

# Why Usable Security And Privacy Is Hard?

- Security is **a secondary task**
  - Nobody buys a computer so they can spend time securing it.
  - Time we spend configuring security and privacy tools is time we are not spending doing what we really want to be doing with our computers.

# Why Usable Security And Privacy Is Hard?

- Security is a secondary task
- Security systems and solutions are often complex
  - If the user cannot understand it, costly errors will occur

**Ex: Complex Password Policies, User Permissions, Security Software Settings (ex. Antivirus )**

- Diverse users with diverse skills and diverse knowledge need to incorporate security in their daily lives

**Ex: Healthcare Professionals (use electronic health records ), Elderly Population (use smartphones), etc.**

# One of the security assumptions

“Users do not want to be responsible for, nor concern themselves with, their own security.”

- Blake Ross



# Approaches to usable security

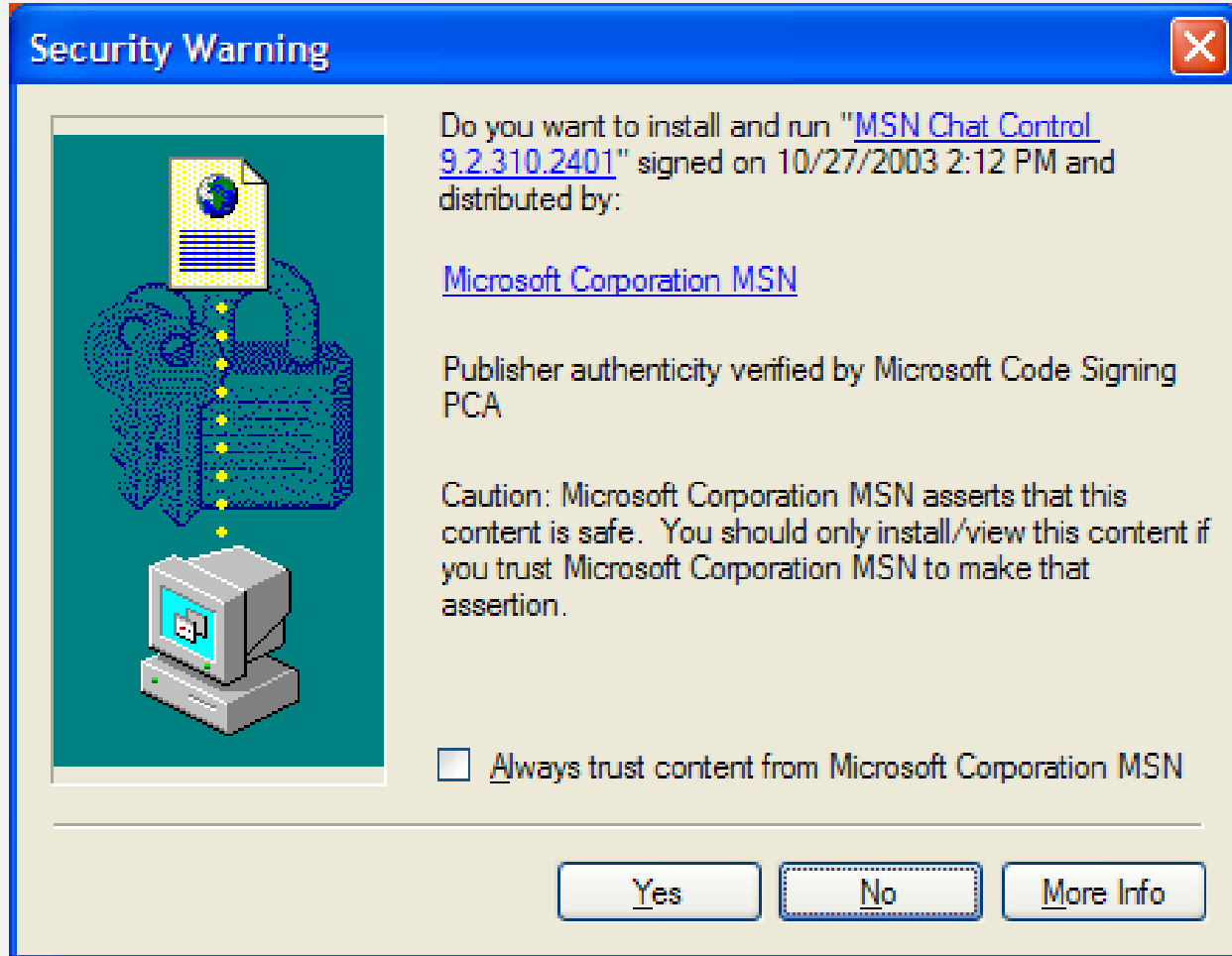
- Make it “just work”
  - Invisible security
- Make security/privacy understandable
  - Make it visible
  - Make it intuitive
  - Use metaphors that users can relate to
- Train the user and help them make decisions

