

Mainframe2 Launches Graphics Application Streaming Service

Posted on Graphics.com

Mainframe2 startled the graphics world last October by promising that it could allow people to run Photoshop as fast, if not faster, than a regular desktop installation by streaming it with any HTML5-capable browser. And with no plugins or pesky client software — just a browser, running on a PC or Mac, Chromebook, tablet or smartphone. It was even possible to share sessions, with multiple users seeing the same desktop app and being able to share the mouse and keyboard.

We gave this a try during the brief demo period and were amazed that it actually worked, although the response was sluggish. But speed relies on the proximity of the nearest available server, and for the demo these were in short supply.

Streaming Photoshop was simply a proof of concept, with the firm claiming that, "Even high end, workstation class applications that require dedicated GPUs, such as advanced 2D and 3D design and visualization software, can be delivered with complete fidelity to a variety of endpoints."

Just to keep things interesting, in August of this year graphics firm OTOY announced its X.IO App Streaming service, which like Mainframe2 moves Windows apps to the cloud, stating that it's "built from the ground up to handle the demanding nature of graphics-intensive applications, including image editing, CAD, and 3D modeling and rendering applications."

Things heated up even more when Adobe announced Project Photoshop Streaming last month, currently in beta, with the streaming provided by no less than Google. This makes perfect sense for Google, since it's working hard to show that its Chromebooks can be used for serious work. Running Photoshop proves the point so well that this could bump Chromebook sales. Google also wins because Photoshop will work directly with Google Drive, helping legitimize it for creatives.

Now Mainframe2 is back in the news with the announcement that its service has launched, such that "developers and independent software vendors (ISVs) can instantly transform their Windows desktop software into software as a service and deliver it to users everywhere." Beyond simply offering application streaming, the service now also provides onboarding, orchestration, app store and e-commerce layers, as well as connection to third-party services, such as Dropbox, as part of a single comprehensive architecture.

So what does it all mean? At the moment, perhaps nothing, unless you're using an application that a developer, such as nuPSYS or Configura, is making available through the service (Adobe is apparently a customer, so who knows?). But beyond that, Mainframe2 is now taking applications for its Early Access Program, which is open to educational and business organizations.

The educational sector would certainly seem to be a fit for this approach, since according to founder Nikola Bozinovic, who kindly responded to our questions, no permission is required from a developer to simply embed a Windows application in a webpage, as long as license compliance is being maintained.

And the benefits from this approach extend to businesses, including agencies and design shops. According to Nikola, "There is a huge benefit for schools/businesses in being able to provision (and de-provision) software and workstations (in this case virtual). People can work faster, from any device (including Chromebooks and tablets) enabling BYOD models. They can also collaborate — all without having to buy new hardware or spending any money up front. This model is especially useful for geographically distributed teams. Right now, in order to do this, organizations need to use VDI, which is slow, expensive and difficult to maintain. Mainframe2 is an easy way to solve this problem."

But what about individual users? Nikola tells us that they "plan to have the product on the market for this audience but with no set date for now." It seems to us that whether you're an educational institution, business (think design agency, CAD shop, architectural studio) or individual, there's no downside to signing up to request access to the Early Access Program. Since in our view the future of running graphics applications in the browser has clearly arrived and Mainframe2 is well positioned to be a major player.



Google Announces GoogleBit Digital Currency

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Today's announcement of Google's new GoogleBit digital currency makes sense of some of the company's recent initiatives. For example, the firm's [focus on security](#) dovetails with the need for a secure online environment, if digital currency is to finally go mainstream.

And if one of the most important aspects of such a currency is its anonymity, the last thing you want are government operatives tracking your every purchase — hence Google's participation in a move to end the bulk data collection practices currently authorized under the USA PATRIOT Act.

Going further, last week Google announced that its new chief financial officer would be Ruth Porat, formerly the CFO of multinational financial services corporation Morgan Stanley. Nothing like that to instill confidence in an audacious new cryptocurrency.

Apparently this is a project Google has been working on for some time, with bitcoin being simply an earlier proof of concept. Created by a team working within Google's secretive Project X under the codename Satoshi Nakamoto, bitcoin had surpassed its objectives and in fact had become so popular that it was increasingly seen as a barrier to the eventual adoption of GoogleBit.

