

**PRELIMINARY REPORT OF DENNIS CARLTON  
REGARDING IMPACT OF NEW GTLDS ON CONSUMER WELFARE**

**March 2009**

**I. INTRODUCTION**

**A. QUALIFICATIONS**

1. I am the Katherine Dusak Miller Professor of Economics at the University of Chicago Booth School of Business. I received my A.B. in Applied Mathematics and Economics from Harvard University and my M.S. in Operations Research and Ph.D. in Economics from the Massachusetts Institute of Technology. I have served on the faculties of the Law School and the Department of Economics at The University of Chicago and the Department of Economics at the Massachusetts Institute of Technology.

2. I specialize in the economics of industrial organization, which is the study of individual markets and includes the study of antitrust and regulatory issues. I am co-author of the book Modern Industrial Organization, a leading text in the field of industrial organization, and I also have published numerous articles in academic journals and books. In addition, I am Co-Editor of the Journal of Law and Economics, a leading journal that publishes research applying economic analysis to industrial organization and legal matters, and serve, or have served, as an editor of a variety of scholarly journals.

3. In addition to my academic experience, I am a Senior Managing Director of Compass Lexecon, a consulting firm that specializes in the application of economics to legal and regulatory issues. From October 2006 through January 2008, I served as Deputy Assistant Attorney General for Economic Analysis, Antitrust Division, U.S. Department of Justice, the most senior position in the Antitrust Division held by an

economist. I also served as a Commissioner of the Antitrust Modernization Commission, created by the U.S. Congress in 2002 to evaluate U.S. antitrust laws. I have provided expert testimony before various U.S., state and federal courts, the U.S. Congress, a variety of state and federal regulatory agencies and foreign tribunals and have served as a consultant to the Department of Justice, the Federal Trade Commission and other government agencies. My curriculum vita is attached as Appendix I to this report.

4. I have been asked by ICANN to analyze from an economic perspective ICANN's anticipated introduction of new generic top level domain names (gTLDs), and to identify and address the benefits and costs associated with ICANN's proposal. In doing so I evaluate various concerns that have been raised by the Antitrust Division of the U.S. Departments of Justice (DOJ), the National Telecommunications Information Agency (NTIA) of the U.S. Department of Commerce, and comments of third parties submitted to ICANN in response to its proposal.<sup>1</sup> I also indicate where further studies would be informative in addressing the relevant issues.

## **B. OVERVIEW AND SUMMARY**

5. I conclude that ICANN's proposed framework for introducing new TLDs is likely to improve consumer welfare by facilitating entry and creating new competition to the major gTLDs such as *.com*, *.net*, and *.org*. Like other actions that remove artificial restrictions on entry, the likely effect of ICANN's proposal is to increase output, lower

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1. See letters from Deborah A. Garza to Meredith A. Baker dated December 3, 2008 ("DOJ letter") and from Meredith A. Baker to Peter Dengate-Thrush dated December 18, 2008 ("NTIA letter") The NTIA letter also requests information about the effect of new gTLDs on the stability and security of the Domain Name System, which are not addressed in this report.  
([http://www.ntia.doc.gov/reportsarchive\\_2007\\_2008.html](http://www.ntia.doc.gov/reportsarchive_2007_2008.html))

price and increase innovation. This conclusion is based on the fundamental principles that competition promotes consumer welfare and restrictions on entry impede competition.

6. DOJ, NTIA and a variety of other parties have expressed concerns that the introduction of new gTLDs could harm consumer welfare by creating confusion among consumers and imposing costs of trademark holders by necessitating inefficient “defensive” registration of domain names on new gTLDs. While entry generally promotes consumer welfare, proper account also must be taken for property rights that protect firms’ investments in establishing a reputation and brand name. If such property rights are not protected, rivals have an incentive to “free ride” on the reputation created by rivals by imitating trademarks or adopting very similar marks thereby potentially creating consumer confusion.

7. This possibility, and the harm to consumer welfare that results, is recognized by existing trademark law and in economic analyses of intellectual property. But to the extent that the introduction of new gTLDs gives rise to intellectual property concerns, they can be addressed through existing legal mechanisms and appropriately-designed ICANN procedures for protecting intellectual property. It would not be sensible, from an economic perspective, to block entry of gTLDs to prevent potential trademark concerns. Indeed, the relatively small number of registrations achieved by new gTLDs such as *.info* and *.biz* introduced in recent years suggests that the need for defensive registrations in new gTLDs is limited. The likely adverse effects such a strategy would have on consumer welfare would likely be greater than any potential harm, especially since appropriate steps can be taken if needed to address concerns regarding intellectual property rights.

8. DOJ and NTIA further suggest that action on ICANN's proposal should be delayed until ICANN completes the economic study it authorized in 2006 to address whether the domain registration market is one economic market or whether each TLD operates as a separate market. While this remains an interesting question deserving of analysis, evaluation of the impact of ICANN's gTLD proposal on consumer welfare does not depend on the answer to this question. Indeed, even if new gTLDs do not compete with *.com* and the other major TLDs for existing registrants, it is likely that consumers would nonetheless realize significant benefits from new gTLDs due to increased competition for new registrants and increased innovation that would likely be fostered by entry.

## II. BACKGROUND ON ICANN'S PROPOSAL

### A. ECONOMICS OF THE DOMAIN NAME SYSTEM

9. Despite the introduction of several new gTLDs in recent years, Internet activity today continues to be dominated by a small number of registries. For example, the *.com* TLD today has more than 80 million registered domain names while *.net* and *.org* respectively have roughly 12 million and 7 million active domain names.<sup>2</sup> While several new gTLDs have been introduced in recent years, these have achieved only limited success in attracting registrants and Internet activity. For example, *.info* and *.biz*, both introduced in 2001, have attracted roughly 5 million and 2 million domain names respectively.<sup>3</sup>

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2. ICANN Registry Operator Monthly Reports October 2008.

