

Economic Case for Auctions in New gTLDs

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Executive Summary

There are two lines of argument for auctions as the tie-breaking mechanism for resolving contention among competing applicants for new generic TLD strings. First, auctions accomplish the goal of allocative efficiency: putting scarce resources into the hands of those who value them the most. In particular:

- Applicants whose true intentions or abilities are to serve many users would be able to justify higher bids than applicants who will serve few users;
- Applicants capable of providing high-quality service at low cost would be able to justify higher bids than low-quality, high-cost applicants; and
- Applicants who intend to develop the gTLD immediately would be able to justify higher bids than applicants whose purpose is to hold the gTLD, unused, for speculative purposes.

Second, while auctions are not perfectly aligned with ICANN's objectives, alternative allocation mechanisms such as comparative evaluations and lotteries inherently have much more severe limitations and defects, as evidenced by the historical record and by the abandonment of these alternatives in other communications areas.

ICANN intends to use auctions in the new gTLD process as a tie-breaking mechanism, not the primary allocation mechanism, for the resolution of string contention among competing new gTLD applicants for identical or similar strings. Auction would be the final means of settling any contention cases that have not been resolved at any of the previous stages in the process.

1. Background

ICANN is preparing implementation plans for the new gTLD process. Staff is working from the GNSO New gTLD recommendations and input from Internet community to guide the implementation. This memo has been prepared with the assistance of Power Auctions LLC, which has been retained for assistance in auction design.

In 2004, the Organization for Economic Cooperation and Development (OECD) released a paper on "Generic Top Level Domain Names: Market Development and Allocation Issues" (see <http://www.oecd.org/dataoecd/56/34/32996948.pdf>). The OECD paper described allocation methods for gTLD strings, including auction and comparative evaluation. The OECD paper concluded: "On balance the economic arguments favour the use of auctions in some form, where scarcity exists, in relation to the goals set by ICANN for allocation procedures. They are particularly strong in relation to allocation decisions concerning to existing resources and where a 'tie-breaker' is needed during a comparative selection procedure for a new resource. In all cases, the best elements of comparative selection procedures could still be incorporated, at a prequalification stage for registries, using straightforward, transparent, and objective procedures that preserve the stability of the Internet" (pp. 51-52).

The paper acknowledged that comparative evaluation may have the advantage of providing equity for new gTLD applicants, and permits the inclusion of broader objectives in the new gTLD selection process. However, it also noted that comparative evaluation lacks transparency and relies on subjective judgment in the determination of a winner for a proposed gTLD string.

By contrast, auctions provide objectivity and transparency: “Auctions rely on relatively simple and transparent rules that apply to all participants. As such they are fair and transparent. Given that bids are observable and verifiable by a court or any third party, the final allocation is less likely to be legally contested relative to a comparative selection procedure” (see page 42).

The OECD paper highlighted both that auctions are effective for determining the market value and that auctions are advantageous even if revenue maximization is not a primary objective. “Economic theory and experience suggest that auctions are one of the best available mechanisms for realising the true market value of a resource, as the price is decided by those with the best knowledge of the market. In the context of the TLD market the benefits auctions can bring, in this respect, largely depend on the objectives that are set by ICANN.” It continued: “As a notfor-profit organisation, revenue maximisation may not, in fact, be an objective ICANN sets for itself. The value of any new gTLD may, for example, be impacted by the number of other gTLDs that ICANN chooses to make available. ICANN may decide that the increasing the number of new gTLDs can provide greater competition, choice and innovation and give higher priority to meeting those objectives than to revenue maximisation. This does not, however, negate the benefit an auction can yield in terms of determining the value of a resource or in being a tool for efficient allocation” (p. 44).

An additional resource available to ICANN is “An Economic Analysis of Domain Name Policy,” Hastings Communication and Entertainment Law Journal (2003) (by Karl M. Manheim and Lawrence B. Solum) (see <http://law.bepress.com/sandiegolwps/le/art1>). This paper argues that the root is an economically scarce resource, that ICANN should allow a market to develop in top-level domains, and that the market should serve the public interest. It should be noted that TLDs are not necessarily a scarce resource.