In addition, Facebook's long-rumored ZuckCoin currency was nearing completion and Apple Pay, designed from scratch to enable AppleCoin, one of Jobs' last Big Ideas, was receiving widespread acclaim. So the launch was moved up from its planned fall release.

Will the new blockchain-based GoogleBit currency find acceptance? Much will depend on how it's integrated into the Google ecosystem, with early indications pointing to the AdWords online advertising service being the first to shift to the new currency. Given that the firm is generating \$60 billion a year from AdWords worldwide, adopting GoogleBit will instantly make it a currency to be reckoned with. This will be followed by its adoption on the Play store, a good fit for the mobile-friendly digital currency.

Beyond that? Keep your eye on the Google [high-altitude balloons](#) that will deliver internet access to the two-thirds of the world's population that currently doesn't have access. Once that access is available, guess what currency those folks will be using? That's right, since digital currencies are a perfect fit for countries without a developed banking infrastructure. In short, the future looks golden for GoogleBit.

On a curious note, the announcement concluded by stating that Google's original company motto, "Don't be evil," had been changed to a saying of the Marquis de Sade, "Those who define are the masters." We're not quite sure what to make of that.



Wordfence: A WordPress Security Plugin

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There are a number of ways that you might find out that your website has been hacked, beyond the obvious one of discovering a weird image on the home page, like the one above, announcing gleefully that you're now "owned" by some shadowy perpetrator.

It's more likely you'll stumble across a series of anomalies, such as modified or new files, traces of unauthorized logins or unusual bandwidth usage, which after a while produce a growing sense of panic that something just isn't right. But these days crackers are wily critters who can easily ensure that most site owners never discover an infection — unless someone else points it out to them.

This could come in the form of a visitor who clicked on a link that took them to an obvious spam- or malware-based site. Hosting providers can also provide an alert, especially in shared-server environments in which infections, once established, can quickly spread from site to site.



I once had a supposedly "premium" hosting provider alert me that my WordPress site had been infected. But not to worry, it had removed the offending files. All very nice, except its clumsy cleanup took down the site, to the point where it needed a complete reinstall. Thankfully, I had a recent backup.

But perhaps the worst way to find out that your site has become the playground of dark operatives is to have Google tell you. Because once Google thinks you're evil, it's goodbye traffic. This happened to me recently when by chance I came across a listing amongst a page of search results for a modest WordPress-based site that I was managing for a friend. There before me were the letters of doom, proclaiming: "This site may be hacked." The only thing worse would have been the even more lethal, "This site may harm your computer." Small comfort.



My first reaction was one of disbelief, since the site was running a security plugin from a respected service that was supposed to prevent this very thing from happening. I immediately changed the passwords on the site and ran a full scan, with the plugin blissfully announcing that all was as it should be. Grr!



At this point it was time to let Google know that I was aware of the problem, so I headed to its Search Console and checked out the security issues that were freaking it out. Its concerns weren't ungrounded, since it had found some nasty hidden directories with such enlightening names as signature-loans-athens-ga and cash-advance-loans-ma. Ouch.

I won't bore you with the tedious process of cleaning up the site and then alerting Google to its newly-pristine condition, so that the warning could then be removed. Instead, I'm here to sing the praises of a security plugin that I turned to for help with the cleanup and subsequent lock down.

I'm speaking of Wordfence, available in both a free and Premium version, at \$39 per year. The free version may well provide all you need, but of course the Premium version does supply additional functionality and flexibility, and that's what I've been using. I have to admit that I'm now a fan and rank it up there with Yoast SEO, Akismet, BackupBuddy and Contact Form 7 on my shortlist of essential plugins.

The laundry list of features is just too much to go through but the heart of the Wordfence WordPress plugin is its scanning capabilities, which even in the free version are very robust. There are no less than 17 options you can enable, such as scanning for signatures of known malicious files, backdoors, trojans and suspicious code. You can even scan outside the WordPress installation itself, in search of additional unpleasantness. And you have to like that Wordfence checks URLs against Google's safe browsing list.

I've opted in to receive email alerts for anything dubious that the scan finds, although post infection I'm happy to report that these have just been related to plugins that needed manual updating or that have changed their TXT documentation files. After receiving a warning you can head to the admin area on your site and view details about the warning, as shown below, and let Wordfence know what action you've taken.