# Help Users Make Decisions

- Developers should not expect users to make decisions they themselves can't make
- “Present choices, not dilemmas”



# Examples



# Examples



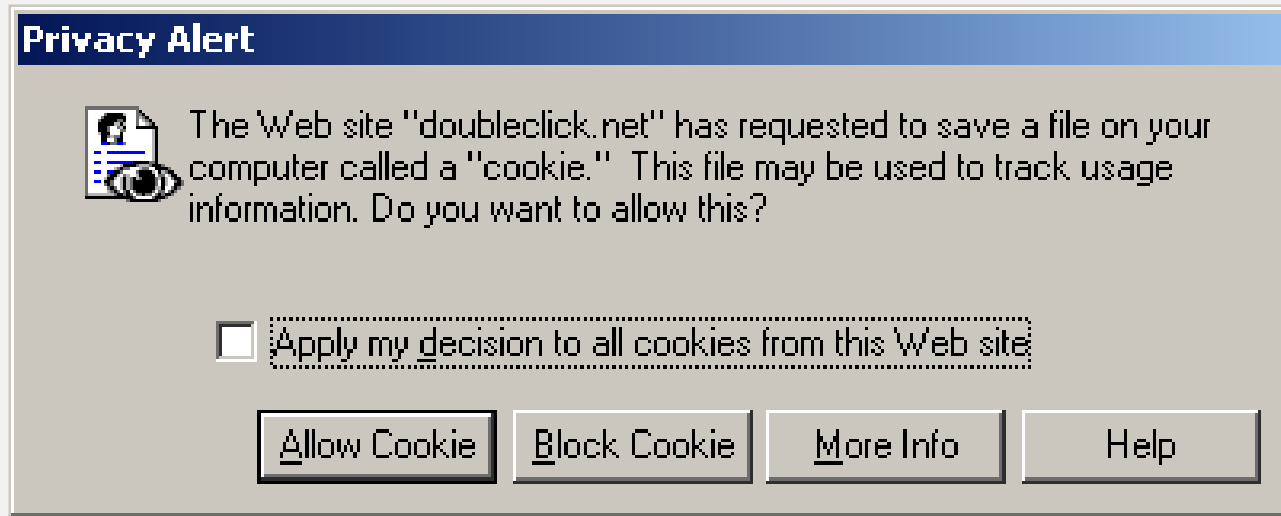
# Examples



Users Don't Check  
Certificates



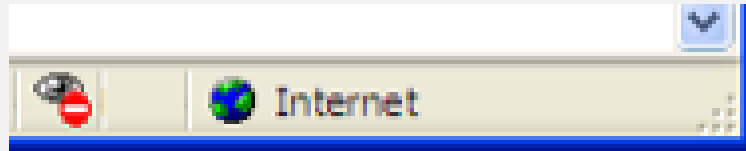
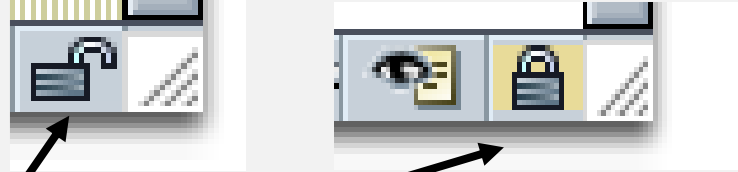
# Examples



Making concepts  
understandable

# Examples: Symbols & Metaphors

Netscape SSL icons



IE6 cookie flag



Firefox SSL icon

# Examples: Privacy Bird Icons

Web site privacy policies

➤ Many posted, few read



Privacy policy  
matches user's  
privacy preferences

Privacy policy  
does not match  
user's privacy  
preferences

# References

Prof. Lorrie Cranor's lecture notes