Recommendation H.DLT-TFR: Technical Framework for DLT Regulation

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Outline

- Motivation
- Content of the draft recommendation
- Conclusion

Motivation

▶ DLT regulation faces great challenges, especially in financial services

▶ Although different legal framework exists, the main regulatory concern should have common technical solutions

▶ Identify the main regulatory challenges to DLT and the corresponding technical solutions
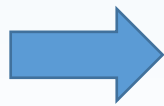
《Technical framework for DLT regulation》

Motivation

DLT regulation in China

- Legal aspect
    - ICO banned since 2017
    - 《Administrative provisions for information service of DLT》publish in 2019
    - More than 1000 DLT services have been put on record
    - National standard under development : 《Security specification for information service of DLT》

- Security assessment to discover and to prevent the security risks of DLT

- Focus on the DLT network, information and financial risks

Motivation

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▶ Previous work in FG-DLT D4.1: DLT regulatory framework (Technical Report)

  ▶ Discuss the key properties of DLT and its associated regulatory challenges

  ▶ Propose some approaches/recommendations

International Telecommunication Union

ITU-T   **Technical Report**

TELECOMMUNICATION
STANDARDIZATION SECTOR   (1 AUG 2019)
OF ITU

ITU-T Focus Group on Application of
Distributed Ledger Technology
(FG DLT)

Technical Report FG DLT D4.1
Distributed ledger technology regulatory
framework

| Distribution, shared ledger |

| Autonomy and responsibility |

| Tamper evidence and resistance |

| Openness, transparency and anonymity |

| Incentive mechanism and digital assets |

Main features related to DLT regulation

Technical framework for DLT Regulation

- Draft Recommendation in ITU-T SG16 Q22

- Define a technical framework for DLT regulation
  - Identify the regulatory challenges in DLT service
  - Analyze the requirements for DLT regulation

- Relation with existing work
  - FG DLT D4.1: continuation without legal aspect
  - SG17 Q14: DLT security
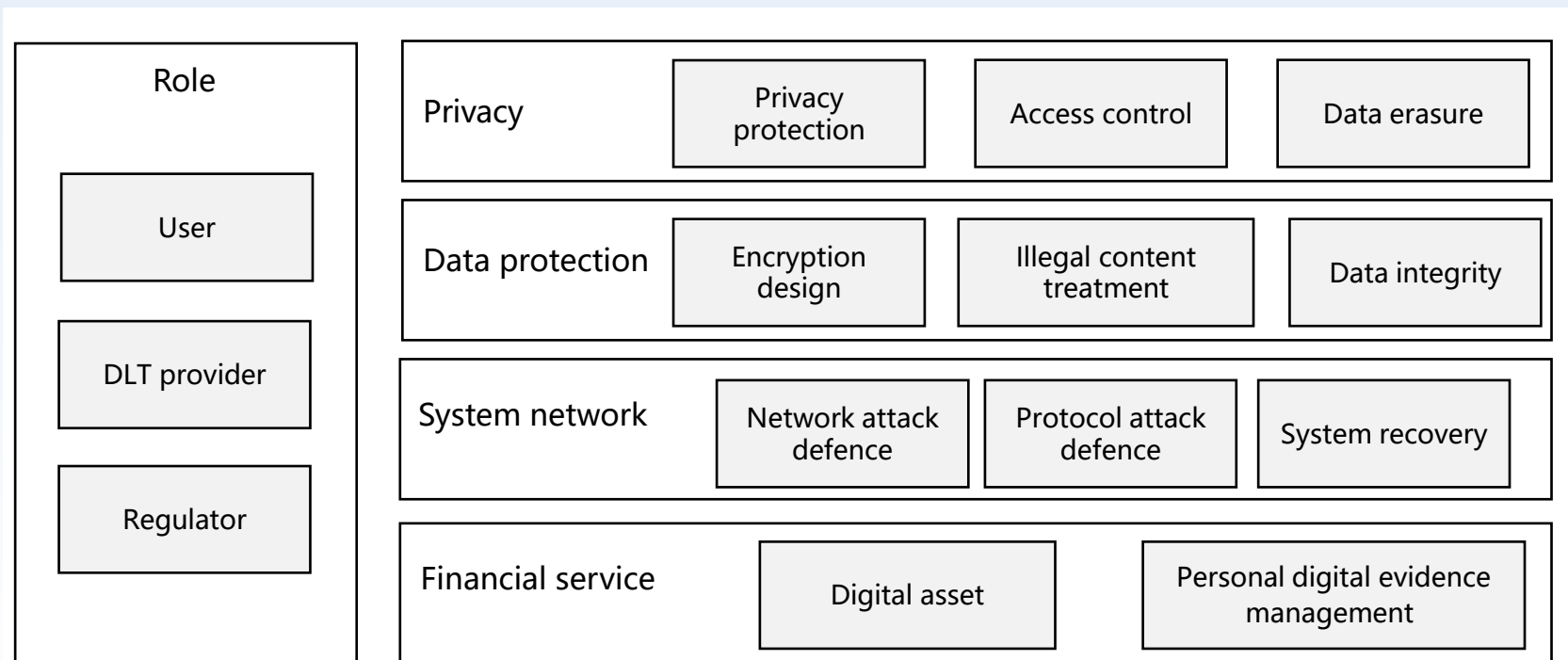   - X.1401 《Security threats to distributed ledger technology》

Table of Content

Regulation challenges

- Privacy challenges
  - Challenges related to privacy issues, such as personal data protection, business confidentiality

- Data protection challenges
  - Challenges related to the lifecycle of data governance, including data creation, treatment, distribution, propagation and storage

- System network challenges
  - Challenges related to DLT system network functions and services

- Financial service challenges
  - Challenges related to financial services and applications of DLT

The Technical Framework

▶ Analyze the regulation capacities from privacy, data protection, system network and financial services

Role		Privacy	Privacy protection	Access control	Data erasure
User		Data protection	Encryption design	Illegal content treatment	Data integrity
DLT provider		System network	Network attack defence	Protocol attack defence	System recovery
Regulator		Financial service	Digital asset	Personal digital evidence management	

Following Work

- Refine the framework and the regulatory aspects

- Focus on the technical recommendations
  - Identify the related techniques

- Add use cases for the application of the recommendation

Conclusion

- DLT regulation can use technical framework to mitigate potential risks

- Draft recommendation H.DLT-TFR: Identify the regulatory challenges and propose technical recommendations

- Hope more experts could join the development of H.DLT-TFR

Thank you for your attention!

Q & A