

# Longmai Mobile PKI Solution

*A quick Solution to External and Internal fraud in Insurance Industry*



*Putting the client at the center of modernization*

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# 1. INTRODUCTION

Today, more than following the rapid development of Internet and mobile devices, industries and enterprises are trying to migrate to online office- connecting business resources to be accessible by employees from anywhere at any time. Meanwhile many Insurance companies are improving expense management through outsourcing by focusing more diligently on core businesses, streamlining existing processes and increasing overall automation.

Though insurers have not made the more important investments in how they secure teleworking sales agents or mobile device users. In other words, they continue to use paper documentation and legacy systems that require username and password to access critical information, rather than implementing strong *multiple factor authentication (MFA)* solutions to protect digital assets from external and internal fraud.

## 1.1 Challenges

In traditional working model, Insurance sales agents are required to carry with them business materials like contracts and agreements for onsite signature of customers:

- ✚ **Management costs are high** - for example in case a single paper is missing, the agent has to look for the client to re-signify.
- ✚ **High possibility of business - critical information leakage or fraud** - due to stolen or unintended delivery of document materials.

Adoption of digital technology offers insurers the profound ability to improve underwriting, sustainably reduce costs, enhance customer experience, create novel marketing strategies and analyze consumer behavior, but implementing insecure business models for online business and mobile device technologies (*BYOD*) pose potential external and internal fraud risks.

## 1.2 How to solve existing potential security problems?

Today, more than evermore there is more unauthorized internal network access and users' information leakage especially in Insurance industry. Century Longmai is one of the first global digital solution providers to design a Mobile PKI solution to successfully identify online and offline users, mitigate frequent data breaches, and protect enterprise confidential data and applications from unauthorized access.

In addition, the solution adopts an environmental-friendly paperless office trend for Insurance identity authentication and information protection is designed to successfully security authentication on users' identity.

## 2. LONGMAI MOBILE PKI SOLUTION

More than ever, strong identity authentication is the foundation of secure electronic office (can effectively fight against malicious and prevent information leakage). Insurance sales agents store business-critical and clients' data on internal insurance system or cloud servers which are accessible through their mobile devices or through VPN terminals posing significant risk of unauthorized data access through password theft attacks or sophisticated malware attacks.

Century Longmai provides an Insurance Identity Solution based on smart card technology for multi-purpose personal security device authentication - ensuring insurance companies have the ability to validate a person's identity, insurance information and obtain an overview of agents and end users' event history. It is a cost effective and secure method for uniting the vast information generated by financial sectors into one data source protected by advanced encryption algorithms only accessible with right user permissions.

### 2.1 Design Principle

The Longmai Mobile PKI solution is designed mainly for mobile devices - based on wireless PKI -leverages smart card technology for secure network authentication, user identity authentication and communication encryption purposes in accordance to the below principles:

- Overall planning and step by step implementation.
- Unified regulations and standards.
- Optimized utilization of available resources.
- Customizable through integration to achieve the real demands of Insurance sector.

### 2.2 Solution Design Aims

- Building business management system based on information security principles.
- Building secure business management system based on Insurance business.
- Verification of user identity by a strong authentication protocol.
- Combined data encryption and digital signature functions in the business management system to fight against information leakage.

### 2.3 Solution Functions

Century Longmai's mobile PKI solution can effectively fight against insurance users' identity information leakage issues by providing:

### **2.3.1 Strong Multi-factor Authentication**

In all IT Infrastructures setup, user identity authentication is not optional when considering a security solution. Longmai mobile PKI authentication function supports for end user identity – all users attempting to access corporate systems MUST verify their “USERNAME and Password” and present PIN for Longmai mToken device. This ensures a strong multiple factor (MFA) solution that can ensure effective protection of insurance companies’ digital information.

### **2.3.2 Intranet access control and Logging**

Today, how to protect insurance companies’ internal network security is very big challenge - many Insurance IT administrators design infrastructure design to protect external attack but forget about internal access issues or internal breach. Deploying Longmai mobile PKI solution offers a secure internal network logon that fully supports for Bring your own device (BYOD) based on identity authentication. Authorized IT admin can access logged reports and retrieve after-event tracking data.

