[SOUND] Let's

briefly talk about the history of HTML.

Its usually the case that the history of any technology

is not particularly interesting or exciting and

I can't claim that the history of HTML is that interesting either.

But there are certain parts of this history that not only give you

an understanding of how this technology was developed, but

also gives you an appreciation of certain aspects of HTML

that are still relevant and applicable today.

Play video starting at ::32 and follow transcript0:32

So before 1997, there were no community standards, so

browsers basically did whatever they wanted.

They invented new tags.

They implemented the same tags differently.

I was kind of the wild west of the web.

Play video starting at ::46 and follow transcript0:46

And you could go to a website and

end up being told that your browser is not compatible with this website so you have

to go get a different browser in order to even view the website to begin with.

Now around 1997 the World Wide Web Consortium, the W3C, came up

with the first standard browsers actually started to pay somewhat attention to,

which is HTML4 and they very quickly updated it to HTML4.01.

That standard was, pretty loose, and, the browser's had, still had,

way too much leeway inside that standard,

as to how they implemented it, and how pages we're being rendered.

So, around 2000, the W3C came up with another specification called

XHTML 1.0 and that specification was based on XML.

And XML is a very rigid but very clear markup language.

In W3C wanted to kind of pick that up and keep going, with it and produce XHTML 2.0.

The problem is that the browser vendors which at this point already had

a history of not really listening a 100% to any standard, they decided that

this whole W3C thing is moving way too slowly, and on top of that,

they felt that the specifications are really moving in the wrong direction.

So the browsers banded together, the browser vendors banded together and they

created yet another group that produced specifications that was called WHATWG.

And WHATWG, that's yet

another abbreviation because we don't have enough of them.

So that group is called WHATWG and

it stands for Web Hypertext Application Technology Group.

So it's a bunch of browser vendors that got together.

And this group is much less democratic than the W3C.

In other words they have one central, one editor that makes the final decisions so

all the browser vendor representatives can argue all they want but

at the end the appointed one editor that kind of makes the final decisions.

And they're the ones that are driving the entire HTML5,

what we have now, they're the drivers behind it.

So for a long time the two organizations didn't really see eye to eye much at all

and they didn't work together, so

they were really going to two different directions.

But I think W3C eventually realized that hey, you know, that organization is

actually being driven by the people and by the companies that actually matter.

Because they are the guys who are developing the browsers themselves,

so maybe it's a good idea to kind of make peace and

try to see if we can work together somehow.

And this is what happened around 2007, 2009 time frame.

So WHATWG and W3C started sort of kind of working together.

And what they produced in the end is what we have now, HTML5.

So what does any of that matter to you?

Well what matters now is that there are two organizations out there, one is called

W3C and the other one is WHATWG and they're both in charge of HTML somewhat.

So it could be that you could get into a situation,

it's certainly possible that a browser potentially can be compliant

with a specification which isn't yet even formalized by the official W3C.

So, it makes your head spin a little bit, doesn't it?

Play video starting at :4:4 and follow transcript4:04

So the way they divided it up is that W3C is going to be in charge of

the standards since this is what their bread and butter is, its standards.

And they are going to be in charge of the HTML5 standard.

And WHATWG is not even going to give a version to their HTML standard,

they're just going to say it's HTML and it's constantly evolving.

There is no version.

We never stop.

We keep evolving it.

And that WHATWG, they're the ones that really implement the browsers.

So what W3C does is it kind of cherry picks some of the more successful

things that are actually kind of start to be implemented by the browsers and

they slowly bring it into the official standard.

So the point of this history, this quick history lesson,

is that this whole thing is a bit of a muddy waters.

And it's kind of hard to keep track of well,

what is the browser supposed to be compliant with?

But unfortunately it is our job as developers to keep track of these

capabilities.

And it's particularly important nowadays because all the major modern

browsers are all evergreen browsers.

And what that means is is that they silently update themselves

on the users computer.

So you no longer even need to have the user

Play video starting at :5:17 and follow transcript5:17

acknowledge the fact that they want to update.

That means that, which is a good thing actually, right.

Because now every browser is kind of patched as much as they can be patched for

security reasons.

