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# HealthKey Program

## *Secure E-Health Solutions*

A Program funded by  
The Robert Wood Johnson Foundation

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Presentation to:  
**WEDI**  
Wednesday, April 18, 2001  
San Diego, California

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Presented by:

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***HealthKey Project Coordinators***



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*Introduction to the:*

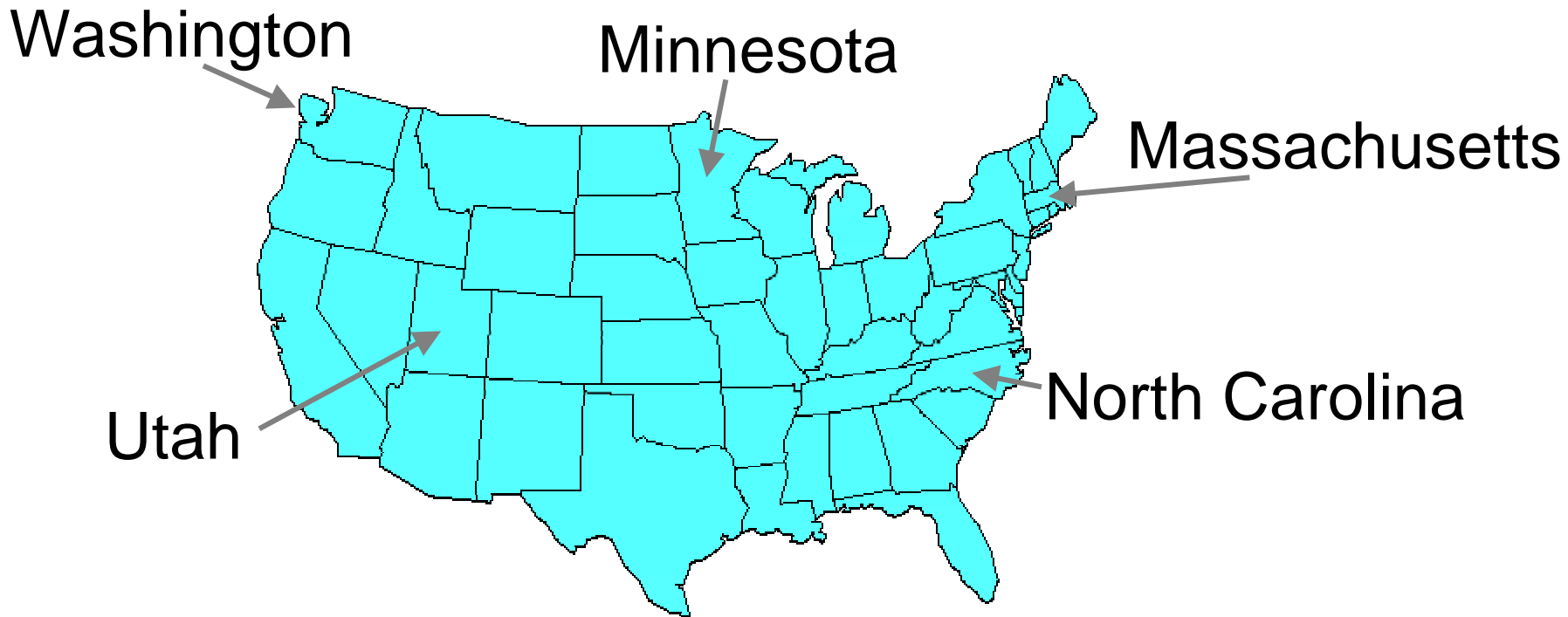
# HealthKey National Program



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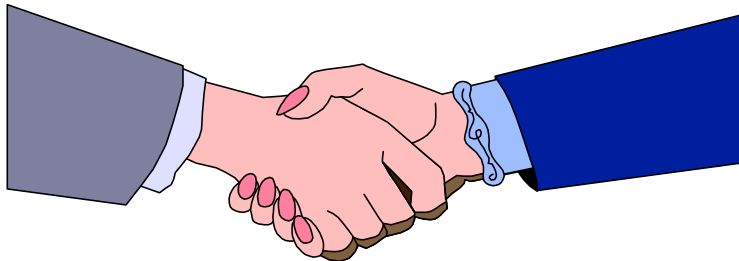
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## A 5-State Project



