# A Book About Hype

By Michael Garofalo

# A Book About Hype

A guide to creating apps, books, games and websites with Tumult Hype

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### Foreword

Back in 1994, more than quarter of a century ago, I learned about the Internet. At first, this new technology seemed a bit frivolous to me. What was I supposed to do with it? I was in college, studying to be a photojournalist. The news was traditionally delivered on paper, but that was the year when things dramatically changed. Before the year was out, I was making webpages for People Magazine.

The world started to move faster. With the emergence of the desktop computer, combined with global connectivity, entire professions changed dramatically. Some jobs were simply eliminated. The days of 1-hour photo labs, arcades and video rental stores gave way to photo sharing websites, online video games and video streaming sites.

It wasn't the smoothest of transitions. In the early days of the web, almost every cool feature required a plug-in. Do you want to watch a video? Plug-in! Do you want to play a game? Plug-in! Do you want animation on your website? Plug-in! Do you want to view a document? Plug-in!

The world tolerated this because the technology was still new and it was the best we had. Today, the Internet can be a scary place. All too often, installing a browser plug-in increases the exposure to security risks. Today, with the dominance of mobile devices, the latest trend is to streamline technology. It's not enough for our gadgets to be fast. Now they have to be power efficient too.

Steve Jobs drew a line in the sand with the iPhone and again with the iPad. Power hungry, insecure, and buggy browser plug-ins were not permitted on iOS devices. In classic Jobs style, he was able to predict the future by inventing it. Apple steered the Internet towards open standards. History proved that it was the right thing to do. With HTML5, CSS3 and JavaScript, plug-ins are not as necessary for advanced website features.

Again, the transition was abrupt. The iPhone launched in 2007 and the iPad launched in 2010. These gadgets marked the next generation of the Internet. It also made life more difficult for web designers and developers. The requirements were higher than ever. Websites needed to function on modern devices and browsers, all while maintaining support for Internet Explorer 6 on Windows XP.

The software to support this new age of web development was lacking. But in 2011, a glimmer of hope arrived — Tumult Hype. Sporting an illustrated hummingbird as an app icon, a new WYSIWYG editor for creating animated and interactive web content was born. Coding was not required. A graphical user interface could be used to dragand-drop elements and a timeline could be used to control the action.

As the version numbers increased, many impressive features were added. With Physics, multiple timelines, flexible layouts, responsive layouts, symbols, and other additions, getting started with Hype today can be a bit overwhelming. Where should you start? That's what this book is about. It condenses years — even decades — of web design and development experience and puts it in an easy to follow format. However, this book is not just for beginners. Advanced topics, such as working with JavaScript or creating standalone apps with Xcode, are also included. Hype may be one application, but it can be used to complete many different types of projects. Hype can be used to create animated advertisements, entire websites or even games.

What Tumult has done with Hype is amazing. From their style in software design, to the way they treat their customers, it's all top notch. Hype represents a

better possible future for the Internet. That's what motivated me to write this book. The world should know about the awesomeness of this software.

That's the aim of this book — to attract new users to Hype and to help existing Hype users improve their skills with the software. Also, this book aims to help designers and developers (like you) to build a better world.

A good website can help the world to communicate. The Internet brings people together, encouraging collaboration, and the sharing of ideas. What you build in the digital world spills into reality.

There's another reason why I'm writing this book. I find the modern Internet to be so plain. The Internet is not just a utility. It can be artful. Mobile devices expanded the reach of the Internet, but it did so by flattening the look of the web. Gone are the days of pseudomorphic designs. Perhaps that's a good thing, but it makes today's Internet less memorable. When was the last time you were impressed by the look or functionality of a website?

The late 1990s, to the early 2000s, was an era of the digital gold rush. The technology was new. Not only was this a new experience, it was an experience without equal. Perhaps that level of excitement may never return to the Internet, but I sincerely hope not. If it is to change, it's going to take people like **YOU** to bring back those days of wonder — to make websites beautiful and fun again.