(<http://www.icann.org/en/tlds/monthly-reports/>)

3. Id.

10. Currently, all agreements between ICANN and the registries operating unsponsored gTLDs include price maximums and limits on permissible future price increases.<sup>4</sup> Registrars operate under contracts with registries and charge rates to registrants that are not regulated by ICANN. Registrars can contract with multiple registries and typically offer a variety of additional services to registrants such as web site hosting and design.

11. Registrants that subscribe to a particular Internet domain name face costs when switching registries because the TLD is a component of the domain name which, by definition, cannot be ported across registries. That is, if the registrant that operates the website *cars.com* wants to switch to the *.net* registry, then it must adopt *cars.net* (if available) or adopt another *.net* domain name. Switching costs faced by registrants may create incentives for registries and registrars to act opportunistically by raising prices. However, ex ante competition to attract new registrants, as well as harm to the reputation of the registry and/or registrar limits their ability to engage in such conduct.

12. An increase in the number of gTLDs increases the number of alternatives available to consumers, and thus offers the potential for increased competition, reduced prices, and increased output. The availability of new gTLDs also offers increased opportunities for registries and registrars to develop innovative services or business

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4. See, e.g., Section 7.3 of *.com* Registry Agreement between ICANN and Verisign, dated March 1, 2006. Unsponsored gTLDs (.com, .biz, .info, .name, .net., org, .pro) have price caps; all sponsored gTLDs (.aero, .asia, .cat, .coop, .jobs, .mobi, .museum, .tel, .travel), which in most cases are smaller than the unsponsored gTLDs, have no price caps. These caps are established in contracts between ICANN and registry operators, such as Verisign (which operates the *.com* and *.net* registries). ICANN operates under a Memorandum of Understanding with the U.S. Department of Commerce.

models and circumstances provide significant opportunities for increases in consumer welfare.

## **B. ICANN'S PROPOSED PROCEDURES FOR DEPLOYING NEW GTLDS**

13. ICANN has proposed a framework for authorizing new gTLDs. ICANN's draft Guidebook for applicants details the various phases of the ICANN's review process and the requirements that need to be met for approval.<sup>5</sup> ICANN will evaluate both the technical and financial capabilities of the applicant, the effect of the proposed gTLD on consumer confusion, and the effects of the proposed gTLD on Internet stability.<sup>6</sup>

14. If more than one application for similar (or identical) gTLDs passes ICANN's evaluation phase, these applications enter the "string contention" process, in which ICANN determines which application will ultimately be approved. ICANN will first encourage the interested parties to negotiate a solution amongst themselves. If the applicants are unable to negotiate a resolution, they enter a second comparative evaluation phase. If more than one application still remains after this phase, ICANN will employ a tie-break mechanism such as an auction.<sup>7</sup> I understand that ICANN's goal is to establish application procedures that are consistent with consumers' interests and that

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5. See ICANN, New gTLD Program: Second Draft Applicant Guidebook, February 18, 2009 ("Draft Guidebook"), (<http://icann.org/en/topics/new-gtld-program.htm>).

6. Draft Guidebook, p. 2-2.

7. The Second Draft Applicant Guidebook suggests that ICANN will use highest-bid auctions as a tie-break mechanism with the proceeds going to a not-for-profit foundation. DOJ suggests that ICANN use auctions in which bidders are selected on the basis of promising the lowest price. The DOJ suggestion, however, does not address how ICANN should evaluate bidders that offer a low price by offering low-quality service and those that offer higher quality/higher price services. (Draft Guidebook, p. 4-13 to 4-14.)

proposed procedures can be further modified based on comments received both before and after the adoption of such rules.<sup>8</sup>

15. Objections to applications can be filed by various parties including existing TLD registries, other applicants, holders of intellectual property rights (such as trademarks) and others.<sup>9</sup> Objections can be made on a limited number of grounds including string confusion, legal rights (e.g. trademark infringement), morality and public order, and community objection.

**C. SUMMARY OF CONCERNS ABOUT ICANN’S PROPOSAL TO EXPAND GTLDS.**

16. The DOJ and NTIA and some private parties have expressed concerns that the introduction of new gTLDs will harm consumers and/or trademark holders. Broadly summarized, these comments reflect the view that the introduction of new gTLDs will harm registrants (consumers) by creating confusion and by imposing significant costs on registrants from forcing them to establish “defensive” registrations with the new gTLDs that protect their trademarks and existing domain names. Comments by the DOJ and several other parties also claim that the introduction of new gTLDs is unlikely to result in increased competition that would lower prices or improve service to registrants.

17. For example, the Association of National Advertisers states that new gTLDs will generate higher “costs of brand management and create new opportunities for others to infringe, phish, and engage in other deceptive practices. As a result, brand

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8. See Cover letter from ICANN President and CEO accompanying Draft Guidebook.