# HealthKey Origins

- ❑ Funded by \$2.5 million grant from The Robert Wood Johnson Foundation-Fall 1999
- ❑ Collaboration to advance the development of health information infrastructure
- ❑ Market-driven, community-based approach
- ❑ VisionShare retained to coordinate pilot efforts in 5 states (MA, MN, NC, UT, WA)



# HealthKey Participants

- ❑ Massachusetts Health Data Consortium (MHDC)
- ❑ Minnesota Health Data Institute (MHDI)
- ❑ North Carolina Healthcare Information and Communications Alliance (NCHICA)
- ❑ Utah Health Information Network (UHIN)
- ❑ Washington: Community Health Information Technology Alliance (CHITA)

# HealthKey Goals

- ❑ Identify **interoperable**, standards-based solutions to real business problems
- ❑ **Pilot** PKI and similar technologies to test evolving health information infrastructure
- ❑ Identify **Solutions** to achieve HIPAA compliance

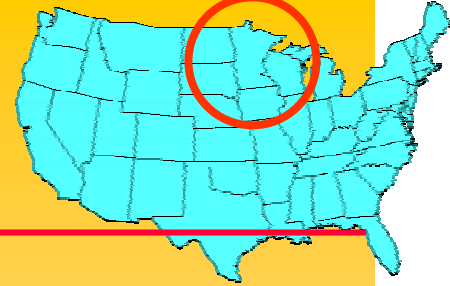
# PKI?

1. Public Key Infrastracture
  - Note “Public Infrastructure”!
  - Uses public/private keys
2. Key stored in “digital certificates”
  - X509v3 standards
3. Widely Used Already by:
  - All secure web sites
  - Microsoft signed downloads
  - Novell
  - Smartcards
  - iButtons
  - etc..





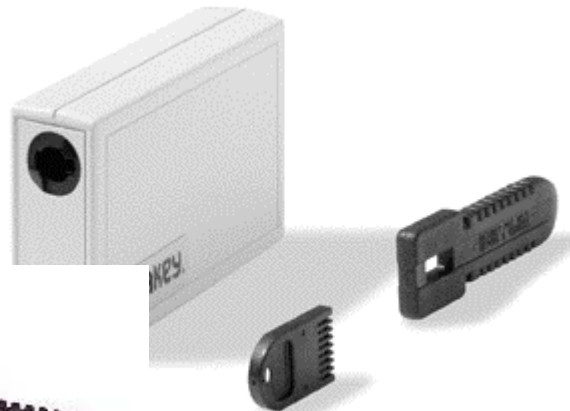
# HealthKey MN



- Proposed HealthKey MN Smartcard:



