Perpendicular Angel Design

Organizing and simplifying, one illumination at a time

An Event Apart 2017: Evaluating Technology by Jeremy Keith

Posted on **April 6, 2017**

Jeremy Keith's presentation focused on the tools that we use to evaluate the tools that we use – as technology is ultimately just another tool in the millions humans have used.

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anne gibson
@kirabug

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We're starting with @adactio talking about code - and Rosalind Franklin's notes on the code of DNA #AEASEA

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Every life form around today is successful, the pinnacle of its evolution. #AEASEA

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Specialization, ubiquity, and cooperation are three keys to success in life #AEASEA

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Technology gave us the ability to augment ourselves. First technology is a hand ax #AEASEA

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Greg Whitworth
@gregwhitworth

.@adactio begins #AEASEA day two with "Evaluating Technology."

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2

Stephanie
@seaotta

Technology gives us a leg up on the slow process of evolution. It's our hack to stay one step ahead. #aeasea

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Stephanie
@seaotta

The pencil has a built in progress bar. 😆 #AEASEA

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The pencil is ubiquitous, it's specialized, and it is made by a group - cooperation #AEASEA

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You can't do technology alone, you have to do it together with a group #AEASEA

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"Curious tool" Chindogu society in China has butter sticks (like glue sticks), a fan on chopsticks, etc. #AEASEA

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They also had a very early selfie stick. #AEASEA

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In the 20th century we got a new layer between the hardware and the human - software #AEASEA

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The human and the hardware speak to each other through the software #AEASEA

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Stephanie
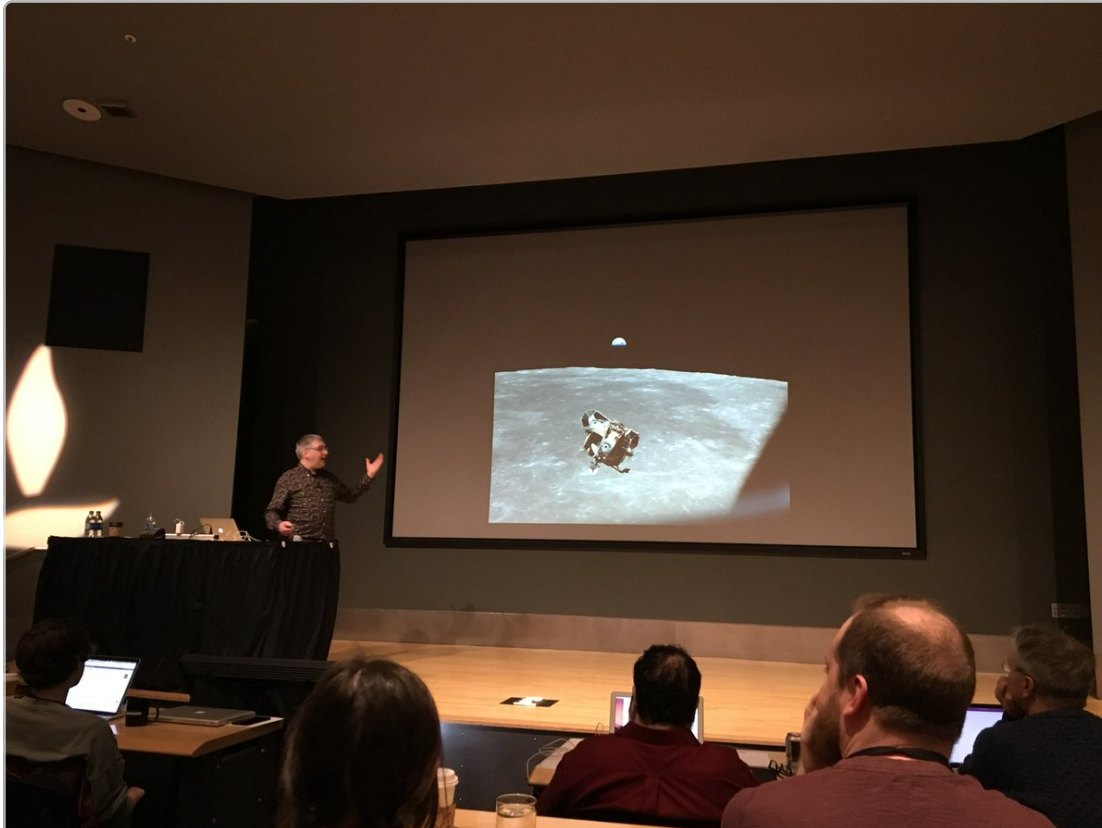@seaotta