9. A party that objects to an application must pay a dispute filing fee, which is expected to be between \$1,000 and \$5,000. At that time, the applicant has 30 days to respond (and pay the same fee). Both parties will then submit advanced payment to cover the dispute resolution proceedings, with payment refunded to the prevailing party (Draft Guidebook, p. 1-24 to 1-25).

owners and consumers will be net losers.”<sup>10</sup> Similarly, the U.S. Chamber of Commerce concludes that, “the proposed gTLD program [...] will compel businesses to invest millions of dollars in defensive domain registrations and litigation [...]”<sup>11</sup>

18. The DOJ concludes “the need of many registrants to purchase domains in many or most gTLDs allows each gTLD registry operator to impose costs on registrants that purchase domains simply because a gTLD exists. [...] In light of these findings, we believe that the introduction of new gTLDs under the RFP could impose substantial additional domain registration costs on many consumers and that many new gTLD registry operators may have market power over registrants.”<sup>12</sup>

19. In addition, both the NTIA and DOJ also express concerns regarding ICANN’s proposed application and review process itself. Due to concerns that even new gTLDs have market power over its registrants, both DOJ and NTIA recommend ICANN use competitive bidding in assigning new TLDs, with applicants submitting bids that specify maximum prices and permissible price increases.<sup>13</sup> The DOJ and NTIA further recommend that, in instances in which competitive bidding may not be effective, ICANN incorporate provisions directly into their agreement with new registries, such as price restrictions or requirements of long-term contracts with users, to prevent the exercise of

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10. ANA letter, p. 1. (<http://forum.icann.org/lists/gtld-guide/mail2.html>) “Phishing” is “a computing scam where the perpetrators try to get sensitive personal information by sending users to fake, but legitimate looking websites.” (Source: <http://onlinebusiness.about.com/od/onlinebusinessglossary/g/phishing.htm> accessed on February 17, 2008)

11. U.S. Chamber of Commerce letter, p.1. (<http://forum.icann.org/lists/gtld-guide/index.html>)

12. DOJ letter, p. 3.

13. DOJ letter, p.7 and NTIA letter, p.2.



market power. Finally, the DOJ suggests that ICANN require periodic competitive bidding for renewal of registry agreements.<sup>14</sup>

### **III. CONSUMERS ARE LIKELY TO BENEFIT FROM THE INTRODUCTION OF NEW GTLDS.**

20. The comments by NTIA and DOJ appropriately focus on the impact of new gTLDs on consumer welfare, but I believe come to the wrong conclusion.<sup>15</sup> This section shows that, putting to one side the concerns about consumer confusion which are addressed in the next section, ICANN's plan to introduce new gTLDs is likely to benefit consumers by facilitating entry which would be expected to mitigate market power associated with *.com* and other major TLDs and increase innovation. As a result, the proposal by DOJ and NTIA to delay, and even preclude, deployment of new gTLDs, is likely inconsistent with consumer interests. I conclude that such output restrictions are unnecessary and that the concerns motivating these restrictions can be addressed in better ways, as I describe below.

#### **A. POLICIES THAT FOSTER ENTRY HELP ADDRESS CONCERNS ABOUT MARKET POWER ASSOCIATED WITH *.COM*, AND OTHER MAJOR TLDS**

21. DOJ has expressed its concern that *.com* and other gTLDs possess market power.<sup>16</sup> To the extent they do, however, ICANN's proposal to expand the number of TLDs available would serve to limit any such concern. As the Horizontal Merger Guidelines note, entry has the potential to "counteract the competitive effects of concern."<sup>17</sup> More generally, entry is recognized to play a central role in maintaining

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14. DOJ letter, p.7 and NTIA letter, p.2.

15. DOJ letter, p. 2, "...ICANN's general approach to new gTLDs should be revised to give greater consideration to consumer interests. ICANN should more carefully weigh potential consumer harms against potential consumer benefits..."

16. DOJ letter, p. 3.

17. Horizontal Merger Guidelines of the U.S. Department of Justice and Federal Trade

competitive markets.<sup>18</sup> Hence, to the extent that *.com* and other TLDs have any market power today, expansion of the number of TLDs would help dissipate it in the future.

22. DOJ claims that “... the creation of additional gTLDs is unlikely to constrain the exercise of market power by existing TLDs...”<sup>19</sup> The DOJ, however, seems to focus on the effect of new TLDs on existing registrants, not on their impact on competition for new registrants. The DOJ, for example, speculates that “the network effects that make *.com* registrations so valuable to consumers will be difficult for other TLDs to overcome.”<sup>20</sup> However, any market power associated with *.com* will attract entrants with strategies built around bringing new registrants to the new gTLDs. Restricting the opportunity for entrants to compete for such profits necessarily has the effect of preserving profits associated with *.com*.

23. Both economic theory and empirical evidence indicate the elimination of entry barriers is likely to have a number of beneficial effects on consumer welfare, including lower prices, expanded output, and increased innovation. The most direct benefit of entry is that the increased set of alternatives available to consumers increases the elasticity of demand faced by firms creating an incentive to reduce their price. Consumer welfare is enhanced because these lower prices are associated with greater output. An empirical analysis of the effect of entry of new gTLDs, such as *.info* and *.biz*, on output and pricing would likely contribute to our understanding of the effects of entry on consumer welfare. The data necessary to perform such a study are not maintained by ICANN.

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Commission, p. 25.

18. See Carlton, *Modern Industrial Organization*, 4<sup>th</sup> ed., pp. 77-82.

19. DOJ letter, p. 1.

20. DOJ letter, p. 2.

24. The DOJ suggests that new gTLDs will not provide substantial competition for *.com* and other existing TLDs, stressing the ubiquity of *.com* and the fact that existing registrants face significant costs of switching to another TLD. Even if this is the case, this logic does not extend to competition between *.com* and new gTLDs to attract new registrants. The increase in the number of alternatives available to new registrants provides an incentive for registries for both new and existing gTLDs to reduce prices and improve service quality. Note that this benefit holds even if *.com* pricing continues to be regulated through price caps because competition has the potential for inducing registries of regulated TLDs to reduce prices below these caps. Furthermore, even if entry of new gTLDs did not affect the prices charged by *.com* and other gTLDs, entry would still be likely to increase consumer welfare. The fact that a registrant selects a new gTLD instead of an existing one reveals that it is better off due to the expansion in the number of available alternatives. That is, the expansion in the number of available alternatives alone is likely to increase consumer welfare.