# Multiple Private Key Storage Options:

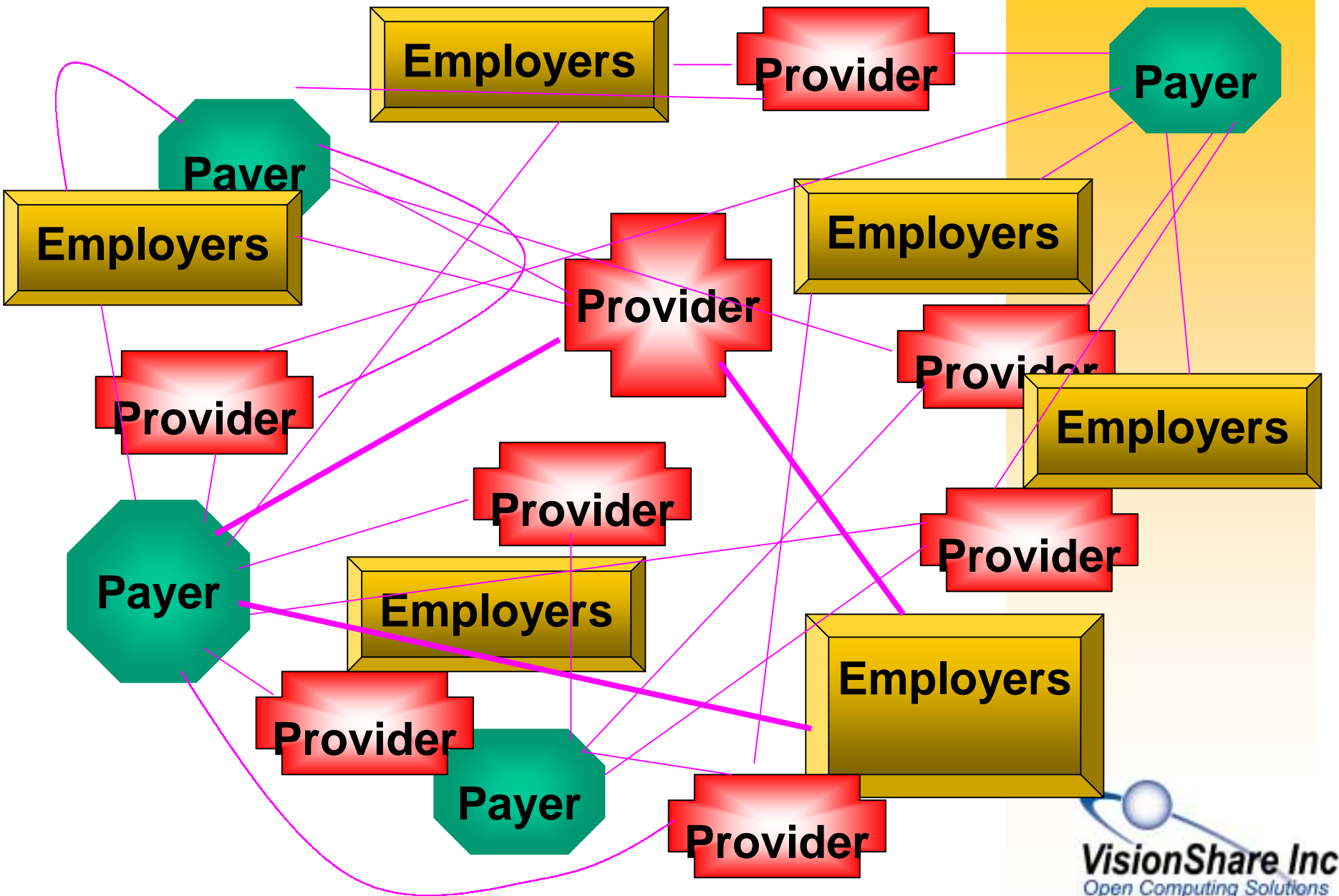


# Health Care PKI

## Challenges & Opportunities



# Health Care PKI - Communication needs:



# Health Care PKI - Challenges:

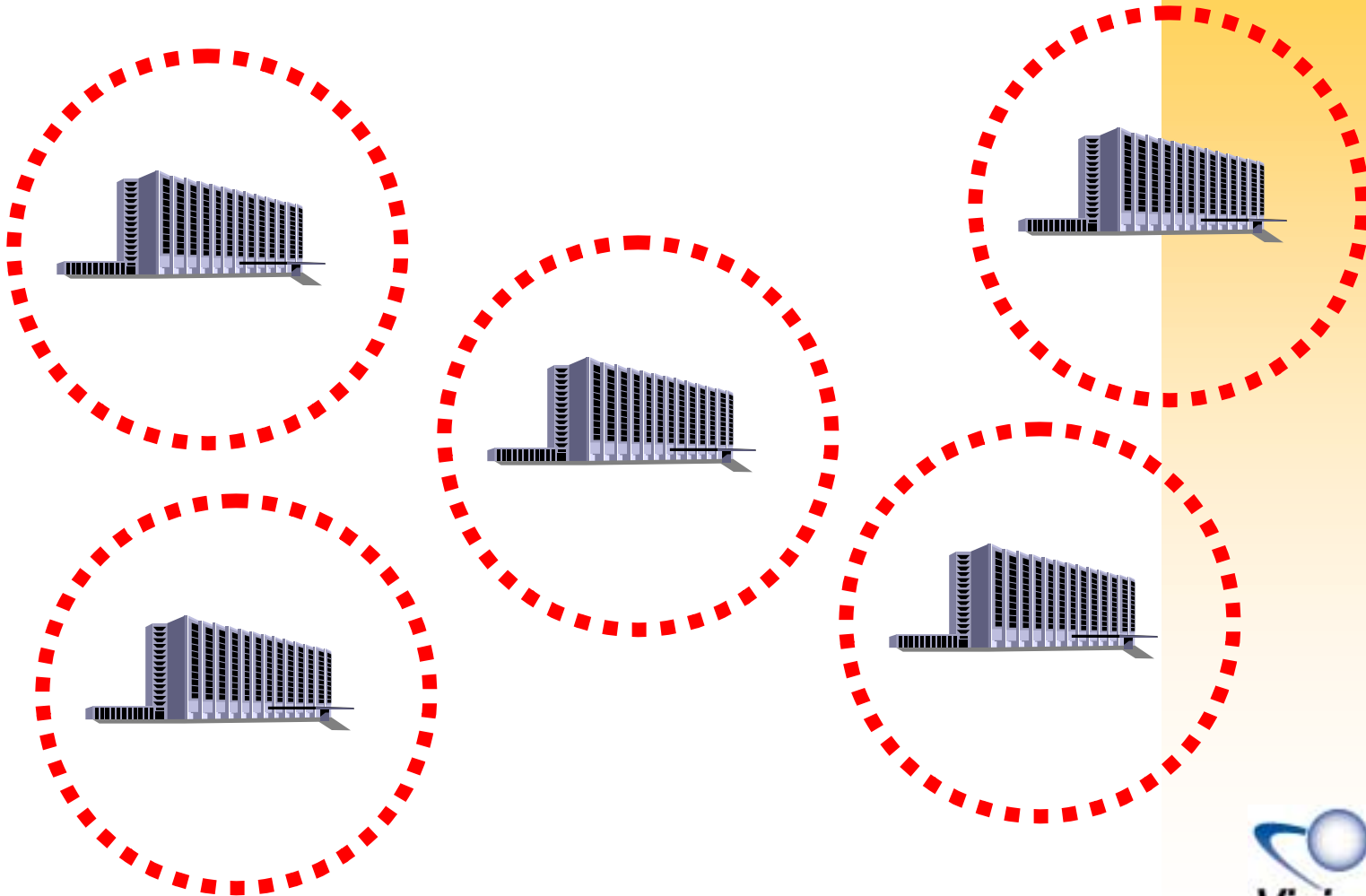
- ❑ No large scale PKI exist today
- ❑ Existing PKIs -retail, banking, government, health care - are closed CAs
- ❑ Health Care is inherently an OPEN industry
- ❑ Many separate entities need to collaborate

# Health Care PKI - Challenges:

- ❑ Different models emerging
- ❑ Can't rely on single vendor to provide it all!
- ❑ Need community, trusted solutions!

# Health Care PKI - Challenges:

“Stovepipe” PKIs now being built - no coordination !