In the 20th century, we added a new layer between human interaction w/hardware. We can now manipulate hardware through software. #AEASEA

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An everyone-elsie: every human except the photographer is in the picture #aeasea

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One of the crowning achievements of technology is going to the moon #AEASEA

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The World Wide Web was put together so that scientists could collaborate hardware-agnostic #AEASEA

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Specifically, it was built so scientists could communicate hardware-agnostically, starting at CERN with Tim Berners-Lee and then across the world. Turned out it was a pretty decent idea.

Anne Gibson
@perpendicularme

WWW
Internet
Computers
Electricity
Industrialization

Building on what comes before #AEASEA

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The tweet above (and the side it was mirroring) are meant to be read bottom-to-top, in a sense. We could have no WWW without Internet, no Internet without computers, no computer without electricity and no electricity without industrialization.

Pretty much any time you see this structure in the slides, that was the meaning behind it.

Anne Gibson
@perpendicularme

Things start to feel inevitable - multiple people inventing radio at the same time - but the shapes may differ #AEASEA

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The iPhone was not inevitable, but the smartphone probably was #AEASEA

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One of my favorite parts of An Event Apart is that the speakers riff off of each other and make each others' presentations stronger by sharing what they know.

Anne Gibson
@perpendicularme

When all the things are in place that's when the magic happens. "The adjacent possible" #AEASEA

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(As usual it is incredibly difficult to keep up with @adactio's masterful flood of ideas) #AEASEA

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The hard part isn't creating protocols. The tricky part is getting people to use it. #AEASEA

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Grace Hopper: "Humans are allergic to change. That's why I have a clock on my wall that runs counter-clockwise." #AEASEA

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The whole way we deal with time isn't very logical. Base 60 math, because accounting in Babylonia set it #AEASEA

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There was a proposal for a decimal time after the French Revolution, but humans are allergic to change #aeasea

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There is a world standards day on Oct 14, except in the US when it's on Oct 23. #murica #AEASEA

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Elizabeth Newman
@eLizz1e

Don't try to change people's behavior, just try to nudge it slightly. @adactio #AEASEA

