LiquidPixels®

Understanding Dynamic Imaging

A Guide for the E-Commerce Manager

UNDERSTANDING DYNAMIC IMAGING

This white paper is an overview of the technology and applications of dynamic imaging, an essential but often poorly-understood online imaging method for e-commerce.

LiquidPixels was the first to provide dynamic imaging to e-commerce in 2000, accumulating multiple patents along the way and making us the industry pioneer. Our dynamic imaging solutions are offered as an independent tool kit, unlike any other offering in the industry — enabling integration into unlimited platforms and projects.

Get Started ▶

WHAT IS DYNAMIC IMAGING?

Dynamic imaging is a revolutionary way of processing and delivering images on the web that enables high-performance, interactive online visual merchandising. As a script-driven, server-side online imaging method, it combines one or more master images with live data and returns the resulting customized image to the browser in real time, automatically.

True dynamic imaging fundamentally re-engineers the way images are processed and delivered on the web. This imaging process streamlines workflow and leverages graphic design time for drastic improvements in asset management. It also makes the best online shopping experiences possible, from zoom, pan, and 360 spin; to fast loading even for mobile images or within responsive design, to custom product configurators like virtual dressing rooms.

Online images have historically been treated as discrete objects that must be created and maintained in their entirety; this is "static imaging." Dynamic imaging has revolutionized this framework by digitizing image data so that images can be treated like every other component of a web page — data that can be manipulated in real time to produce a result customized to that user, on that device, at that moment.

AN EXAMPLE

You have an image of a product — a shirt. That shirt comes in many different sizes, styles, and colors. You need a picture of the shirt in yellow for your website, a slightly smaller picture of the yellow shirt for mobile devices, and a cropped picture of the yellow shirt to highlight in an email. Now you need a picture of the same shirt in red, plus all the different variations.

With dynamic imaging, just one master image is required. One. Then, our LiquiFire® Operating System (OS) solutions render whatever derivative you need at the instant you need it.

Using static imaging to obtain an image optimized for any one of those factors (the right size, the right color, etc.) you have to create a manual image specifically for each and every additional application, or, in some cases, ask the web browser to do some work to tailor the iamge. More manual work means more image management, costs, storage requirements, and pain.

WHAT ARE TYPICAL APPLICATIONS?

The range of applications is enormous. You can deliver the appropriate size, resolution, and format of an image to any device, instantly and automatically. If you're thinking this sounds perfect for mobile images and responsive design, you're right.

Photograph only one product and allow your users to view that product in every available color. Provide visualization of custom-configured products for approval, giving online consumers the confidence to make a purchase decision and confirming the order before sinking expenses into production. Let shoppers see what your product looks like with their name embroidered on it or with their logo embossed on it. Using dynamic imaging, you can realistically drape material swatches or textures to enable, for instance, an online furniture showroom.

You can provide visualization for custom products and send the customer's design directly to production or to their inbox as a customized product preview reminding them to complete their purchase. You can populate banner ads dynamically and across devices or generate data-driven promotional materials automatically.

"By enabling real-time visualization of custom products, [we could] increase customer experience and drive real business value for the retailer."

-Brent Bamberger, Creative Guy, Ink

I'M NOT SURE MY BUSINESS IS THE RIGHT FIT.

It's easiest to discuss the benefits of dynamic imaging in the context of online merchandising. However, any business in which online images plays a key role can and will benefit from dynamic imaging. Merchants that need to re-size and serve high volumes of images, for instance, find tremendous value in the core dynamic imaging functionality of automatic image re-sizing. When it comes to online retail, you know that customization is increasingly acknowledged as the future of e-commerce.

Whether you're in manufacturing, merchandising, or fulfillment, at some point, you're going to be faced with the challenge of visualizing a custom product. Everything from wedding favors, to swing sets, to shipping boxes are trending this way. Custom product configurators like virtual dressing rooms and whole-room designers have already raised the bar for online shopping in their markets. Your vertical may be next.

WHAT ABOUT ROI?

True on-demand dynamic imaging saves you money behind the scenes, and, if you apply it in a merchandising context, it can increase your revenue stream. Generating all the server-side image variants at the moment they're required means an exponential reduction in the number of image assets you need to acquire and maintain. Upstream, this reduces product photography and graphic design costs. Downstream, this speeds up and simplifies the asset publishing and updating workflow.

Dynamic imaging increases shopper-to-buyer conversions with greater interactivity and more compelling images. It also increases customer satisfaction and reduces product returns. If you use its web-to-print capabilities for automatic proofing or printing, dynamic imaging can also shorten your production cycle.