# How Many Health Care PKIs?

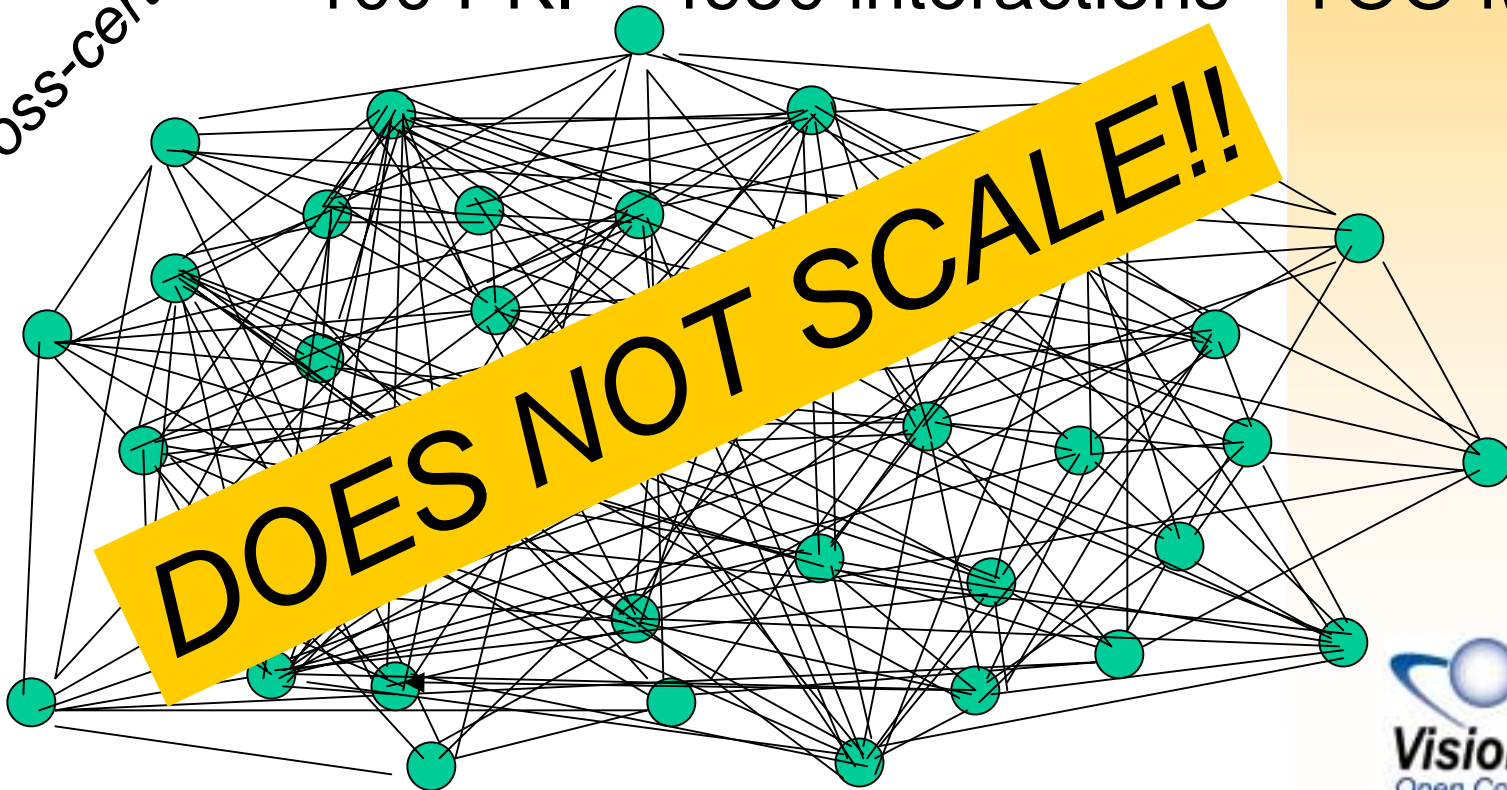
“more” makes a difference

Cross-certify Model: 3 PKI = 3 interactions

10 PKI = 45 interactions

