Computer Science Principles
Lesson: <mark>April 7, 2020</mark>

Learning Target:
In this lesson, the goal is to build student understanding of the Internet as a set of computers exchanging bits in the form of packets, and for students to identify the components of their digital footprint.

A Question to Ponder:
What is the difference between the internet and the World Wide Web? Are they they the same thing? Write your answers in your journal...

Practice:

How do computers find each other?

In 1973, there were only 45 computers on the Internet, located at 36 labs around the US.Here's a map of that Internet:
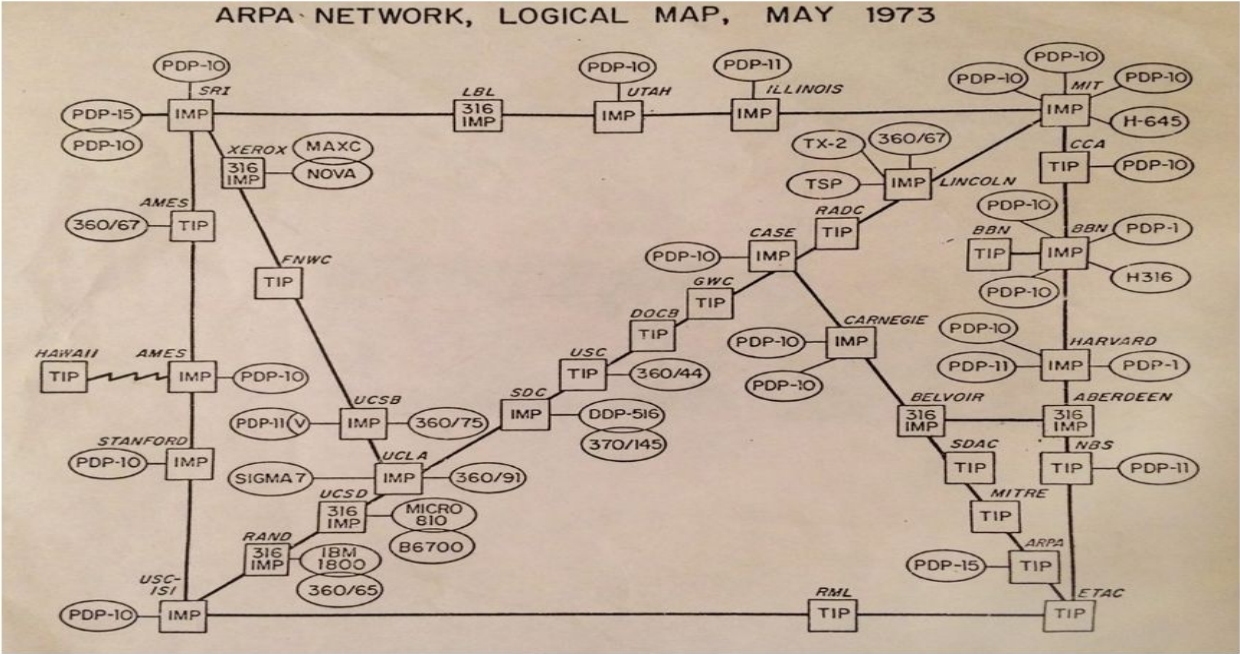

