

**REPORT OF DENNIS CARLTON
REGARDING ICANN'S PROPOSED MECHANISM FOR
INTRODUCING NEW gTLDS**

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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 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 several government agencies including the Department of Justice and the Federal Trade Commission. 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 either in response to its proposal to introduce new gTLDs or in response to my previous two preliminary reports.¹ In conjunction with this analysis, I also address whether price caps that limit prices and future increases in prices charged by registries of these new gTLDs would be necessary to achieve the potential competitive benefits of the new gTLDs.

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) For comments received by ICANN see <http://forum.icann.org/lists/competition-pricing-prelim> and <http://forum.icann.org/lists/gtld-guide>.

5. This report combines and updates my two preliminary reports that address ICANN’s proposed mechanism for introducing new gTLDs.² This report also addresses in part certain comments made in response to my preliminary reports.

B. OVERVIEW AND SUMMARY

6. I conclude that ICANN’s proposed framework for introducing new gTLDs is likely to facilitate entry and create 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 price and increase innovation. This conclusion is based on the fundamental principles that competition promotes consumer welfare and restrictions on entry impede competition.

7. The 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 in 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. In the absence of alternative mechanisms for protecting trademarks, the expansion in the number of gTLDs could impose costs on trademark

2. Preliminary Report of Dennis Carlton Regarding the Impact of New gTLDs on Consumer Welfare, March 2009, and Preliminary Analysis of Dennis Carlton Regarding Price Caps for New gTLD Internet Registries, March 2009.

holders by creating an incentive for them to undertake “defensive” registrations that serve no purpose other than protecting their intellectual property.

8. 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 dispute resolution mechanisms and appropriately-designed modifications of ICANN procedures for protecting intellectual property. Given the availability of these alternative mechanisms for resolving trademark-related disputes, the draconian remedy of restricting entry would be likely to harm consumer welfare compared to approaches based on these alternatives.

9. DOJ, NTIA and other commenters 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.

10. I also conclude that price caps or ceilings on prices charged by operators of new gTLD registries are not necessary to ensure that consumers benefit from new gTLDs. Proponents of price caps suggest that caps on prices charged for registrations on new gTLDs is necessary because trademark holders could be charged high prices to

protect their trademarks and due to concerns that registrants for new gTLDs could face high prices due to their high costs of switching to other registries.

11. However, the ability of ICANN to protect trademark holders through existing dispute resolution mechanisms and appropriately-designed modifications of ICANN procedures for protecting intellectual property implies that price caps are not necessary to protect trademark holders. In addition, the fact that registrants for new gTLDs face switching costs also does not provide a rationale for imposing price caps. The rates charged by new gTLDs will face competition from existing registries and other entrants, and operators of new gTLD registries that attempt to act opportunistically by subsequently raising prices face significant risk of harming their reputation and the loss of future customers. Further, the imposition of price caps for new gTLDs may inhibit the development and marketplace acceptance of new gTLDs by limiting the pricing flexibility of entrants to the provision of new registry services without generating significant benefits to registrants of the new gTLDs.

II. BACKGROUND ON ICANN'S PROPOSAL

A. ECONOMICS OF THE DOMAIN NAME SYSTEM

12. 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 registered domain names.³ While a handful of 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*,

3. ICANN Registry Operator Monthly Reports January 2009.
(<http://www.icann.org/en/tlds/monthly-reports/>)

both introduced in 2001, have attracted roughly 5 million and 2 million domain names respectively.⁴

13. Currently, all agreements between ICANN and the registries operating unsponsored gTLDs include price maximums and limits on permissible future price increases that can be charged to registrars.⁵ Registrars, in turn, charge rates to registrants that are not regulated by ICANN. Registrars typically deal with multiple registries and offer a variety of additional services to registrants such as web site hosting and design.

14. 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.

15. 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 models that could provide significant opportunities for increases in consumer welfare.

4. Id.

5. 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.

B. ICANN'S PROPOSED PROCEDURES FOR DEPLOYING NEW GTLDS

16. 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.⁶ 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.⁷

17. Objections to gTLD applications can be filed by various parties including existing TLD registries, other applicants, holders of intellectual property rights (such as trademarks) and others.⁸ 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.

18. ICANN has also initiated a process to address the concerns of trademark holders related to the introduction of new gTLDs. ICANN formed the Implementation Recommendation Team ("IRT") which has issued a report, discussed in more detail below, that contains recommendations relating to new trademark protection mechanisms to alleviate these concerns.

6. See ICANN, New gTLD Program: Second Draft Applicant Guidebook, February 18, 2009 ("Draft Guidebook"), (<http://icann.org/en/topics/new-gtlds/comments-2-en.htm>).

7. Draft Guidebook, p. 2-2.

8. 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).

