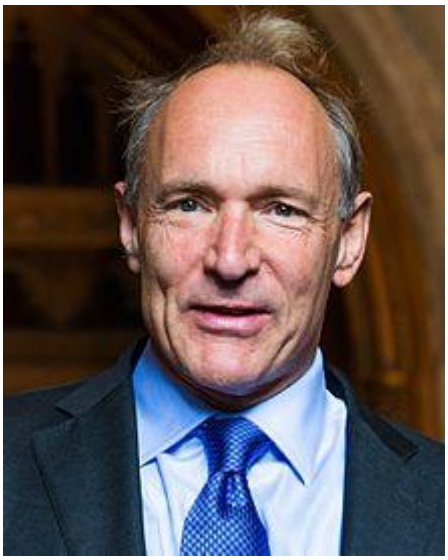
Tim Berners-Lee



Early Life and Education

Tim Berners-Lee was born in London, England in 1955. From a young age, Tim was surrounded by computers and technology. Both of his parents worked on the first commercial computer, the Ferranti Mark I. He was also an avid train spotter as a child, and taught himself about electronics by playing around with a model railway set that he owned. He went on to receive a first-class bachelor's degree in physics from The Queen's College in Oxford. While there, he made his first working computer, using a soldering iron, TTL gates, an M6800 processor and an old television set that he bought from a repair shop.

Early Career

After graduating, Berners-Lee spent two years working for Plessey Telecommunications, a major UK telecom equipment manufacturer, where he worked on distributed transaction systems, message relays, and bar code technology. Following this, he joined D.G. Nash where he wrote typesetting software for intelligent printers, and a multitasking operating system. However, it was when he joined CERN in mid-1980 that he started on his greatest work.

The World Wide Web

At CERN, Berners-Lee created a program for his own private use. It was called "Enquire" and was a tool to facilitate sharing and updating information among researchers. It could store information in files that contained links, both within the files and without, in other separate files. This technique became known as hypertext. This tool laid down the conceptual foundation for the World Wide Web.

Berners-Lee then left CERN for three years to work for Image Computer Systems, where he worked on real time control firmware, graphics and communications software, and a generic macro language, among other things. He then returned to CERN as a fellow in 1984.

By 1989, CERN was the largest internet node in Europe. At this point, the system that the researchers were using to results, techniques and practices – email – was getting unwieldy. Berners-Lee realised

that a more efficient method was needed, so proposed a global hypertext project, based on his earlier "Enquire" work. Researchers would instead place their information online, and their peers would be able to retrieve it at any time, provided they had a link to it. Berners-Lee wrote the very first World Wide Web server, "httpd" (Hypertext Transfer Protocol daemon), and the first client, "WorldWideWeb", a hypertext browser/editor that ran in the NeXTStep environment. It was made available within CERN in December 1990, and the internet at large in the summer of 1991. The very first website was also built at CERN, info.cern.ch, which gave information on the World Wide Web project, information on how to create a webpage, and an explanation on how to search the web for information.

After the Web

In 1994, Berners-Lee established the World Wide Web (W3) Consortium at MIT's Laboratory for Computer Science in the United States. The consortium is a web standards organization that develops interoperable technologies such as specifications, guidelines, tools and software, and whose aim is to improve the quality of the web. Since then, he has served as its director. The W3 consortium makes its technologies available freely, without patents or royalties, allowing them to easily be adopted and used by anyone.

Recent Work

In 2009, it was announced by the British Prime Minister Gordon Brown that Berners-Lee would be working with the UK government to help in making data more open and accessible on the web. He was made a member of the Public Sector Transparency Board, which pushes the UK's transparency agenda. Berners-Lee, along with Professor Nigel Shadbolt, is a key figure behind the website data.gov.uk, a UK government project which has been set up to make all data gathered for official purposes available to the public free of charge.

In November of the year, Berners-Lee founded and became director of the World Wide Web Foundation. This foundation is a non-profit organisation whose goal is to build a world in which all people have access to the web, allowing them to communicate, collaborate and innovate freely. They also strive to defend the Open Web, which is the concept that people should be able to publish, code, implement, access and use content on the web freely and openly, and to promote and further it as much as possible.

He is currently the president of the Open Data Institute, founded in 2012, and leads a coalition of public and private organisations including Google, Intel, and Cisco among many others, called the Alliance for Affordable Internet (A4AI). The alliance seeks to make internet access more affordable, allowing those in third world countries, or in less well-off parts of wealthy countries, to access the opportunities, tools and information that the internet provides. Their aim is for access to cost less than 5% of monthly income.

He also leads a web decentralisation project called Solid, which aims to give users more control over their personal data, letting them choose who can access it, and where it goes.

Awards

Tim Berners-Lee has been the recipient of a multitude of awards and honours over the years. His most notable include:

- Named by Time Magazine as one of the 100 most important people of the 20th century
- Knighted by Queen Elizabeth II in 2004 for "services to the global development of the internet"
- Awarded the 2016 Turing award for "inventing the World Wide Web, the first web browser, and the fundamental algorithms allowing the Web to scale"

He has also been awarded many honorary degrees from universities all over the world.

Impact and Legacy

Berners-Lee's impact on the modern world cannot be understated. His invention, the World Wide Web, is without a doubt one of the most influential inventions of the 20th Century, and perhaps in all of human history. He revolutionised the world of information, communication and technology, and the world today would be almost unrecognisable and the web not been invented. Not only this, but Berners-Lee gave his invention to the world free of charge. There are many heroes of the open source world, but in my opinion Berners-Lee is by far the most important. Almost none of what has happened in the last few decades in software and computer science would have been possible without the World Wide Web being available to all free of charge. Berners-Lee could have made a small fortune off of his invention, but instead gave it away for the greater good. Even today, he is at the forefront of the open web and open data movement and a strong supporter of net neutrality, being involved in many organisations as I described earlier. As a member of the DU Pirate Party committee here in Trinity, this in particular resonates with me strongly.