Payload Formats and Universal Data for Near Field Communication

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Abstract

NFC has a variant where Type 1 with NFC-A, Type 2 with NFC-A, Type 3 with NFC F, and Type 4 with NFC-B. In its application, the use of NFC is based on its tag type. If we go further, each type has similarities and differences. We can look at the various parameters, but for now we will look at 4 parameters, namely Sequence format, Bit level coding, frame format and data & payload format. From the four parameters, compared to the parameter value and obtained the difference and the equation.

With that use, an mobile application only runs in one type, while for another type must be modified. To overcome this, it is proposed a framework that can handle the tags of different types. Proposals are made for universal data and payload formats, and the expectations can be recognized by all NFC tag reading tools.

Architectures are built with attention to the similarities and differences for each type. For above four parameters. Beginning with getting the data for the use of the most tag type, then made the
proposed universal data format. Commonly used types are types 1 and 2. Of the two types, the differences of the four parameters are on the data and payload parameters. And more specifically on the CRC. Thus, a universal data and payload format with a specific CRC is used.

References


Index Terms

Computer Science
Information Sciences

Keywords

NFC, communication, multi-tag, universal, IoT.