SEVERITY	ISSUE
	<p>The Plugin "Akismet" needs an upgrade.</p> <p>Plugin Name: Akismet Plugin Website: http://akismet.com/ Current Plugin Version: 3.1.5 New Plugin Version: 3.1.7 Severity: Critical Status: New</p> <p>You need to upgrade "Akismet" to the newest version to ensure you have any security fixes the developer has released. Click here to update now.</p> <p>Resolve: I have fixed this issue ignore this issue</p>
	<p>Modified plugin file: wp-content/plugins/post-types-order/readme.txt</p> <p>Filename: wp-content/plugins/post-types-order/readme.txt File type: Plugin Issue first detected: 1 hour 56 mins ago. Severity: Warning Status: New</p> <p>This file belongs to plugin "Post Types Order" version "1.8.5" and has been modified from the file that is distributed by WordPress.org for this version. Please use the link to see how the file has changed. If you have modified this file yourself, you can safely ignore this warning. If you see a lot of changed files in a plugin that have been made by the author, then try uninstalling and reinstalling the plugin to force an upgrade. Doing this is a workaround for plugin authors who don't manage their code correctly. [See our FAQ on www.wordfence.com for more info]</p> <p>Tools: View the file. Restore the original version of this file. See how the file has changed. <input type="checkbox"/> Select for bulk repair</p> <p>Resolve: I have fixed this issue ignore until the file changes. Always ignore this file.</p>

Also handy is being able to view before and after versions of any altered files. In the example above, it was clear that a plugin had simply altered its TXT file to indicate support for a new version of WordPress. Whew! This is also provided in the free version.

Wordfence: Viewing File Differences

The two panels below show a before and after view of a file on your system that has been modified. The left panel shows the original file before modification. The right panel shows your version of the file that has been modified. Use this view to determine if a file has been modified by an attacker or if this is a change that you or another trusted person made. If you are happy with the modifications you see here, then you should choose to ignore this file the next time Wordfence scans your system.

Filename: wp-content/themes/boom-theme/images/js/
File type: JavaScript
File size: 104 bytes (104)
File version: 1.0.0

The Original Version of the File

```
2 Create Date: http://www.wp-cms.com/boom.php
3 Page and Order: none order, sort, post sort, posts sort, post type order, custom order, editor posts order
4 Structure of Layers: 1,2
5 Version of the: 1.0.0
6 Create Date: 1.0.0
7
8 Sort Order: and custom Post Type Objects (posts, any custom post types) using a Drag and Drop Interface (SortableList class)
```

The Modified Version of the File

```
2 Create Date: http://www.wp-cms.com/boom.php
3 Page and Order: none order, sort, post sort, posts sort, post type order, custom order, editor posts order
4 Structure of Layers: 1,2
5 Version of the: 1.0.0
6 Create Date: 1.0.0
7
8 Sort Order: and custom Post Type Objects (posts, any custom post types) using a Drag and Drop Interface (SortableList class)
```

Another nifty free feature is Live Traffic, which every two seconds updates its display of site traffic, both human and otherwise. I used this to identify visits that were clearly arriving to take advantage of exploits, since visits to the pages and directories I had deleted were highlighted. It was then just a click to block the offending IP or entire countries of origin. Goodbye, Ukraine (country blocking is a feature available in the Premium version).

In summary, Wordfence helped me identify and remove the infection, and a month later the site has remained clean. Hard to ask for more than that. Whether you opt for the free or Premium version, I'm confident Wordfence can bump the security of your site up to another level.



Corel Painter Updated for Natural Media Painting

Posted on Graphics.com

While Adobe dominates the image editing, publishing and web development sectors, there is an area in which it is somewhat surprisingly absent: natural media. And when it comes to natural media, Corel's Painter stands alone as a professional-grade tool. It has found favor with a wide spectrum of illustrators, comics and manga creators, designers and concept artists but it's also popular with digital photographers, in part due to its photo transformation functionality.

After more than 20 years of development, Corel Painter continues to evolve. Version 12 added some notable enhancements to its Real Bristle Painting System, which mimics the bending and splaying of traditional, real-world brush bristles on the canvas. Painter is known for the finesse and responsiveness of its brushes and textures. In that vein, the new Real Watercolor and Real Wet Oil brushes realistically mimicked the liquidity and viscosity of flowing and blending paint, water or solvent. Also worth mentioning were the new Gel and Digital Airbrush brushes.