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WWW

HTTPURLsHTML
TCP/IPDNSSGML

People didn't need to fully change their behavior #AEASEA

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HTML elements aren't always the best elements - you have to build on what's come before - and they degrade gracefully #AEASEA
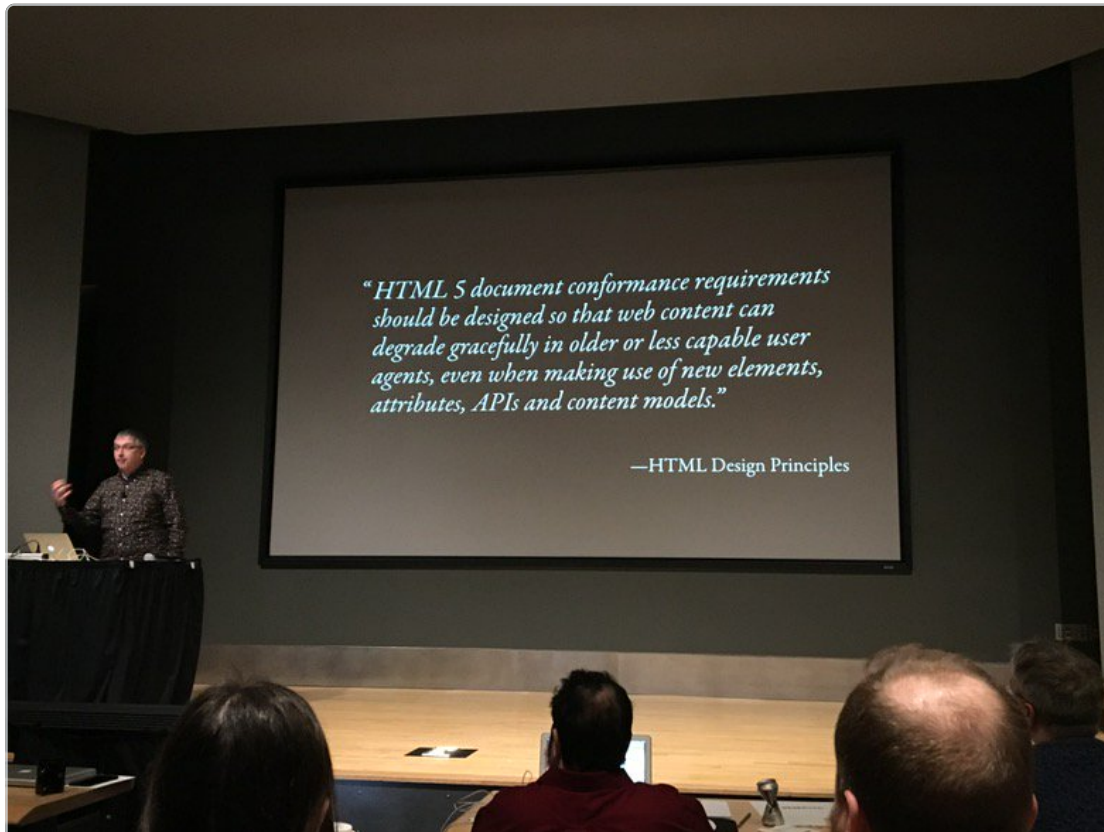
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Canvas allows for fallback to older tags by design, requires a closing tag for the fallback by design #AEASEA

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You don't get to start from scratch #aeasea

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Principles.adactio.com is @adactio's collection of design principles. #AEASEA

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Principles.adactio.com is @adactio's collection of design principles. #AEASEA

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We ask "How well does it work?" When we're evaluating technology. "How well does it fail?" Is a more important question #AEASEA

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CSS shapes "fail" very well, so it's safe to use even if it's not supported. #AEASEA

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Una Kravets 🧝🏻‍♀️
@Una

"caniuse.com tells you how well something works, it doesn't tell you how it fails" -- @adactio #aeasea

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2   13

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Lots of folks in the audience have heard of service workers, but pretty much no one's using them #AEASEA

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Service workers: server can send a script that is installed on the browser and can make requests to the server #AEASEA

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The service worker can cache things and put the assets it gets from the server in the service worker. #AEASEA

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The service worker then gets all requests from the browser and then passes them on to the server if/when necessary #AEASEA

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Service workers can save on performance via their cache, provide offline-first connections #AEASEA

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Conor Meagher 👨🏻‍💻
@conrmahr

Service Workers
- Requires https
- No defaults
via @adactio #aeasea

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Service workers - how well do they fail? Exceptionally well. If they don't work, they're ignored altogether #AEASEA

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You literally can't make a site that requires service workers because the behavior of the initial request is the same either way #AEASEA

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Web components: there isn't a spec for them. It's an umbrella term for a number of other technologies #AEASEA

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Web components are things like custom elements and the shadow DOM. They have hyphens (because HTML tags never do) #AEASEA

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The HTML, javascript, CSS for custom elements is encapsulated. The styles won't leak #AEASEA

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You can write a web component and someone else can use it because it's encapsulated #AEASEA

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Lots of unsupported browsers for custom elements. How well does it fail? It depends how you use them #AEASEA

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You can just use a custom element, but if it fails it's effectively just a span, so that fails badly. #AEASEA

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Alternatively, you can overload an existing HTML element with <nav is="mega-menu"> for example and then you have fallback #AEASEA

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Or at least, fallback to a <nav> element, which is better than no fallback at all.