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

19. The DOJ, NTIA and various other parties have expressed concerns that the introduction of new gTLDs could harm consumers and/or trademark holders. Broadly summarized, these comments reflect the view that the introduction of new gTLDs will harm consumers (registrants) by creating confusion and by imposing significant costs on trademark holders by forcing them to establish “defensive” registrations with the new gTLDs to protect their trademarks and existing domain names. Comments by the DOJ and other parties also claim that the introduction of new gTLDs might not result in increased competition that would lower prices or improve service to registrants.⁹

20. 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 owners and consumers will be net losers.”¹⁰ 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 [...]”¹¹ The Kende

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9. AT&T expresses similar concerns in their economic report that responds to my two preliminary reports. See Michael Kende “Assessment of ICANN Preliminary Reports on Competition and Pricing”, April 17 2009 (“Kende Report”) submitted on behalf of AT&T. I am preparing a separate report that addresses aspects of the Kende Report.
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>)

Report claims “that the proposed introduction of new gTLDs could bring significant additional costs and resource burdens.”¹²

21. The DOJ concludes that “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.”¹³ The Kende Report also suggests regulating registry prices as registries of new gTLDs could extract high payments from trademark owners because “defensive registrations are much less price sensitive than basic new registrations”.¹⁴

22. 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.¹⁵ 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

12. Kende Report, p.11.

13. DOJ letter, p. 3.

14. Kende Report, p.12

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

market power.¹⁶ Finally, the DOJ suggests that ICANN require periodic competitive bidding for renewal of registry agreements.¹⁷

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

23. The comments by NTIA, DOJ, and others appropriately focus on the impact of new gTLDs on consumer welfare, but I believe come to the wrong conclusion.¹⁸ This section shows that, given the availability of alternative mechanisms to address concerns about consumer confusion and defensive registrations, which are discussed below, ICANN's plan to introduce new gTLDs is likely to benefit consumers by facilitating entry which would be expected both to bring new services to consumers and mitigate market power associated with *.com* and other major TLDs and to increase innovation. As a result, the proposal by DOJ, NTIA and others to delay or 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 without resorting to draconian restrictions on entry, which essentially would freeze the number of TLDs less than fifteen years after the first commercial development of the Internet.

16. I understand that the current proposed agreement between ICANN and new gTLD registries contains a requirement for registries to offer a 10-year registration option to registrants.

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

18. 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..."

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

24. The DOJ and others have expressed concern that *.com* and other gTLDs possess market power.¹⁹ To the extent they do, however, ICANN’s proposal to expand the number of TLDs available could serve to limit any such concern. As the Horizontal Merger Guidelines note, entry has the potential to “counteract the competitive effects of concern.”²⁰ More generally, entry is recognized to play a central role in maintaining competitive markets.²¹ Hence, to the extent that *.com* and other TLDs have any market power today, expansion of the number of TLDs could constrain it in the future.

25. DOJ claims that “... the creation of additional gTLDs is unlikely to constrain the exercise of market power by existing TLDs...”²² 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.”²³ 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 protecting and preserving the profits of the *.com* registry and its registrars.

26. Both economic theory and empirical evidence indicate the elimination of entry barriers is likely to have a number of beneficial effects on consumer welfare,

19. See, e.g., DOJ letter, p. 3 and Kende report p17.

20. Horizontal Merger Guidelines of the U.S. Department of Justice and Federal Trade Commission, p. 25.

21. See Carlton, *Modern Industrial Organization*, 4th ed., pp. 77-82.

22. DOJ letter, p. 1.

23. DOJ letter, p. 2.

including lower prices, expanded output, and increased innovation. The benefits of entry are the increased set of alternatives available to consumers and, more generally, the increased the elasticity of demand faced by existing firms creating an incentive for them to reduce their price. Consumer welfare is enhanced because product variety increases and output expands, resulting in an increase in consumer surplus. 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, but, as explained below, even if such a study indicated that this entry did not result in a reduction in *.com* registrations or fees, this would not lead to the conclusion that entry was not beneficial.²⁴

27. The DOJ suggests that new gTLDs may not provide substantial competition for *.com* and other existing TLDs, stressing the ubiquity of *.com* and the fact that 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, improve service quality, and offer innovative services as they compete for new registrants. 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 and to develop new and improved services.

24. The data on registrations and price necessary to perform such a study are maintained by registries, not by ICANN.

28. Furthermore, even if entry of new gTLDs did not affect the prices charged by .com and other existing TLDs, entry would still be likely to increase consumer welfare, which NTIA and DOJ appear to ignore. When registrants select a new gTLD instead of an existing one, they reveal that they are better off due to the expansion in the number of available alternatives. That is, the expansion in the number of available alternatives (including both TLDs and the second-level names) alone is itself likely to increase consumer welfare.

29. Removing entry barriers also is 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 as they strive to sign up new registrants.²⁵

30. 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.

25. See Carlton and Perloff, *Modern Industrial Organization*, 4th ed. p. 564.

- 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 provision of products 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.²⁶

31. As these examples suggests, many of the benefits of new gTLDs can be realized even if the new gTLD would not compete today on price 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. I discuss this issue in more detail below.