25. Removing entry barriers is also likely to foster innovation. In the absence of competition from new gTLDs, registries and registrars that serve *.com* and other major TLDs face limited incentives to develop new technologies and/or improved services that may help attract new customers. However, absent restriction on new gTLDs, potential new entrants will be motivated to develop new technologies and methods as a way to overcome *.com*'s first mover advantage. This, in turn, increases the incentives to innovate faced by registrars of *.com* and other incumbent registries.<sup>21</sup>

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21. See Carlton and Perloff, *Modern Industrial Organization*, 4<sup>th</sup> ed. p. 564.

26. A variety of innovations are likely to be facilitated by expansion of the number of gTLDs. For example:

- A gTLD dedicated to serving the financial services industry might require registrants to provide secure transactions. The certification provided in the gTLD name thus provides valuable information to consumers who desire secure financial transactions over the Internet.
- A new gTLD may offer International Domain Names so that a URL (e.g., <http://www.google.com>) can be presented in the language of the region, facilitating the delivery by registrars in multi-language services.
- New gTLDs are expected to focus efforts at serving high targeted markets, such as the customers and suppliers of a given firm while others, perhaps, will focus on serving a variety of registrants in a given geographic area.<sup>22</sup>

27. As this suggests, many of the benefits of new gTLDs can be realized even if the new gTLD would not compete today with existing TLDs. For example, expansion in the number of gTLDs that fostered increased innovation or simply expanded aggregate Internet registrations and utilization would generate improvements in consumer welfare even if the new gTLDs operated in antitrust markets that are distinct from *.com*. Of course, potential consumer confusion could be reduced to a minimum by having only a single gTLD (*.com*), but it is unlikely that this would be in consumers' interest.

28. DOJ has expresses concern that “some new gTLDs envisioned by the RFP likely would have market power...”<sup>23</sup> However, even if true, this fact alone does not

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22. Connecting.NYC Inc. letter to ICANN (<http://forum.icann.org/lists/gtld-guide/index.html>).

23. DOJ letter, p.1.

provide a basis for restricting entry. Even if new gTLDs possessed some market power, allowing their entry would still enhance consumer welfare, just as entry which results in the creation of a duopoly from a monopoly enhances consumer welfare even though both duopolists typically will have market power. Similarly, it is inconceivable that anyone would find it desirable to restrict entry into an industry with product differentiation because such products may have some market power.

**B. NEW GTLDS ARE LIKELY TO BENEFIT CONSUMERS EVEN IF THEY DO NOT COMPETE DIRECTLY WITH .COM.**

29. New gTLDs also can enhance consumer welfare by providing information to Internet users that facilitates navigation of the Internet, even if the new gTLDs have limited substitutability with *.com* (and thus function in separate antitrust markets). This is due to the likelihood that new gTLDs will be designed to serve consumer needs that *.com* does not meet well. For example, because domain names contain information content that is of value to consumers, some new gTLDs may facilitate consumers' Internet navigation and search by more rapidly directing them to websites with the desired content. For example, company-specific TLDs (e.g., *.GeneralMotors*) may facilitate the ability of General Motors' customers to obtain product information as well as the interaction of suppliers and dealers with General Motors. Similarly, new generic TLDs, like *.cars*, may facilitate the ability of consumers to obtain both generic information about cars as well as the ability to access the websites of car manufacturers, suppliers, and other car consumers that use this gTLD to host their websites.

#### **IV. CONCERNS EXPRESSED ABOUT NEW GTLDS DO NOT SUPPORT RESTRICTIONS ON ENTRY.**

30. As noted above, DOJ and others argue that trademark holders will perceive the need to register domain names with new gTLD registries solely for defensive purposes, in order to avoid costs associated with improper use by others of the registrant's trade name.<sup>24</sup> That is, DOJ and others argue that entry should be restricted because such competition may increase the costs associated with defending trademarks. This section shows that while costs associated with defending trademarks are real, other mechanisms are available to address these concerns and that these alternatives preserve the benefits of increased competition resulting from entry.

##### **A. THE ECONOMIC RATIONALE FOR TRADEMARK PROTECTION DOES NOT JUSTIFY RESTRICTING ENTRY OF NEW GTLDS.**

31. Domain names help reduce the costs of searching for information available on the Internet and registrants select domain names to help attract consumers to their sites. Thus, registrants face concerns that other similarly-named sites may create confusion, raise search costs faced by consumers, and harm the registrant's ability to attract traffic.

32. As this suggests, the economic function of domain names is related to the economic function of trademarks, which also protect the trademark holder's intellectual property by preventing confusion created by rivals' efforts to free ride on the trademark holder's reputation. Similarly, registrants have a significant interest in protecting their domain names from imitation and free riding by others that attempt to utilize a trade name that is protected or that is confusingly similar to a protected trademark.

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24. DOJ letter, p. 5.

