World Class Standards

# 6TiSCH F-Interop PLUGTESTS REPORT

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14–15 July 2017
Prague, Czech Republic

# Overview of the Event

- Event organized by:
  - ETSI (European Telecommunications Standards Institute)
  - LIST (Luxembourg Institute of Science and Technology)

- Supporting Companies/Projects:
  - OpenMote (hardware, www.openmote.com)
  - OpenWSN (firmware www.openwsn.org)

- Event sponsored and funded by:
  - European Commission

- 16 Participating Companies
  - 7 observer companies

- 6 6TiSCH and 6 OSCoAP independent implementations

# Participating companies

| # | Company | # | Company |
|---|---|---|---|
| 1 | Analog Devices | 9 | INRIA and RISE SICS |
| 2 | August Cellars | 10 | LIST |
| 3 | Christian Amsüss | 11 | Sandelman Software Works |
| 4 | CISCO | 12 | Toshiba Research Europe Ltd |
| 5 | Endress+Hauser GmbH & Co. KG | 13 | Universidad Diego Portales |
| 6 | Ericsson | 14 | Universitat Oberta de Catalunya |
| 7 | Gridbee Communications | 15 | UPMC of Paris |
| 8 | INRIA | 16 | University of Science and Technology Beijing |

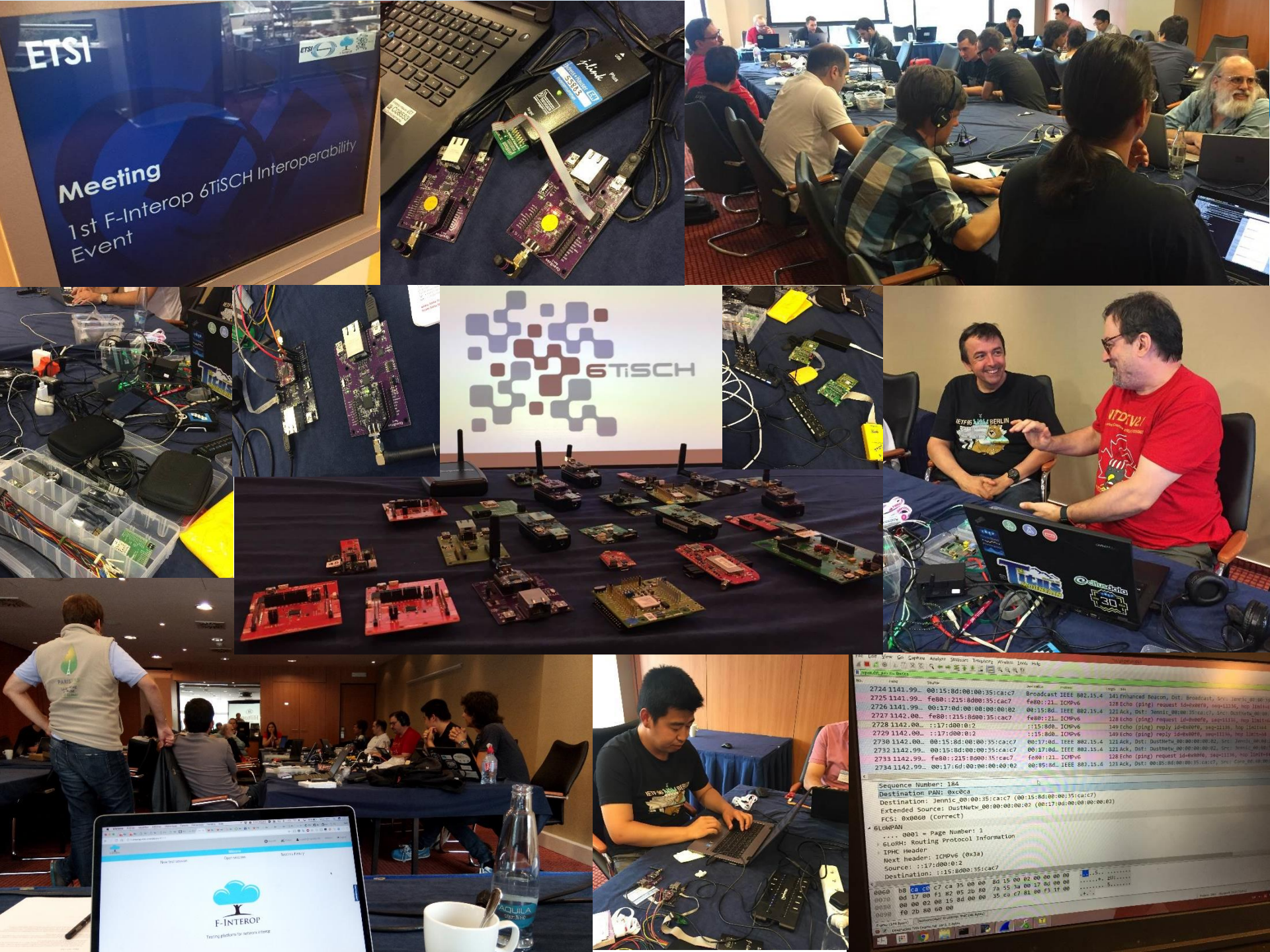
# Participants

# Plugtests Agenda

| F-Interop 6TiSCH Agenda (14-15 JULY 2017) | | |
|---|---|---|
| Time | Friday 14 | Saturday 15 |
| 08:00<br>11:00 | | TEST SESSIONS |
| 11:00<br>13:00 | SET-UP / REGISTRATION | |
| 13:00<br>14:00 | LUNCH BREAK | LUNCH BREAK |
| 14:00<br>19:00 | TEST SESSIONS | TEST SESSIONS |
| 19:00<br>19:30 | GOING TO THE RESTAURANT | WRAP UP / TEAR-DOWN |
| | DINNER | |

# Summary of Event Planning

- 1 preparation call
  - ETSI/LIST/Experts group led and organized
  - Collaborating Web conf (GotoMeeting) on 3.7.2017
  - Included Vendor Participants
- Test Plan Development
  - 6TiSCH -> Led by Thomas Watteyne, Tengfei Chang, Malisa Vucinic, and Maria Rita Palattella
  - 6TiSCH Online Testing Tools -> Remy Leone
  - OSCoAP -> Led by Malisa Vucinic ??? I don't know


ETSI
Meeting
