Autotrader.com boasts 3 million vehicle listings while attracting more than 14 million qualified buyers each month. Autotrader.com's extensive expertise in data management and vehicle buying trends are helping car buyers nationwide make well-informed buying decisions online.

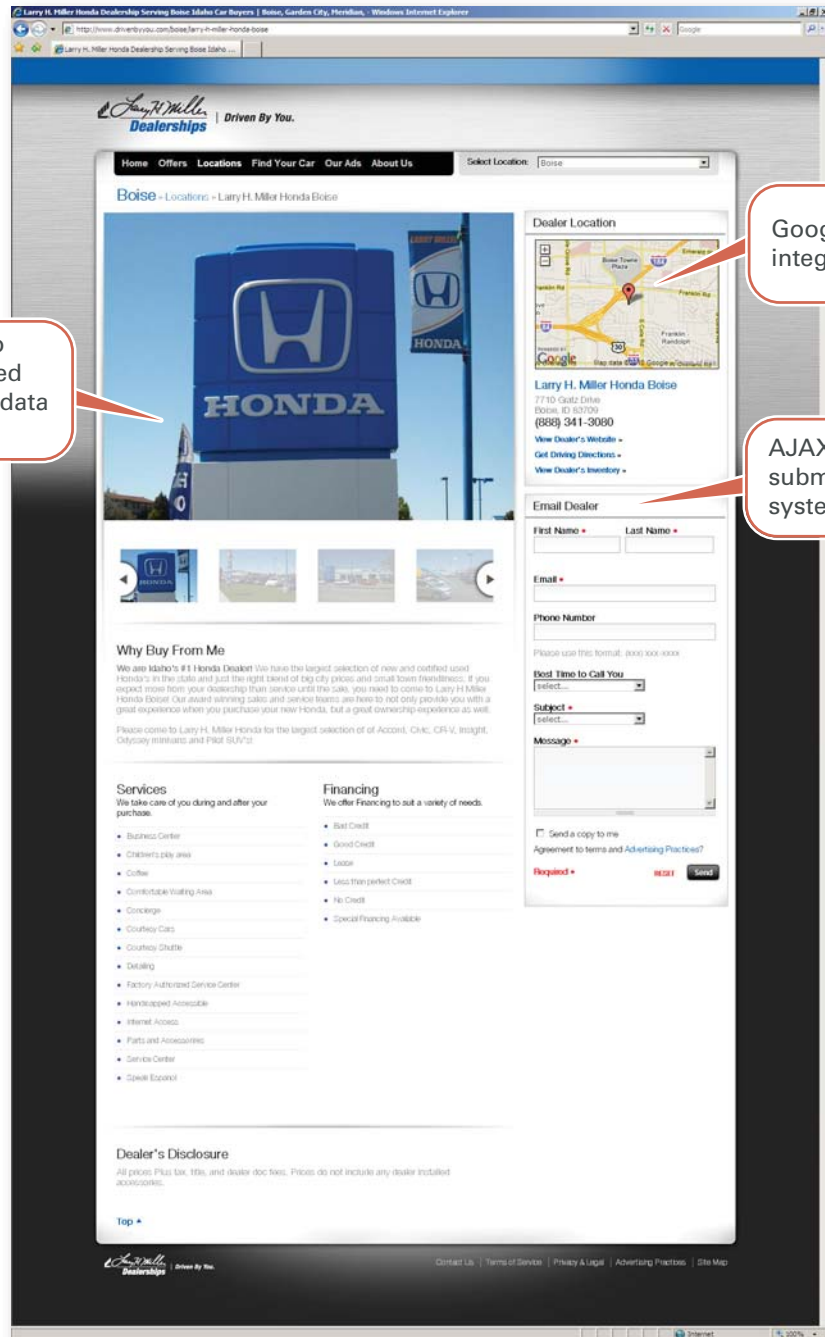
In late 2009, Autotrader.com devised a new way to market vehicles on the Web. Traditionally, online car verticals ask users to narrow a set of results by various criteria like make and model. Contrary to tradition, Autotrader.com engaged Mediacurrent to explore a more offer-focused, geocentric approach. The idea is, rather than having to spend a day making trips to various dealers in the area, a car buyer can quickly identify local dealership offers and specials without leaving home. By helping to remove some of the frustrations of car shopping, potential buyers would be able to make better informed buying decisions in less time. The new site was appropriately named "DrivenByYou.com" after Utah-based Larry H. Miller Group's signature tag line. Drupal was selected as the platform of choice because of the compressed timeline to launch, ease of customization, and the amount of required functionality already available via community modules.



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Jquery photo gallery derived from nightly data feeds

Google Maps integration

AJAX webform submits to CRM system

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CHALLENGE

Building a site that displays vehicle inventory from 40 car dealerships meant that the data describing each vehicle had to be aggregated in one central location. Because each dealership has its own method of tracking and describing inventory, standardization of the incoming data from these dealers was of the utmost importance. In addition, vehicle inventories would change on a daily basis, creating the need for a website that could efficiently update thousands of images as well as data fields for each vehicle behind the scenes. In addition, the website would need to be intelligent enough to automatically map large volumes of vehicle inventory with specific promotional offers.

