Essay on features of a future internet

The current internet is facing unprecedented challenges in many aspects which include security, capacity, mobility and content distribution. According to Talbot (1), the internet is not robust enough for the continuing proliferation of connected devices. This is true considering that the current internet usage is above 2. 2 billion users worldwide. This has been accelerated by advances in technology which have seen the cost of accessing internet-enabled devices such as mobile phones, smart phones, tablets and laptops dropping significantly. At the same time, internet costs have reduced significantly meaning that more and more people can access the internet. Therefore, the features of the future internet are based on making networks robust and efficient so that they can support all the wireless devices. Thus, future internet architectures will have several features.

First, there will be a shift from the current architecture from IP to content- or-data-oriented paradigms. These new paradigms will be a solution to today's internet whereby traffic builds around the narrow waist IP (Pan and Jain 27). Also, the future internet will offer mobility and ubiquitous access to networks as internet access shifts from PC-based computing to mobile computing. Future networks will be based on cloud computing-centric architectures. These architectures have already started taking shape and their aim is to shift computation and storage into the cloud. This will create new ways of providing global-scale network resource provisioning in a utility-like manner. These service clouds will offer platforms that perform virtualized services. This also calls for the monitoring of such clouds so as to ensure security and effective operation. Different projects such as the Named Data Networking

(NDN) and Mobility First are also being undertaken (Talbot 1). For example, NDN seeks to develop a data-centric concept that makes it possible for privacy and security settings to be attached cryptographically directly to the data. Mobility First aims to make car networks and mobile devices a more seamless part of the network infrastructure. Therefore, any future developments will focus on increasing capacity, making the internet more user-friendly and available, and making the internet safer and trustworthy.

Works Cited

Talbot, David. Your Gadgets are Slowly Breaking the Internet. MIT Technology Review, 9 Jan. 2013. Web. 05 March 2013.

Pan, Jianli, and Jain, Raj. A Survey of the Research on Future Internet Architectures. IEEE Communications Magazine, July 2011, pp. 25-36.