

# The Bidding Strategy In The Ausubel-Milgrom Proxy Auction With Complementarities

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## Abstract

This paper investigates the bidding strategy in the Ausubel-Milgrom's "ascending proxy auction" (Ausubel and Milgrom (2002)) in an incomplete information model. The Ausubel-Milgrom auction is a sealed-bid package auction but its incentive properties are not well-known yet when goods may be complements and when there's private information about buyers' valuation. In our model, each bidder wants a unique bundle of the goods and gets profits only when he obtains all of the goods in the bundle. We characterize bidders' strategies in a Bayesian-Nash equilibrium, and derive the condition under which bidders report their values truthfully in an equilibrium even when there're complementarities. Truthful reporting is optimal when all other bidders' wants overlap with own wants or never affect on own allocation determination problem. Our results also give some implications for the general values model and other familiar package auction designs.

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