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Objectives

- The study of computer network security provides knowledge about the basic structure and framework of computer network security.
- The main objective of this course is to know about the internetwork security model etc.
- To learn about the internetwork security model, its component and basic tasks etc.

Course Outline

- Model for Internetwork Security:
 - Component of Internetwork Security
 - Message
 - Parties
 - Logical Channels
 - Basic Tasks in Internet Security Model
 - Unwanted Access
 - Information Access Threats
 - Service Threats

Model for Internetwork Security:

- A model consist of following terms as shown in Figure 1

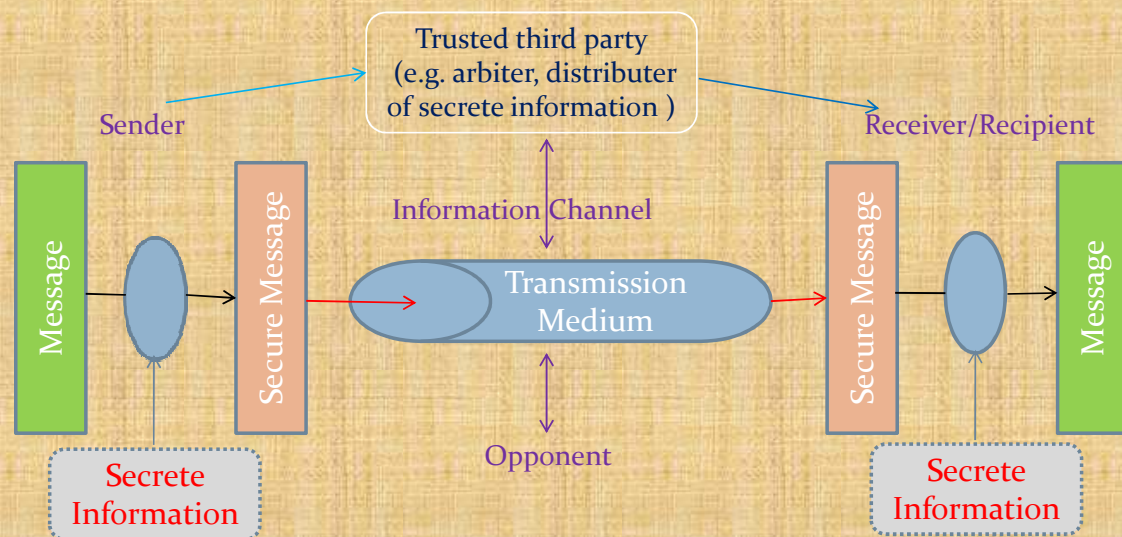


Figure 1. Model for Internetwork Security

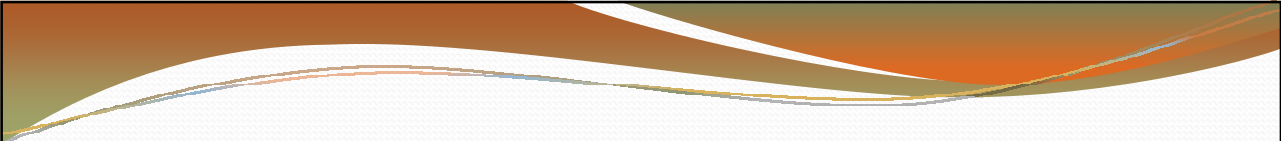
Component of Internetwork Security Model:

- Basically there are the component i.e.
 1. **Message:** A message is to be transferred from one party to another party across some channel of internet.
 2. **Parties :** The two parties must cooperate for the exchanges to take place.
 3. **Logical Channel:** A logical information channel is established by defining a route through the internet from source to destination and by the cooperative use of communication protocol (TCP/IP).

Basic Tasks in Internetwork Security Model:

The general model shows four basic tasks in designing a particular security services i.e. as follows:

1. Design a secure algorithm for security transformation.
2. How to generate, distribute and keep the secret information (keys) securely.
3. Specify a protocol to achieve the security service by using the security algorithm and secret information.
4. Implement the whole system properly.



There are various type of security of security mechanism and services that fit into the model shown in given Figure 1. However, there are other security related situation of interest that do not nearly fit the model but that are considered.

A general model of these other situation is illustrated by Figure 2 which reflects a concern for protecting an information system from unwanted acces.