Hype is a powerful tool. It can be used to build amazing websites. We have the technology, but there hasn't been that watershed moment when the software truly hit popularity. Hype could revolutionize the look of the web. This book can be that catalyst — by giving you the knowledge and inspiration necessary to make something wonderful.

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# **Section I — Getting Started**



# Chapter #1 — Installation

One of the appealing features of Hype is that it is not tethered to the cloud. Developers and designers don't have to rent Hype on an annual or monthly basis. Instead, a fairly inexpensive download enables content creators — from all around the world — to build modernized websites.

The Mac App Store launched on January 6, 2011. 24 hours later, the Mac App Store had over one million app downloads. Hype joined the party that May. Those were the days when Apple still named the different versions of OS X after cats. Snow Leopard (OS X 10.6.6) was the first version of OS X to support the Mac App Store.

There have been some changes to the Mac operating system over the years. As of version 10.15, the Mac operating system is referred to as macOS. "Catalina" is the nickname for the 2019-2020 version of macOS. Catalina is not another type of cat. It's a rocky island in California. The following Mac hardware is supported by macOS 10.15.

iMac (2012 and later)	<ul> <li>MacBook Pro (2012 and later)</li> </ul>
iMac Pro (2012 and later)	<ul> <li>Mac mini (2012 and later)</li> </ul>
MacBook Air (2012 and later)	<ul> <li>Mac Pro (2013 and later)</li> </ul>
MacBook (2015 and later)	

If you're buying a Mac to run Hype, the supported hardware list should help you choose the appropriate Mac. Hype 4 requires a minimum of OS X 10.10 (Yosemite). That means even somewhat older Mac hardware can run Hype.



*Tumult Hype 4 on the Mac App Store* 

A decent amount of RAM is recommended though. Many of the older entry level Macs were released with a minimal amount of memory. With many of the newer Macs, the RAM is permanently soldered to the motherboard. If you're purchasing a used or new Mac, the amount of RAM is an important stat to consider. Having too little RAM can slow down your Mac, while adding too much RAM can get expensive.

Storage space is different from memory. Hype is generally not too taxing on the hard drive. If you're using an older Mac, specifically for Hype, upgrading to a solid-state drive might be a great idea. SSDs usually have less storage space than an equally priced conventional (spinning platters) hard drive, but SSDs are usually much faster. Choosing the right drive depends on the types of projects that you're working on. Hype projects with video can consume plenty of hard drive space. In that scenario, Apple's hybrid "Fusion Drive" might be a good balance of speed, storage space and affordability.

While Hype 4 is exclusive to macOS, it is not exclusive to the Mac App Store. Hype can be purchased directly from the Tumult website.

https://tumult.com/store/

There's even an "Educational Store" for students, faculty and staff of educational institutions. Qualifying customers can enjoy a substantial discount on Hype. Additionally, both the standard "Tumult Store" and the "Educational Store" have "Volume Pricing" discounts for purchasing multiple licenses of Hype.

If you're reading this book right now, you probably have Hype already. But if not, or if you want to introduce Hype to a friend, colleague or family member, Tumult does offer a 14-day trial of the software. It's available on their website.

#### https://tumult.com/hype/download/

Another bonus to the Tumult Hype trial is the ability to test the different editions. The initial launch screen has an option to choose between the "Standard" and "Professional" editions.

But if you look closely at the free trial version of Hype 4, you might see an interesting feature at the bottom right of



the initial launch window. The "Use Free Viewer" button enables another mode. Here is the official description.

"The Free Viewer mode allows you to open and preview Hype documents created by a licensed copy of the app. If you want to create and save documents, you can start a 14-day free trial or purchase Hype."

Since Hype 4, the 14-day free trial also applies to the Mac App Store. You can trybefore-you-buy the software. Then, upgrading is done via an in-app purchase. Choosing between the "Standard" and "Professional" editions can be tricky for the cost conscious. Tumult lists the differences on their homepage.

