Aspiration – The Electronic Hub!

- Singapore aspires to be a global financial hub and has deliberately forged ahead to be the leading nation in e-security for electronic financial transaction in the World.
- MAS as early as 2005 requires all banks in Singapore to provide 2FA to ensure e-security of financial transaction.
- Given the limited time banks have to complying with this requirement prospects for a standard 2FA system is limited.
iN2015

- We ended up with as many 2FA systems as there are banks
- In 2006, under the iN2015 MasterPlan to build an Intelligent Nation, IDA conceived the NAF as the national authentication system
- This is to be a system that can integrate and connect with all financial institutions and service provider of e-Services; unifying all the 2FA systems and services
Central to such a national authentication system is a common connectivity protocol for inter-system integration.

IDA commissioned a study to specify the system that will enable open source systems (such as UNIX, Windows, etc) to inter-connect. **RTAP** defines the technical communications across systems operating within the network.

The **RTAP** is unprecedented. It is the first national level connectivity standards and protocol system.

**RTAP** has potential to evolve into a global open standard.
OpenID?

- Was it necessary for Singapore to ‘invent’ a new standard when there are in fact similar protocol/standards around?
- There is the OpenID
- While it has adequate provisions on security, it is essentially a 1FA system based on “cross-referrals”.
Convenience Vs Security

- The NAF has to offer convenience to users while providing an evolving leveling of security relevant to the times.
- We appreciate that this is a challenging requirement as security by its nature is NEVER absolute.
- Every prevailing security solution is vulnerable to attack and compromise over time.
Security - Ahead of Risks!

- The approach must therefore be to enhance security provisions abreast risk of compromise.
- PKI offers good protection against security attack. OTP offers convenience for user. The practical solution is to strike the right balance between security and convenience.
- There is no thorough-bred solution available that offers us this balance.
A Hybrid!

- IDA then developed a unique system which is a hybrid of the PKI-OTP system based on RTAP as the connectivity protocol
- This is the Singapore NAF system.
OneKey

- We brand it: OneKey
- Challenges of OneKey
  - Replacing the banks’ operating systems (proven over the last 6 years)
  - Incentives offered (free device, free services for 2 years to wean them off Service Providers’ existing system)
  - Addressing the new requirements (transaction signing)
Relative Strength of OneKey

- It has security provisions on par with the best in the local financial industry
- With RTAP, it can connect with any operating system
- Single device for multiple e-transaction applications – Convenience for users
- It is certified to ISO27001
- It complies with MAS IBTRM
- Assurance of leading security architects in the industry
- Resilient with 100% redundancy; active-active backup
Brokerage Companies:
By Mar 2012

- OneKey is offered to all Public Service Providers
- Public Service has provided guidelines what sort of information and transaction will require 2FA
- Public Service agencies are examining.
- Security Companies are required by MAS to offer 2FA by Mar 2012.
Smart Token vs One-Button Token

- Banks have their own 2FA system. With recent challenges to security, banks will have to up-grade to Transaction Signing
- NAF operates on Smart Token (OneKey) Vs One-button token
- OneKey offers Transaction Signing (new requirement of MAS)
- Banks have option to take up NAF
Assurity – IDA Wholly-owned Co

- IDA set up a company to implement and operate the NAF > Assurity
- Set up with equity by IDA and MICA
- Concept is to out-source as much as possible and keep organic resources lean
System Builders

- Assurity selected ST Engineering as the vendor to build the NAF
- The other key vendors involved are:
  - Data Security Systems Solutions (DS3)
  - Vasco Data Security
- NAF/OneKey will be launched in Dec 2011
- Service Providers have been invited to subscribe.
- Users will request their OneKey through the SPs
Assurity’s Concerns

- Issues of concern to Assurity
  - Educating users on e-Security
  - Staying ahead of the Security Threat
  - Disaster Recovery - Continuity of operation
  - Systemic Fraud – Prevention and Deterrence
  - Business viability
  - Fulfillment of the National Agenda – iN2015
• Assurity will be happy to offer its learning experience to help agencies implement 2FA system at NATIONAL level
• AFTER we have established our 2FA system – OneKey/NAF
Thank You