**5G NR OVERVIEW**

Author: Vũ Công Hoàn

1. **5G NR System Overview**

Mô tả về kiến trúc của hệ thống 5G

* 1. **The 5G Core Network**
  2. **The Radio-Access Network (RAN)**

1. **5G NR Protocols Overview**

## **2.1. Radio Protocol Architecture**

## **2.2. User-Plane Protocols**

* **Service Data Application Protocol (SDAP)**
* **Packet Data Convergence Protocol (PDCP)**
* **Radio-Link Control (RLC)**
* **Medium-Access Control (MAC)**
* **Physical Layer (PHY)**
* **The SDAP protocol**.
* **The PDCP protocol**.
* **The RLC protocol**.

### **2.1.1. Service Data Adaptation Protocol (SDAP)**

### **2.2.2. Packet-data convergence protocol (PDCP)**

### **2.2.3. Radio-Link Control (RLC)**

### **2.2.4. Medium-Access Control (MAC)**

**2.2.4.1. Logical Channels and Transport Channels**

**Logical-channel includes:**

**Transport-channel includes:**

**2.2.4.2. Scheduling**

**2.2.4.3. Hybrid ARQ with Soft Combining**

### **2.2.5. Physical Layer (PHY)**

## **2.3. Control-Plane Protocols**

### **2.3.1. RRC State Machine**

### **2.3.2. Idle-State and Inactive-State Mobility**

**2.3.2.1. Tracking the Device**

**2.3.2.2. Paging Message Transmission**

### **2.3.3. Connected-State Mobility**