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E2E Interoperability a key element

With the diversity kept, it’s working thanks to extensive e2e interoperability efforts carried out by the industry.

The only way to keep the diversity and keep the operational excellence in the multi-vendor, multi-operator environment is e2e interoperability.
E2E IMS Interoperability a necessity

- Conformance and Protocol testing initiatives are necessary but not enough:
  - Issues related to the E2E perspective is not detected in conformance testing.
  - In reality, deployment environment of IMS is much more complicated than the simple conformance and protocol testing environment.
  - New and standardized services are network agnostics, but dependency on legacy systems as the connectivity layer is ignored in conformance and protocol testing.

- E2E IMS Interoperability is a quality assurance:
  - Prove of the concept in reality, validation and improvements of the specifications.
  - IMS standardization work is incomplete as long as the E2E Interoperability testing is not made a natural part of the standardization effort.
  - Bi-lateral testing between companies on a continuous basis, involves normally only a small part of the players in the ecosystem, though the major ones.
  - Multi-lateral E2E IMS Interoperability is a highly appreciated opportunity for the small players of the ecosystem.
Success Criteria for E2E IMS IOT

- E2E IMS Interoperability MUST be industry driven:
  - Only the industry can clearly define the boundaries.
  - Non industry driven activities tends to be never ending, costly, fragmented, unstructured…
  - Quicker consensus within the industry. Standards shall not create moving targets and keep changing for ever.
  - Not using the extensive testing experience within the industry is waste of capital.
  - Re use of deliverables within the industry, reduces testing costs and enriches testing. Giving the developers access to Standardized Interoperability Test Specifications, Trouble Reports and Test Tools ensures high quality testing within the industry and minimizes in the filed issues.

- E2E IMS Interoperability MUST be done in a real network Environment:
  - No simulator is as real as a real network element and component.
  - Capturing integration issues for new standardized IMS services will ease deployment.
  - Hand over, Radio shadow, Roaming ... Are all scenarios requiring a real network.
Success Criteria for E2E IMS IOT, Contd.

- **E2E IMS Interoperability MUST be performed in different network environments:**
  - Different Networks imply different capabilities and limitations.
  - Differences in Delays, QoS, Radio network dimensioning, traffic modeling etc...have impacts on the E2E perspective.

- **E2E IMS Interoperability MUST involve all member categories of the ecosystem:**
  - Service performance, availability and usability is not only a server side issue, but also a client side.
  - Involvement of the test tool industry will create alignment possibility.
  - Operators involvement will give the possibility to run E2E interoperability in different network environments and will give an insight about the future integrations issues.

- **Any serious E2E Interoperability testing initiative MUST guarantee confidentiality of the results:**
  - The aim is to resolve E2E interoperability issues before products are reached to the market. In other words Products can improve, the results are just a snapshot of a products life cycle.
  - Using the results as marketing tools may not be fare!
E2E IMS IOT Conditions

- The industry is geographically distributed all over the world:
  - Travel obstacles and Entry visa barriers
  - Language barriers
  - Culture differences

- Different markets, different needs:
  - Statistics from different testing initiatives confirms a clear relation between geography and participation level.
  - Companies participation frequency in testing events is market dependent.

- Test environment in America, Asia and Europe
  - Major markets
  - Existence of suitable test environments
  - Differences in deployment conditions
Running a network is a costly business.
- Joint activity with other initiatives such as OMA TestFests for IMS based enablers will:
  - Increase participation
  - Minimizes the cost for the organizer(s)
  - Provides the best problem detection occasions, due to presence of different service enablers and implementations
- Maintaining network components from different vendors requires extensive knowledge updates. That might be a reason for considering:
  - Permanent test sites
  - Connectivity to already existing test sites
E2E IMS IOT and ETSI

- ETSI is the most suitable standardization body to organize the activity
  - Extensive experience from organizing such initiatives
  - Broad member base, opening the door for involving almost the entire industry
  - Capability in creation of short feedback path, shortening specification updates and initiating specification improvements
  - A trusted organization capable of keeping confidentiality of the results
  - Well known and respected standardization body
Ericsson as one of the major players in the market, takes its responsibility and provides the necessary support

- We support such initiatives in form of:
  - Hosting events
  - Providing access to necessary network components
  - Supporting operators, institutes who offer to host events
- Ericsson’s support to all recent latest testing events, has proven that we are best in class and play our role seriously!
Conclusion

- E2E IMS Interoperability testing is a key element in ensuring operational excellence in a multi-vendor and multi-operator environment.
- We as Ericsson believe that ETSI, as one of the most respected standardization bodies has an important role to play. ETSI has the capacity to establish the necessary ecosystem, define the boundaries, organize the activity and drive it.
- We as Ericsson therefore would like to see a Task Force Team, established by ETSI, with the mission to aggressively take the stand and move the establishment task of the ecosystem, definition of the scope and organizing the activity forward.
- Of course as ETSI member, we will be the first company to step forward, participate in and support such a task force team in it’s mission.
- In addition we would like to see a time line for the task force team to be established, for the ecosystem to be defined and for the activity to get started.