

# INTRODUCTION TO PLAYGROUND

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**EN.600.424**

**Fall 2018**

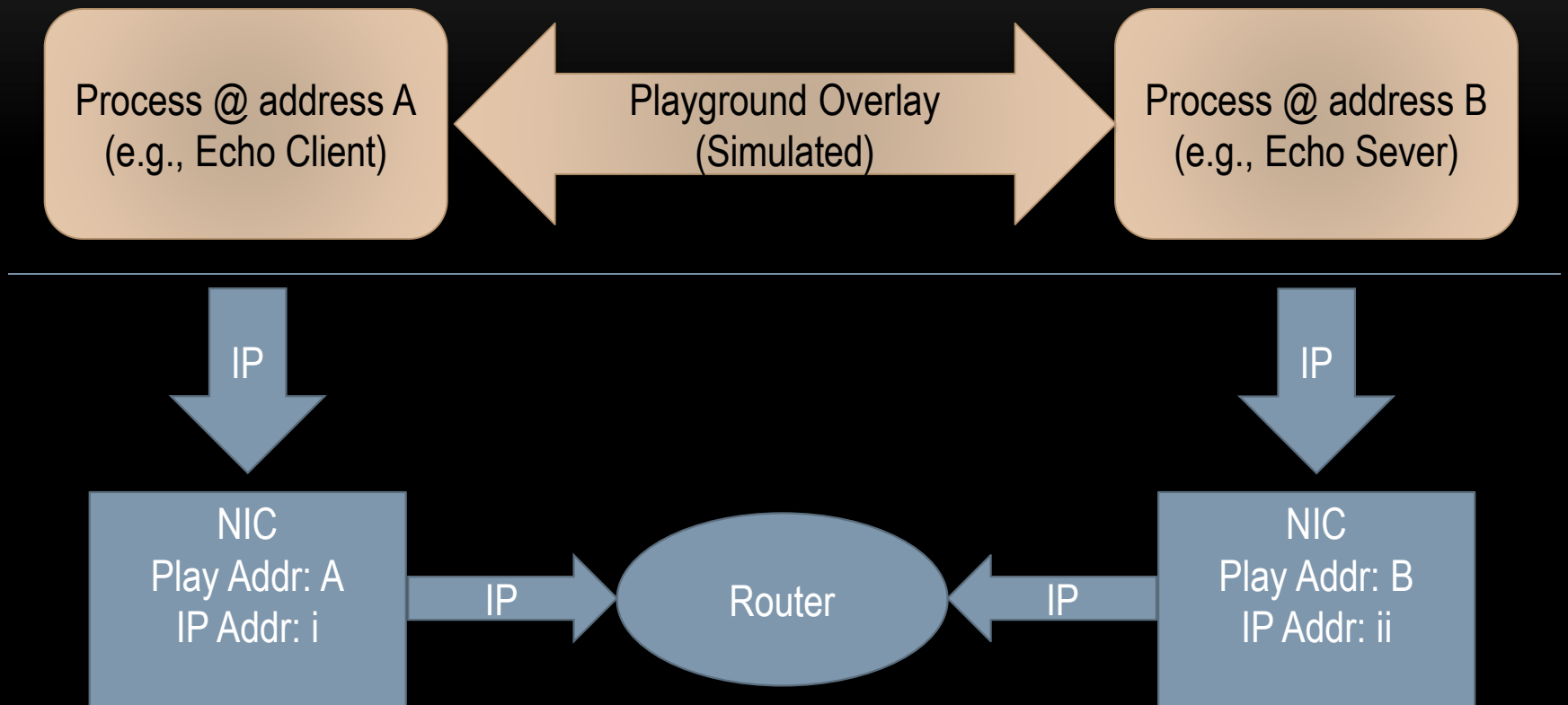
Lecture Notes

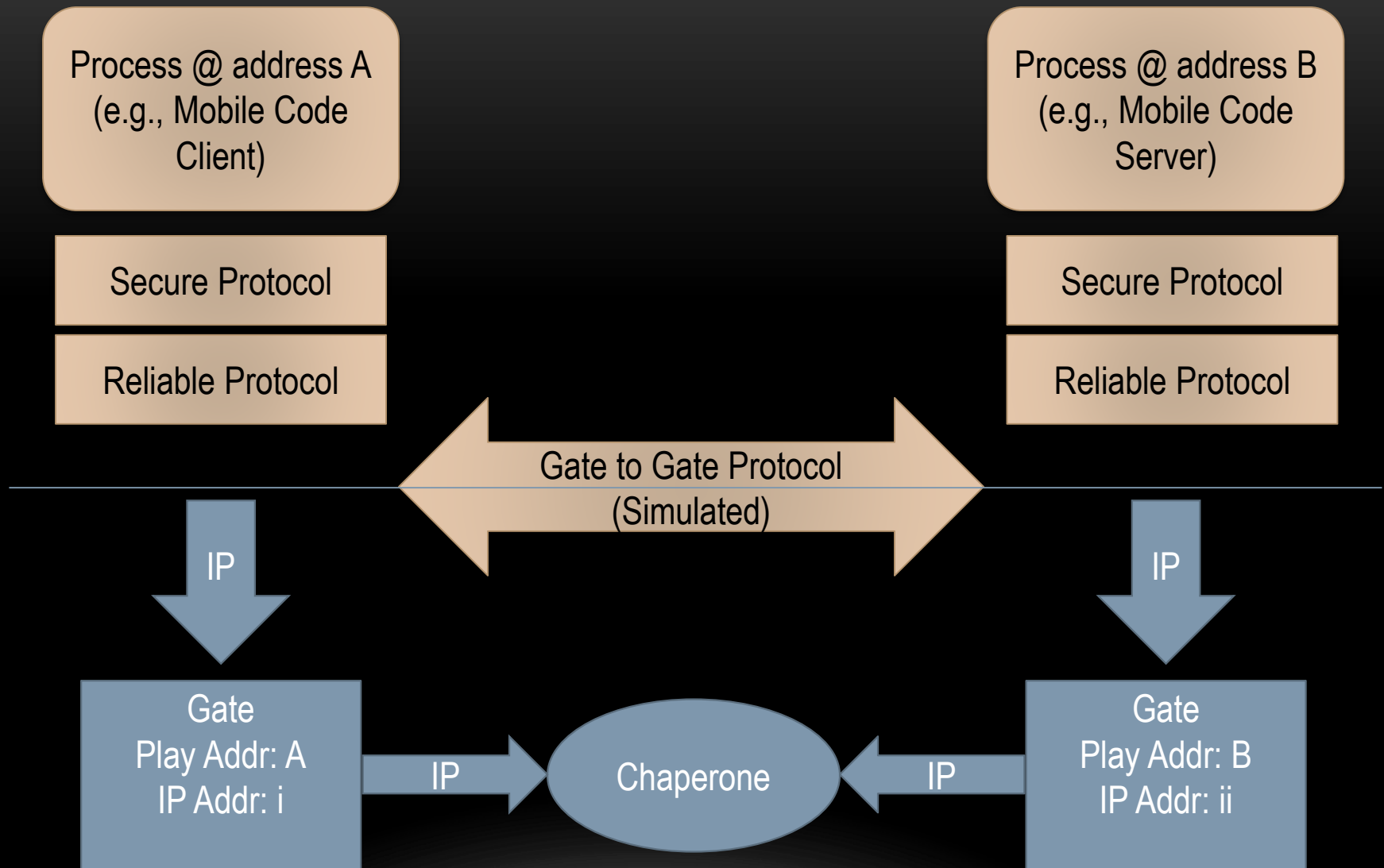
# OVERVIEW

- Poly-Localized Algorithm Yields Generated Remotely On Unused Network Devices
  - Originally, for remote code execution
  - I thought the name was clever, but now it's an orphaned acronym
- Playground is a simulated network for testing protocols, applications and architectures

# THREE MAJOR COMPONENTS

- **ROUTER:** provides connecting nodes access to the overlay network
- **NIC:** provides processes access to the Router and an address
- **PROCESS:** regular program! Communicates with other processes





# PLAYGROUND ADDRESS

- When a playground Gate connects to the Chaperone, it requests a Playground address
- An address consists of four integers
  - The semester, which is the year and an extra digit (e.g., 20184)
  - The group number
  - The individual number
  - The index
- We'll work out how we want to use the other three numbers later
- Example: 20141.1.1.1

# PLAYGROUND IS DANGEROUS

- Any NIC can register for ANY playground address, even one in use
- If two NIC's register for the same address, messages will be routed to both
- Thus, it's trivially easy to eavesdrop!
- Also, even though it runs over TCP, the Chaperone can drop/modify messages