RESEARCH AND DEVELOPMENT OF TRAFFIC MODELS AND METHODS FOR SELECTING THE STRUCTURE OF INTERNET OF THINGS NETWORKS

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Internet of things (IoT) – is rapidly developing technology today and most likely everyday thing in the future. Numerous devices, computing machines and build-in sensors connected in a single dynamic network continuously receive and exchange information from the outer environment. Huge data clusters are collected and put to use in handmade applications that scrupulously manage and control given objectives. In this way, an interactive technical infrastructure is created, which can oversee and infiltrate any person's vital processes. Though separately every device and technological solution in the IoT can be known for many years, each architecture is unique and provides new challenges for the network owner. This research aims to investigate IoT general structure and management aspects with the knowledge of which the authors will try to answer a trivial question whether it is possible to comprehensively control such a tremendous structure with the current level of technology.

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The term "Internet of Things" (IoT herein) for the first time was mentioned by Kevin Ashton in 1999 representing supply chain management aspects to the public [1]. The idea was too intriguing to develop in such a narrow scope, so through the past decade it spread out covering a wide range of applications such as healthcare, utilities, finances, traffic, etc. Since then the word "things" has changed its meaning, but the main idea of the IoT remains the same – to organise a related communication environment where computing technologies will be able to communicate with one another, that users can adjust for their needs, but at the same time will work autonomously, gathering information from external sources. The IoT comes in different sizes and shapes – ranging from a few sensors in a room to global structures covering entire countries. Respectively, some ideas, such as intelligent houses, become more and more popular allowing their owners not only to save funds in the future, but also to significantly simplify house management. Independent light intensity, air conditioning, household tool, door management and other control systems are only part of our own little IoT world [2]. Even a person that has never been interested in such technologies can encounter them on a daily basis, for example, by using payment cards while making a purchase, registering a trip in the public transport or other type of personal identification. This type of dynamic communication in social surrounding is possible thanks to new technologies, such as radio-frequency identification (RFID), Bluetooth, Near Field Communication (NFC), Wireless networks (Wi-Fi), telephone services and local. The term "Internet of Things" (IoT herein) for the first time was mentioned by Kevin Ashton in 1999 representing supply chain management aspects to the public [1]. The idea was too intriguing to develop in such a narrow scope, so through the past decade it spread out covering a wide range of applications such as healthcare, utilities, finances, traffic, etc. Since then the word "things" has changed its meaning, but the main idea of the IoT remains the same – to organise a related communication

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