Shortpaper: IoT-NDN: An IoT Architecture via Named Data Netwoking (NDN)

Leonard Boetefuer

Abstract—als Leztes

I. INTRODUCTION

als vorleztes

II. RELATED WORK

XYZTEST2

III. ANALYSIS OF IoT AND NDN

This section will talk about the limitations of IoT devices and the challenges of the current Internet architecture.

A. The connectivity of IoT devices:

Currently IoT devices use server-client or host-to-host connection to connect. In the server-client architecture every client has to communicate to the server and with a billion devices the server will be a massive bottleneck. In the host-host architecture, every host has to communicate to every other host. This results in exponential resource consumption. The server-client and the host-to-host model both need IP addresses for every single device, which is not possible with a billion devices.

B. Technological Standards:

The crucial standards are for the network protocols, the communication protocols, and the data aggregation. The challenge is that
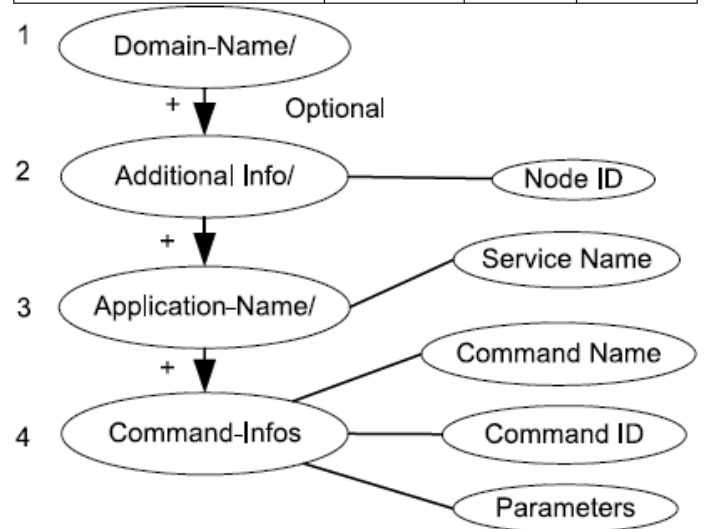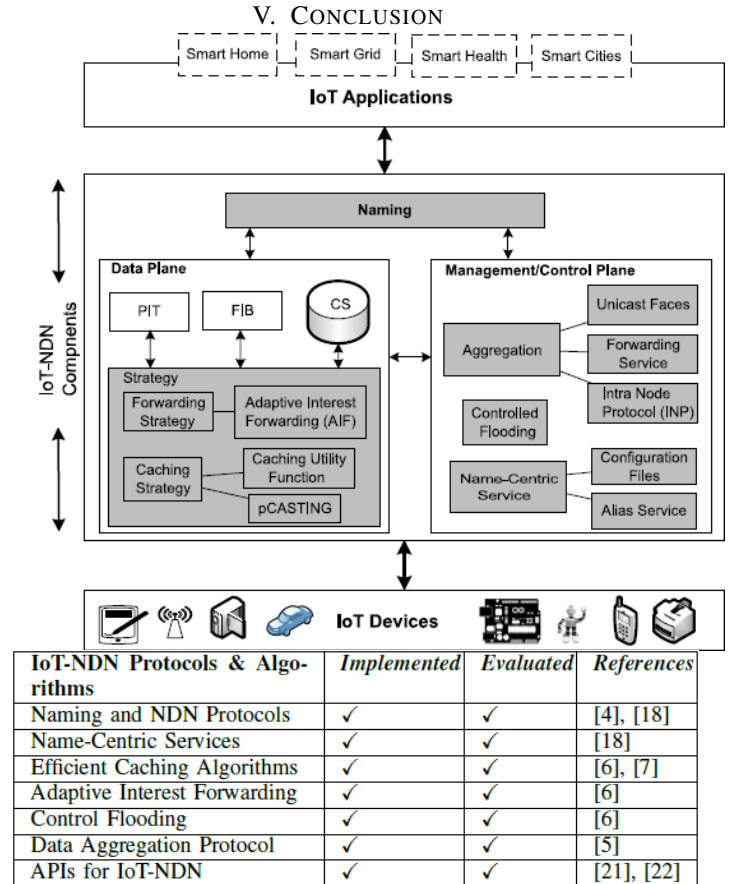
C. Mobility:

The amount of mobile devices is rising and so are the challenges. The technologies of the mobile devices are divers and the IoT systems need to keep that in mind.

D. Complexity and Integration Issues:

IoT systems are composed of many different APIs (Application Programming Interfaces), protocols and platforms. The integration of new technologies in the system is very complicated because of all the different combinations. The IoT system should consider the resource limitation of its components.

IV. ARCHITECTURE OF IoT-NDN SYSTEM

V. CONCLUSION

IoT-NDN Protocols & Algorithms	Implemented	Evaluated	References
Naming and NDN Protocols	✓	✓	[4], [18]
Name-Centric Services	✓	✓	[18]
Efficient Caching Algorithms	✓	✓	[6], [7]
Adaptive Interest Forwarding	✓	✓	[6]
Control Flooding	✓	✓	[6]
Data Aggregation Protocol	✓	✓	[5]
APIs for IoT-NDN	✓	✓	[21], [22]

VI. REFERENCES

XYZ