Simulation of Computer Networks

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Overview of the Lecture

» **Introductory Example**

» **Pseudo-Random Number Generators (PRNG)**

» **Generating various random distributions**

» **Discrete-Event Simulation and necessary algorithms**

» **Computer Network Simulation Scenarios**

  – **wired / wireless topology scenario generation**
  – **communication patterns**

» **Extensive ns-2 Example (wired / wireless)**

» **Tools for Scenario Evaluation**

Literature

» **Averill M. Law, W. David Kelton: "Simulation Modeling and Analysis", McGraw-Hill, 3rd edition, 2000.**

» **Sheldon M. Ross: "Simulation", 2nd edition, Academic Press, 1997.**

» **Stochastics, statistics: Henze et al., Schätzen und Testen**

» **Computer networks: Tanenbaum**

» **Pointers to original work is given on a 'per lecture basis'.**

Administrative issues

» **'Praktikum' (only in Karlsruhe)**

» **Exam options (3 ECTS points, probably oral exam)**

» **Sprechstunde (on demand fuessler@informatik.uni-mannheim.de)**

» **Webpage** http://www.informatik.uni-mannheim.de/informatik/pi4/stud/veranstaltungen/ss2003/netsim

» **Access to restricted area: studi / simmel**