MUDA: A Truthful Multi-Unit Double-Auction Mechanism

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Goal: Truthful Two-Sided Markets

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"United states frequency allocation chart 2003", pixabay.com, http://youtube.com/watch?v=7TxLKH0ortw&t=13s
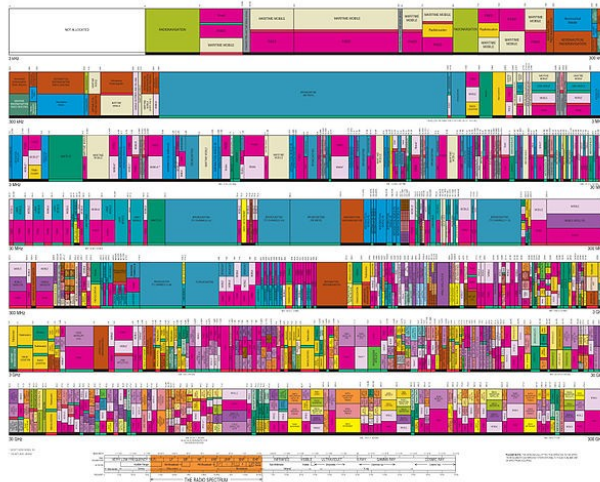
Goal: Truthful Two-Sided Markets

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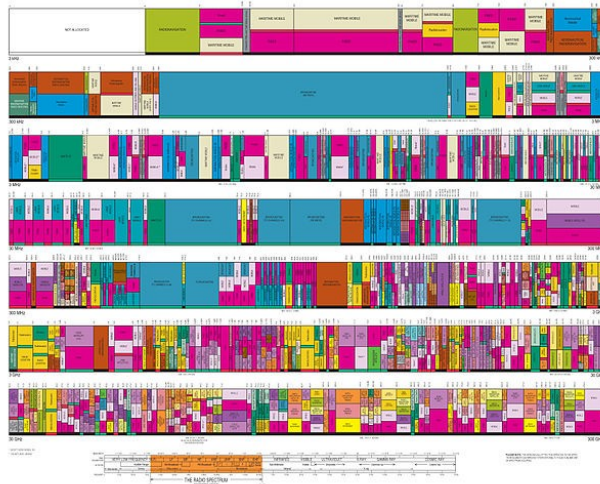
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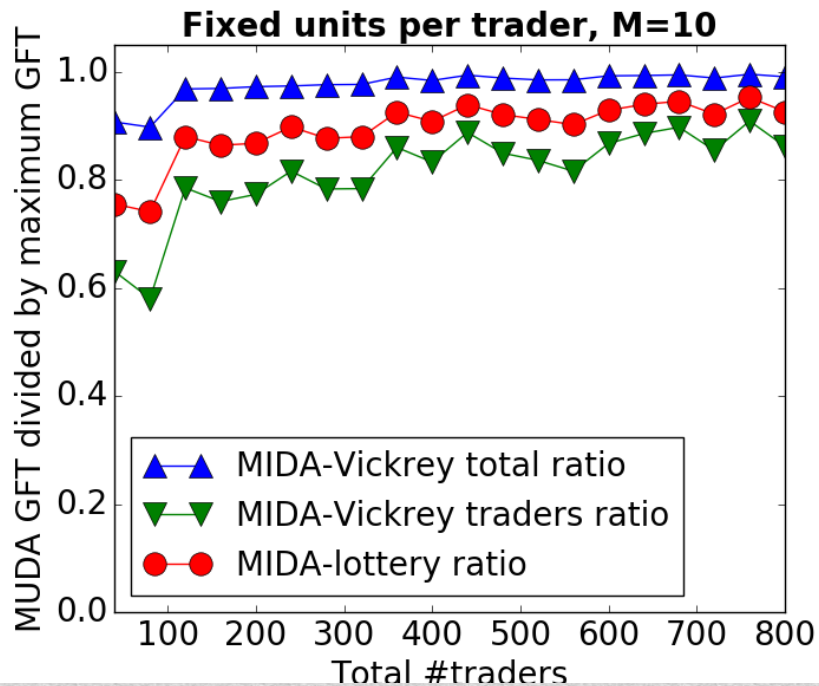
Existing mechanisms are -

1) Not truthful, or -

2) Require government subsidy, or -

3) Require prior information, or -

4) Have low gain-from-trade, or -

5) Allow only one unit per trader.

MUDA is -

1) Truthful;

2) Budget-balanced;

3) Prior-free;

4) Gain-from-trade approaches maximum;

5) Allows multiple units per trader.

MUDA Simulations

Values drawn uniformly at random:

Values based on historic NYSE data: