TIM BERNERS LEE

Introduction

Although I thought my first encounter with Tim Berners Lee was last year, in one of the most famous Ted Talks of all time, as recommended by our lecturer; my actual first encounter was many years previous, when using a school computer to access the world wide web.

Despite receiving a knighthood, and undoubtedly influencing the way we live today, Berners-Lee has taken the non-profit path, and is content with this. He has continued to work, in many different roles, founding the world wide web foundation, the open data institute, as a professor in multiple universities, the list goes on. Although my initial inspiration for this essay began with his ted talk, it was his life's work to date which really sparked my interest and curiosity, especially as I am of the age when a lot of these things, I would take for granted, and life before the web relies on my imagination, not memory.

Where it began

As a child, Tim had an interest in trains and describes himself as being fortunate for growing up at the time that he did. He references to the accessibility and affordability of the electronic components which allowed him to make electronic gadgets to control the trains; thus, shifting his interest from trains to electronics. As a teenager, transistors were cheap enough for him to buy, then as he began to build with them, he realised that he could build his own computer. Once he reached university, microprocessor chips came out, allowing him to hook one up to his computer that he made with a television set.

Although one cannot deny his fortune in relation to the time that he grew up, as much of the computing components became accessible to him. One cannot deny the influence that his parents Mary Lee Woods and Conway Berners-Lee had - both working on the very first commercial computer, the Ferranti Mark 1.

After moving from his hometown of London to the University of Oxford, although studying physics and achieving a first-class honour in his degree, he began work as a software engineer. Initially working for a telecoms company working on distributed transaction systems, message relays and bar code technology, he shortly moved onto a company run by two of his friends, where he created type-setting software for printers and wrote a multitasking operating system.

His start at CERN

From Dorset he moved on to working for the European Organization for Nuclear Research (CERN), making a proposal for a project based on "hypertext" when he was there. He also developed a prototype system called ENQUIRE to demonstrate how it would work, although the name may seem a little abstract, it was based on a Victorian book called "Enquire within Upon Everything". This program allowed him to store information in files that contained links both within and among separate files. This technique later became known as hypertext.

He then let CERN to become a Director at John Poole's Image Computer Systems LTD in Bournemouth, Dorset, in the late 1980s. For three years he was in charge of the technical side of the company and gained experience in computer networking, graphics and communications software.

Returning to CERN in 1984 was a logical move for Berners-Lee, as it placed him in the ideal environment for launching the world-wide web. In 1989 CERN was the largest internet node in the European continent. Despite this, he found himself continually frustrated at the lack of good collaborative tools for his team. He mentions in his 2009 Ted Talk that his idea was "born out of frustration, at CERN everyone had different machines, with different programs and it was the unlocked potential" that got under his skin.

The result

The variety of projects that Berners-Lee has previously worked on, and his life's work to that point, provided him to come up with the idea for a system that would solve this frustration.

With the goal of providing researchers the ability to share their results, techniques and practices without having to exchange email constantly, Berners-Lee drew up a proposal for creating a global hypertext document system that would make use of the internet. Once the information was published online, peers could retrieve this information anytime, day or night.

He mentions that once you realise that you know the system could be simpler, then the web is a very simple idea.

It seems laughable that an idea that has a revolutionary impact on the work, did not have an immediate uptake. In 1989 He published 'Information Management: A Proposal' in which he married up hypertext with the Internet, to create a system for sharing and distributing information not just within a company, but globally. He named it the World Wide Web. Labelled "Vague but exciting " by his boss at the time, thankfully the idea was not dismissed. He began to work on this proposal as a side project, eventually leading to the proposal beign recirculated in 1990, a year later, and after a few months Mike Sendal, Tim's boss allows Tim to go ahead and write the global hypertext system, justifying the purchase of a NeXT cube, one of Steve Jobs earlier computers, for this task.

By Christmas of 1990 the Word wide web's browser and editor were demonstrable, a year later there were early adopters among the computer science community, and in 1994 there was the founding of the World Wide Web Con

He also created the first web browser and editor. The world's first website, http://info.cern.ch, was launched on 6 August 1991. It explained the World Wide Web concept and gave users an introduction to getting started with their own websites.

In 1994, Berners Lee founded the World Wide Web Consortium at the Laboratory of Computer Science (LCS) at the Massachusetts Institute of Technology in Boston. He has served as director of the consortium since then.

32 years on…

Over 30 years later, the web has allowed the world to evolve and adapt to challenges, but has also created some new ones. For example, the dot com crash certainly affected the world, but not in a positive way, however as outlined in Tim Berners-Lees open letter on the Web's 32nd birthday, the web certainly proved to be "a lifeline " that allowed people to repair and rebuild the world after as we adapt to life with covid.

It appears to me that a creation such as the Web, one which there are no barriers to (by design, albeit not always in reality) is something that ought to be managed, but also remaining free for the public to use. I find it quite interesting, and to be frank; admirable, about how Berners-Lee can manage this balancing act.
The struggle here seems to be less about making the connections and getting the data out there, but to do with the quality of that data, or the risks of the wrong data in the wrong hands, or people's data being captured without their control or consent.

In his 2009 Ted Talk, Berners-Lee appealed for people to share their data on the web (as long as it was structured to his rules!), and now it appears to me that there is a conflict of interests with the visionaries such as Berners-Lee, the monopolistic tech giants, malicious users, and the average Joe. Upon my initial research for this essay, I had made the assumption that Berners-Lee was a touch overly optimistic, and seemed a bit rose-tinted, however when researching more recent interviews and publications I admire his ability to negotiate these tricky situations pragmatically and to strive towards the more positive vision, whilst dealing with these major concerns.

Reflection

I think that to me, Tim Berners-Lee is inspiring due to his commitment for the cause of the greater good, and his life's work building towards that. Again, I am struck by the size of the tasks undertaken by his projects, for example the project Solid which he is working on in MIT, which aims to "radically change the way Web applications work today, resulting in true data ownership as well as improved privacy", in my opinions, although rather cynical compared to the general narrative of this essay, if the inventor of the Web doesnt care about the eventualities of the Web, then who will?

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