Due Maternity, an online retailer targeted towards pregnant women, gave their prospects a real feel of their products by using dynamic image technology — the website used images that you can spin around — 360 degrees. Result: the pages that had these rotating images out-performed the standard two-dimensional ones. And their conversion rate for these particular products increased by 27%.

https://blog.kissmetrics.com/boost-conversions-using-images/

INTEGRATION

The LiquidPixels dynamic imaging tool kit integrates into absolutely any web and workflow environment. It strictly works within the image opening of the web page you create and uses an appended URL — what we call a LiquiFire OS chain — to send a sequence of steps to the server-side rendering engine to create the desired modified image. LiquiFire OS is agnostic to the software tools used to develop the site, the UI, and workflow design of your online shopping experience, as well as to whatever platform hosts the overall system.

Because all the system requires is an image path online and an image tag, LiquiFire OS can operate with zero changes to your business or asset management structure. Some other platforms may require that your image assets be transferred to a new location. Our platform does not.

Writing image chains and preparing image assets to be dynamically changed is a learning process that varies depending on your application and team strengths. Graphic designers typically come up the learning curve quickly, preserving their role on your team while adding value to their work (prep work can be done to a single image, rather than to a set of images).

Dynamic imaging solutions are typically cloud-based, making it easy to transition to the new platform. LiquidPixels offers this industry-standard SaaS model as well as an on-site option for enterprises that prefer to keep their networking physically under the same roof. All of our imaging servers are shipped pre-configured and can be installed in your data center in minutes.

To learn more about what's possible with dynamic imaging, LiquidPixels offers a range of free online demos that showcase many applications and features in context.

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UNIVERSITY OF NORTH TEXAS®

LiquidPixels is a founding member of the University of North Texas's Global Digital Retailing Research Center (GDRRC), housed in the College of Merchandising, Hospitality & Tourism. As a founding member of the GDRRC—the first interdisciplinary center in the U.S. with a complete focus on digital retailing as a research hub and resource for the industry — LiquidPixels collaborates with faculty and other founding members to provide technology insights, updates on relevant career paths, and internship opportunities to ensure graduating students have hands-on experience in advanced technology solutions to effectively address the most demanding challenges facing the online retail industry today.

Students are given the opportunity to learn how to implement LiquidPixels LiquiFire dynamic imaging solutions and to understand the value the technology brings to retailer or business enterprises. Graduating students will go into the online retail workforce with functional knowledge of on-demand dynamic imaging and its benefits.

WHAT'S THE FUTURE OF DYNAMIC IMAGING?

One of the great things about dynamic imaging is that it adapts easily to new technologies. When LiquidPixels first released LiquiFire dynamic imaging in 2000, Flash® was a hot topic and "m-commerce" was unheard of. Because dynamic imaging requires only the building blocks of online imaging to operate (i.e., the image path and the image tag), it can evolve along with changing environments.

Some of the longevity appeal of dynamic imaging is categorically true, though there are differences among providers. Designing for growth was part of the founding principles of LiquidPixels, so LiquiFire OS was built on open standards for easy integration and long-term flexibility. Features we've offered since the beginning — like zoom and pan, or instant colorization — have become table stakes for online retailers, while new features facilitate best-in-class responsive design and interactive 360-degree product views. Customers we acquired 16 years ago are still our customers today and are operating at the leading edge of e-commerce.

MY BOSS IS DEFINITELY NOT GOING TO READ THIS WHOLE THING.

Then let us sum up for you. Dynamic imaging has already changed the face of e-commerce by making it possible to deliver custom-tailored images to any device. Leading online retailers across markets have been using it for years, and more are doing so every day as the technology becomes critical to e-commerce success. Use dynamic imaging to serve online images across all platforms and mobile devices and in support of responsive design, to provide interactive product views, or to visualize custom products. If it's not in your technology mix now, it will be.

SO ... NOW WHAT?

Understanding what dynamic imaging does is different from understanding how it could specifically support your business. Visit providers' websites to check out their product demos, and, if you like what you see, request consultations. Some providers bundle dynamic imaging in with other services or products such as marketing analytics or web design; LiquidPixels offers LiquiFire OS as a stand-alone online imaging tool kit. There are very few enterprise-level, full-service dynamic imaging providers. Some offer modular components such as viewers or colorization tools, but these providers do not offer the benefits or full opportunities discussed here.

Interested in learning more about dynamic imaging from the experts? Contact the LiquidPixels team and let's continue this conversation. Find out how dynamic imaging could be increasing your sales and saving you money by contacting LiquidPixels through our website, on Twitter, or at 866-808-4937.

About Us

LiquidPixels is leading the imaging revolution. Built on open standards, its LiquiFire® dynamic imaging solutions integrate into existing web and workflow environments, enhancing product creation and visualization while reducing production costs. LiquidPixels makes its patented technology available as a hosted service or via on-site enterprise servers with solutions that may be tailored to each customer's unique needs. If you'd like to find out more about us, we'd love to tell you. Contact us at LiquidPixels.com.