FREEDOM TO IMPLEMENT: OCF AND IOTIVITY

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WHAT IS THE BEST WAY TO ESTABLISH INTEROPERABILITY?

A FORMAL SPECIFICATION WITH MULTIPLE IMPLEMENTATIONS?

OR IS INTEROPERABILITY BEST ASSURED BY ADOPTING THE SAME IMPLEMENTATION ACROSS ALL PRODUCTS?

For many years, the question was framed as "standard" vs. "proprietary" because 'same implementation' usually implied 'an implementation only available from one company'. Open source changes that presumption. It is now possible for interoperability to be implemented using code from multiple contributors whose copyright is licensed to all at no charge.

But the question persists: what's best— implementation or formal specification?

The Open Connectivity Foundation and the corresponding IoTivity project represent the only cloud-native IoT software effort that delivers both a formal specification that can be implemented virtually any way a developer chooses, complemented by an open source implementation.

The OCF specification provides a standardized blueprint for implementation of cloud-native interoperability from scratch, and a benchmark for the implementation of certification tests.

The specification is created by the OCF membership and when approved, is available publicly. Any OCF member can

implement the specification secure in the knowledge that patents owned by member companies (and their affiliates) that are required to implement the specification are licensed on royalty-free or nondiscriminatory terms no matter how members choose to implement it. (The official policy is available to members and discusses several important elements in precise legal terms.)

In addition, OCF sponsors an open source project, IoTivity, which implements the specifications in a form usable in many IoT products. IoTivity uses the widely accepted, flexible Apache 2.0 license with its accompanying patent grant.

The combination of OCF and IoTivity cover you in all these circumstances:

- IoTivity is implemented in C, but your set top box middleware is implemented in Java. Recoding in another language is supported in the OCF's IP policy.

- Your engineers come up with optimized code to implement an interoperable device that you choose not to contribute to IoTivity. That's OK, because you are still covered by OCF member patent licenses to implement the OCF specification.

- Affiliates (e.g., a corporate parent) are bound by the promises a subsidiary makes to you in OCF. In some cases, parent companies hold relevant IP.

- Your legal department has a short list of approved open source licenses.

- MIT, Apache 2.0 and BSD are on it. IoTivity uses Apache 2.0, making the approval process faster and easier.

What is outlined here is not legal advice – only your own company's attorneys can provide that.

But OCF believes that a healthy ecosystem of IoT products requires formal specifications that can be used as a basis for independent implementation, with IP policies informed by decades of standards practice, in addition to robust open source implementations.

It seems as if new proposals for interoperability among IoT devices are made every other day. But only the Open Connectivity Foundation and IoTivity open source project offer cloud-native architecture and implementation in a formal specification with an IP policy that delivers the kind of flexibility needed in this fast-moving environment.

As you make design decisions, understanding the business implications of those decisions is critical. Read the fine print. Consult your company's legal department.