33. In analyzing the economic function of trademarks, William Landes and Richard Posner explain that:

...a trademark is a word, symbol, or other signifier used to distinguish a good or service produced by one firm from the goods or services of other firms. To perform its naming function a trademark or brand name...must not be duplicated. To allow another maker of decaffeinated coffee to sell its coffee under the name “Sanka” would destroy the benefit of the name...If the law does not prevent it, free riding may destroy the information capital embodied in a trademark, and the prospect of free riding may therefore eliminate the incentive to develop a valuable trademark in the first place.<sup>25</sup>

34. “Generic” terms, however, generally cannot be trademarked.<sup>26</sup> As defined by Landes and Posner, “[a] generic name or term is by definition the name not of a brand but of an entire product: ‘airplane’ and ‘computer’ are examples.”<sup>27</sup> The lack of legal protection for generic terms is consistent with principles of economic efficiency because granting trademarks for such terms to one firm can raise search costs faced by consumers and hinder competition from other firms. Granting legal protection for generic terms also serves no purpose in protecting incentives for firms to invest in creating a reputation and information capital in the term. As Landes and Posner explain:

... if a single firm is given the exclusive right to use the word or words that identify an entire product, as distinct from an individual brand of the product, competition with other firms that make the same product will be impaired. Thus, if a particular manufacturer of personal computers could not use the terms “personal computer” or “PC” in its advertising or labeling because another firm had the exclusive rights to these terms, it might have to describe its product as “a machine capable of doing word

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25. W. Landes and R. Posner, *The Economic Structure of Intellectual Property Law*, Belknap Press of Harvard University Press (2003), pp. 166-168.

26. Landes and Posner, Chapter 7, p. 190. There are exceptions to this general statement. For example, a term can be generic in connection with some goods (and thus not be protected) but can be trademarked for its use in connection with other goods. For example, the word “apple” is generic when applied to fruit but can be trademarked when applied to computers.

27. Landes and Posner, pp. 190-91.

processing and high-speed calculations and other data manipulations, using a central processing unit,” etc...Because it is harder to recall long than short phrases, a lengthy description may well convey less usable information about the firm’s product than a single word or a short phrase, so search costs will rise.<sup>28</sup>

35. Internet domain names can be based both on trademarks (e.g., *GeneralMotors.com*) and generic terms (*cars.com*), and the new gTLDs that would be permitted under ICANN’s proposal also may include both trademarks (*.GeneralMotors*) and generic terms (*.cars*). Economic evaluation of ICANN’s proposal raises distinct issues for gTLDs that use generic terms and trademarks and reflects the competing interest of protecting intellectual property of trademark holders and promoting the unrestricted use of generic terms.

36. Trademark protection extends to domain names so, for example, only General Motors has the ability to use and/or prevent others from using domain names such as *GeneralMotors.com* and, similarly, register *.GeneralMotors* as a gTLD.<sup>29</sup> Congress enacted the Anti-Cybersquatting Consumer Protection Act in 1999 to clarify the role of trademarks in domain names and to prevent “cybersquatting,” (i.e., attempts by firms to acquire domain names, including those involving trademarks, for the purpose of reselling them to trademark holders). ICANN also has established mechanisms for resolving domain name disputes that arise in the existing gTLDs; for example, in 1999 it established the its Uniform Dispute Resolution Policy in 1999 which set procedures for resolving disputes over domain names.<sup>30</sup> As discussed further below, the economic literature recognizes that frivolous registrations and challenges can be further limited by

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28. Landes and Posner, p. 175.

29. Anti-Cybersquatting Consumer Protection Act, November 1999.

30. Under these procedures, an objector files a complaint with an ICANN-approved dispute resolution service provider which follows ICANN-specified policies and procedures for addressing the complaint.



establishing “loser pays” procedures in which the loser of a challenge to a domain name pays the legal fees of the prevailing party.

37. Nonetheless, as various comments on ICANN’s gTLD proposal emphasize, trademark holders still expend effort to monitor unauthorized use of their marks and to enforce their property rights. Many trademark holders are concerned that the introduction of new gTLDs will require additional costs related to monitoring and enforcing the use of these trademarks.<sup>31</sup> At the same time, however, it is important to note that registrants that use generic terms in domain names also have a private interest to restrict competition by limiting the use of these terms by rivals in domain names and gTLDs, although there is limited potential benefit in terms of reduced monitoring and enforcement costs in such circumstances from limiting the use of generic terms.

38. Indeed, a significant potential benefit of the introduction of new gTLDs would be to facilitate expansion in the use of generic terms in domain names. As discussed above, the use of such terms can promote consumer welfare by reducing search costs faced by Internet users. For example, the establishment of *.cars* as a gTLD is likely to facilitate the ability of Internet users to identify information related to automobiles and is likely to help registrants in attracting Internet visitors.

**B. REQUIRING PROOF OF COMPETITIVE BENEFITS BEFORE AUTHORIZING ENTRY IS LIKELY TO HARM CONSUMER WELFARE**

39. Parties that have commented on ICANN’s proposal, including DOJ and NITA, suggest that due to the presence of potential costs to trademark holders and others posed by new gTLDs, the competitive benefits of new gTLDs should be proven before

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31. See, e.g., comments submitted by Microsoft and US Telecom to ICANN, December 15, 2008 (<http://forum.icann.org/lists/gtld-guide/>).

ICANN authorizes their use.<sup>32</sup> For example, NTIA states that “[i]t is unclear that the threshold question of whether the potential consumer benefits outweigh the potential costs has been adequately addressed and determined.”<sup>33</sup> This approach is inconsistent with the widely-held view, described above, that the entry benefits consumers by expanding output and lowering price.

