

## **Applicant Auctions for Top-Level-Domains: Resolving Contention Fairly, Efficiently and Transparently**

*By Peter Cramton, 21 November 2012*

The quest for new top-level domains took an important step last spring with 1,930 applications to ICANN. 755 of these applications, from 145 different parties, are under contention. ICANN has encouraged these applicants to resolve the contention among them, and has established a Last-Resort Auction in the event agreements among applicants cannot be reached. Here I describe a private auction model, the [Applicant Auction](#), which is an efficient, fair and transparent approach to resolve contentions.

Relative to the ICANN Last-Resort Auction, a key benefit of the Applicant Auction is that the applicants themselves retain the auction's revenue—that is, instead of paying ICANN, applicants will pay each other. Those who value the strings the most—the buyers—will compensate those who do not value the strings as highly—the sellers. With this approach all applicants are winners, whether buyer or seller.

A second important benefit of the Applicant Auction is that the buyers will get the names allocated sooner, and the sellers will be compensated for their efforts to date.

Governments, agencies, and others that oversee provisioning of public-interest goods and services have used auctions for centuries to fairly and transparently allocate assets to those seeking to become their stewards.

This is why ICANN, too, adopted an auction solution to determine final registry operators among those contending for a new string; but, ICANN views its own auction as a last resort—its preference is for applicants to resolve contentions among themselves. The Last-Resort Auction's key purpose is to define the property right under which parties negotiate. (Nobel Prize winning economist Ronald Coase would applaud ICANN's wisdom in defining a clear property right to facilitate efficient trade.)

My organization is offering the Applicant Auction as a simple and effective means to resolve string contention.

### **Applicant Auction objectives**

The Applicant Auction is designed to eliminate applicant contention and satisfy four objectives:

1. *Efficiency.* The auction maximizes total value by assigning the string under contention to the applicant who values it the most.
2. *Fairness.* No applicant is favored in any way.
3. *Transparency.* The auction has clear and unambiguous rules.

4. *Simplicity*. The auction is simple and easy to understand.

Each of these objectives is critical to ensure confidence in the auction.

## **Applicant Auction mechanics**

The auction we propose is known as a simultaneous ascending clock auction—precisely the same type ICANN has adopted for its Last-Resort Auction. In this auction, many assets are auctioned simultaneously, and applicants determine whether their strings are included in the auction or not.

We propose holding two auctions—one before and one after the Initial Evaluation results are posted.

Given ICANN’s current schedule, the first auction would be held in March 2013. This auction includes only those strings for which there is unanimous applicant agreement to conduct the auction before Initial Evaluation. The first auction is likely to include strings with fewer applications as well as lower-value strings. Applicants for these strings value the most rapid resolution of string contention and prefer to save on transaction costs.

The second auction occurs in September 2013 after Initial Evaluation results are posted. This auction includes all strings not resolved in the first auction and for which there is unanimous participation among the string’s applicants. The second auction will likely include higher-value strings for which it makes sense to wait until uncertainty about the Initial Evaluation is resolved.

Both auctions have identical formats, and indeed one further advantage of the two-auction approach is that the first auction will give applicants an opportunity to learn about the process and string values from the first auction, well in advance of the second auction. For some applicants the first auction will serve as a live practice event, and therefore a valuable opportunity to learn more about the process and refine strategies.

Each auction occurs over a sequence of rounds in which prices ascend until only a single applicant remains. In each round, bidders can determine whether they want to continue at the higher price or enter an exit bid at a price between the prior price and the current price. Once a bidder exits, the exit is irrevocable. The highest bidder—the buyer—pays the second-highest bidder’s exit bid.

Proceeds from the buyer are then split equally among the other contending applicants, allowing applicants the benefit of retaining the auction proceeds—a benefit not available in the ICANN Last-Resort Auction. (Other revenue splits, such as shares proportionate to bids, have been considered but these have been shown to create poor incentives.)

The simultaneous auction has proven to be highly efficient in theory, in the experiment lab, and most importantly in practice. Recent experiment tests of the Applicant Auction conducted with well-motivated PhD students at the University of Maryland show that the auction achieves

efficiencies of about 98 percent—that is, the total value achieved by the Applicant Auction is within 98 percent of the maximum possible value. Details of both the theoretical and experimental results are in [a research paper](#) and also available in [presentation form](#).

Since the Applicant Auctions involve long-term investments, the auctions are done over a significant period of time to facilitate analysis and rational bidding. Each Applicant Auction takes about 10 business days (two weeks) and about 80 bidding rounds, or eight rounds per day. Proxy bidding is permitted for those bidders who have simple bidding strategies and prefer to bid in a single round. This is also helpful for those who need to skip one or more bidding rounds as a result of other commitments.

## **All applicants are winners in the Applicant Auction**

As mentioned, an important benefit of the Applicant Auction is the rapid resolution of string contention. Strings go to delegation more quickly and with assurance that the top-level domain goes to the applicant who can put it to its best use.

