

Prof. Tyler Moore

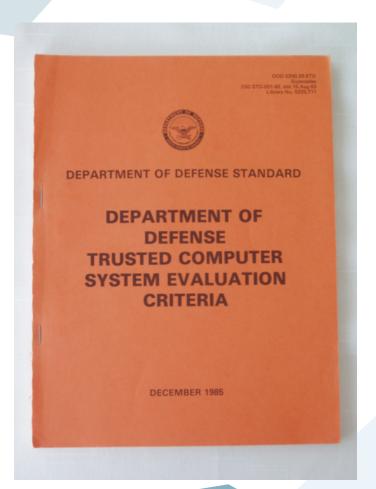
The University of Tulsa

**Certification Schemes** 

## Certification schemes for mitigating information asymmetries

- ◆A government-led approach: Common Criteria certification
  - ◆ Can be useful, but also gamed
  - Evaluation is paid for by vendor seeking approval, leading to test-shopping





### Another certification "fail"



mbt kaya

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#### Shopping results for mbt kaya



MBT Kaya: MBT Women's Maryjane Shoes

\$127.48 new - Zappos.com

MBT Kaya: MBT Women's Maryjane Shoes

\$127.48 new - 6pm MBT Kaya - Black

\$119.95 new - ShoeStores.com

#### MBT Kaya Shoes, MBT Kaya Sale, MBT trainers 2 - Oct 19

Discover the benefits of MBT Kaya. We supply best quality of MBT Kaya shoes, more discount mbt shoes on mbtshoestar.com. Fast delivery, highest quality, ... www.mbtshoestar.com/mbt-kaya-shoes-c-83.html - Cached

#### Amazon.com: MBT Women's Kaya Mary Jane: Sports & Outdoors: Reviews ...

Footwear with a unique sole construction that mimics the feeling of walking barefoot on sand, activating muscles throughout the body and relieving stress on ... www.amazon.com > ... > Women's > Fashion Sneakers > Mary Janes - Cached

#### Mbt Kaya on Footwear etc. \$\times\$

Read 91 Reviews for MBT Shoes: MBT Women's Kaya Mary-Jane - Chocolate Nubuck - On Sale! Related Searches: Mbt Sale | Mbt | Kaya ... shoes.footwearetc.com/footwear/Mbt%20Kaya - Cached - Similar

#### MBT Kaya Chocolate - Zappos.com Free Shipping BOTH Ways

Kaya by MBT at Zappos.com - FREE Shipping. Read MBT Kaya product reviews, or select the MBT Kaya size, width, and color of the MBT Kaya of your choice. www.zappos.com/mbt-kaya-chocolate - Cached - Add to iGoogle

#### MBT Kaya | cheap MBT Kaya, mbtsport-sale.com

cheap MBT Kaya -mbt shoes, mbt sport shoes for sale, A lot of MBT Kaya for you to choose in our mbtsport-sale.com store. MBT Kaya good to care your body. www.mbtsport-sale.com/mbt-kaya-c-9.html - Cached

## Not all shoe sites are created equal

#### zappos.com

#### SHOP WITH CONFIDENCE SHOPPING ON ZAPPOS.COM IS SAFE AND SECURE. **GUARANTEED!** You'll pay nothing if unauthorized charges are made to your credit card as a result of shopping at Zappos.com. SAFE SHOPPING **GUARANTEE** RELIABILITY All information is encrypted and transmitted without risk using a Secure Sockets Layer (SSL) protocol. Learn How We Protect Your Personal Data »

### mbtsport-sale.com



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Domain Name	•
Registrant ID	
Registrant Name	
Registrant Organization	Orgnization CXGroup
Registrant Address	no.25 lvring road, siming district.
Registrant City	xiamen
Registrant Province/State	Fujian
Registrant Postal Code	361009
Registrant Country Code	CN
Registrant Phone Number	+86.592519411 - 0
Registrant Fax	+86.592519411 - 0
Registrant Email	micheltalor@gmail.com

