

A SECURE, SIMPLE AND EFFICIENT WAY TO PROCUREMENT

PARTISIA PROCUREMENT AUCTIONS



PARTISIA
MARKET DESIGN

SECURE

- The bids are encrypted and remain so forever
- The required computations are done directly on the encrypted bids
- The decryption key is split such that no single organization or person can access the system

SIMPLE

- The searching and matching is done by the secure mediator
- Competitive prices are settled by the secure mediator
- The security policy is reduced to a minimum – just protect the key!

EFFICIENT

- Maximize gains from trading
- Cost efficient administration since no confidential information is involved
- Cost efficient repetitions since all processes can be computerized



COMPETITIVE, TRANSPARENT
PROCUREMENT MARKETS HELP
PUBLIC AUTHORITIES ACQUIRE
CHEAPER, BETTER QUALITY GOODS
AND SERVICES AT LOWER COSTS.

EUs Commission's report on the economic effects of public procurement 2004

INTRODUCTION

It is essential for private and public organizations alike to find and select the right commodity or service at the most competitive price. Well-designed procurement auctions ensure the optimal match of supply and demand at competitive prices.

If the desired commodity is well specified, a simple procurement auction is probably the most efficient approach. Often, however, it is difficult to describe all the desired commodity or service characteristics before the auctioning, and a more flexible approach is therefore required. A useful alternative is to combine traditional negotiations with simple auctions. An initial price auction may for example select the parties for intermediate negotiations, and a final price auction may ensure an efficient price settlement with the negotiated product or service characteristics.

Procurement auctions often benefit from fully or partially sealed bidding. With Partisia Market Design, sealed bidding is done in a secure, simple and efficient way.

Partisia Market Design is developing and maintaining a range of procurement auctions based on our innovative secure, simple and efficient information processing approach.



IN A SEALED-BID TENDER,
WHERE EACH BIDDER
SIMULTANEOUSLY MAKES
A SINGLE “BEST AND FINAL” OFFER,
COLLUSION IS MUCH HARDER (...)

OECD Policy Brief: Fighting cartels in public procurement (October 2008)

SECURE

Our new approach to information security guarantees ideal (deep) confidentiality. Participants' bids are encrypted using state-of-the-art security technology before they leave the participants' computers. The submitted bids remain encrypted at all times and are *never* decrypted. Using the unique Partisia technology computations are done directly on the encrypted bids. The system relies on a number of “key custodians” and the security can only be broken if they cooperate. So by giving parts of the decryption key to each of several interest groups, the security can only be broken if they cooperate - and if they do so, confidentiality would not have been an issue in the first place.

Keeping the bids confidential is an important feature. Sealed bidding with Partisia technology avoid some types of collusion and limits others. Apart from preventing collusion the specific context may provide several reasons for keeping the bids confidential including:

- General reluctance to share private information
- Avoid a central accumulation of private information
- Hold back information that may be used in related negotiations



THE SECURE APPROACH
SIMPLIFIES THE ADMINISTRATION
BY LEAVING NO CONFIDENTIAL
INFORMATION TO HANDLE.
THE SECURITY POLICY IS REDUCED
TO SAFEGUARDING A KEY.

Partisia Market Design

SIMPLE

Trading is simple: The participants submit information about supply through a secure and user-friendly web page. With a simple procurement auction, the procurement organization no longer has to go through the hassle of finding sellers and negotiate prices at the risk of not settling at the right prices - all trades are examined and the most optimal realized.



Administration is simple. The secure approach simplifies the administration. All the required computations are done directly on the encrypted bids and the public result is revealed simultaneously to the involved parties. Therefore, no special procedures are required to handle confidential information. In practice, the traditional complex security policy is reduced to safeguarding a decryption key. A decryption key that is useless by itself.

Also, in terms of communicating the security, the simplicity makes it easy: All bids are encrypted and remains encrypted forever. Only through the keys held by the custodians can computation be performed.

To ease the implementation of Partisia Procurement Auctions with existing IT systems, the required integration is kept at a minimum.

THE APPLICATION OF THE
(EU PROCUREMENT) DIRECTIVES
APPEARS TO REDUCE PRICES PAID
BY NATIONAL, REGIONAL AND LOCAL
AUTHORITIES FOR SUPPLIES,
WORKS AND SERVICES BY AROUND 30%.

EUs Commission's report on the economic effects of public procurement 2004

EFFICIENT

The central matching and pricing using our secure and simple approach realizes the most competitive prices at minimal costs. Partisia Procurement Auctions ensures

- Maximal gains from trade
- Cost efficient administration with no confidential information involved
- Cost efficient repetition since all processes can be computerized



THERE ARE COSTS ASSOCIATED
WITH MAKING PROCUREMENT
MARKETS MORE TRANSPARENT
AND COMPETITIVE. TRANSACTION
COST MINIMISATION IS ESSENTIAL
TO ENSURE GOOD MARKET PERFORMANCE.

EUs Commission's report on the economic effects of public procurement 2004

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