#### https://tumult.com/hype/compare/

To summarize, the "Pro" version includes Physics-Based Animation, Symbols (including Persistent Symbols), Sprite Sheets, Responsive Layouts (Breakpoints), Image Sequence importing, Viewport Actions (Waypoints), Grid System, Editable HTML Attributes and additional options for exporting.

Fortunately, Hype can be upgraded in stages. If you don't need the "Pro" features, then you can start with the "Standard" edition. This book covers both the "Standard" and "Professional" features.

If you've purchased your copy of Hype through the Mac App Store, but you're having trouble finding the app on your computer, Apple's "Spotlight" search feature can help. By pressing the "Command + Space" buttons, or clicking the magnifying glass icon at the top-right of the screen, a search field should appear. This quick search should allow you to launch the application.



Once launched, the Hype icon in the "Dock" can be right-clicked or press "Command + Click" to select the "Keep in Dock" option. That should indefinitely add Hype to the Dock. This makes it easier to launch the Hype app in the future. If you use Hype a lot, the "Open at Login" option can be used to autolaunch the app.

## **Chapter #2** — Introduction

When explaining new development applications, I like to start with the "Hello World" exercise. Being able to display text to the screen is a great starting point for a beginner. It also feels like a proper introduction. It's as if you're communicating with the software. You're literally stating, "Hello!" But with Hype, the task is rather trivial.



By pressing the "Elements" button in the toolbar, the "Text" option should appear in a floating menu. Selecting that option should create a new box in the

workspace, with the words "New Text" already entered.

By replacing the words "New Text" with the words "Hello World!", you've completed the "Hello World!" exercise. All that's left to do is to test it. By pressing the "Preview" button, the words, "Hello World!" should appear in your browser.



It might not seem like much, but a lot just happened. To see this, view the source code. If you're using Safari as your web browser, you can enable the "Show Develop menu in menu bar" option from the "Advanced" tab of the Safari "Preferences" toolbar.



Once the developer mode is enabled, the "Develop" menu should appear in the Safari menu bar. There are many options in this menu. To view the source code, select the "Show Web Inspector" option. This is more powerful than simply selecting the "Show Page Source" option, as you can specifically target your text with the "element selection" tool. (The icon for this tool looks like a crosshair.)

		Hell	lo World!
div	//////////////////////////////////////	2XGS8KTJ57V9.HYPE_e	element <b>103</b> px × <b>34</b> px
100	400	500	600 700
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Network Debugger Resources Tir	melines Storage	Canvas Audit	Console + ଊ
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Even if you know nothing about programming, you can probably see that this is an inordinate amount of code. Showing you this jumble of letters, numbers and characters is not meant to overwhelm you. Rather, the main idea is to change the "I'm not a programmer" mindset. This is programming! Hype just translated your commands into HTML5. To truly master Hype, a strong understanding of web development is required. If you're new to programming, this is how it starts. This simple little exercise gives a glimpse into what goes on behind the scenes. To the novice, it's just a bunch of HTML code. But if you look more closely, you can see the structure.

#### Document > HTML > Body > Hype Container > Scene > Element > Hello!

This is known as the "Document Object Model". It's the standard upon which modern webpages function. It's a tree-like way to organize data, as elements branch out from the starting point. But in this "Hello World" example, it was basically a straight line to your introductory text.

Tumult's FAQ states, "All animations are based on DOM manipulations driven by JavaScript." To put that in laymen's terms, you can think of it as boxes within boxes. The "Hello World" text was placed inside an "Element". That element was placed inside a "Scene". That scene was placed inside the main "Hype Container". That container was placed inside the "Body" of the main "HTML" "Document".

What makes Hype special is that it can animate the boxes inside of the main Hype Container. Creative thinkers are taught an old cliché, to think outside the box. Developers are all about the box. This hierarchal arrangement of elements is the foundation for your web/Hype content. It doesn't matter if your Hype project is basic or advanced — the structure is the same.

What you put inside the boxes, that's up to you.