1st F-Interop 6TiSCH Interoperability Event
6TiSCH
F-INTEROP
AQUILA

# Results Reporting

- The results of each interoperability test session have been recorded in a dedicated web application software: the ETSI Test Report Tool (TRT)
  - After each test execution the interoperability result is agreed among all participants and then recorded
  - After each test session the report is submitted to ETSI

# Test descriptions

**6TiSCH Tests description** (publicly available)

Testing: Synch, Minimal, 6top, L2 security, Secure joining

1 TD_6TiSCH_SYN_01
2 TD_6TiSCH_MINIMAL_01
3 TD_6TiSCH_MINIMAL_02
4 TD_6TiSCH_MINIMAL_03
5 TD_6TiSCH_MINIMAL_04
6 TD_6TiSCH_MINIMAL_05
7 TD_6TiSCH_MINIMAL_06
8 TD_6TiSCH_L2SEC_01
9 TD_6TiSCH_SECJOIN_01
10 TD_6TiSCH_SECJOIN_02
11 TD_6TiSCH_SECJOIN_03
12 TD_6TiSCH_SECJOIN_04
13 TD_6TiSCH_6P_01
14 TD_6TiSCH_6P_02
15 TD_6TiSCH_6P_03
16 TD_6TISCH_6P_04

# 6TiSCH Tests Outcomes 1/2

| Total | Passed | Failed | Not Applicable |
|---|---|---|---|
| 156 | 85 | 14 | 57 |
| | **85,9 %** | **14,1 %** | 36,5% |

- 6TiSCH Synchronization: 100% interoperability
- 6TiSCH MINIMAL: 85% interoperability
  - Aspects to be improved:
    - XXX
    - YYY

# 6TiSCH Tests Outcomes 2/2

- 6TiSCH L2SEC: 100% interoperability
- 6TiSCH SECJOIN: 0% interoperability
  - 9 tests -> all NA – Q: were the results well reported??
- 6P: 50% interoperability
  - Aspects to be improved:
    - XXX
    - YYY

# F-Interop 6TiSCH Online testing tool

DEMO: shall we add some screen shot?
Remy, can you help?

# Conclusions – 1st 6TiSCH F-Interop Plugtests

- Conclusion
  - Great success! Enabled to detect standard gaps using real implementations, e.g, …
  - Progress through implementation and real testing.

- Recommendations for future:
  - Improve Format of the Plugtests: promote use of online tools.
  - Organize a fully remote F-Interop 6TiSCH Plugtests

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# THANK YOU!

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