Image source: ARPANET, Wikipedia

Nowadays, there are more than *4 billion devices* connected to the Internet, in a world with a population of 7.5 billion. A map of the Internet now looks more like this:
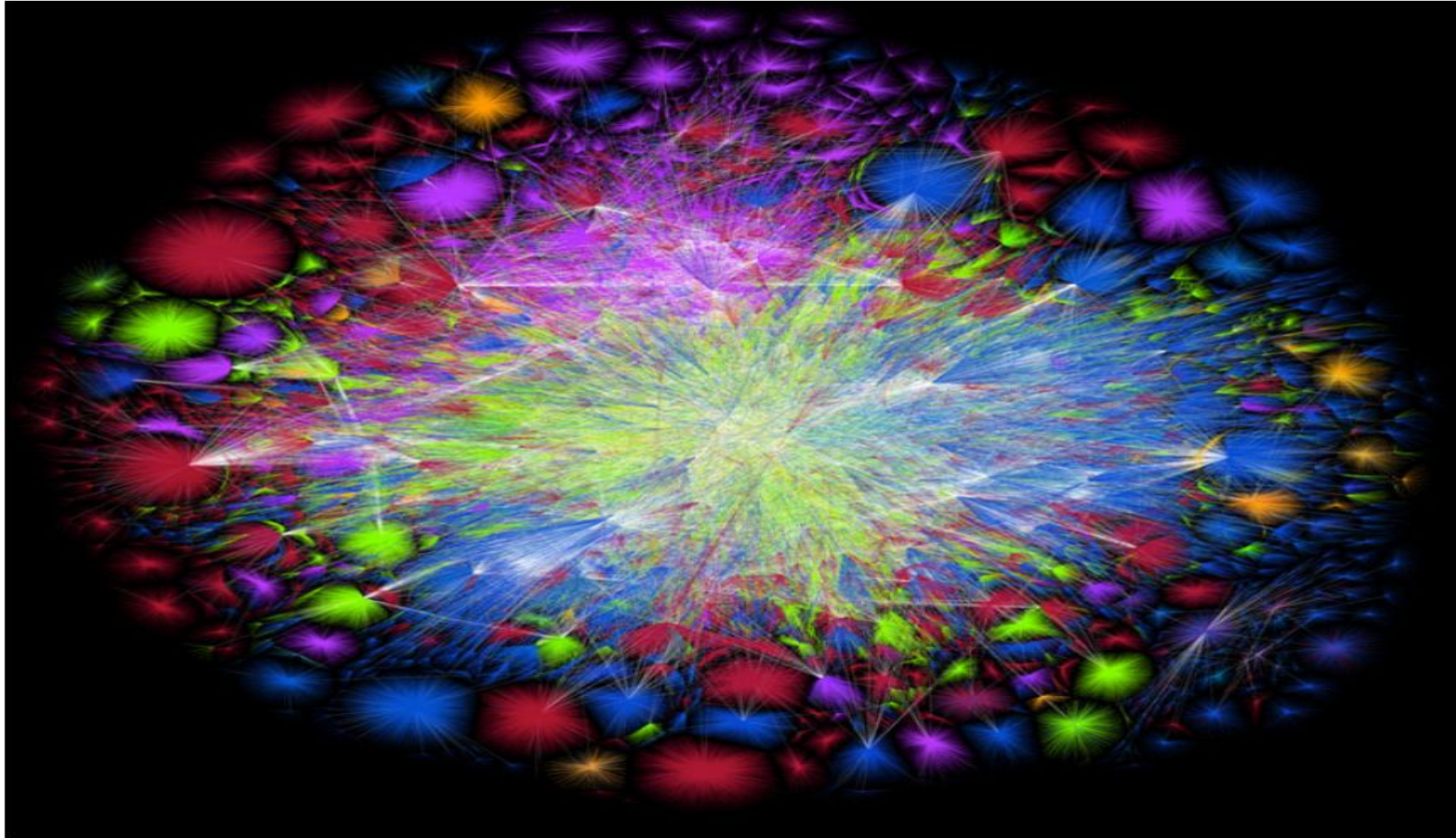
When one computer sends a message to another computer, it needs to somehow identify that computer amongst the billions of other computers.

How is that possible? It's all thanks to IP and DNS, two protocols for addressing computers in a network.

We'll start off this lesson with an introduction to IP & DNS in [a video](#) (featuring the inventor of the Internet!), and then dive deeper in the articles after.

IP addresses

- Click Here to read and take notes over IP addresses, the 'handshake' of the internet.
- Let's see what you have learned so far! Click here to here to test your knowledge..

Domain Name System (DNS)

- Click [Here](#) to read and take notes over Domain Name Systems,

- **How much have you learned?Click [here](#) to check your knowledge of how the internet works so far…**

- **Tomorrow: Packets, Routers, and Reliability: How can computers send data reliably?**