CS395T
Agent-Based Electronic Commerce
Fall 2003

Peter Stone

Department of Computer Sciences
The University of Texas at Austin

Week 4b, 9/18/03
Logistics

- In Tuesday’s reading look for typos!
Logistics

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• Any questions?
Carryover from last time

- Endogenous
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  - Time between bids is “endogenous” (Crampton)
  - Amount of competition is “endogenous” (Crampton)
  - Quantity is “endogenous” (Milgrom)
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- **Distortionary taxes**
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- **Distortionary taxes**
  - Tax on labor vs. tax on capital
Any comments about particular moves by the bidders?
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Why did WirelessCo bid-withdraw-rebid in round 99? (page 10?)
• Any comments about particular moves by the bidders?

• Why did WirelessCo bid-withdraw-rebid in round 99? (page 10?)

• Any other moves you want to discuss?
PRSDR

- Simulator built previously to exactly match auction rules
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We had to define:

- How many agents
- Their values
- Their knowledge of each other’s values
- Their strategies
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Started out as an exploration of strategy space in the simulator
Knowledge Engineering

• Long, iterative process
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• Not a stationary target
Knowledge Engineering

- Long, iterative process
- Not a stationary target
- Unclear how reliable the info is
Knowledge Engineering

- Long, iterative process
- Not a stationary target
- Unclear how reliable the info is
- The auctions are a poker game!
Market Values

• Secondary bidders
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• Merill Lynch report
Market Values

- Secondary bidders
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- Random goals based on a realistic model
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- Priorities = how many you want
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  – p.292: $5M \times 30M \text{ pop} \times 10 \text{ mhz} \times 1.05 \text{ (priority)} = $1.575B
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- No inter-market dependencies
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– Used to compute satisfaction
Budget Stretching

- You value A at $30 and B at $35
- I value A at $1 and B at $30
Budget Stretching

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• I value A at $1 and B at $30

• You have $40 at most to spend
Budget Stretching

- You value A at $30 and B at $35
- I value A at $1 and B at $30
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- What is the obvious outcome?
  - How much utility?
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- I value A at $1 and B at $30
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- What is the obvious outcome?
  - How much utility?
- How can you do better?
Fairing and cheater detection

• Does fairing guarantee that all bidders are satisfied eventually?
Fairing and cheater detection

- Does fairing guarantee that all bidders are satisfied eventually?

- Is it possible for cheaters to be misidentified?
PRSDR and efficiency and optimality

- Does PRSDR lead to an efficient outcome?
PRSDR and efficiency and optimality

- Does PRSDR lead to an efficient outcome?
- Is it a dominant strategy in this domain?