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We could design our web components to fail very well. But often we don't, there's no thought given to the fallback #AEASEA

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The power is in our hands with web components to ensure that we build something that fails well #AEASEA

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Web components give us the same power that previously only browser makers had — a blessing and a curse #AEASEA

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3   2

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Service workers and web components are the poster children for the extensible web #AEASEA

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1   4

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Unlike the slow messy work of browser standards, developers are exposed to the DNA of the web #AEASEA

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Whatever is most robust will find its way into the standards over time, in theory, but it's a lot of responsibility for developers #AEASEA

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Once we had the word AJAX to rally around it really took off. Responsive Web Design was a rallying point. Extensible Web is next #aeasea

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Progressive Web Apps is a term for HTTPS + a service worker + a manifest file #AEASEA

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Progressive web apps - any web site can have them #AEASEA

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Right now the industry is treating progressive web apps like mobile URLs, when the whole idea is they're the same thing #AEASEA

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"Let's treat websites differently depending on whether they're Netscape or IE!"

"Let's treat websites differently depending on whether they're mobile or desktop!"

"Let's treat websites differently depending on whether they're progressive web apps or not!"

We are slow learners, apparently. 😠

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Any website can be a progressive web app, which means the current term is problematic #AEASEA

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Stephanie
@seaotta

Progressive web apps should not be a separate website. It defeats the purpose of building your website as a progressive web app.
#aeasea

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Who benefits from a technology? #AEASEA

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9 times out of 10 things benefits developers *and* users. Service workers are real benefit to users, but rough for devs #AEASEA

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.@adactio's favorite HTML principle: in case of conflict consider users over authors over implementors over theoretical purity #AEASEA

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Tools divided in 2 camps:

Your computer:
Sass
Less
GIT
Gulp
Nvm

Doesn't affect the end user directly#AEASEA

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(This one is just a list, they're not building on each other. Same with the next one.)

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JQuery
Bootstrap
Angular
React
Ember

These benefit the developer but possibly at the tax of the end user.
Analyze closely#AEASEA

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jared bishop
@bishopart

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#aeasea adactio instagram.com/p/BSeHjSxgvVz/

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The fallacy of assumed competency: you use it because some large company X is using it. "They must know what they're doing" #AEASEA

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1   1

Stephanie @seaotta   4 Apr
We should have different criteria when we have outward facing tools like jQuery, Bootstrap, angular, react, ember. #aeasea

Stephanie
@seaotta

These affect the end-user directly and not in a good way: needing to download libraries, etc. #aeasea

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Unless you're google, what works for google may not to work for you. Never use a tech just because someone says you should #aeasea

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"Not invented here" syndrome is the opposite end of the scale.
Don't throw things out just because you didn't invent it #AEASEA

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Could just use HTML, CSS, and Javascript… but you may be more
comfortable at a layer of abstraction up #AEASEA

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All computing is abstraction ("are you writing in assembly
language?") #AEASEA

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We have tricked rocks into thinking. #AEASEA

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Angular
React
Ember

Monolithic frameworks make it hard to cherry pick the bits you like.
Evaluate! #AEASEA

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What's the browser support like? What's the community like?
What's the file size? #AEASEA