Then before version X3 (aka 13) Corel released several free updates, which added non-trivial functionality. Version 12.1 provided support for 32-bit Mac and 32- or 64-bit Windows Photoshop plugins, as well as the ability to easily share brushes; an enhanced live brush stroke preview; moving or copying a brush variant to any category; an enhanced Color Mixer Palette; and improved drag and drop support for panels.

Version 12.2 added flow maps, which help direct the flow of paint by producing less saturation at the peaks of textures and more saturation in the valleys. Also new was the ability to dock palettes to the vertical edge of the application window by dragging and dropping. Finally, multi-touch support was added to Wacom Intuos5 touch pen tablets and Cintiq 24HD touch interactive pen displays. This made it possible to perform such touch movements as panning, spinning and pinching.

A willingness to provide free updates between versions is quite refreshing and shows that a subscription model, à la Creative Cloud, is not a requirement to provide customers with ongoing new functionality — instead, a developer simply has to be generous enough to commit to it. But business is business and so the time for paid upgrades must inevitably arrive. Version X3 came with almost 1,000 brushes in 30 categories, so the addition of brush searching capabilities was welcome news, along with a preview of the found brushes. Also new was the ability to display a reference image, which is handy not only for inspiration but to sample colors from it. Colors could also be sampled from four new "inspirational mixers," and files in several graphic formats, including Photoshop PSD, could be imported for use as a custom Color Set Library.

Version X3 provided 25 jitter brush variants, as well as universal jitter, the idea being in both cases to add an irregular nature to brushstrokes. And worthy of note was enhanced Wacom multitouch support; improved flow maps for creating the irregular effects common to watercolor work; perspective guides for drawing accurately in 1-, 2- or 3-point perspective; contextual brush controls; an enhanced image cloning workflow; improved support for Photoshop file import; the ability to transform across layers; and memory optimization for 64-bit systems.

Corel then thankfully abandoned its X-based version naming system and released the next iteration as Painter 2015 (version 14). The most striking new inclusions were Gravity, Flow and Spring Particle brushes. These physics-based brushes, as Corel puts it, "produce rich, chaotic strokes by emitting particles from a central point that create lines and patterns as they move across the canvas." More precisely, flow variants emit short-lived particles that flow out from the center of the brushstroke across the canvas and gradually fade. Each of the three types has its own behaviors and can be controlled by such real-time input factors as pressure, bearing, tilt or velocity. Fun stuff!

Some will say that such brush effects aren't a fit for a natural-media application but I think it makes perfect sense for Corel to explore just what a painting program can do. Also new was Jitter Smoothing, said to enhance the realism and randomness of both traditional and Particle brushes, while custom user interface palette arrangements simplify switching between tools and optimize the painting environment. Also added was the possibility to control and customize pressure-sensitive memory for virtually any brush. Performance improvements included a native 64-bit Mac version, and enhanced brush accuracy.