Manheim and Solum compare management of the Internet’s system of unique identifiers to telecommunications spectrum and licensing of spectrum in the United States by the Federal Communications Commission (FCC). “Compared to spectrum auctions, we believe gTLD auctions will be relatively simple, both in concept and operation. Nonetheless, we think actual auction design should be worked out by ICANN to assure compatibility with technical standards and to maximize economic efficiency” (pp. 416-417).

Manheim and Solum conclude: “When auctions were first proposed to the FCC, they were dismissed out of hand as “too academic” and ridiculed as “of the realm in which it is merely the fashion of economists to amuse themselves.” The same attitude can be found in many of the objections to gTLD auctions espoused by defenders of the status quo. Just as, over time, auctions have become accepted as means for allocating economically scarce spectrum and telephony resources, we believe they will become seen as the best means for expanding the TLD name space. Indeed, the case for auctioning new gTLDs is compelling” (p. 449).

2. Auctions accomplish the goal of allocative efficiency

Auctions are well suited to accomplishing the goal of *allocative efficiency*: putting scarce resources into the hands of those who value them the most. As such, the results of auctions tend to create greater social value than alternative allocation mechanisms. For example, suppose that one applicant for a gTLD has the true intention and capability of serving many users, while a second applicant has in mind a narrow application that would serve only a few limited interests. The first applicant would generally be able to justify a higher bid for the gTLD than the second applicant; consequently, the first applicant would be likely to win the gTLD in an auction. By contrast, in a comparative evaluation, the second applicant might be able to win the

gTLD if it were more persuasive (or hired the more effective consultant or lobbyist); and in a lottery, the two applicants are by definition equally likely to win. Similarly, an auction process would tend to favor a high-quality, low-cost applicant over a low-quality, high-cost applicant. And an applicant who intends to develop the gTLD immediately would be able to justify a higher bid than an applicant whose purpose is to hold the gTLD, unused, for speculative purposes.

Largely for similar reasons, governments began 15 years ago to allocate telecommunications licenses by auction. In 1993, the US Congress authorized the Federal Communications Commission (FCC) to allocate mobile telephone licenses by auction; and in 1997, it extended this authorization to use auctions for resolving competing applications for radio and TV licenses. Moreover, auctions for allocating radio spectrum have been a truly global phenomenon. They have been used in New Zealand since 1990 and in Australia since 1993; and they have been adopted subsequently in the UK, Germany, Austria, Netherlands, Switzerland, India, Hong Kong, Singapore, Nigeria, Canada, Mexico, Brazil, and Trinidad and Tobago (to provide only a partial list).

The key benefits of a well-designed auction mechanism include the following:

- Transparent and objective means for determining a winner
- Efficient allocation – puts gTLD strings in the hands of those who value them the most and will put them to use (Note - ICANN intends to use auctions as a tiebreaking mechanism, not as the primary allocation mechanism.)
- Efficient process – fully dynamic auction, concludes in one day to one week
- Revenue maximization (with possible options for ensuring that “deepest pockets” do not always win auction) *Note that revenue maximization is not one of ICANN’s goals with the new gTLD process.

Of course, no allocation mechanism will perfectly address needs for transparency, objectivity and scalability, and auctions have received severe criticism in some contexts. For example, the European Telecommunications Network Operators’ Association (ETNO) all but blamed the European UMTS/3G spectrum auctions of 2000 and the subsequent collapse of the telecommunications sector: “The auction process appears to be particularly inappropriate when considering innovative technologies and new markets ... the whole sector has been seriously destabilised and the launch of new services delayed.”¹ ETNO argues that beauty contests are preferable to auctions.²

The timing of the European spectrum auctions coincided with the NASDAQ stock market peak. Given that telecom firms operating outside of Europe or outside the wireless sector suffered similar drops in stock prices as European wireless operators and given the similarly-timed bursting of the “dot-com” bubble, it is more reasonable to view the high European spectrum auction prices as a symptom of the bubble rather than as a cause of its collapse. Oxford University Professor Paul Klemperer has noted: “In retrospect, of course, the licenses look expensive. But in retrospect, shares or houses sometimes look expensive. Like any other

¹ See ETNO Reflection Document Commenting on Auctions and Beauty Contests, Dec. 2004; available at <http://www.etno.eu/Portals/34/ETNO Documents/Information Society i2010/RD203 - FM Auctions and Beauty Contests.pdf> (p. 3).

