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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Trusted mobile e-document framework - Requirement,
functionality and criteria for ensuring reliable and safe mobile
e-business**

可信移动电子文件框架 安全可靠的移动电子业务要求、功能和准则

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt ISO 20415:2019 "Trusted mobile electronic document framework - Secure and reliable mobile electronic services - Requirements and functionalities".

and guidelines.

Compared with ISO 20415:2019, this document has undergone the following structural adjustments.

---3.1 "Terms and Definitions" corresponds to Chapter 3 of ISO 20415:2019;

---Added section 3.2 "Abbreviations";

---Subdivide 6.2.3 into 6.2.3.1 to 6.2.3.6.

The technical differences between this document and ISO 20415:2019, and the reasons therefor, are as follows.

---The scope has been changed (see Chapter 1) to suit my country's technological conditions;

---Terms changed to "electronic document", "denial of service", "digital signature", "electronic signature", "mobile communication", "public key infrastructure", and "public key".

The definitions of "certificate" and "timestamp" (see 3.1.4~3.1.7, 3.1.12, 3.1.14, 3.1.15, 3.1.18) should be adapted to my country's technological conditions;

---Added the terms and definitions for "RSA algorithm", "SM2 algorithm", "SM4 algorithm", and "SM9 algorithm" (see 3.1.24~3.1.27) to suit [the needs of users].

Based on my country's technological conditions;

---The technology neutrality verification standard has been revised (see 4.5) to adapt to my country's technological conditions;

---The confidentiality protocols "National Cryptographic Algorithm" and "Quantum Encrypted Communication Protocol" (see 6.3.2.2) have been added to adapt to my country's technological conditions.

The following editorial changes have been made to this document.

---The URL information for the ISO and IEC terminology databases has been removed;

---The informative references GB/T 25068.3 and GB/T 29246 have replaced ISO/IEC

27033-3 and ISO/IEC 27000 (see GB/T 25068.3 and GB/T 29246).

---Informative references to GB/T 37036 (all parts) have been added (see 4.5);

---ISO 14533-1 has been replaced by GB/T 31308.1 (see 6.2.3.6), which is cited in the informational reference.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Electronic Business Standardization Technical Committee (SAC/TC83).

Introduction

Mobile device communication is crucial in modern society; the vast majority of mobile devices have become bridges connecting people, businesses, and networks.

Electronic transactions, information processing, and data transmission via mobile devices have become standard practice in the business world. Furthermore, mobile devices in the business sector...

The number of electronic documents in use is growing rapidly, and electronic document exchange is widely used in various industries such as B2C/B2B; considering mobile...

The equipment's features will allow it to play a significant role.

However, mobile device communication still faces numerous problems. Firstly, wireless channels may be unexpectedly interrupted during data transmission, leading to data loss.

Data loss; this problem could pose a fatal flaw in the transmission and reception of sensitive corporate data. Secondly, mobile devices are easily stolen, potentially leading to this allows unauthorized data transmission. Finally, mobile communications are more vulnerable to security and reliability issues compared to wired communications.

The widespread adoption of electronic documents and transactions via mobile communications has consistently hindered the circulation of electronic documents and the popularization of electronic transactions. Businesses and individuals are concerned about the security of mobile communication data transmission.

The need for reliability and security is growing. Therefore, it is necessary to establish a standardized methodology to ensure the secure transfer of electronic document data via mobile devices.

Security and reliability of the exchange.

Due to the inherent limitations of wireless networks, different principles and standards are required compared to wired network environments to ensure the smooth operation of wireless networks.

Reliability of electronic document distribution. Given the relatively low reliability of wireless networks and limited computing resources, appropriate methods need to be selected based on cost or network environment.

Standards for the joint distribution of mobile electronic documents.

This document aims to provide a secure and reliable way to create and transmit B2B/B2C data via mobile devices in unstable and unreliable wireless network environments.

Electronic Documents (TMEF) provides a technological framework. The TMEF concept is illustrated in Figure 1. Currently, businesses and individuals are increasingly reliant on mobile devices for business processing.

As technology advances, the need for handling critical business operations continues to grow. Therefore, achieving secure and reliable transmission of electronic documents in a wireless network environment is crucial.

Processing has become an increasingly urgent and important need.

Figure 1. Concept of Trusted Mobile Electronic Document Framework

However, due to limitations in computing resources and wireless networks, wireless network environments cannot utilize all methods to maintain the highest level of security and reliability.

Therefore, it is necessary to derive the trust factors required for secure and reliable electronic service processing in a wireless network environment and to apply them in practice.

application.

Wireless networks and mobile devices are most vulnerable to attack in wireless network environments. The portability of mobile devices makes them difficult to rigorously identify.

Mobile devices and user identities. Furthermore, wireless networks may suddenly be interrupted during electronic transactions, and can be easily intercepted by unauthorized users.

Listening to this raises many questions about the reliability and security of electronic transactions.

Therefore, to securely and reliably process electronic documents in a wireless network environment, it is necessary to first authenticate the mobile device, mobile operating system, and other components used.

Applications and users. Simultaneously, it is necessary to detect wireless network outages and restore them quickly, and security measures must be taken to prevent eavesdropping. In a certain in some cases, it may also be necessary to verify the integrity or authenticity of files created by the mobile device. If the mobile device only provides some of the above