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What are the assumptions built into the tools you're using? What
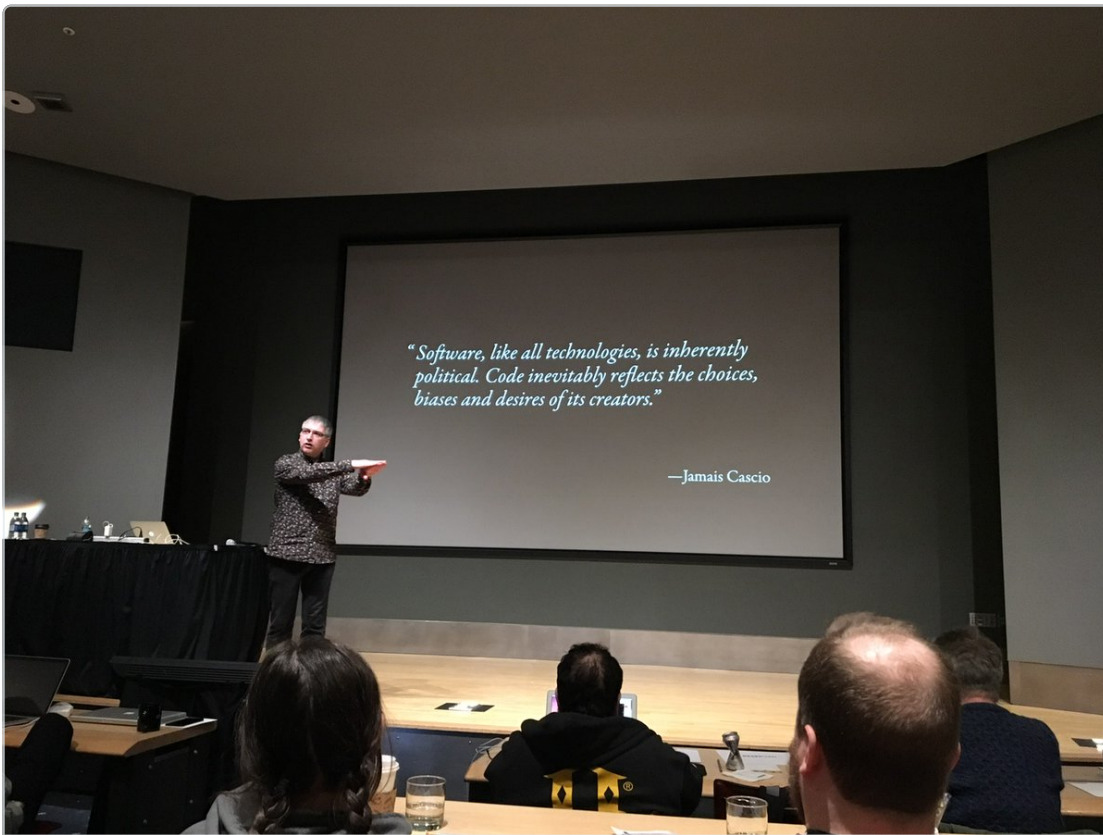are the biases? Critical question! #AEASEA

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Stephanie
@seaotta

It tends to be very hard to cherry pick only the bits you want to use
from monolithic frameworks like angular, react and ember. #aeasea

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If your philosophy clashes with the framework of the philosophy you're going to have problems #aeasea

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Fractal - Clearleft's tool for pattern libraries - wanted to make unopinionated software. It's really hard #AEASEA

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Seriously. Design an application, have it rolled out to your internal users (the ones that never get budget to have problems in their tools fixed) wait six months, then go see how they're using it. Guaranteed you will learn more workarounds for workflows you either didn't know about or got wrong than you can possibly imagine. We talk about ourselves in IT as "hackers" but if you really want to see hacking, stick a customer service rep with tight call volume requirements on a shitty application and watch how they'll turn your application's intended use inside out to service their clients.

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Heddy Lamar helps to design a technology to switch frequencies on guided torpedos in ww2. Now exists in wifi and Bluetooth #AEASEA

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Well, talked.

