ITU Workshop on "Security Aspects of Blockchain" (Geneva, Switzerland, 21 March 2017)

Reports from all sessions

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Session 1: Introduction to blockchain
Results & Conclusion

- Key summary

  – Consider what user benefits are.

- Some recommendations to SG17

  – Consider to study and develop standards

    - Blockchain is mainly based on integrity using hash functions, a kind of security application

    - Blockcahin needs security

Session 2: Applications and use-cases
Results & Conclusion

- Much more to discuss. Innovation is happening – move fast

- Some recommendations to SG17
  - Coordinate with TC307, SC27 and others. Liaison is not enough
  - Focus on other sectors, not just fintech
  - Focus on real change, not theory. Look at new use cases
  - Expect many, many small chains & federations of chains
  - Assurance in the blockchain. High quality, non-repudiation
  - Assured external dependencies
    - Authentication of all entity types – person, device and organisation
    - Federation is essential. PKI federation could replace proof of work
    - Trusted attribute providers. Particularly ROLO for organisational ID & attributes
  - Link to ISO270XX and Cybersecurity frameworks. And to Internet governance
  - Include law enforcement

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Session 3: policy implication Results & Conclusion

- The panel agreed that blockchain and DLT are innovative technologies that require smart regulation to promote innovation, not to stifle innovation
  - Some helpful conceptual instruments are identified in this session, such as regulatory sandbox and stepwise decentralization

- Cooperation and ongoing dialogue among stakeholders will be the key to embrace these technologies
  - Interactions among regulators, industry, SDOs, experts and communities should continue, triggered by this Workshop

- SG17 should facilitate ongoing deliberations, considering its mixed constituency of regulators, industry, standards experts and subject matter experts, as security is key concern in Blockchain / DLT

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Session 4: Security, privacy and trust aspects
Results & Conclusion

- Key summary
  - focus on security issues in blockchain design and attention to privacy

- Some recommendations to SG17
  - Has implications on identity and federation protocols and IOT security

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Session 5: Panel discussion
Results & Conclusion

- Suggest SG17 to:
  - Revise existing Question text (for example, Q7/17, or Q6/17) to incorporate studying security aspects of blockchain: or
  - Create new Question on security aspects of blockchain.
- Suggest SG17 to establish new work items:
  - Use cases for blockchain applications and services;
  - Threat analysis for block-chain technology based applications and services;
  - Security requirements for block-chain system;
  - Security architecture for blockchain systems.
- Suggest SG17 to:
  - Request Category A liaison status with ISO/TC 307, Blockchain and electronic distributed ledger technologies; and
  - Collaborate other relevant groups.

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