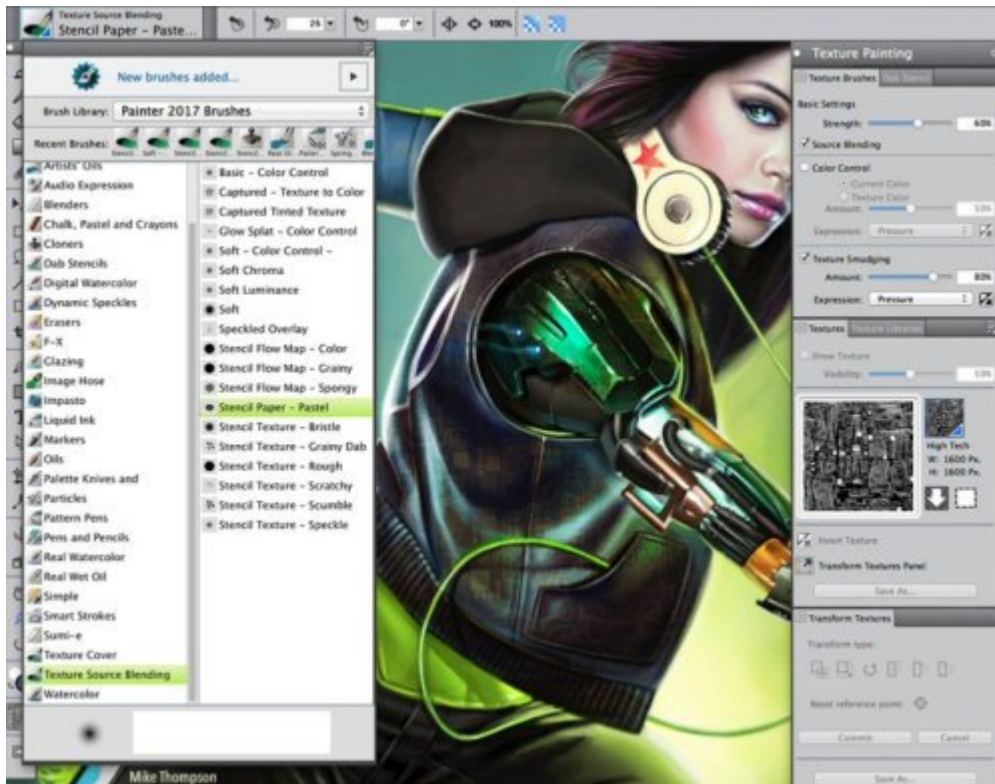
Central to the release of Painter 2016 last summer was the inclusion of 131 additional brushes, some of which were quite novel. The Audio Expression brushes, for example, react to sound, so users can play music to modify the size, angle and color variability of any brush. Then there were Dynamic Speckles. The idea here is that particle system physics combine with brush thickness control, allowing users to create unusual brushstrokes or splatters, complete with dynamic speckles that are generated as the user paints.

Leaving the fanciful behind, new "dab" types use particles and either Liquid Ink, Watercolor or Impasto to add increased realism to brush strokes. It was also possible to change the angle of paper textures and flow maps to generate even more brush stroke variety, all in the Holy Grail of reproducing the effects possible in the traditional art world. Also new in this release was claimed improvements in speed and stability; improved blending across layers and media types; Adobe Photoshop brush file import (finally!); enhanced workspace customization; and augmented context-sensitive brush hints.

What's New in Corel Painter 2017?

So much for history — if you need a more granular view of the evolution of Painter, a [version comparison](#) is available. But after 20 years is there really much room for innovation in a mature natural media application? With Painter 2017, Corel's response would once again seem to be yes, with significant new functionality showing up across the program. For example, an Interactive Gradient tool allows users to drag and drop a gradient and then edit the color and opacity in the context of the painting, with the ability to modify the transparency and smoothing, as well as merge nodes.

In addition, a Gradient Express paint feature makes it possible to quickly fill a large area with stroke-filled paint. One of the most significant new features is Texture Painting, which allows users to import texture sources and blend them into the artwork, with control over the texture color, luminance, location and distortion. This adds an entirely new dimension to Painter to the point where one wonders why this functionality wasn't added sooner.



A number of interface enhancements stand out, such as Palette Drawers for freeing up the painting area by combining panels, brush variants and custom palettes in groupings that can be opened and closed as desired. In a similar vein are Artist Layouts, which provide one-click access to display just the essential tools and controls for particular workflows, such as concept art, fine art, illustration, photo art or manga creation. Completing this is the enhanced Eyedropper tool, a tweaked Brush Selector and a more efficient Property Bar.

But what about the new brushes, you ask? It's true, no release of Painter is complete without a slew of new brushes and brush functionality, and 2017 is no exception. The Dab Stencils feature, for example, sounds promising thanks to it masking a brush dab before paint is applied to the canvas, with the ability to choose from a variety of stenciling media. And when it comes to the brushes themselves, Corel has added 106 of them, including 12 new Texture Cover brushes, 23 Texture Source brushes and 46 Dab Stencil brushes.

To learn more, useful PDF documents include a [User Guide](#), [Introduction to Painter](#) and a [Reviewer's Guide](#). There's also a solid collection of tutorials on the PainterTutorials [YouTube channel](#).

Corel Painter 2017 for Mac and Windows can be purchased for \$429 on [the Painter site](#). A trial version is also available.