Una Kravets 🙆🏽‍♀️
@Una

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YASSS @adactio talks about Hedy Lamarr -- inform yourselves about this badass woman: en.wikipedia.org/wiki/Hedy_Lama… #idol #aeasea

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@eLizz1e

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This. #aeasea #womenintech

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7   16

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James Burk of Connections showed the connections from Napoelon to rockets #AEASEA

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Susie Hall
@suzillazilla

The video link of James Burke: dailymotion.com/video/x17lrm0_… from @adactio pres #AEASEA

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The tech singularity: there's an event horizon in our future we can't see past right now #AEASEA

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We've probably had technological singularities in our past: hunter/gatherer to farmer, industrial revolution, information revolution #AEASEA

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All those previous singularities didn't replace what came before, they added to them. #AEASEA

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No technology has ever gone extinct. Everything ever created is being used by humans somewhere today #AEASEA

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Anne Gibson
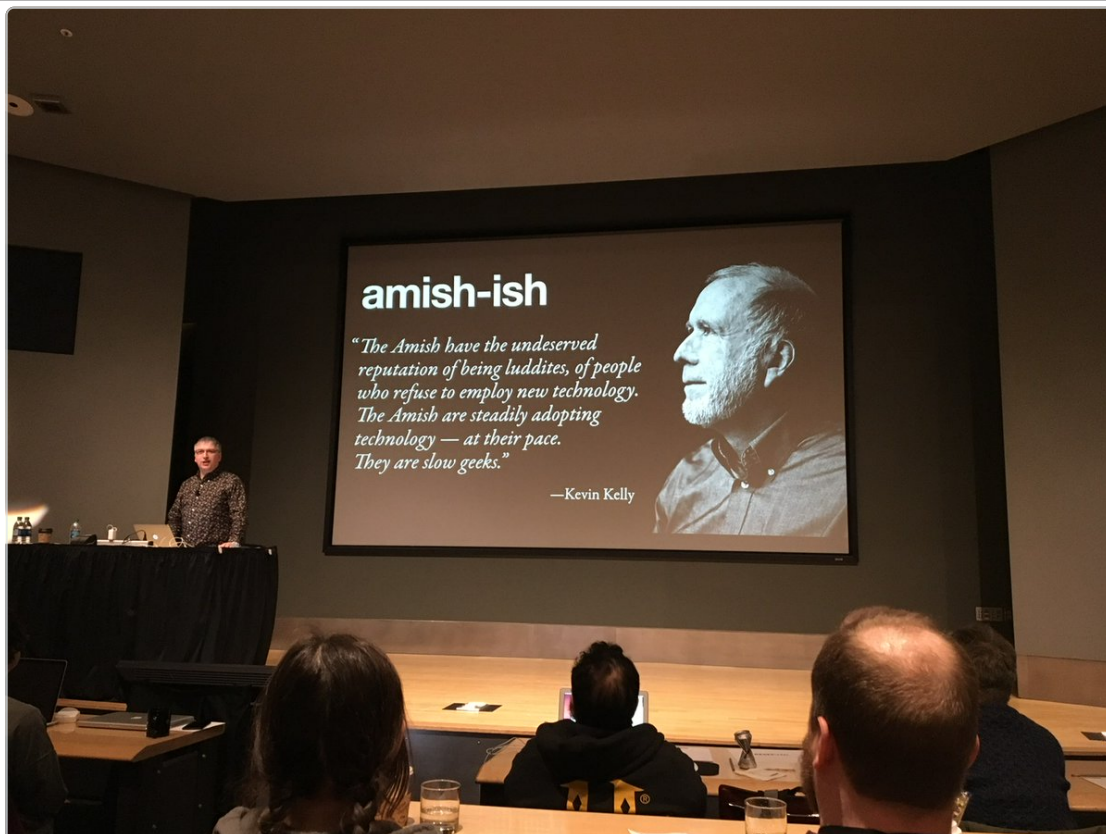@perpendicularme

we have the power to control the direction our technologies take if we evaluate technology #AEASEA

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Anne Gibson
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Can vouch for this, since I went to college in Lancaster County, PA
#aeasea

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How well does it work?

How well does it fail?

Who benefits?

What are the assumptions?

A Brave New
@abravenew

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Questions technology folks should ask themselves more often.
Thanks for the reminder @adactio #aeasea

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5   6

[Sketchnotes by Krystal Higgins.](#)

[Notes by Luke Wroblewski.](#)

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