### **2.3.3 VPN logon**

As many employees swift to mobile office, many Insurance employees also need to work outside the office, like when visiting customers or while at home (usually using mobile handsets or laptops to access to insurance system ). Longmai mobile PKI solution supports for VPN logon functions designed for the secure extension of insurance internal network. This can help remote end users, insurance branch offices, insurance business partners and suppliers to securely access to insurance internal system based on authorized access and encryption/decryption operations of electronic files.

### **2.3.4 Electronic signature**

In traditional insurance model, insurance sales representative need to carry with them huge paper documentation to customers for onsite signature signing – this model is still seen as old fashioned, inconvenient and not environmental friendly. When you adopt the Longmai Mobile PKI solution, all documentation (MS office, PDF, WEB, forms) can be presented on mobile devices for customers’ reading and digital signing. The solution fully integrates with customer’s own OA system.

### **2.3.5 Data encryption/decryption**

Data encryption/decryption technology is one of the most reliable security methods adopted in computer systems. Combining Longmai mobile PKI solution and digital signature can offer comprehensive data protection in any financial and any corporate environment.

### **2.3.6 Email encryption/decryption**

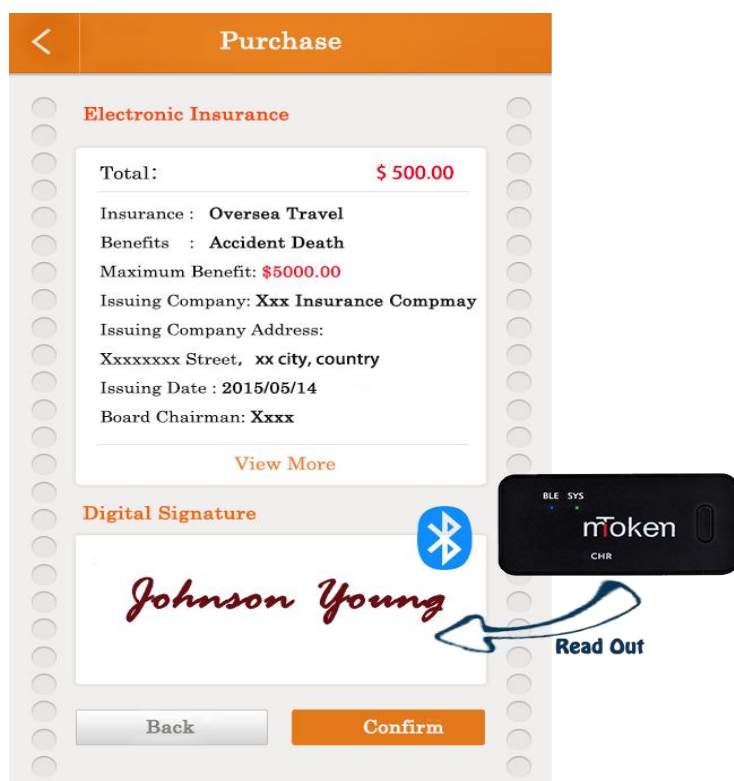
Today, Email is still the most popular and modern way of business communication. Adopting Longmai mobile PKI solution to build trustful email networks that hand and maintain digital signature certificates for email encryption/decryption can enhance security of information exchange.

### 3. LONGMAI SOLUTION BENEFITS

Longmai mobile PKI solution can be applied in all insurance companies' levels ranging from sales agents, external and internal network to end users. Basically, when the customer first signs a contract with the insurance companies, he/she is give a hardware PKI authentication device. For Longmai solution, all the token devices are 32-bit smartcard chip based that can store certificate keys and user's custom data.

#### 3.1 Benefits for End users

- ✚ Traditionally, the insurance sales agents need to travel to customer for redeem insurance payments, sign contract. But it's not clear how customers' payment security can be protected.
- ✚ Deploying Longmai mobile PKI solutions offers a secure access to Insurance web or app services. End users can embrace new services and use them with confidence that their data is secure and protected.