100 PKI = 4950 interactions - TOO MANY!!

**DOES NOT SCALE!!**

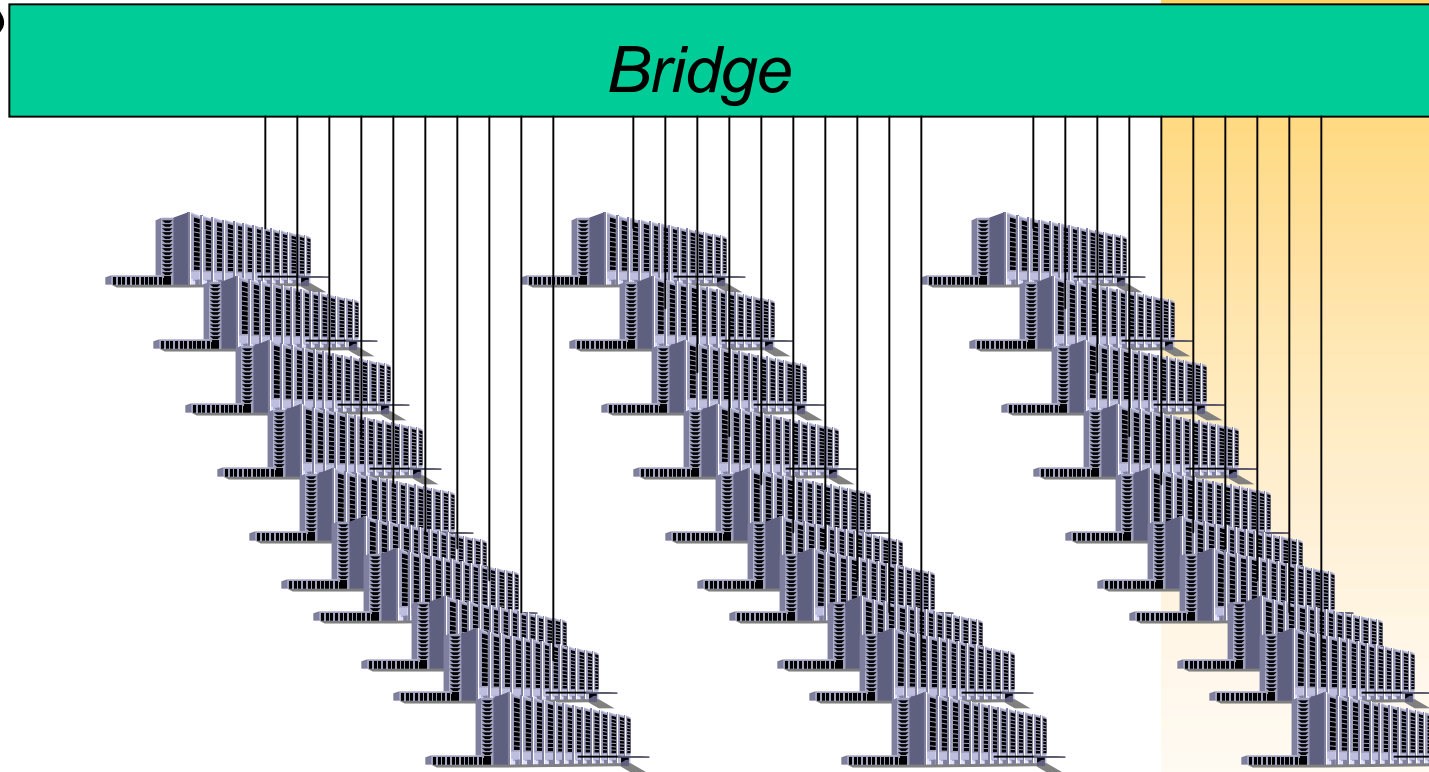




# How Many Health Care PKIs?

Bridging Model:

