

PassFree

Products and Services

Agenda

- Key devices
- Lock devices
- Web services
- Summary

Key devices

- iPod style
- Smart phone software
- Passport
- Aural key device for the blind

iPod Style key device

- The personal item that gives individuals a way to use PKI from anywhere
- A small iPod-size device with optional keypad, thumbprint scanner, or other biometric; also as a novelty item such as two-part heart necklace
- Market: More than 1 billion mechanical keys in USA
- Pricing: \$49 – \$199 for the hardware will depend on hardware costs and market capacity

Smart phone software

- Adds key device functionality to equipment users already own – iPhone, Blackberry, Treo...
- Market: 225 million cell phones in USA, more than 2 million iPhones sold in last quarter of 2007 alone
- Pricing: \$1.99

Passport key device

- A stand-alone key device issued by the government in addition to a passport
- Drop-in replacement for government's current proposal for using RFID in passports
- Market: 60 million passports in USA
- Price: \$49

Aural key device for the blind

- A fully capable key device with raised navigational buttons, speaker, and no display
- All information is spoken aloud to the user
- Market: thousands in USA
- Price: \$99

Personal Computer USB Lock

- The home electronics item that bridges the personal key device with existing PKI
- Functionality possible as software for Bluetooth/Wifi-enabled laptops and PCs, and as a USB attachment
- Market: Roughly 1 for each personal key device – 225 million cell phones, 1 billion mechanical keys
- Pricing: \$19 software-only or \$49 software and hardware

Plugin for Web Browser

- The e-commerce bridge between the web browser and the personal computer USB lock; enables users to sign electronic forms and login to websites using their key device
- Functionality possible as plugin for all major browsers
- Market: 36 million laptops sold each year
- Pricing: Free (download)

Credit card authorization service

- No new hardware; bank installs software on servers and users install software on smart phones
- Users register public key on bank website and enable the credit card authorization service; bank then approves only transactions immediately preceded by user's smart phone authorization via Internet
- Market: 7,000+ banks in the US alone
- Price: \$75,000 plus integration costs

Point of sale authorization lock

- Hardware similar to personal computer USB lock, but communicates with a distant authorization server
- Functionality possible as hardware only, for additional transaction security, and eventually to replace the magnetic credit card reader at stores and bank ATMs
- Market: unknown millions
- Price: \$149–\$399 product line ranging from add-on to complete station

Bolt lock for home & office doors

- A replacement for traditional door locks and a drop-in replacement for smart-card door locks, this lock device fitted to a bolt or magnetic lock provides a more secure way to access facilities
- Functionality possible as hardware only, to prevent lock picking and reduce key management costs
- Market: unknown millions of homes and offices in USA, over 1 million home security systems already installed
- Price: \$79-\$199 product line range

Lock for containers

- A drop-in replacement for pad locks and combination locks
- Functionality possible as hardware only, to prevent lock picking and reduce key management costs
- Market: unknown millions of locked containers in USA
- Price: \$29–\$129 product line range

Car lock

- A drop-in replacement for existing key fobs and their corresponding access control devices
- Functionality available as an adaptor or as a complete replacement
- Market: 17 million new cars sold in USA each year
- Price: \$89

Web Services

- Electronic document time-stamping
- Online authentication center
- PassFree provider for OpenID

Electronic document stamping

- An e-commerce facility that provides non-repudiation
- Possible as a pay-per-use or a subscription
- Market: unknown millions of e-business contract signing events and documentation events yearly
- Price: Pay per use and annual subscription prices depend on document size

Online authentication center

- Provides identity verification for e-commerce
- Users (consumers) register and are verified diligently, then added to registry that can be queried by other authorized users (merchants) both online with software and at point of sale with point of sale lock
- Market: unknown billions of e-commerce transactions yearly in the USA
- Price: \$29.95 registration fee for users, \$1.95 yearly maintenance fee for users, \$49.95 registration fee for merchants, \$9.95 monthly maintenance fee for merchants, will depend on market capacity

PassFree Provider for OpenID

- Provides identity verification for any Internet purpose
- Integrates with any OpenID system
- Price: Free

Summary

- Invention enables people to use PKI wherever they are; not just at work desk
- Market for applications is large



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