Furthermore, vehicle information needed to be easy for users to find. With a site-wide inventory of over 12,000 vehicles, users needed an easy way to search based on dealership offers as well as other criteria such as mileage and sell price. Therefore, the site's user interface needed to be clean and intuitive. Users also needed to be able to find inventory through search engines, so high importance was placed on SEO techniques such as using meta tag and SEO-friendly URLs.

Finally, the site needed to be hosted on a platform that could handle nightly data processing tasks while serving web pages at optimal download times. The platform needed the ability to scale quickly, since traditional media marketing campaigns planned for the site's launch could potentially cause sudden user traffic spikes.

SOLUTIONS

In order to fulfill the requirements set forth by Autotrader.com, Mediacurrent relied on Drupal's flexible, modular framework. Mediacurrent recognized that this flexibility would facilitate building custom data exchange interfaces, permit a highly customized user interface design and support custom data entry workflows. The first step was identifying a hosting platform that could support processing a nightly data feed of 12,000 vehicle records, each with roughly 20 fields of data and up to 70 images associated with each.

Mediacurrent relied on its own Drupal VPS CentOS 5.3 LAMP stack, deployed to the Rackspace Cloud Server platform for the hosting solution. Three servers were provisioned -- a database server that also processed feed data, an image server that processed images and the Drupal site server itself. The Rackspace Cloud Server's ease-of-use in provisioning and server management was a natural fit. Should visitor traffic spike on the site, each hosting server's RAM could be increased in less than ten minutes.

After the hosting platform and configuration was determined, Mediacurrent devised a strategy for harvesting vehicle inventory records and their associated images. On a nightly basis, a feed aggregating inventory across all dealerships would be uploaded to the database server. Next, a custom, standalone PHP script would quickly parse this feed, add or update vehicles nodes to the database, apply any offers as needed and send image URLs to the image server. Images would then be downloaded, resized, and associated with their vehicle nodes. The image processing script was quick, taking an average of 15 minutes total to download and process images each night.

Meanwhile, Mediacurrent worked with key project stakeholders at Autotrader.com to design a user interface with simple, clean lines and an intuitive layout. The brushed metal

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background helps evoke a sense of style and cleanliness while visually associating the site with the auto industry.

In addition, a complex administrative workflow was simplified through Drupal's unique form altering capability. The CCK module, along with Drupal's taxonomy system, was utilized to populate an "offer" content type with dozens of data fields, adding flexibility when creating offers. Essentially, an "offer" could be thought of as a "pre-defined" search to narrow car inventory to vehicles for which the "offer" applies based on a plethora of criteria such as vehicle-make or year. In addition, car inventory could be explicitly associated with an offer by a site administrator selecting vehicles one-by-one. Ultimately, this would allow hundreds of vehicles to be automatically associated with an offer with minimal effort.

Drupal contributed modules used on the DrivenByYou.com site include:

- ⚙️ **Administration Menu** - Used by developers to provide easy access to various admin/content management links.
- ⚙️ **CCK Fieldgroup Tabs** - This lets you turn fieldgroups on add/edit pages into clickable tabs to simplify data entry.
- ⚙️ **FileField** - Used for managing non-vehicle images as well as file attachments like PDFs.
- ⚙️ **ImageField** - Used to manage non-vehicle content images.
- ⚙️ **Node Reference** - CCK field used to relate various content on the site; for example, dealers and vehicles.
- ⚙️ **Number** - Provides a numeric CCK field used by various content types.
- ⚙️ **ImageCache** - Used to dynamically resize non-vehicle images on output.
- ⚙️ **Views** - Used heavily across the site for listing various content.
- ⚙️ **Backup and Migrate** - Used to back up the database on a daily basis. This is very important because the vehicle data feed loader requires certain data structure remain exactly the same. If a change occurs that breaks the site, the database can be restored to its state prior to the change.

In addition, a number of custom modules were needed to provide functionality that could not be found in Drupal contributed modules:


- ⚙️ **AUT Blocks** - Common location for all custom blocks.
- ⚙️ **AUT Form Customization** - Used to provide custom form filtering on the vehicle search results page as well as some node add/edit pages.
- ⚙️ **AUT Pages and Paths** - Used to generate all custom pages. This includes the market home pages. This is also used to allow market name URL arguments to follow a

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common format. Because views does not allow the first argument to be dynamic, this rewrites args for some pages to make the desired paths possible.

 **AUT Vehicle Feed Loader Manager** - This is used to trigger vehicle feed loads on the database server, manage loader settings, and view statistics for past loads.

RESULTS

DrivenByYou.com officially launched on April 11, 2010, with dozens of sales event offers targeted toward 40 car dealerships across the Rocky Mountain area. Site administrators were able to quickly assemble complex sales promotions and apply them to hundreds of vehicles seamlessly. Data feeds and imports of over 12,000 vehicles and associated photographs executed flawlessly on a nightly basis, giving users seemingly “real-time” inventory displays across a myriad of car brands.

TECHNOLOGY ENVIRONMENT

3 Rackspace Cloud Servers averaging 1.25 GB RAM
CentOS 5.3 Operating System
MySQL 5.0
Apache 2.2

ABOUT MEDIACURRENT

Mediacurrent is an Atlanta, Georgia-based interactive firm that has developed a specialization and consulting vertical within the free, open-source content management system (CMS) called Drupal. Mediacurrent offers strategic direction and tactical implementation of an array of creative and technical solutions. For more information regarding Mediacurrent's services and portfolio please visit www.mediacurrent.com.