

# THE CHINESE WALL SECURITY POLICY

Dr. David F.C. Brewer and Dr. Michael J. Nash, 1989

November 06, 2015

Mikael Elkiær Christensen  
michri11@student.aau.dk

Department of Computer Science  
Aalborg University  
Denmark



AALBORG UNIVERSITY  
DENMARK



# Who is the enemy?

## CHINESE WALL

Mikael Elkjær  
Christensen

### Introduction

Background  
Relevance

### Bell-LaPadula

Terminology  
Access rules  
Example

1

8

# Who is the enemy?

## CHINESE WALL

Mikael Elkiær  
Christensen

### Introduction

1

Background  
Relevance

### Bell-LaPadula

Terminology  
Access rules  
Example



# Who is the enemy?

## CHINESE WALL

Mikael Elkjær  
Christensen

### Introduction

1

Background  
Relevance

### Bell-LaPadula

Terminology  
Access rules  
Example





# Background

## CHINESE WALL

Mikael Elkiær  
Christensen

Introduction

Background

Relevance

Bell-LaPadula

Terminology

Access rules

Example

2

- ▶ Coined in 1929 following the Wall Street crash
- ▶ Chinese Wall policies are already in use
  - ▶ Not necessarily digital
  - ▶ Can have authority of law
- ▶ Other terms, as some find the original offensive
  - ▶ "Screen", "firewall", "cone of silence", and "ethical wall"



# Relevance

## CHINESE WALL

Mikael Elkjær  
Christensen

Introduction

Background

Relevance

3

Bell-LaPadula

Terminology

Access rules

Example

- ▶ Before 1989, most security policies were military
  - ▶ E.g. Bell-LaPadula (more about this later)
- ▶ Need of something that holds up in court
- ▶ Relevant anywhere conflicts of interest can exist

## CHINESE WALL

Mikael Elkjær  
Christensen

### Introduction

Background  
Relevance

### Bell-LaPadula

Terminology  
Access rules  
Example

4

- ▶ Proposed by Bell and LaPadula in 1973
- ▶ Security policy model
- ▶ Designed for military use

8

## CHINESE WALL

Mikael Elkjær  
Christensen

Introduction

Background

Relevance

Bell-LaPadula

Terminology

Access rules

Example

5

**Object** Data or program.

**Classification** Minimum security level.

**Category** Security group(s).

**Subject** Person or program.

**Clearance** Maximum security level.

**Need-to-know** Security group(s).

8



# Access rules

## CHINESE WALL

Mikael Elkjær  
Christensen

Introduction

Background

Relevance

Bell-LaPadula

Terminology

Access rules

Example

6

**Simple security:** access is granted only if the subject's clearance is *greater* than the object's classification and the subject's need-to-know *includes* the object's category(ies)

**\*-property:** write access is granted only if the output object's classification is *greater* than the classification of all input objects, and its category *includes* the category(ies) of all input objects.

8

# Example

## CHINESE WALL

Mikael Elkiær  
Christensen

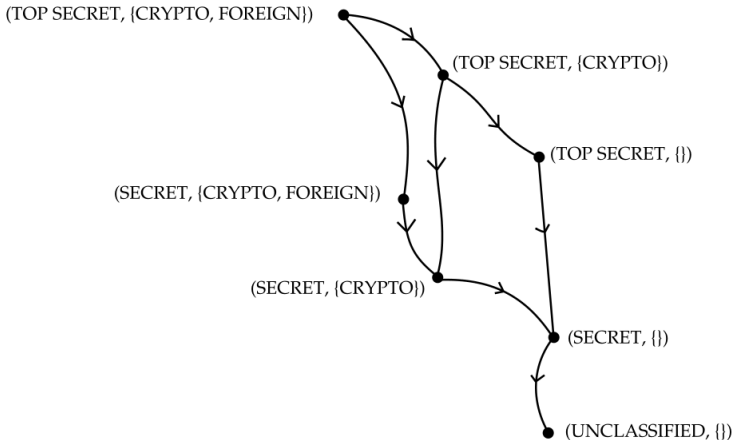
### Introduction

Background  
Relevance

### Bell-LaPadula

Terminology  
Access rules  
Example

7



8

## Example (2)

### CHINESE WALL

Mikael Elkiær  
Christensen

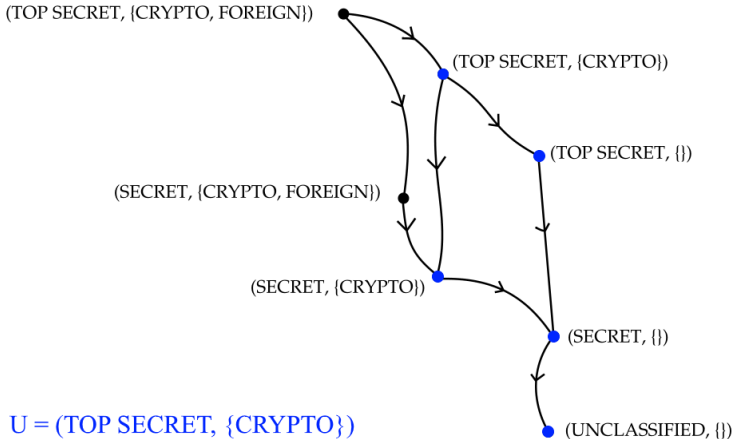
#### Introduction

Background  
Relevance

#### Bell-LaPadula

Terminology  
Access rules  
Example

8



8

Questions?



**AALBORG UNIVERSITY**  
DENMARK