## Self-regulatory approach: website security seals

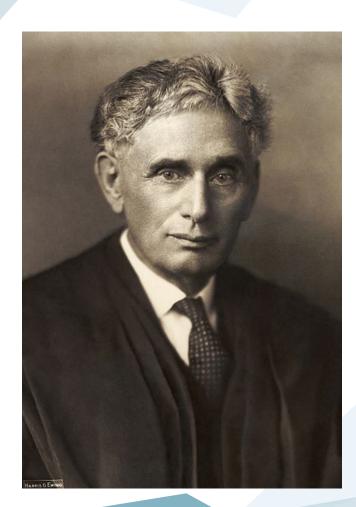


- ◆Edelman uses data from SiteAdvisor to identify sites distributing spam and malware as "bad"
  - ♦ He then found that such "bad" websites are more likely to be TRUSTe-certified: 5.4% of TRUSTe-certified sites are "bad", compared with 2.5% of all sites
- ◆Poorly implemented signaling devices exhibit adverse selection
- ◆The upshot: both private- and public-sector efforts to certify security can be gamed by criminals

Information Disclosure

### Information disclosure

- ◆Louis Brandeis: "sunlight is said to be the best of disinfectants"
- ◆ Cybersecurity incidents are often hidden from public view, so one light-touch intervention is to mandate disclosure



### **Data breach notification**

California Civil Code 1798.82 (2002):

"Any person or business that conducts business in California, and that owns or licenses computerized data that includes personal information, shall disclose any breach of the security of the system following discovery or notification of the breach in the security of the data to any resident of California whose unencrypted personal information was, or is reasonably believed to have been, acquired by an unauthorized person."



Deirdre Mulligan

## Many high-profile breaches came to light



## Break-in costs ChoicePoint millions

Earnings report shows the data broker took charges of \$11.4 million to remedy the leaking of personal information.

those people, the company said in a statement.

Tech Industry

by Joris Evers

July 21, 2005 6:58 AM PDT



The remaining \$9.4 million was for legal and other professional fees, ChoicePoint said.

to the leak of information on about 145,000 Americans, it said Wednesday.

ChoicePoint revealed in February that scam artists had gotten access to personal data on tens of thousands of Americans, resulting in at least 750 cases of identity theft. The scandal has prompted calls for new legislation to protect consumers' privacy rights.

Data broker ChoicePoint took a \$6 million charge in its second quarter to cover costs related

The charge is in addition to the \$5.4 million in costs the company recorded in the first quarter. Of

the total \$11.4 million, about \$2 million in charges through June 30 were for communications to

individuals whose data has been exposed as well as credit reports and monitoring services for

### Effect of data breach legislation

- ♦ Most cybersecurity risk can be managed if (1) it can be measured and (2) responsibility for failures clearly assigned
- ♦ Most "hard" security problems arise by failing to meet one or both of these conditions
- ◆ Data breaches used to be a "hard" problem, but the information disclosure legislation corrected many limitations
- ♦ It is no coincidence that the most mature market for cyber-insurance coverage is insuring against direct losses associated with data breaches

## Where else in cybersecurity is sunlight needed?

- 1. Financial fraud figures
- 2. Cyber espionage incidents
- 3. Control systems incidents
- 4. Consistent collection of cybercrime losses
- ♦ Information does not always have to be public to be effective

**Voluntary Approaches** 

## The benefits (and limits) of voluntary measures

- Many regulatory efforts in cybersecurity have been voluntary to adopt
  - ♦ NIST Cybersecurity Framework
  - Information Sharing: ISACs (sharing between firms encouraged by government)
  - Information Sharing: CISA (firms sharing with government)
  - Cyber Incident Data and Analysis Repository (insurers, firms sharing data convened by DHS)
- ♦ Governments can play a valuable coordinating role
- ◆ But conflicting incentives can stymie participation

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