40. Restricting ICANN’s ability to expand the number of gTLDs is economically efficient only if costs from new gTLDs, including increased consumer confusion and/or higher costs of monitoring and enforcing trademarks, exceeds the potential benefits to consumers from new gTLDs, which include lower prices for domain names, increased output, and increased innovation. As noted above, many of these benefits of new gTLDs and domains established on those gTLDs can be realized even if the new gTLDs do not compete with existing TLDs.

41. Requiring entrants to justify entry on cost/benefit basis, however, is likely to result in significant consumer harm because the competitive benefit of new business methods or technologies facilitated by entry can be very hard to predict *a priori*. Economic literature shows that innovations are a principal source of the growth in GNP and consumer welfare over time. Most notably, Robert Solow, who was awarded the 1987 Nobel Prize in Economics for his work on the sources of economic growth, noted in his Nobel Prize lecture that “the rate of growth...depends entirely on the rate of technological process.”<sup>34</sup> Following in this tradition, in their well-known book,

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32. See, e.g., DOJ letter, p. 2, NTIA letter, p. 1 and comment submitted by AT&T to ICANN on December 15, 2008 (<http://forum.icann.org/lists/gtld-guide/>).

33. NTIA letter, p. 1.

34. Robert M. Solow, Nobel Prize Lecture, December 8, 1987.

*Innovation and Growth in the Global Economy*, Gene Grossman and Elhanan Helpman describe innovation as “the engine of long-run growth.”<sup>35</sup>

42. Economic literature also stresses that innovations and new products generate large increases in consumer welfare, while regulatory policies that limit or delay entry and the spread of innovation can substantially reduce welfare. As part of his extensive research on the consumer welfare gains generated by new goods, Jerry Hausman has found that “the introduction of cellular telephone services has led to gains in consumer welfare which now exceed \$25 billion per year,” and that the consumer welfare cost of the regulatory delay of this introduction was close to \$100 billion.<sup>36</sup> In their volume “The Economics of New Goods,” Tim Bresnahan and Robert Gordon review the economic literature and conclude, “[c]learly, new goods are at the heart of economic progress.”<sup>37</sup> In his 2002 paper on consumer welfare gains resulting from the introduction of the minivan, Amil Petrin notes that “...large improvements in consumers’ standard of living arise from competition as firms cannibalize each other’s profits by seeking new goods that give them some temporary market power.”<sup>38</sup>

43. As this suggests, restrictions on entry are likely to promote consumer welfare under only limited circumstances that are not apparent here. The imposition of such restrictions, however, is likely to benefit existing market participants by limiting competition from firms offering innovative services and new business models. Actions

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35. Gene Grossman and Elhanan Helpman, 1993, *Innovation and Growth in the Global Economy*, p. 18.

36. Jerry Hausman, 1998, “New Products and Price Indices,” NBER Website, [http://www.nber.org/reporter/fall98/hausman\\_fall98.html](http://www.nber.org/reporter/fall98/hausman_fall98.html).

37. Timothy Bresnahan and Robert Gordon, 1997, *The Economics of New Goods*, p. 1.

38. Amil Petrin, 2002, “Quantifying the Benefits of New Products: The Case of the Minivan,” *Journal of Political Economy*, p. 705.

that protect any market power that *.com* and other gTLDs may possess are unlikely to benefit consumers.

44. At the same time, DOJ and others have presented no evidence about the likely costs to trademark holders from the need to defensively register domain names with new gTLDs. The relatively modest number of registrations achieved by new gTLDs introduced in recent years (relative to *.com*) suggests that concerns about the need for defensive registrations may be exaggerated.

45. As noted above, since their introduction in 2001, *.info* has attracted 5 million registrants and *.biz* has attracted 2 million, far below the roughly 80 million registrants using *.com*.<sup>39</sup> While some of the registrations for domain names under the new gTLDs may have been made for defensive purposes, the limited number of registrations for new gTLDs indicates that the vast majority of *.com* registrants did not find a compelling reason to undertake defensive registrations on the new gTLDs. While various parties commenting to ICANN cite the limited demand for the recently introduced gTLDs, they fail to note that these same facts undercut their claim that new gTLDs will create the need for a large number of defensive registrations.<sup>40</sup>

**C. NO NEW ECONOMIC OR LEGAL ISSUES ARE CREATED BY THE INTRODUCTION OF NEW GTLDS.**

46. As parties commenting on ICANN's proposal stress, firms undertake significant efforts to monitor and enforce trademarks and legal rules that facilitate such activities promote economic efficiency. Restrictions on the authorization of new gTLDs

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39. ICANN Registry Operator Monthly Reports, October 2008.

40. See, e.g., comment submitted by the U.S. Chamber of Commerce and US Telecom on December 15, 2008,

promote economic efficiency only if they prevent substantial new enforcement costs.

However, the deployment of new gTLDs does not appear to raise any such issues.

47. More specifically, issues relating to enforcing and monitoring trademarks that arise with new gTLDs also arise under the existing domain name system. For example, consider GM’s attempt to protect its domain name *GeneralMotors.com*. There are already numerous alternative names it maintains and monitors, including *GMcars.com*, *Chevrolet.com*, *Chevy.com*, etc. It is unclear how the introduction of a new gTLD – say, *.cars* designed for sites related to car– would further increase the required effort and associated costs of monitoring use of GM marks. The introduction of GM trademarks in the *.cars* gTLD raises the same concern as in other gTLDs and thus appears to raise no new issues relating to the use of trademarks in domain names.

48. A variety of existing legal mechanisms are designed to protect the use of trademarks in domain names and to limit the use of domain names that result in consumer confusion. The development of improved institutional mechanisms to enforce such rules can deter the need for defensive registrations and reduce concerns of the type raised by DOJ, NTIA and other parties without the cost to consumer welfare of preventing new entry and the potential innovation it promises.