1 Digital Sign in Progress

## 3.2 Benefits for Insurance sales

- ✚ **Strong Authentication** - Application of Mobile office plus a security authentication model can offer extremely high security level and effective mobile working environment for insurance employees who are normally working outside of the office:
- ✚ **Extended Convenience**- with high level smart card security (no need to carry paper files) - Sales agent can utilize Longmai standard or customized new generation of authentication products for **Secure access control** – physical (building & offices) and logical (computers). The entire Authentication solution is adapted to every sales agent's mobility and usability needs while connecting to corporate applications.



2 Win-win

## 3.3 Benefits for Insurance companies

**The winner** - Insurance Companies can focus on increasing revenue from existing services, create new offerings, and deliver great customer experience:

- ✚ Transform entire sales and service business model to a high-effective online/mobile office model by solving traditional paper signature security and chronology problems.
- ✚ Unlock new revenue streams, build loyalty and increase 'stickiness' for customers.

# Traditional

# Mobile Era



3 Scene

## 3.3.1 Snapshot of Success

In 2013, Ping An was the only Asia-Pacific insurer out of nine globally to be designated as a global systemically important insurer (G-SII) by the G-20 Financial Stability Board. Today, it has developed into a personal financial services group with three core businesses of insurance, banking and investment has about 635,000 life insurance sales agents and 236,000 full-time employees. Century Longmai is providing Ping'An China with innovative PKI solutions supporting for electronic document access and transmission protection.

## 4. CONCLUSION

The world of financial services is changing fast and consumers are looking for more customizable, convenient, yet secure digital security solutions. Century Longmai offers a wide range of digital solutions to meet and exceed these demands focusing on security and privacy.

In particular, the Longmai Mobile PKI Solution powered by Smart card technology and Bluetooth communication standards facilitate the mobile office, electronic signature, secure remote connections, micro payment security, etc. The solution can fully protect the whole insurance system's security with its extraordinary features, prevent unauthorized access to physical and logical resources, guaranteeing legality of electronic policies, and verification of users to fight against repudiation and avoid illegal data access by tracking after-the-event - ensures extended mobility and convenience while deploying a strong authentication.



## 5. APPENDIX: GLOSSARY

- **BLE:** Bluetooth Low Energy
- **Chip:** An electronic component that performs logic, processing, and/or memory functions.
- **IC:** Integrated circuit.
- **Key:** In encryption and digital signatures, a value used in combination with a cryptographic algorithm to encrypt or decrypt data.
- **Mobile contactless payments:** A payment to a physical merchant that is initiated from an NFC-enabled.
- **PIN:** Personal identification number
- **Smart card:** A device that includes an embedded secure integrated circuit that can be either a secure microcontroller or equivalent intelligence with internal memory or a secure memory chip alone. The card connects to a reader with direct physical contact or with a remote contactless radio frequency interface. With an embedded microcontroller, smart cards have the unique ability to securely store large amounts of data, carry out their own on-card functions (e.g., encryption and mutual authentication), and interact intelligently with a smart card reader.
- **SD (secure digital memory) card:** A flash memory card that provides storage for digital cameras, mobile phones, and personal data assistants. Although SD cards support encryption and content protection, they are mostly used for storage due to their small size and fast transfer rate.

## ABOUT CENTURY LONGMAI

Founded in 2003, [Century Longmai Technology Co., Ltd](#) is one of the most leading digital security device manufacturers with market occupation over 30 countries. Headquartered in Beijing, China, Century Longmai applies over 12 years' of extended experience and clear product roadmap to develop solutions that defend against latest security threats and risks while meeting customers' specific requirements. Our ever-expanding number of employees supports customers in different ways to help them become winners in their respective market sectors like Identity and access, financial services, government, mobile, and transport.

Following the rapid development of Internet and mobile devices, more than ever industries, enterprises and government want fulfill their end-users dream of living a better, safe and enjoyable lifestyle anytime anywhere.

## Contact Us

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