100 PKIs = 100 connections





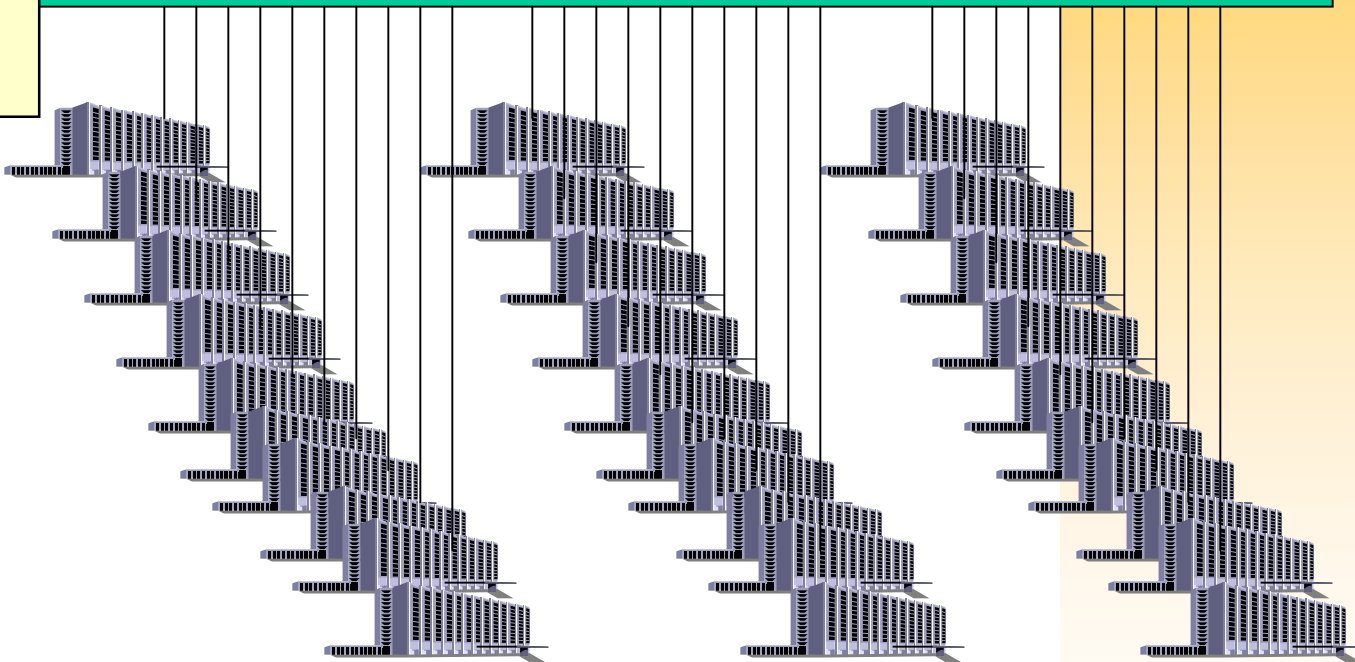
# Model Bridge: Federal Bridge PKI

Bridge - run by Mitretek

**Bridge Magic:**

- Cross Certify
- Path validation
- CP validation
- CP mapping
- Associations

*Bridge*



*Gov't Agencies*

# Background on Mitretek

- Mitretek is a ***non-profit*** technology company located in McLean, VA
- Mitretek performs a variety of telecommunications, security, healthcare IT, and other technology services for the Federal Government and selected other organizations
- Mitretek has developed the initial versions of the bridge technology for GSA

# National HealthKey Bridge Implementation Timeline

## ☐ February 2001

- ☐ Pilot project implementations in NC and MN

## ☐ March 2001

- ☐ Mitretek Bridge operational
- ☐ March 18-20, 2001 - National HealthKey Summit
- ☐ Demonstrate Bridge Functionality

## ☐ April 2001 onward

- ☐ Additional projects/states added
- ☐ Build national consortium

# HealthKey Bridge Expected Benefits:

- ρ Allows validation of digital certificates from all member CAs
- ρ Members can operate own CAs
- ρ Automatic checking of trust path
- ρ Automatic validity check of digital signature
- ρ Additional states/projects can tie in after pilot phase



# HealthKey Consortium Proposal

## Concepts for Discussion

# HealthKey Consortium



- Goal: Further privacy and security in Healthcare
- Membership: Open to all
- Non-profit, neutral, independent of any specific vendors/providers/payers
- Member/consensus-driven - everyone has a stake
- No member has a controlling interest

