A network in a laptop: rapid prototyping for software-defined networks

Technology, Information Technology

The paper " A Network in a Laptop: Rapid Prototyping for Software-Defined Networks" is an exceptional example of an article review on information technology. A prototype is an initial model or sample of an idea or concept that leads to the creation of a product or service. In the field of information technology (IT), prototypes are mainly hardware or software that are the main components of computer systems that run IT. Prototyping occurs in many fields of expertise where innovations and inventions are the keys to progress and relevance. Prototypes are developed in medicine, manufacturing, textile and design, architecture and various other professional fields. This paper aims at highlighting and discussing a prototype from a published article.

A network in a laptop: rapid prototyping for software-defined networks was published in the ACM-DL-Digital Library. The article was about a system prototype called Mininet that was meant to rapidly prototype large networks using meager resources of a single laptop (Lantz, Heller & McKeown, 2010). The article describes the logic and principles used in developing the prototype. The article is able to shed light on the need and the gap that this prototype is meant to address and fill. A surprising aspect about prototyping is that the product of prototyping has to exceed or surpass, in terms of performance, over other similar products in the field for it qualifies as a prototype in that field. This is a surprising aspect because, in the IT field, new software or hardware is developed using knowledge from existing older versions. Thus, it would be obvious that the new product is superior to already existing products. This is not the case because the expected capabilities might not manifest as expected, which creates the need for

testing through trials (Kroenke, 2013).

The purpose of prototyping was to test the viability of Mininet in achieving its intended goal and objective of supporting collaborative network research. Prototyping enabled the researchers to determine if Mininet was able to afford Self-defined Networks (SDN), which anyone with a laptop or personal computer could tweak, download, run, explore and evaluate (Lantz, Heller & McKeown, 2010). Prototyping is an effective way of getting valuable feedback from the intended product before the final is released. This enables the developers to make deserving changes where the prototype is lacking according to the product's specifications.