49. For example, the economic literature shows that frivolous requests for gTLDs and/or frivolous challenges of new names can be deterred by requiring the party that loses a challenge to bear the legal cost of both parties. Under such “loser pays” rules, a non-trademark holder that attempted to obtain domain name or gTLD based on a trademark would need to pay the legal fees of the trademark holder and related administrative fees if the trademark holder successfully challenges the domain name or gTLD. Such a rule would deter frivolous attempts by non-trademark holders to obtain

domain names that are based on trademark terms or are confusingly similar to such terms as well as the need for defensive registrations.<sup>41</sup>

#### **IV. EVALUATION OF ICANN’S PROPOSAL DOES NOT REQUIRE DETAILED STUDY OF SCOPE OF COMPETITION AMONG TLDS.**

50. Both the DOJ and NTIA recommend that ICANN should postpone the introduction of new gTLDs until it studies the scope of competition among TLDs along the lines that ICANN proposed in 2006.<sup>42</sup> At that time, ICANN proposed to analyze, among other things: whether each TLD functions as a distinct economic market; the effects of switching costs involved in moving from one TLD to another; and the effect of the existing TLD structure on the pricing by entrants.

51. While the issues that ICANN proposed to analyze in 2006 are of economic interest, analysis of these questions is not necessary for the evaluation of ICANN’s proposal. As discussed above, the concerns about consumer confusion and the need for defensive registrations raised by DOJ, NTIA and others arise whether existing TLDs constitute distinct antitrust markets or whether they are appropriately considered to be part of a broader market. Nor do the concerns raised by DOJ, NTIA and others depend critically on the extent of switching costs or the effect of the existing TLD structure on entrants’ pricing. The DOJ and NTIA do not explain why the information from ICANN’s proposed 2006 study is necessary for evaluation of its proposed mechanism for introducing new gTLDs and, as I have explained, I can see no reason that it is.

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41. J. Hughes and E. Snyder, “Litigation and Settlement Under the English and American Rules: Theory and Evidence,” 38 J. Law and Econ. 225 (1995).

42. See DOJ letter, p. 6 and NTIA letter, p. 1.

## V. CONCLUSION

52. The benefits of free entry are well-recognized and the introduction of new gTLDs is likely to benefit consumers by subjecting *.com* and other gTLDs to increased competition, widening choice available to consumers, and facilitating innovation. At the same time, claims that the introduction of new gTLDs will necessitate widespread defensive registrations appear to be exaggerated and are inconsistent with the oft-noted observation that there have been a limited number of registrations on gTLDs introduced in recent years. Existing legal framework and ICANN-established procedures provide mechanisms for protecting trademarks and addressing concerns about consumer confusion. If necessary, various additional mechanisms could be created by ICANN to protect against abuse of existing trademarks.

53. Together, these factors imply that consumer welfare is likely to be harmed if the deployment of gTLDs is restricted or delayed by requiring ICANN or others to provide an affirmative justification to permit entry. Placing such a burden on ICANN or other parties is inconsistent with the general approach to antitrust policy in a wide variety of industries.

## APPENDIX I

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### **EDUCATION**

Ph.D., MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts: Economics, 1975.

M.S., MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts: Operations Research, 1974.

A.B., HARVARD UNIVERSITY (Summa cum laude): Applied Math and Economics, 1972.

### **EMPLOYMENT**

COMPASS LEXECON (formerly Lexecon), Chicago, Illinois (2008 – present) Senior Managing Director;  
LEXECON INC., (1977 – 2006), President 1997 – 2001, Senior Managing Director 2003 - 2006

UNIVERSITY OF CHICAGO, Graduate School of Business, Katherine Dusak Miller Professor of Economics (2008 – present); Professor of Economics (1984 – 2008); Law School, Professor of Economics (1980 – 1984); Department of Economics, Assistant Professor (1979 – 1980); Associate Professor (1976 – 1979).

U.S. DEPARTMENT OF JUSTICE, Washington, District of Columbia (2006 – 2008) Deputy Assistant Attorney General for Economic Analysis, Antitrust Division

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, Massachusetts, Department of Economics (1975 – 1976) Instructor in Economics

### **OTHER PROFESSIONAL EXPERIENCE**

HARVARD UNIVERSITY, Public Policy Summer Course in Economics (1977), Professor

BELL TELEPHONE LABORATORIES (Summers 1976, 1977)

JOINT CENTER FOR URBAN STUDIES OF M.I.T. AND HARVARD UNIVERSITY, Cambridge, Massachusetts (1974 - 1975)



CHARLES RIVER ASSOCIATES, Cambridge, Massachusetts (Summers 1971, 1972) Research Assistant

