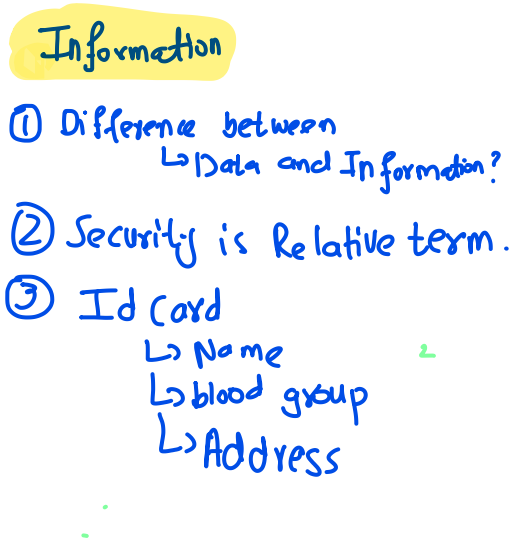
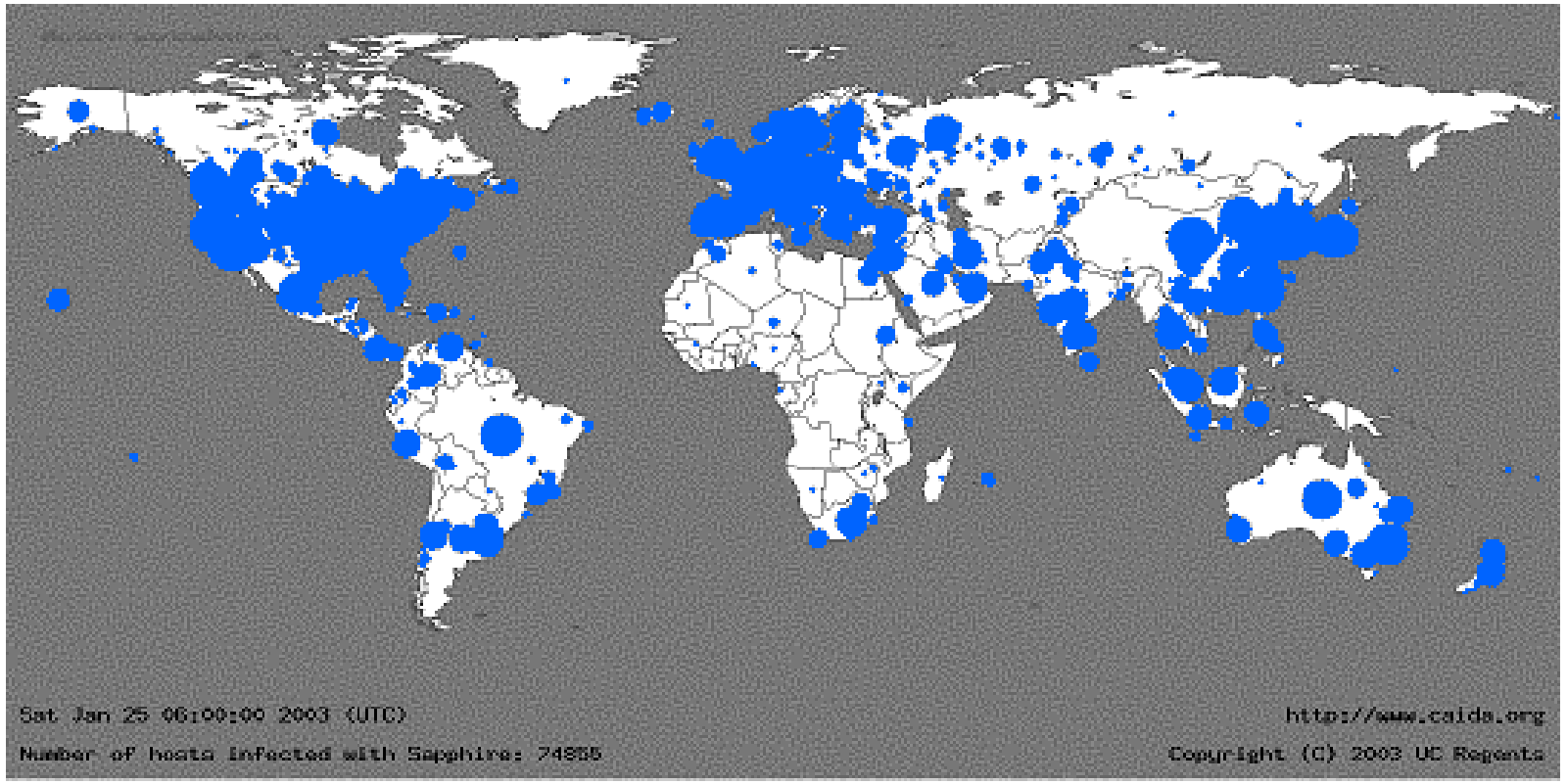
CS3002 - Information Security

Lecture#01 - Overview



Small vulnerabilities



Where is this all going?

- We are at a unique point in history.
  - We have little security.
  - We have little usable theory on what is secure.
  - We have little knowledge of how to get it.
  - Workable tools are rudimentary, but sometimes effective.
- However, we have a huge amount of risk riding on computer and network security.

  Financial

  Medical

  Personal ...
- Every computing system we use is *insecure*...

This Course

- We are going to explore the tools that the address these frequent and expected vulnerabilities.
- Why are we doing so poorly in computing systems at protecting our users and data from inadvertent or intentional harm?

The answer: stay tuned!

The Course

- This course will cover introductory topics in computer and network security. We will investigate the tools and problems of contemporary security:

  This course provides an introduction to the theory and application of security in computer and network environments. Students will develop the skills necessary to formulate and address the security needs of enterprise and personal environments. The course will begin by describing the goals and mechanisms of security as motivated by recent incidents in the area. Topics will cover cryptography, authentication, secure programming, security in operating systems, network security, secure storage, access control, denial-of-service, and file systems, and conclude with emerging trends in secure systems design.

↳Ubuntu Info Intake
↳ during debugging errors
↳Pakistan have no laws for the Security.

Why are we here? -- Goals

- Our goal: *to provide you with the tools to apply current and future approaches to computer security.*
  - Formulating a security strategy
  - Basic technologies
  - Engineering trade-offs
- The key to success is sustained effort. Keep up with readings and assignments.
- **Pay-off:** security competence is a necessary, rare, valuable skill

Course Challenges

→You Should know the other Technology.

- Security is relative
  - Good understanding of other computer technologies are necessary
- Security is terminology
  - Each application of security has different terms for concepts
- Security is defensive
  - Consider the function available to the attacker not the user