# Chapter #3 — Elements



Before the Internet, the word "Developer" was traditionally associated with construction. While a traditional developer

> might use bricks to build a building, a Web Developer uses "Elements" as their construction material. Hype elements are essentially blocks of

HTML. What makes your project stand out is what

you do with these blocks — how do they look, what's inside of them, how are they animated? To create an element in Hype, you can use the "Elements" option in the toolbar. Clicking that icon displays the list of available elements. This chapter is an overview of those elements.

When adding an element to a Hype project, you are essentially creating a set of HTML tags, such as "div" or "iframe". It's HTML5 code being created in a dragand-drop way. The following is sample code from a new "Text" element. The default words "New Text" are highlighted in bold.

```
<div class="HYPE_element" id="hype-obj-
KPIUIYFCN8J91MOCRP8C" hype_scene_index="0"
style="pointer-events: auto; position: absolute;
padding: 8px; overflow: visible; word-wrap: break-word;
display: inline; white-space: nowrap; font-family:
Helvetica, Arial, sans-serif; z-index: 1; font-size:
16px; color: rgb(0, 0, 0); transform-origin: 50% 50%;
transform: translateX(254px) translateY(181px)
rotateY(0deg);">New Text</div>
```

Hype hides the code from your view. But if you look at the source code, you can see the truth. A new "Text" element is essentially a set of "div" tags.

Double-clicking a "Text" element will allow you to edit the text. Using the sample code as a guide, "New Text" was bolded. When you edit a text box in Hype, the bolded text area is what's changed. Hype is automatically handling the HTML5, JavaScript and CSS for you.



While Hype presents elements as separate types, the actual differences between them are blurry. When double-clicking a "Text" element, a little pencil icon appears below, and to the center, of the box. By clicking that icon, you can edit the contents of the box. This is not just for plain text. It's HTML code. Even though the element is labeled "Text", you can fill it with all sorts of web content.

As an alternative to double-clicking, you can click the element once and then select "Edit > Edit Element" from the menu bar. If you want to work with HTML code, you can use the "Edit > Edit Element's Inner HTML" option. Sometimes, you might have elements that are offscreen. It can be tricky to click the little pencil icon. Using the menu bar command, or the "Command + Control + E" quick keys combination, can solve that problem.

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Matching your content to the appropriate element icon can help you keep your project organized. When a new element is added to the scene, it is assigned a layer. Elements can be stacked on top of

each other. Hype decorates this arrangement with little icons. A "T" shaped icon is for "Text" related layers. A little picture icon is used to represent "image" elements. A little "OK" icon is used to represent "Button" elements.

The layer icons are meant to highlight the type of content in that element / layer. That only works if the content matches the icon. Even though you can use HTML code to add images, videos, buttons and other content inside a "Text" element, this might get confusing when you have many elements. To keep your projects neat, you might want to reserve "Text" elements for just text-based content.

When selecting the "Image" element, Hype will prompt you to select the image. This file is then placed in the "Resources" folder. While images can be manually dragged into this folder, using the "Image"

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element can make it easier to manage a Hype project.

While the "Image" element can make it easy to add an image to a Hype project, the automation might not be in a way that you prefer. There are different ways to add an image to an HTML document. When using an "Image" element in Hype, the image is added as a background image style. If you're not sure what that means, imaging the difference between hanging a picture on a wall verses covering the wall with sheets of wallpaper. A background image is similar to a wallpaper texture. Background images can be shown as a repeatable pattern.

Hype's automatic code generation is easy for beginners, but that automation might cause limitations when customization becomes necessary. Here's a dramatically simplified version of how a Hype creates the "Image" element code.

```
<div style="background-image: url('image.png');"></div>
```

It's also important to note that the "background-image: url(...);" portion of the code was also shortened for readability. In actuality, the path to the "image.png" file is quite long. Complicated URLs can make it difficult to manually load image files from the "Resources" folder. Fortunately, Tumult created a way to resolve this problem.

```
<img src="${resourcesFolderName}/image.png" />
```



By using JavaScript, the path can be generated dynamically. If you're manually adding an image to a Hype element, it's important to add the path to the "Resource Folder". By using "{resourcesFolderName}" in the path, the local image can load regardless if you're working in the Hype app, previewing your project in a web browser or uploading your project to a live site.

