

УДК 004.89

Кивацький І. – ст.гр. СІ-31

Тернопільський національний технічний університет імені Івана Пулюя

ІНТЕРНЕТ РЕЧЕЙ

Науковий керівник: ст.викл. Джиджора Л.А.

Kyvatskyi I.

Ternopil Ivan Pul'uj National Technical University

INTERNET OF THINGS

Supervisor: senior lecturer Dzhydzhora L.A.

Ключові слова: Інтернет, Інтернет речей, пристрої, безпека

Keywords: Internet, Internet of things (IoT), devices, security

It is of common knowledge that the Internet of Things (IoT) is the network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors and connectivity which enables these objects to connect and exchange data.

The scientists proved that the IoT allows objects to be sensed or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit in addition to reduced human intervention.

It is also investigated the already impacting working and living environments with exciting trends. It has come a long way and 2018 looks promising for tweaked and heightened possibilities.

It is noticed that the IoT application ranking tracks the Internet of Things activity of different applications by quantifying popularity and activity for each of the IoT applications. The ranking is updated on a quarterly basis and serves as an indication of the segments that currently enjoy the most activity and buzz.

It should be emphasized that the complete IoT system integrates four distinct components: sensors/devices, connectivity, data processing, and a user interface.

The sensors/devices can be connected to the cloud through a variety of methods including: cellular, satellite, WiFi, Bluetooth, low-power wide-area networks (LPWAN), or connecting directly to the internet via Ethernet. The Industrial Internet as it is used across several industries such as manufacturing, logistics, transportation, energy/utilities, mining and metals, aviation and other industrial sectors and in use cases which are typical to these industries.

It should be also underlined that there also are huge differences between typical consumer devices and applications in the consumer electronics space such as smart watches on one hand and industrial devices and applications such as freight monitoring in transportation, intelligent manufacturing systems on the other.