The world has come a long way in the search for the best way to share information. From smoke signals to runners, from the telegram to the telephone… one thing is certain, things have gotten better over the years. The invention of the telephone came with the need to sort out names and numbers for anyone that needed information fast. And from that we got the phone book. But once more, the world has taken the leap into the internet era but the needs are still the same, only faster.

Enter Domain Name System (DNS). Just as the telephone book, DNS works by searching and locating a specific name then providing the information needed. The domain name system is a name database in which internet domain names are located and translated to internet protocol (IP) address. The DNS finds and locates names used and connects the information to the website registered in relation to the data provided.

Web browsing and most other internet activities rely on DNS to quickly provide the information necessary to connect users to remote hosts. DNS mapping is distributed throughout the internet in a hierarchy of authority. Access providers and enterprises, as well as governments, universities and other organizations, typically have their own assigned ranges of IP addresses and an assigned domain name. They also typically run DNS servers to manage the mapping of those names to those addresses. Most URLs are built around the domain name of the web server that takes client requests.

How it works

DNS servers answer questions from both inside and outside their own domains. When a server receives a request from outside the domain for information about a name or address inside the domain, it provides the authoritative answer. When a server receives a request from inside its own domain for information about a name or address outside that domain, it passes the request out to another server.

This server is one managed by an internet service provider (ISP). If that server does not know the answer or the authoritative source for the answer, it will reach out to the DNS servers of other providers. Then, it will pass the request down to the authoritative server for the specific domain. The answer will flow back along the same path.

Effects on the digital economy

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Connecting users and clients thus becomes easier and fast especially if one has a dedicated IPS. The ease in which companies can reach their market base is dependent on how fast they connect and push innovation to even higher levels.

It is certainly along way from the telephone book.