Here are some reasons for manually adding images to your Hype project.

- You're loading an image that's outside of your Hype project, such as an image file that's already on your website.
- You're using HTML5 / CSS / JavaScript techniques that are not available in Hype.
- You're using Base64 to encode your images, reducing the amount of separate files being loaded from a web server.
- You're using multiple layers of images, such as a background image behind the primary image.

The main takeaway — it's important to understand what Hype is doing with the images. While it can be tempting to let the program operate on autopilot, there can be fringe cases where you'll want to override the way an image is added to the project.

(It's also important to remember the "\${resourcesFolderName}" "Substitution Variable". That's something unique to Hype, but it's easy to forget.)

In between the "Text" and "Image" element options, there are two separate "Button" element options. The difference is in the style. A regular button starts out as a rectangular box with a light-gray background. The "Textured Button" has rounded edges and a vertically blended background. Both of the button elements have a 1-pixel border, with a slightly darker color than the background. You don't have to stress about choosing between them. A regular "Button" can be changed into a "Textured Button" and the other way around.

The larger concern for buttons are their three different states — "Normal", "Hover" and "Pressed". Hype "Button Controls" are a way to add some interactivity to your elements. Just click on the tabbed button to choose which state to edit.



*The top button is a regular button. The bottom button is a "Textured" button. Both of these buttons can have editable states — Normal, Hover and Pressed.* 

If you get confused with managing these three states, you can start from the beginning with the "Edit > Clear All Button States" menu option. Next to this option is the "Hide Button States" toggle. Button states can be added to "Text" or "Image" elements. For many of the other elements, the button states option will be grayed out in Hype.

Similar to the button elements is the "Audio" element. If you want to attach a sound to a button, using the "Audio" element is a quick way to do it. The sound should play when the element is pressed.

The "Video" element uses the HTML5 video tag to load a video. For modern browsers that support HTML5 video, no plug-in is necessary. Hype uses Quicktime as a fallback for Internet Explorer 6-8.

New in Hype 4, and only available in the "Pro" edition, a "Sprite Sheet" can be added as an element. This element type accepts a series of images, a single image (with equally separated tiles of animation) or even an animated gif.

	11111
Element	
HTML Widget	
Edit Code Snippet	
Specified URL	

The "HTML Widget" is the equivalent of an HTML iFrame, which can be used to embed external webpages into a Hype document. The "HTML Widget" can also be used to create an embedded HTML page within the Hype project. Use the "Edit Code Snippet" option to add custom HTML code.

The next three elements are separated into their own group. These are shapes. There's a "Rectangle", "Rounded Rectangle" and an "Ellipse". Each one is a set of div tags, but the elements have been stylized to look more like a geometrical shape. These elements are quite similar to a "Text" element. The main difference is that (by default) a grayish background color has been applied, along with a grayish border color.



The rounded edges are created with a "Border Radius" effect. That style setting is the only thing separating the three elements. By default, the "Rectangle" has no border radius and the "Rounded Rectangle" has a 10-pixel radius. The "Ellipse" element blocks out the border radius setting in Hype. But in actuality, if you inspect the HTML code, the border radius is 50% for all four corners. That means

the "Ellipse" is essentially a rectangular element, but with the downside of a permanent border radius setting.

Even though "Text" is the first option in the elements list, you might find yourself using way more "Rectangle" elements. Text and a background image can easily

Border	
Width 2 px 🗘	Radius
Style	Padding
Solid 🗘	0 px 🗘

be added to a "Rectangle" element. With HTML code, all sorts of content could be added to the box too. Rounding the corners is just another setting in Hype. While these abilities also apply to the "Text" element, the "Rectangle" element has a generic layer icon. That makes the "Rectangle" element more versatile.