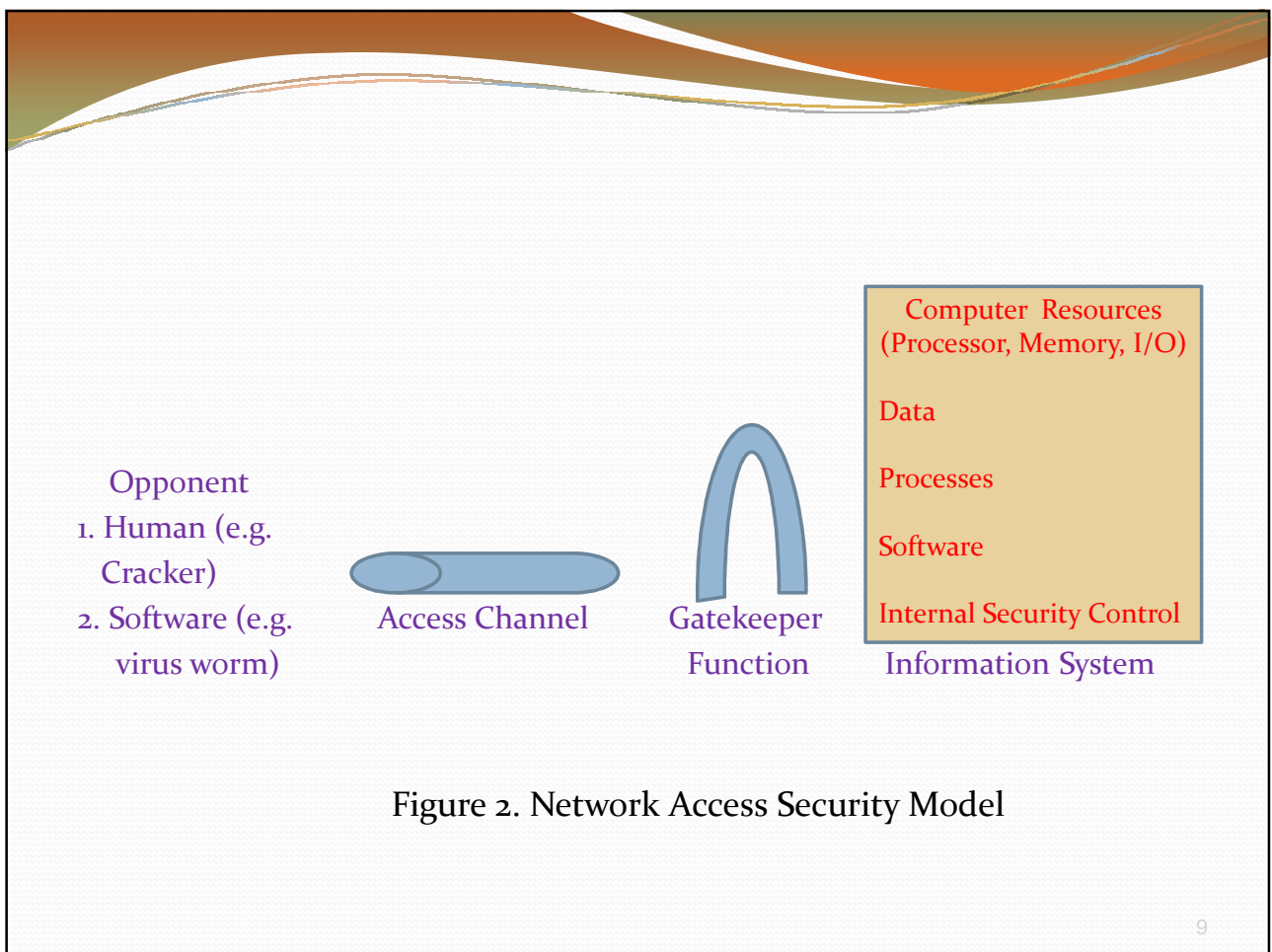


Figure 2. Network Access Security Model

Unwanted Access

It is the placement in a computer in a computer system of logic that exploits vulnerabilities in the system and that can affect application program as well as utility program , such as editors and compilers. Program can present two kind of threats:

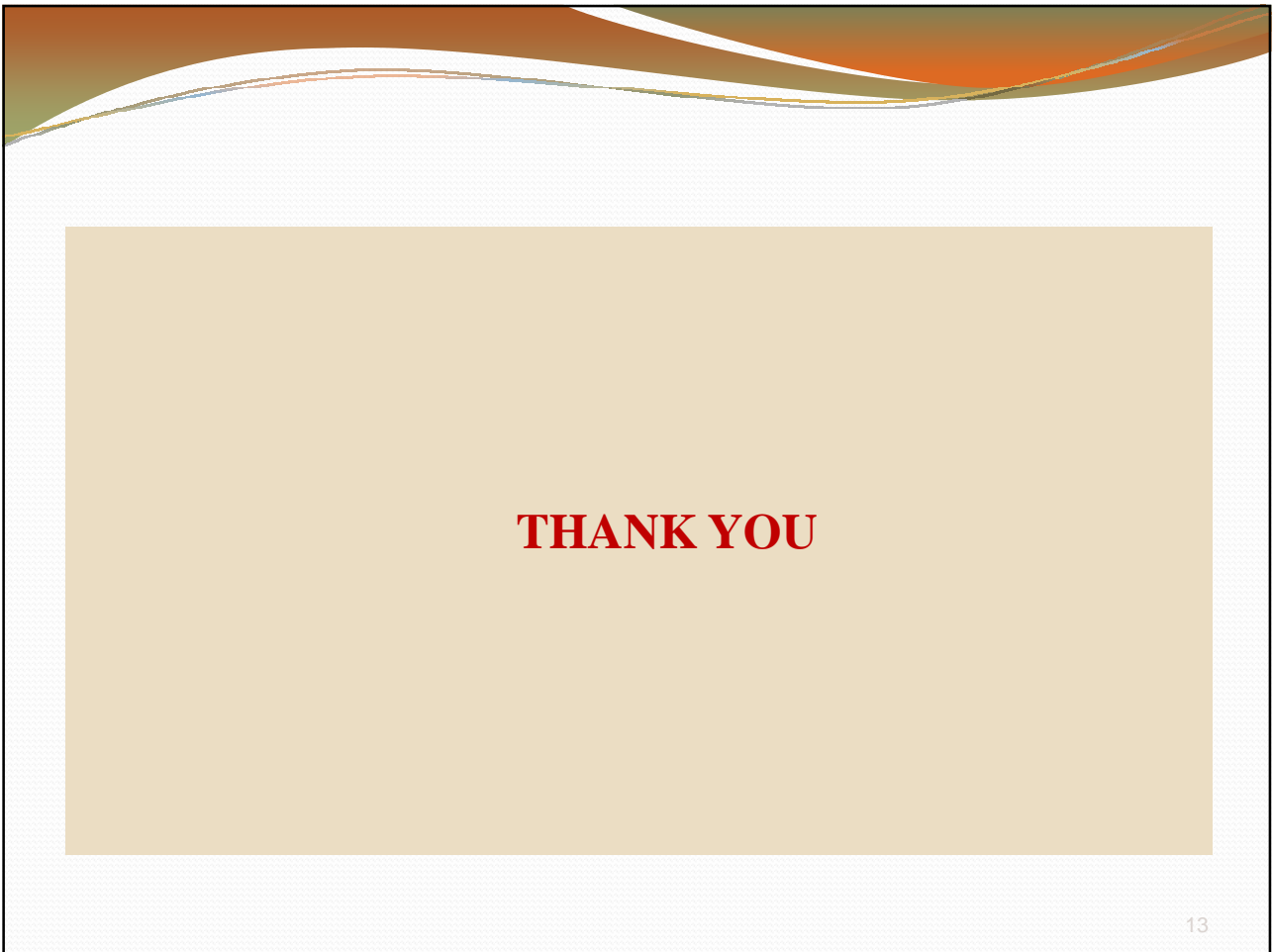
1. **Information Access Threats:** It intercepts or modifies data on behalf of use who should not have access to that data.
2. **Service Threats:** It exploits service flaws in computers to inhibit use by legitimate users.

Related Questions:

1. What is Internetwork Security Model. Explain with diagram?
2. Explain the component of Internetwork Security Model.
3. Define the basic tasks of Internetwork Security Model.
4. Define unwanted access.

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THANK YOU