Wireless Communication Systems

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- Reference (Not a textbook!): Wireless Communications, Principles and Practice, T.S. Rappaport. Prentice Hall

Wireless Communication Systems

- Final Exam: MCQ (70%)
- Midterm: MCQ (Tentative in Dec, 1 week notice) 15%. 60 minutes
- Quiz: MCQ (Tentative November, 1 week notice) 5%. 15 minutes
- Assignment: Simulation using MATLAB 10%

  Report and oral questions
- Number of lectures = who knows!

Course Contents

- Historical Background (1 L)
- Frequency Re-use and Spectrum Efficiency (3L)
- Methods to Increase Capacity (3 L)
- TDMA Frame Structure (4 L)
- Cellular System Block Diagram (4 L)
- Interference (5 L)

Intending Learning Outcomes (1/3)

- Explain the rationale of choosing TDMA access scheme for DAMPS
- Use concepts of re-use, spectrum efficiency, traffic, and trunking efficiency to measure system capacity
- Assess different techniques to increase capacity and choose the best technique to fit a given application

Intending Learning Outcomes (2/3)

- Examine and compare field structure of TDMA time slot of DAMPS forward and reverse channels
- Breakdown of high level block diagram of DAMPS into its main units and critisize the functionalities of each block

Intending Learning Outcomes (3/3)

- Investigate main types of intereferecne in mobile systems, methods of reducing intereference, and solve simple design problems to meet performance criteria
- Model simple problems related to interfernce, and traffic blocking using simulation tools and present results in a team