Technological solutions and private sector initiatives

Presentation to
ITU/EU (ENISA) Regional Seminar on
Cyber Security for CEE, CIS and Baltic States
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Wes Kussmaul
CIO, The Village Group
With rare exceptions such as Notartel…

There Is No Security.

Why Is There No Security?
Why Is There No Security?
Let’s ask those who sell us “security”: 
Why Is There No Security?
Let’s ask those who sell us “security”:

“Seek out security solutions that are complex and require additional software and hardware”

Kapil Raina, “How to Sell Security”

VARBusiness, July 30, 2003
Noted cryptographer Taher Elgamal, responding to the question, “What's the biggest mistake people are making with their security architectures?"

"The biggest mistake is that there are no security architectures!"
What Is Architecture?
What does a well-architected building or facility provide?

Answer: A well-architected facility provides **Quiet Enjoyment.**
Architecture delivers Quiet Enjoyment. Where would you rather work?

or

What is the basis of the difference?
What is Quiet Enjoyment?

Quiet Enjoyment is the conveyed right to possess premises which meet a certain description, as in a lease or in a covenant, and to enjoy and use those premises in peace and without interference.
What is a PKI?

An effective PKI is that which creates and maintains a bounded space in which people are able to pursue an agenda in Quiet Enjoyment.
Q: What is the difference between an effective PKI and a well-designed office?

A: Different construction materials.
Differences in construction materials imply other differences:

- Lack of visual and aural cues means you’re not sure who’s in the meeting room with you
- A 20,000 km tunnel is cheap to build
- Security guards may be robots
- The actual room may be copied as easily as the drawing is copied
Given those differences, how do we get Quiet Enjoyment from our PKI?

- Compensate for lack of visual and aural cues with reliable identity credentials and with “indoors” technology
- Recognize that a tunnel is not a meeting room, much less an office suite
- Separate the identity credential from all other credentials
- Establish and enforce building codes
- Establish and enforce licensure of professionals
- Require occupancy permits

=> Certifications backed by PUBLIC AUTHORITY.
What is Authority?

Trust Management Engineer Matt Blaze:

“A commercial certification authority protects you from anyone whose money they refuse to take.”
Authenticity certified by commercial authority

Authenticity certified by public authority

Which source of authority is more reliable?
Why Is There No Security?
-- No Online Quiet Enjoyment?
Answer: Because we have been unable to successfully deploy a Universal PKI, which depends upon reliable certification of

• Identity
• Code integrity
• Authorizations
• Facilities Design and Construction
• Qualifications and Liability of Facilities Professionals
Welcome to Osmio City Hall

Departments

Vital Records Department
Department of Vehicle Regulation and Inspection
Department of Professional Authentication Standards
Law Enforcement and Privacy Protection
Planning and Zoning Board
Building Inspection Department
Board of Regulation of Real Estate Professionals
Public Works Department
The Problem Addressed by the Vital Records Department of the City of Osmio

The first step toward Quiet Enjoyment:
RELIABLE IDENTITIES

Identity Is The Foundation Of Security™
Universal ID?

What About Privacy?

Solution: The Personal Intellectual Property Infrastructure.

PIPI Requires Universal Standards and Certifications;

Privacy needs City Hall.
Reliable Identities require Reliable Enrollment Standards

City Hall answers the question: Who is qualified to perform enrollments?

- Background
- Training
- Delegated Public Authority
Quiet Enjoyment Requires:

**RELIABLE PRIVATE KEYS**

How do we protect the private keys in clients and servers?

Answer: Let City Hall judge whether a private key protection scheme is reliable and free of hidden agendas – and be authorized to be designated a Private Key Infrastructure™.
Quiet Enjoyment Requires:

**RELIABLE CODE**

Other Departments:

- Planning and Zoning Board
- Building Inspection Department
- Board of Regulation of Real Estate Professionals
- Public Works Department
The World Needs A City Hall.

Who Can Do This Job?
Who Is Osmio?
Alex, I Have A Suggestion…