### FIELDS OF SPECIALIZATION

Theoretical and Applied Microeconomics  
Industrial Organization

### ACADEMIC HONORS AND FELLOWSHIPS

Keynote Speaker, Japanese Symposium on Competition, sponsored by Japan Fair Trade Commission, 2009  
Recipient of Inaugural Robert F. Lanzilotti Prize, awarded by the International Industrial Organization Society for Best Paper in Antitrust Economics, 2008  
Keynote Address to Israel Antitrust Conference, 2008  
Lewis Bernstein Memorial Antitrust Lecture, Washington, D.C., 2006  
Distinguished Visitor, University of Melbourne, April 2005  
Milton Handler Lecture, New York, 2004  
Keynote Address to the International Competition Network, Mexico, 2004  
Alexander Brody Distinguished Lecture, Yeshiva University, 2000  
Ph.D. Thesis chosen to appear in the Garland Series of Outstanding Dissertations in Economics  
Recipient of the 1977 P.W.S. Andrews Memorial Prize Essay, best essay in the field of Industrial Organization by a scholar under the age of thirty  
National Science Foundation Grant, 1977 - 1985  
Recipient of Post-doctoral Grant from the Lincoln Foundation, 1975  
National Science Foundation Fellowship, 1972 - 1975  
Phi Beta Kappa, 1971  
John Harvard Award, 1970  
Detur Book Prize, 1969  
Edwards Whitacker Award, 1969  
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### PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Co-editor, Journal of Law and Economics, 1980 - present  
Visiting Committee, MIT, Department of Economics, 1995 - present  
Member, Advisory Board, Economics Research Network, 1996 - present  
Member, Advisory Board of Antitrust and Regulation Abstracts, Social Science Research Network, 1998 - present  
Advisory Board, Massachusetts Institute of Technology, Department of Economics, 1999 - present  
Co-Editor, Competition Policy International (CPI), 2004 - present  
Advisory Board, Journal of Competition Law and Economics 2004- present  
Deputy Assistant Attorney General for Economic Analysis, Antitrust Division, U.S. Department of Justice, 2006 - 2008  
Presidential Appointment to the Antitrust Modernization Commission, March 17, 2004 - 2007

Invited Panelist at Public Hearing on the Retail Banking Sector Inquiry: Payment Cards, before the European Commission in Brussels, Belgium, July 17, 2006.  
Consultant on Merger Guidelines to the FTC, 2003  
Professor, George Mason Institute for Judges, October 2001  
Chairman, FTC Round Table on Empirical Industrial Organization (September 11, 2001)  
Participant in the Round Table on the Economics of Mergers Between Large ILECS before the Federal Communications Commission, February 5, 1999  
Member, Steering Committee, Social Science Research Council, Program in Applied Economics, 1997 - 1999  
Participant in roundtable discussions on "The Role of Classical Market Power in Joint Venture Analysis," before the Federal Trade Commission, November 19, 1997 and March 17, 1998.  
Participant in meetings with Committee of the Federal Reserve on Payment Systems, June 5, 1997  
Associate Editor, Regional Science and Urban Economics, 1987 - 1997  
Resident Scholar, Board of Governors of the Federal Reserve System, Summer, 1995  
Accreditation Committee, Graduate School of Business, Stanford University, 1995  
Associate Editor, The International Journal of Industrial Organization, 1991 - 1995  
Editorial Board, Intellectual Property Fraud Reporter, 1990 - 1995  
Consultant on Merger Guidelines to the U.S. Department of Justice, 1991 - 1992  
Member, Advisory Committee to the Bureau of the Census, 1987 - 1990  
National Bureau of Economic Research, Research Associate  
Member, American Economics Association, Econometrics Society

## BOOKS

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Interview with Deputy Assistant Attorney General, The Antitrust Source (February 2007)

Separate Statement of Dennis W. Carlton, in The Report of the Antitrust Modernization Commission, (April 2007)

"Does Antitrust Need to be Modernized?," Journal of Economic Perspectives (Summer 2007)

"The Year in Review: Economics at the Antitrust Division 2006-2007" (with K. Heyer), Review of Industrial Organization, (2007).

"Economic Analysis of Competition Practices in the EU and the U.S.: A View from Chief Economists," (with M. Salinger), Competition Policy International (Autumn 2007).

"Mergers," Palgrave Dictionary, (with J. M. Perloff), (2008).

"Antitrust and Regulation," (with R. Picker) in N. Rose ed., Economics of Deregulation, NBER, (forthcoming).

"Tying," (with M. Waldman), in W. Collins ed. Issues in Competition Law and Policy, American Bar Association, (2008).

"Barriers to Entry," in W. Collins ed. Issues in Competition Law and Policy, American Bar Association, (2008).

"Product Variety and Demand Uncertainty: Why Mark-ups Vary with Quality," (with James D. Dana Jr.), Journal of Industrial Economics (2008)

"Regulation, Antitrust, and Trinko," (With H. Sider), in eds. J. Kwoka and L. White, The Antitrust Revolution, (2008).

"Proposal for a Market-Based Solution to Airport Delays," (with W. Whalen, K. Heyer and O. Richard), Regulation (2008).



- "Should 'Price Squeeze' Be A Recognized Form of Anticompetitive Conduct?," Journal of Competition Law and Economics (2008).
- "Safe Harbors for Quantity Discounts and Bundling," (with M. Waldman), George Mason Law Review (2008).
- "The Need to Measure the Effect of Merger Policy and How to Do It," Antitrust, (condensed version of subsequent paper), (Summer 2008).
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- "Appropriate Antitrust Policy Towards Single-Firm Conduct: Extraction vs. Extension" (with K. Heyer)," Antitrust, (condensed version of subsequent paper), (Summer 2008).
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- "Assessing the Anticompetitive Effects of Multiproduct Pricing," (with P. Greenlee and M. Waldman), Antitrust Bulletin, (Fall, 2008).
- "Competition, Monopoly, and Aftermarkets," (with M. Waldman), Journal of Law, Economics and Organization, (forthcoming 2009).

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- "Modeling the Housing Allowance Program," M.A. Thesis, Massachusetts Institute of Technology (September 1974).
- "The Cost of Eliminating a Futures Market and The Effect of Inflation on Market Interrelationships," (1984).
- "The Empirical Importance of Delivery Lags as an Explanation of Demand," (1984).
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### EXPERT TESTIMONIAL EXPERIENCE

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