

Welcoming remark by Heung Youl Youm, Chairman of ITU-T SG17

ITU Secretary General Mr HOULIN ZHAO,

Excellency Deputy Minister of Ministry of Science and ICT, Republic of Korea, Dr Jin-bae Hong,
Distinguished colleagues and friends,

Good morning, good afternoon, and good evening,

I sincerely thank Mr Houlin Zhao for giving us his comprehensive, insightful opening remarks as well as Dr Jin-bae Hong for giving us his impressive, interesting congratulatory remarks.

It is my pleasure and honor to give this welcome remark to this first ITU-T X.509 Day, celebrating the 33rd anniversary of the approval of Recommendation X.509 in 1988.

In addition, I'm pleased to congratulate three pioneers who have received certificates of appreciation for their profound efforts in developing X.509 by Mr Houlin Zhao, Secretary General of ITU. They are: Mr Erik Andersen, Mr Hoyt L Kesterson II and Mr Doug Steedman.

As you may know, ITU-T SG17 is responsible for building confidence and security in the use of ICTs by producing a set of high-quality technical standards in the area of security and data protection. Providing security by ICTs and ensuring security for ICTs are both major study areas for Study Group 17.

Recent WTSA-20, which took place in Geneva in early March 2022, approved twelve Questions for Study Group 17 on Security for this 2022-2024 study period:

- Q1 on Security standardization strategy and coordination
- Q2 on Security architecture and network security
- Q3 on Telecommunication information security management and security services
- Q4 on Cybersecurity and countering spam
- Q6 on Security for telecommunication services and Internet of Things
- Q7 on Secure application services
- Q8 on Cloud computing and Big data infrastructure security
- Q10 on Identity management and telebiometrics architecture and mechanisms
- Q11 on Generic technologies to support secure applications
- Q13 on Intelligent transport system security

- Q14 on Distributed Ledger Technology security
- Q15 on Security for/by emerging technologies including quantum-based security

I believe these twelve Questions lay down a profound ground for SG17 study in this study period.

ITU-T X.509 is the one of the most effective, prominent international standards that SG17 has produced. It is the common global language for a digital public key certificate, which provides a ground for establishing public key infrastructure (PKI). It is being used as the foundation for secure transactions in business-to-business (B2B), business-to-customer (B2C) and government-to-citizen (G2C) environments.

The basic data structures defined in ITU-T X.509 for digital certificates and certificate revocation lists (CRLs) provide fundamental interoperability in a wide variety of use cases across industry, business, and consumer sectors, such as finance, energy, entertainment, health, manufacturing, transport, and utilities.

The first version of X.509 was published on 25 November 1988. The third version of ITU-T X.509 (v3), published in August 1997, adds the extensions field to certificate and CRL. This version has been used by other SDOs, such as IETF.

The ITU-T X.509 international standard is a collaborative work with ISO. It has played a very important role in building trust and confidence in the global cyberspace for the past 33 years and will continue to play an increasingly important role in the future.

In particular, the advent of commercial quantum computers within the next decade presents new challenges and opportunities for this international standard.

This event provides an opportunity to reflect major use cases of past 33 years' implementations since establishment of this international standard, to look at the present situation, and to seek the direction of future development. The main objectives of this event include:

- providing a brief review of the historical materials of ITU-T X.509 standard development,
- reviewing aspects related to public key cryptography and public key infrastructure,
- reviewing typical implementations of ITU-T X.509 by examining major use cases as well as IP protocols and standards using ITU-T X.509,
- identifying potential directions for future developments of ITU-T X.509 standardization and discussing how relevant SDOs could enhance collaboration on future work on ITU-

T X.509.

To conclude, I introduce the SG17 motto since 2017, which I have presented at every SG17 meeting, SAFE, security is absolutely first everywhere. That means that security by design principles should be applied to all ICT services and products from the beginning.

Lastly, I thank the 13 Steering Committee members including TSB event teams for their excellent support to this event.

I thank in advance all the masters of ceremony, session moderators, speakers, and panelists for participating in the event.

I also thank the more than 130 participants online from all over the world, and I hope you will find the event insightful and useful.

This concludes my remarks. Thank you very much.