CS395T
Agent-Based Electronic Commerce
Fall 2003

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Department or Computer Sciences
The University of Texas at Austin

Week 4a, 9/16/03
Logistics

- Thursday’s readings:
  - Weber mainly for the idea
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  – PRSDR for the possible domain
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• Some more of the schedule, including presentation
  – Look for your name
  – Contact me with problems
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- Any questions?
Some terms

• Exposure
Some terms

- Exposure
- Free rider
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- Free rider
- Threshold problem
  - Favors bidders wanting aggregations
Some terms

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- Free rider
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- Demand reduction
- Threats
Example

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- Assume no combinatorial bids: illustrate exposure
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- Illustrate mutually exclusive bids from different rounds
## Demand Reduction

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- Demand reduction can be taken to an extreme.
Threats

- Bidder A winning license 37 for $1M.
- Bidders A and B competing for license 63.
- Simultaneously, bidder B bids:
  - licence 37: $1.1M.
  - licence 63: $13,000,037
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What’s the threat?
Stopping Rules, Activity Rules

Goal: Fast auction; simultaneous closings; simple
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• Close the core “big” licenses first and simultaneously, then the smaller ones separately.
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• Simultaneous close, but require activity
  – Activity on a license: bid placed or previous high bid
  – Low activity lowers eligibility
  – Eligibility bounds what you can bid on
  – Activity requirements increase as time goes on
Example

- NY = 50 BUs; LA = 40 BUs; SF = 30 BUs; etc.
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- Prevents *wait and see* strategy
Limits of theory (Milgrom, p.151)

- Identify variables, but not relative magnitudes
  - Conflicting effects $\Rightarrow$ can’t tell which will dominate
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*Bidder can be counted on to seek ways to outfox the mechanism* — Milgrom p. 150 (top)

Used laboratory experiments too
Failure modes

- Dutch auction (top of p.27)
- Low competition, declining opening bids
- What went wrong?
Failure modes

- Dutch auction (top of p.27)
- Low competition, declining opening bids
- What went wrong?
- Designated entities also didn’t work
Combinatorial bidding

- High complexity estimates
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- What’s so hard?
Combinatorial bidding

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  - 492 licenses $\Rightarrow 10^{148}$ combinations.
Combinatorial bidding

- High complexity estimates
- What’s so hard?
  - 492 licenses ⇒ 10^{148} combinations.
- 700 MHz never happened
Human factors

• CEO allows fears to control strategy
Human factors

- CEO allows fears to control strategy
- Throwing good money after bad
  - German auction
  - Auction 35 (p.27,28)