And also it kind of automatically without the user intervention

gets the latest greatest features of HTML5 and all of the browser software itself.

But every major browser Chrome, Firefox, Safari, Internet Explorer,

they all are evergreen browsers, so they update themselves automatically.

So what I would like to do now is give you a few resources on the web

that will make this job keeping track of these changes a little bit easier.

The first resource that I really should share is the W3C.

The W3C HTML5 standard, and this is a very academic type of reading but

you can still look stuff up in it that is somewhat useful.

And certainly if you want to kind of know what the actual standard is that

everybody agreed to, this is a great document to start with.

Play video starting at :6:17 and follow transcript6:17

Another excellent site that you should definitely check out, and

kind of keep in your arsenal is caniuse.com.

And this is a site that basically itself keeps track of HTML5 standards,

SVG standards, CSS standards, JavaScript APIs and on, and on, and

on in the web space to be able to tell you which browser supports what.

So, for example if I search for Srcset, which is a pretty new attribute

that is going to hopefully come soon to the image tags.

Which we'll talk about it later.

But you can take a look and

see if when I type Srcset that it will tell you well this is an attribute.

It will also tell you which browsers at this point is supported and which ones,

like IE, do not.

And you can yourself take a look at and see whether or not something that

a browser let's say you're not really targeting, you're not really,

don't care so much about, if it doesn't support it, doesn't support it fully,

you can make the decision whether or not you want to use that particular feature.

Another great resource to find out whether or

not your HTML actually is going to work in browsers is to use a validator and

there's a great validator provided by the W3.org website.

And you can basically cut and paste all of your website straight here, or

you could upload a particular HTML file, or at this point you could even copy and

paste your HTML straight in here and check whether or not it's valid.

And if it is valid chances are, very high chances are,

that it will work very well in the browser.

So let's take a look and see let's tested out and

see if we could validate the W3C's own page and if we'd click check and

sure enough it tells us that it is valid or everything is green.

Play video starting at :8:2 and follow transcript8:02

Now when you write webpages in the real world, you can't always say that I'm just

going to go ahead and try to support every browser that exists in the entire

webisphere, and that's not going to work because there's just so many of them and

some of them are so outdated.

So it's always a good idea to check the browser statistics and to see.

Certainly if you are in an organization that you know all the browsers

that are in that organization that are being used,

all the browsers and browser versions, that helps.

But if you're writing an application for

the entire web, it's good to know which browsers are actually popular, and

which browsers are basically falling off the edge.

And if you take a look here, this is a website, w3schools.com,

gives you the browser statistics, and if you take a look here in September of 2015,

Chrome was basically crushing it's competition.

And you can see the next one is almost three times less market share than Chrome.

Play video starting at :8:59 and follow transcript8:59

And you can tell that 65,

66 almost percent of users on the web are using Chrome so

that seems like a pretty important browser to make sure that your webpage works in.

And if you're all the way at 1.4% of market share.

If there some feature that you really, really want to implement and

all the other browsers implemented but

one of them that has such a little, such little market share, doesn't implement.

Well, you might want to decide to go with it anyway.

This is something that you can make a decision about.

And last, but not least, is Google.com or any other, really,

search engine that you would like to use.

I don't think there's a day that goes by that, in web development,

that you don't have to look something up on the web.

And this is just part of the day-to-day business.

And if you're going to be in web development, you kind of have to get

used to the fact that you have to constantly look things up.

Things are constantly changing, and obviously,

no human being can know it all by themselves.

So to summarize, we went over somewhat relevant, hopefully, history of HTML,

and kind of saw how it effects us as developers, even today.

So I gave you some resources for validation of HTML.

Which kind of gives you a little bit more

of a comfort factor that your HTML will work in browsers properly.

And I gave you some resources for

feature investigation like the website of canIuse.com which lets you know whether or

not a particular feature is implemented in a particular version of a browser.

And we also went over where you could look up browser statistics so

you can make an informed decision of what browsers you should even target for

your web application to begin with.

Next we're going to talk about the anatomy of an HTML tag.

We'll take it apart and see what an HTML tag is and how to properly code it.