### Eclipse IoT-Testware (https://projects.eclipse.org/projects/technology.iottestware)

* Description:
It is the aim of the project to supply a rich set of TTCN-3 test suites and test cases for IoT technologies to enable developers in setting up a comprehensive test environment of their own, if needed from the beginning of a project. TTCN-3 has been defined and standardized by the European Telecommunication Standards Institute in ETSI ES 201 873 and related extension packages. It is implemented and supported by the Eclipse Titan project.
* Readiness:

1. Community

* Multiple organizations.

2. Commitment

* Multiple volunteer committers.

3. Road map:

* Frequent but non planned releases (small extension).
* Planned releases (synchronization with standards).

4. Alignment of ongoing Standards:

* Not aligned with SDO standards (in case of extended scope).
* OSS output is aligned with SDO specifications (in case of updates).

5. Licensing:

* Eclipse Public License 1.0

6. Portability:

* Platform independent.
* Interoperability level:
* Technical interoperability: addresses various IoT protocols and platforms (e.g. CoAP, MQTT, OPC-UA, LwM2M).
* Syntactical interoperability: may be subject of future test suites but depend on developer’s resources and decisions.
* Standards:
Various SDO and consortia standards and protocols related to the test suites will be used and supported; sources will include IETF (CoAP), OASIS (MQTT), OPC Foundation (OPC-UA), OMA (LwM2M) etc.

* Supporting organizations:
* Fraunhofer FOKUS
* relayr GmbH
* Ericsson
* Spirent Communication
* Sintesio Foundation
* EasyGlobalMarket (EGM)
* Domain:
* Initiative is related to multiple market domains (consumer/industrial internet) and the technical domain (connectivity, service&applications), i.e. in Figure 3 close to ETSI’s positions in Figure 1.
* Application area:
* Initiative is focusing on integrated/complete IoT solutions, i.e. horizontal industry, and do not exclude a particular vertical industry.
* Scope:
* Communication and Connectivity knowledge area:
	+ It covers testing of communication protocol layers
* Integration/Interoperability knowledge area:
	+ It covers mainly testing of common IoT features required to provide integration and interoperability.
* Applications knowledge area:
	+ Applications testing may be included if specific applications has been identified as of general interest.
* Infrastructure knowledge area:
	+ It covers aspects related to testing during design, deployment, and operation.
* IoT Architecture knowledge area:
	+ It may support integrated/complete IoT testing solutions, including aspects on performance, but this is subject of the developer’s resources and decisions.
* Devices and sensor technology knowledge area:
	+ It do not exclude device/sensor lifecycles, operating systems, platforms, configuration management, sensor/actuators virtualization etc., but this is subject of the developer’s resources and decisions.
* Security and Privacy knowledge area:
	+ It will include fuzzing tests.
* IPR Policy Available:
Eclipse Public License 1.0, <https://www.eclipse.org/org/documents/epl-v10.php>
* Specification Access: <https://projects.eclipse.org/projects/technology.iottestware/developer>