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Title:

OPEN PROTOCOLS FOR AN OPEN, INTEROPERABLE INTERNET OF THINGS

Abstract :

OPEN PROTOCOLS FOR AN OPEN, INTEROPERABLE INTERNET OF THINGS

Like the Internet of computation before it, the Internet of Things will grow, not from a sole supplier's design, but from the interactions of a heterogeneous field of devices and sensors that report and cooperate, using shared open protocols that any maker can employ.

Open standards and open source projects generally are complementary.  Many open standards projects at OASIS and elsewhere are first prototyped and implemented in open source software.  Open source projects (like Eclipse's MQTT for smart sensors) also generate open standards protocols (like OASIS' MQTT TC) for broad re-use.  The open licensing approach of both communities encourages widespread adoption and experimentation.

While multiple formal definitions exist for open source and open standards, they share the same fundamental criteria:  open access to participation; development transparency; and widespread, unconditional availability.  These qualities make "open" work more readily usable, adaptable, evaluable and auditable.  Those lower barriers permit more rapid growth of large, loosely-coupled networks of cooperating devices from diverse sources where interoperability is essential.

The resulting explosion of interoperating objects -- including building systems, transport and trade systems, and human-wearable devices -- will generate tremendous increases in the amount and depth of data collected, and the volume of transactional interactions processed.  These will radically raise demand for more powerful fine-grained data access control and security; reliable, automated privacy protections; widely-extensible unique identifiers; and lightweight transactional protocols that can talk to many different simple devices.  OASIS projects are addressing each of these emerging imperatives.

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