² As described in the reflection document’s introduction, ETNO represents the voice of Europe’s largest telecom operators. Thus, ETNO has a vested interest in obtaining lower license fees for its member operators and insulating them from new entry. Note that the document also asserts: “The progress in technologies leads to significant evolutions of services and transformation of traditional markets. As a consequence, maintaining a distinction between incumbent operators and new entrants becomes more and more artificial.” (p. 2).

market, an auction simply matches willing buyers and willing sellers — it cannot protect them against their own mistakes.”³

While the spectrum auction experience offers some useful insights, there are major differences between spectrum licenses and gTLDs. Spectrum licenses are unique and are limited to a fixed supply — and specific spectrum licenses are needed to provide specific wireless services. Telecom firms in Europe in 2000 may have perceived that they needed to win specific licenses in order to remain in business. By contrast, gTLDs are unique only in their identifying string and the number of gTLDs can be expanded over time — and any of a large number of alternative gTLD strings can be used for a given purpose. If a bidder fails to win its first-choice gTLD, it can submit a new proposal and apply for an alternative string. In this respect, an auction for gTLDs is more likely to be comparable to an auction for houses⁴ than to an auction for spectrum. There are characteristics of a house that make it unique and more desirable than another home, but if an applicant is unsuccessful in a house auction, there is likely to be another suitable house available. Similarly, an applicant who finds .movie to be too expensive in a gTLD auction can instead apply for .film or .cinema. Participants in gTLD auctions will not generally find themselves in “must-win” situations; their second or third choices will be reasonable substitutes.

It is worth emphasizing that, similar to ICANN, most spectrum agencies have not placed revenue maximization at the top of their list of objectives. Rather, the efficient use of the spectrum, and the putting of spectrum into use in a timely fashion, has generally been uppermost. It has also been widely perceived that scarce spectrum is a valuable public resource that governments should not merely give away to self-interested individuals. Transferring TLD rights to third parties for little or no compensation would be equally as objectionable as spectrum giveaways.

At the same time, allocating these resources for free does not reduce the price to end-consumers.

It is a classic fallacy in economics (the “sunk cost fallacy”) that profit-maximizing firms will set their prices in relation to the level of past fixed costs. Rather, they will take account of the scarcity of the resources that they use, regardless of whether they pay for them or receive them for free. There may be a concern that auctions resolving contention among gTLD applications will result in passing on of costs to consumers. The available evidence after spectrum auctions has been that consumer prices do not depend on the price paid for the spectrum. A similar point has been seen recently in Europe, where utilities received grandfathered carbon emission allowances for free but nevertheless set higher consumer prices that reflected the opportunity cost of the allowances, not the (zero) price they paid.

Finally, various devices can be considered for favoring disadvantaged bidders in an auction. For example, a 25% bidding credit could be offered to community-based bidders whose community is located primarily in least-developed countries: a \$300,000 bid from such a bidder would be viewed as equivalent to a \$400,000 bid from a wealthy country. (Obviously, in such event, measures would need to be taken so that bidders in wealthy countries could not establish shell corporations for the primary purpose of “gaming” such bidding credits.) Such devices might make auctions more attractive to the Internet community.

³ Klemperer, P., “The Wrong Culprit for Telecom Trouble,” *Financial Times*, 26 Nov. 2002, p. 21.

⁴ Auctions for houses are commonplace and work well in various parts of the world, for example, in Sydney, Australia.

3. Alternative allocation mechanisms are deficient

Manheim and Solum (2003, p. 367) consider four possible allocation mechanisms:

- Rule of first occupancy⁵
- Lotteries
- Comparative evaluations
- Auctions

Meanwhile, the OECD paper does not even consider a rule of first occupancy and summarily dismisses lotteries: “These are little used by OECD governments where allocative choice is required” (p. 39). Both papers come down decisively in favor of auctions. While part of the reason to use auctions is the set of attractive properties outlined in the previous section, another reason to use auctions is that the alternatives are grossly deficient.

A rule of first occupancy does not seem worthy of any further attention, so we limit consideration to the two other alternatives: lotteries and comparative evaluations.

