

Wireless Mobile Communication

Lecture 2

- Cordless Telephone System

Topics to be Covered

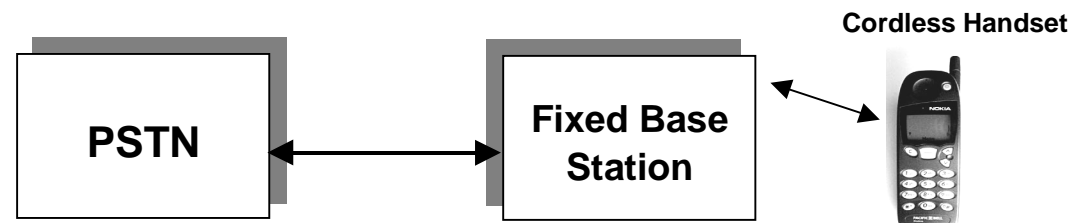
- Cordless Telephone System
- Cellular Mobile Communication
- Limitations of Mobile Communications

Cellular Mobile Communications-I

An Introduction

❖ Cordless Telephone System: To Connect a Fixed Base Station to a Portable Cordless Handset

- ❖ Early Systems (1980s) have very limited range of few tens of meters [within a House Premises]
- ❖ Modern Systems [PACS, DECT, PHS, PCS] can provide a limited range & mobility within Urban Centers



Cellular Mobile Communications-I

An Introduction

- ❖ Limitations of Simple Mobile Radio Systems

- ❖ The Cellular Approach

 - ❖ Divides the Entire Service Area into Several Small Cells

 - ❖ Reuse the Frequency

- ❖ Basic Components of a Cellular Telephone System

 - ❖ **Cellular Mobile Phone:** A light-weight hand-held set which is an outcome of the marriage of Graham Bell's Plain Old Telephone Technology [1876] and Marconi's Radio Technology [1894] [although a very late delivery but very cute]

 - ❖ **Base Station:** A Low Power Transmitter, other Radio Equipment [Transceivers] plus a small Tower

 - ❖ **Mobile Switching Center [MSC] /Mobile Telephone Switching Office[MTSO]**

 - ❖ An Interface between Base Stations and the PSTN

 - ❖ Controls all the Base Stations in the Region and Processes User ID and other Call Parameters

 - ❖ A typical MSC can handle up to 100,000 Mobiles, and 5000 Simultaneous Calls

 - ❖ Handles Handoff Requests, Call Initiation Requests, and all Billing & System Maintenance Functions

Cellular Mobile Communications-I

An Introduction

