Mark Claypool’s IMGD Projects

Counter-strike
Metroid Prime: Hunters
Warcraft III

Network Games
http://www.cs.wpi.edu/~claypool

Effects of Display Quality on Game Performance

- Computer games have many display options
  - Size, Colors, Shadows, Textures ...  
- Better quality frames look better, but do they make you *play better*?
  - Example: High resolution may make it easier to spot distant enemy
- Better quality frames may give you a lower frame rate, so does that make you play *worse*?
- Methodology: select games, design game maps and mods, and run user studies
Effects of Network on Game Performance

• "*&!? Lag" often heard comment in online games
  – But is it really lag or is it loss or server load?
• How do players perceive networking artifacts?
  – How does network lag feel versus network loss?
    + Can a player tell the difference?
• Does an over-loaded server feel the same as network lag?
• Do results hold across PCs, consoles, hand-holds?
• Methodology: setup system to add lag, load and loss to network games, let users play games, measure performance, survey users

Better Game Server Selection

• Choosing a “good” server is critical for multiplayer games, but how do you define “good”?
• Typical server browsers provide ping and CPU load, but how are accurate are these measures?
  – Example: ping based on only 1 or 2 packets
• How do you pick the best server for you and your friend in California?
• Methodology: study current measures, correlate with performance, study how users pick servers, build a better browser
Questions?

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