Lotteries

In the telecommunications area, the best known use of lotteries was in connection with the allocation of US mobile telephone licenses, beginning in 1981. The experience was summarized by Manheim and Solum (2003, pp. 396-397): “Applications came in by the hundreds of thousands. Winners would often ‘flip’ or resell their licenses to larger entities at substantial profit without ever delivering service to a single customer. Some licenses won at lottery were resold in short order for tens of millions of dollars. The windfalls continued, as per the Coase Theorem.⁶ But the transaction costs were high, including the cost of delay in getting licenses to firms that could actually use them. One estimation of social cost for the ten-year delay in licensing of cellular providers [by lottery] was 2 percent of Gross National Product (GNP). By 1985, the FCC indicated its desire to eliminate the lottery system.”

In addition, awarding rights to gTLDs by lottery or “coin flip” might be contrary to the laws in certain jurisdictions. We take no opinion on the legal argument, as conducting a lottery would otherwise appear antithetical to economic principles and to ICANN’s objectives.

Comparative evaluations

Before lotteries, radio spectrum licenses in the US were allocated by comparative evaluation. The process is summarized in Paul Milgrom’s book, “Putting Auction Theory to Work,” Cambridge University Press (2004, p. 3): “Spectrum rights (licenses) in the United States and many other countries had long been assigned in comparative hearings, in which regulators compared proposals to decide which applicant would put the spectrum to its best use. The process was hardly objective: it involved lawyers and lobbyists arguing that their plans and

⁵ A rule of “first occupancy” allocates an item to the first individual to gain possession of or make use of the item.

⁶ The Coase Theorem was introduced by University of Chicago Law & Economics Professor Ronald Coase, see <http://www.law.uchicago.edu/socrates/coase.html>. Coase won the 1991 Nobel Prize for his work. The theorem is summarized as “In a world where there are no transaction costs, an efficient outcome will occur regardless of the initial allocation of property rights.”

clients were most deserving of a valuable but free government license. With its formal procedures and appeals, a comparative hearing could take years to complete.” Milgrom adds in a footnote: “The process was once characterized by an FCC Commissioner as the ‘FCC’s equivalent of the Medieval trial by ordeal’ (as quoted by Kwerel and Felker (1985)).”

The International Olympic Committee uses a comparative evaluation process for determining the site of the Olympic Games. In one of the more notorious episodes, it was alleged that in connection with the selection of Salt Lake City for the 2002 Winter Games, IOC members accepted more than \$1 million in cash, gifts, trips and scholarships. As a result of this bribery scandal, 10 members of the IOC were expelled, another 10 members were sanctioned, and several criminal prosecutions ensued. While the IOC is unlikely to replace its comparative evaluation process with an explicit auction, the episode highlights that comparative evaluations without clear criteria for deciding an allocation are invitations to corruption. By contrast, since auctions are transparent and objective, it is much more difficult to influence the outcome in favor of a particular bidder.

The disadvantages of comparative evaluations can be summarized as follows:

- It is difficult to establish meaningful transparent and objective criteria that allow the evaluator to distinguish among and select one of multiple competing applications;
- As a consequence, the comparative evaluations take a long period of time and require the investment of exhaustive resources by both applicants and the evaluator;
- Also as a consequence, the comparative evaluation process is vulnerable to corruption;
- The awards, once made, are unlikely to withstand judicial review;
- If other than the highest-value applicant wins the comparative evaluation, the winner is likely to ‘flip’ the rights for speculative profits;
- Depending on how the comparative evaluation is structured, the process may favor well-connected applicants, and thus may not be any more protective of disadvantaged applicants than auctions; and
- In the language of the economics and political science literatures, the comparative evaluation process may thus be an ‘all-pay auction’ which dissipates revenues (through expenditures on consultants and lobbyists) instead of collecting revenues that can be channeled to the good of the internet community.

At the same time, as emphasized by the OECD paper and noted in Section 1 above, most of the advantages of comparative evaluations can be obtained through a pre-qualification process before the auction. The pre-qualification procedures could apply straightforward, transparent and objective standards that would deal with concerns that a stand-alone auction might otherwise engender among the Internet community. However, the pre-qualification process would often fail to eliminate multiple competing applications for new generic TLD strings, which would then be resolved by auction. Pre-qualification and evaluation will still be used as a primary allocation method, but auctions would serve as the tie-breaker for resolving contention among identical or similar string applications