# HealthKey Consortium

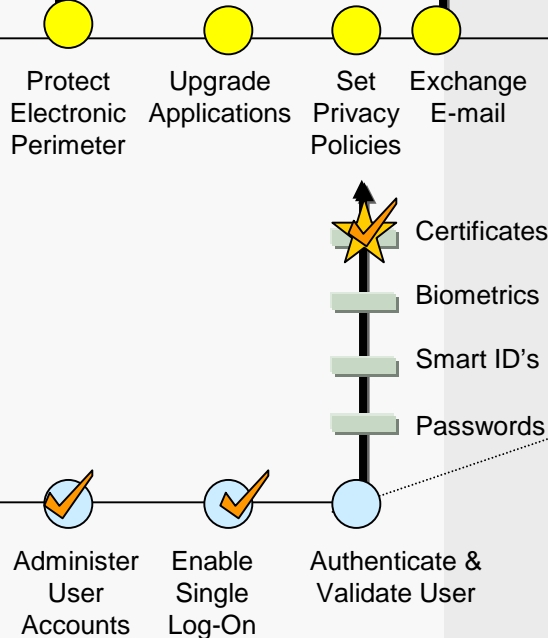
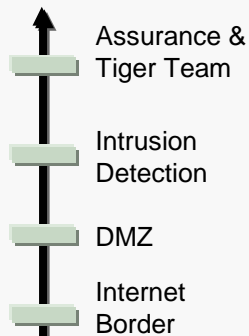


- Services Offered:
  - HealthKey Bridge to link members together
  - Support HIPAA Privacy and Security regs
  - Member CAs agree to standards & audits
  - Members could join via state-level memberships  
( for example, the current 5-state consortium )
- Subgroups do the work:
  - Membership Committee
  - Management Committee
  - Policy Committee

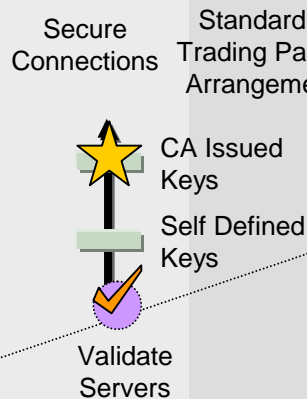
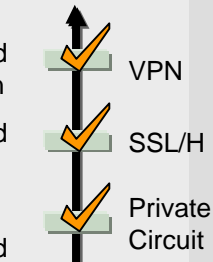
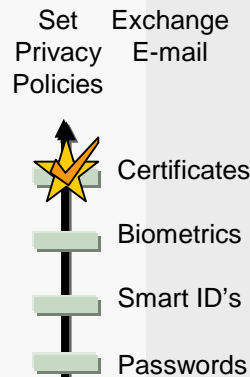
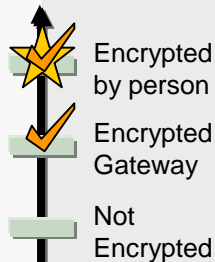


# HealthKey's Roadmap - Implementation Options

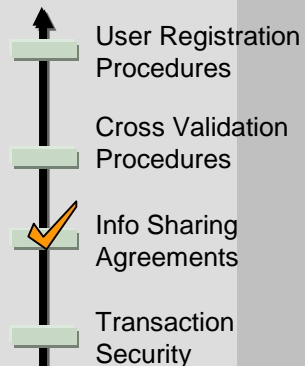
## Enterprise Preparedness



## Enterprise Co-Existence



## Enterprise Affiliation

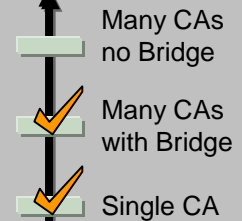
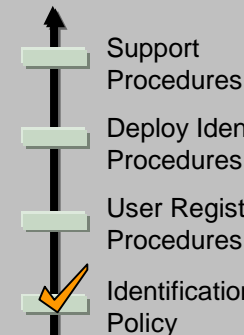


Standardize Trading Partner Arrangements

Standardize Privacy Policies

Standardize Identity Management

## Community-Wide Participation



Empower Administrative Entity

Standardize Identity Validation

Find an Electronic Identity

★ - PKI capabilities

✓ - HealthKey Projects

# For Further Information

## Project web sites:

<http://www.healthkey.org/>

<http://www.mhdi.org/>

<http://www.mitretek.org/>

### Related Sites:

Federal Bridge Project: <http://gits-sec.treas.gov/index.shtml>

