Cooperation in IoT as the key for a quick solution

A frequent obstacle of the rapid deployment of a suitable solution in Internet of Things projects is the large fragmentation of sub-components, whether differently communicating end devices and various transmission technologies, or the need of customizing IoT gateways and applications to a given requirement. This results in long development time, high costs relating to it, and a closed, specialized project that has problems with scalability or adaptation to new requirements.

At the IQRF Summit 2019, IQRF Alliance members have demonstrated that they are able to deliver solutions due to the cooperation and development of interoperable solutions within a few weeks and this solution can be scaled to new customer requirements. The projects were various, ranging from water and air quality monitoring in South African poultry houses, through people and cars counting, temperature monitoring in refrigerators and freezers at the VFN in Prague, to demonstrations of specific products that can be used for projects.

Over the past few years, the IQRF Alliance has been driving the IQRF Interoperability standardization process, resulting in new end devices that communicate in a predictable and consistent way. As a result, IQRF® gateways, with the use of the IQRF Gateway Daemon, can translate messages for example into JSON format which is easy to use in cloud and mobile applications. Various higher-layer communication protocols are available at the gateways. The whole solution is opened for interconnection towards other technologies that can be deployed if necessary. At the summit, there was shown how IQRF® and LoRaWAN can work together as compatible technologies, where IQRF® is used for local autonomy and regular communication with devices and LoRaWAN for remote access. With unified communications, the solution can be extended to new devices and functionality, without requiring a major redrawing of the original concept.

New features in the IQRF® technology have also helped to the easiness of deployment. Newly devices running on batteries and devices powered from the network can coexist in one IQRF® network, the network can be built automatically with Autonetwork V2, you can add devices with reading the QR code containing IQRF Smart Connect code with a mobile application and you don't need to think about the working channel of a network because the network is set to the optimal channel of the master device - the coordinator.

The IQRF® network is completed with partners' services, such as the remote management of IQRF® gateways and devices via PIXLA.online, Open Edge Gateway - services at IQRF® gateway for adapting the gateway behavior to higher-layers requirements, IQRF Network Manager for IQRF® devices management including controlling and reading values, and much more. Thanks to the ongoing cooperation of IQRF Alliance members, newly developed sub-parts are complementary, so creating a complex solution is similar to a puzzle.

"IQRF® technology has run a long way since its beginning in 2004 and is now in a transition to an open standard. Every manufacturer will be able to use our reliable mesh technology to connect their devices to IoT and use any processor and any radio. The IQRF Alliance remains the garant of the interoperability of all devices using the IQRF® advanced mesh technology," says Dr. Vladimír Šulc, CEO of the IQRF Tech company.

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