In addition, the process produces direct financial benefits to all applicants, both buyers and sellers. The gain to sellers is obvious: each seller gets an equal share of the buyer's payment. But what is the gain to the buyer? Compared with the ICANN Last-Resort Auction, the buyer pays less. Why? Because being a seller in the Applicant Auction is much better than losing in the ICANN Last-Resort Auction. As a result, the incentive to bid higher, especially by high-valuing bidders who are apt to win or set the buyer's payment, is reduced. A bidder bids less in the Applicant Auction, because not winning is not so bad—you still get compensated. This implies that the buyer's payment is reduced. This result is a consequence of logic, but moreover, the result has been clearly demonstrated in the experimental lab—bidders bid close to the equilibrium levels predicted by theory, and indeed tend to underbid slightly, suggesting even lower buyer payments.

In the Applicant Auction, buyers pay less and sellers get more compared to the last resort ICANN auction—all applicants benefit.

## **Avoiding holdout is essential**

A challenge for the Applicant Auction is the requirement of unanimous participation—all applicants for a string need to participate in order to avoid the ICANN Last-Resort Auction. The holdout problem is familiar from real estate development: when unanimity is required to create value then each party prefers to be the last holdout whose participation then unilaterally creates the prize resulting from unanimity. This holdout incentive needs to be overcome.

The Applicant Auction addresses holdout directly by requiring all potential participants to decide simultaneously whether to commit to the auction at a date certain—the *commitment date*. All necessary materials must be filed with the Trustee—a major international law firm—by the commitment date. The filing binds the applicant to participate in the Applicant Auction, if

unanimous participation is achieved, and to the ICANN Last-Resort Auction, if one or more of the applicants for the string does not commit to the Applicant Auction. In particular, the commitment to participate entails a commitment not to negotiate with another applicant should unanimity fail—this guarantees that any string not resolved in the first or second Applicant Auction will be resolved in ICANN’s Last-Resort Auction.

Thus, applicants have three choices.

- Participate in the first Applicant Auction and split the auction revenues among the applicants.
- Participate in the second Applicant Auction and split the auction revenues among the applicants.
- Participate in the ICANN Last-Resort Auction and allow ICANN to retain the auction revenues.

Note that participating in one of the two Applicant Auctions is preferable to participating in ICANN’s Last-Resort Auction.

## **Our auction experience**

Over the last twelve years, my organization, Cramton Associates, LLC (CA), has conducted well over 100 auctions of similar size and complexity for governments and private companies in Canada, France, Australia, Germany, Belgium, Colombia, Hungary, France, Singapore, the UK, and the US. Our auctions have resulted in payments of many tens of billions of dollars in a variety of industries, including natural gas, electricity, diamonds and radio spectrum for mobile phones.

Our robust auction platform is specifically designed for high-stake auctions like the Applicant Auction. This includes state-of-the-art security and audit features. Yet bidding is no more difficult than using an ATM, indeed easier in some respects—all you need is an internet connection and a device, such as a tablet, smartphone or notebook, with which to access the internet.

Not only has our team conducted numerous auctions, we also have extensively researched auction incentives and are recognized worldwide for our expertise. A critical element of the team’s knowledge is an understanding of the incentive challenges that arise in auctions in which the buyer’s payment is shared by the non-winning bidders—the sellers. We have a highly robust auction platform, specifically designed for high-stake auctions. The platform has already been adapted and tested for the Applicant Auction.

A final important advantage of CA as market facilitator is our independence. CA has no agreements in place with any potential bidders. Our interest is in proposing an auction

mechanism that is congruent with the needs of all top-level-domain applicants. Our focus is solely on contention resolution.

## **Our compensation**

CA has made and will continue to make substantial investments in the development and execution of this plan. We are compensated by commission—a percentage of the aggregate transaction volume, subject to a floor and ceiling. Our current proposal suggests that our commission rate will be 1 percent or less—assuming many domains are auctioned. For the first Applicant Auction we are committing to a commission rate of 1 percent or less, irrespective of the number of domains auctioned. This commission rate is dramatically less than typical rates for brokered transactions in either the Internet-domain industry or investing banking more broadly.

Importantly, our commission is small when compared to the cost of choosing an auction or negotiation process that does not yield a fair and efficient outcome. We have no monopoly powers other than our intellectual property and welcome competition—if you have a better plan please compete with us in facilitating efficient trade.

## **Conclusion**

The Applicant Auction is a simple, fair and transparent method to efficiently resolve contention and move new top-level-domains toward the root. CA will host an Applicant Auction Conference for interested applicants immediately following the ICANN's Prioritization Draw on 17 December at the Hilton LAX. The Applicant Auction Conference is scheduled for 18 December 2012 from 8:30am to 5pm at the [JW Marriot Santa Monica Le Merigot](#), which is well worth the 20 minute taxi ride from LAX. [Please register online.](#) And follow the latest updates on Twitter [@ApplicantAuc.](#)

CA welcomes questions and comments on the Applicant Auction. The current prototype is just that. The final plan will reflect the comments of all applicants, both large and small. We look forward to assisting the applicant community with this important step.

*By Peter Cramton, Chairman, Cramton Associates; Professor of Economics, University of Maryland, [www.applicantauction.com](http://www.applicantauction.com)*