

W3C Workshop on Web of Things / IoT

Berlin, Germany / 2014

Monohm Inc.

Research & Development of New Necessities™

Accelerated Takeup of Connected Devices

Recently we have seen an acceleration in the takeup of actual or potential small awakened devices. Products that use simple UI and connectivity to supplant their previous generations are here to stay. As the benefits of modern implementations of traditional functionality become clear, we can only expect further experiments in this area. In addition, acquisitions have shown that a market this large is appearing on radar screens, suggesting the prospect of significant investments and releases into the sector by major players.

Barrier to Realizing New Ideas is Very Low

The wide availability of processing power and sensing capabilities make the barrier to rapidly implementing completely new ideas very low. For example, Arduino-based solutions cheaply pair CPU power with sensors, BLE, NFC, and Wi-Fi, putting the implementation of discoverable, connected, remote devices within any budget.

Standards Process Preempt for Chaos

The complement to speedy implementation and deployment is that cross-vendor compatibility typically lags. Even in this nascent market segment, we are already seeing proprietary protocols competing for the same IP space.

Traditionally, the market has seen several years of painful fragmentation before standardization becomes accepted. History has shown us that during this time, a de-facto standard, or worse, a multiplicity of solutions, has trumped any upcoming “real” standard in the marketplace.

Ideally the tradition of fragmentation first and standardization later could be avoided in the case of IoT, as the need for connectivity is clear, the impact of fragmentation potentially crippling, and the market still young.

Standards Lubricate the Process of Realizing Ideas

One significant speed bump on the road to the realization of an awakened device is the development, validation, and release of supporting client software. Execution on the three major mobile platforms within cost parameters may be necessary for the product's release. The further requirement of support for a number of currently favored IoT protocols may represent too high a barrier for a small companies to enter into the space.

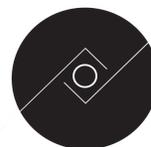
Therefore the efficient adoption of standards would beneficially impact the cost to market of such devices to the point where it actually enables products which would otherwise be cost prohibitive.

No Need to Start from Scratch

Existing protocols that were designed for similar purposes can be adapted to fit, theoretically shortening the standards process -- eg SNMP could be updated with HTTP, JSON, and PKCS.

Security

In this modern connected and monitored world, particularly in the personal and domestic market segments, proof from unauthorised entry and surveillance is essential to engender trust among the projected user base.



Monohm's Proposal

In Monohm's view, the W3C would quickly establish a dedicated working group to proactively frame up standards encompassing:

- protocol neutral discoverability
- common functional ground establishment
- ad-hoc pairing
- pervasive security
- web accessibility

Monohm has Secured Support from Major Players

Since IoT is a significant portion of Monohm's remit, and we wholeheartedly believe in a standards-based future, we have been proactive in discussing the situation with other players.

Recently we have met with Mozilla, Apple, Microsoft, Sony, Ikivo and IBM have been assured of their support for an early entry into the standards process for IoT related concerns.

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