Vector based elements were added in Hype 4. There are three types, "Polygon", "Vector Shape" and "Pencil". Vector shapes are determined by points, not pixels. That means vector shapes can be scaled indefinitely and still maintain their quality.

The "Polygon" lets you create a convex shape with three or more sides, such as triangles (3), pentagons (5) or octagons (8). The "Vector Shape" doesn't actually have a shape until you use this tool to add points. The "Pencil" tool works in a similar fashion, but operates as "Freehand" drawing. If you want to precisely add points, use the "Vector Shape" tool. If you want to draw your shape, use the "Pencil" tool. Regular shape elements (such as the "Rectangle" shape) can be converted into vector shapes, but that will clear HTML content inside.

New elements can also be created by simply dragging-and-dropping or pasting content right into Hype. Starting with Hype 3.5, a single keyboard key can be used to create new elements.

■ Text – T	<ul> <li>Ellipse – O</li> </ul>
<ul> <li>Button – B</li> </ul>	<ul> <li>Vector Shape – V</li> </ul>
<ul> <li>Rectangle – R</li> </ul>	<ul> <li>Pencil – P</li> </ul>
<ul> <li>Rounded Rectangle – U</li> </ul>	

Elements are critical building blocks within Hype — and on websites in general. This chapter only contains a brief overview of these elements. It's information to help you get started. Additional information is included throughout the book.

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# Conclusion

When I was little, I used to lug large textbooks to and from school. They were heavy. And if I lost one, they were expensive. Typically, it would take a class six months to a year to cover all the chapters. If it took so long to merely read a book, writing a book seemed incomprehensible. But similar to how teachers assigned reading assignments, the process is managed a little bit at a time. We didn't read 500 pages in one shot. Instead, it was 10-20 pages a week or a few pages per day.

The goal for this book was to hit 500 pages. The idea was to create a beefy publication, something that you could show off. Unlike an ebook, a printed book can be displayed on a coffee table or a bookshelf. It becomes a symbol of your newly gained knowledge. Yet, I had never written anything this large before. Was this goal too lofty? While the end result seems obvious now, there were many doubts along the journey. Do I really want to do this? Isn't 400 pages enough? Will people actually buy the book? Will people actually enjoy the book?

Many people dream of writing books, but the ideas just float around in their heads. For whatever reason, something stops them. What was different here? How did this book get done? It was completed the only way it could ever be done — a little bit at a time. Writing a whole book seems massive. Writing a single page is far less noteworthy. Just about anyone can write a single page on a topic, so why not two... or three? That logic helped to identify the target number. 500 divided by three is approximately 167. That's less than half a year, which is roughly 180 days. If I could just hit three pages per day, a massive project would be completed in less than six months. By breaking up the project into little pieces, the goal became far more realistic.

This is not to brag. This is to encourage you. Some days I would hit my three pages per day goal. On other days, I would even surpass it. That felt great. But occasionally, I wouldn't write any pages. On one particularly bad day, I was working so hard that I neglecting my health. I ended up in the emergency room. Certainly there were setbacks, but I stayed determined. Overall, the three pages per day average was maintained. All I had to do was cut back on more frivolous activities. Instead, that time and energy was focused on more productive endeavors. Sure, I still played some video games. I still watched TV. It was just less of doing that.

By hitting the sweet spot, not working too hard or too little, the project felt more enjoyable. Hopefully that sentiment is reflected by the quality of this book. That's the message I'm trying to share.

While this is a book about Hype, it is also a life parable. Learning a programming language can seem so alien to beginners. Looking at all the squiggly characters, letters and numbers, it is discouraging to a lot of people. Yet, learning JavaScript is critical to improving your skills with Hype.

This book represents a unique way to learn Hype and JavaScript. Maybe you noticed the difference. The lessons are intentionally small. The templates focus on a specific task. They are building blocks that can be combined to form advanced and beautiful structures. You don't have to absorb everything in this book all at once. Just a little bit a time, maintaining a consistent pace, and suddenly you might find yourself with newfound abilities. From there, you can complete all sorts of wonderful projects.

Thanks for reading a book about Hype!