32. DOJ expressed concern that “some new gTLDs envisioned by the RFP likely would have market power...”²⁷ However, even if true, this fact alone again does not provide a basis for restricting entry. Even if certain 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. To illustrate this point,

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

27. DOJ letter, p.1.

imagine an industry with several differentiated products, each of which has some market power. It is inconceivable that anyone would find it generally desirable to restrict entry into such an industry based on the view that entry will fail to erode the market power of existing products.

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

33. 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*. 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., *.Ford*) may facilitate the ability of Ford customers to obtain product information as well as the interaction of suppliers and dealers with Ford. 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.

C. EVALUATION OF ICANN'S PROPOSAL DOES NOT REQUIRE DETAILED STUDY OF SCOPE OF COMPETITION AMONG TLDs.

34. As noted above, 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 the ICANN Board proposed in 2006.²⁸ At that time, ICANN

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

proposed to analyze, among other things: (i) whether each TLD functions as a distinct economic market; (ii) the effects of switching costs involved in moving from one TLD to another; and (iii) the effect of the existing TLD structure on the pricing by entrants.

35. While these issues are of economic interest, analysis of these questions is not necessary for evaluating ICANN's gTLD proposal. Even if *.com* (or any other TLD) today exercises market power, there is no basis to conclude that new gTLDs would not enhance consumer welfare by creating new products and fostering innovation, and would likely promote future competition with *.com* and other TLDs. In addition, the concerns about consumer confusion, cybersquatting and the potential for new gTLDs to motivate new defensive registrations also arise whether existing TLDs constitute distinct antitrust markets or whether they are appropriately considered to be part of a broader market.

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

36. 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 ICANN authorizes their use.²⁹ 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."³⁰ This approach is inconsistent with the widely-held view, described above, that the entry benefits consumers by expanding output and lowering price.

29. 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/>).

30. NTIA letter, p. 1.

37. 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 likely 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.

38. Requiring entrants to justify entry on a 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.”³¹ Following in this tradition, in their well-known book, *Innovation and Growth in the Global Economy*, Gene Grossman and Elhanan Helpman describe innovation as “the engine of long-run growth.”³²

39. 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

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

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

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.³³ In their volume “The Economics of New Goods,” Timothy Bresnahan and Robert Gordon review the economic literature and conclude, “[c]learly, new goods are at the heart of economic progress.”³⁴ 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.”³⁵

40. As this suggests, restrictions on entry are likely to promote consumer welfare under only very unusual circumstances. 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 that protect any market power that .com and other gTLDs may possess are unlikely to benefit consumers.

IV. CONCERNS EXPRESSED ABOUT TRADEMARK PROTECTION DO NOT SUPPORT RESTRICTIONS ON ENTRY.

41. As noted above, the 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 their trade name.³⁶ That is, the DOJ and others argue that entry should be restricted because such competition may increase trademark holders’ costs of protecting their

33. Jerry Hausman, 1998, “New Products and Price Indices,” NBER Website, http://www.nber.org/reporter/fall98/hausman_fall98.html.

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

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

36. See, e.g. DOJ letter, p. 5.

intellectual property. This section shows that while costs associated with defending trademarks are real, other mechanisms other than preventing entry are available to address these concerns and that these alternatives can preserve the benefits of increased competition resulting from entry.

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

42. 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.³⁷ Thus, registrants face concerns that other similarly-named sites may create confusion, raise search costs faced by consumers, free ride on the registrant's reputation, and harm the registrant's ability to attract traffic.

43. 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.

44. 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

37. Improvements in search engines could provide another valuable method by which consumers can identify and find websites.

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.³⁸

45. “Generic” terms, however, generally cannot be trademarked.³⁹ 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.”⁴⁰ 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 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.⁴¹

46. Internet domain names can be based both on trademarks (e.g., *Ford.com*) and generic terms (*cars.com*), and the new gTLDs that would be permitted under

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

39. 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.

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

41. Landes and Posner, p. 175.

ICANN's proposal also may include both trademarks (*.Ford*) 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.

47. Trademark protection extends to domain names so, for example, only Ford has the ability to use and/or prevent others from using domain names such as *Ford.com* and, similarly, register *.Ford* as a gTLD.⁴² 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.⁴³ As discussed further below, ICANN has also initiated a process to address the concerns of trademark holders and improve the mechanisms for resolving disputes about the use of trademarks in domain names.

48. 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, including entering into "defensive" registrations

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

43. 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.

that serve no efficiency-enhancing purpose and are undertaken only to protect the trademark holder's intellectual property.⁴⁴ 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.

49. 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. ENTRY RESTRICTIONS ARE LIKELY TO BE AN INEFFICIENT MECHANISM FOR PROTECTING TRADEMARKS.

50. While protecting trademarks and intellectual property promote consumer welfare, economic efficiency requires that trademark holders be protected at the minimum possible cost. Entry restrictions are unlikely to be the most efficient way of protecting trademark holders.

51. Mechanisms currently exist for protecting the use of trademarks in domain names. As mentioned previously, in addition to trademark law, ICANN maintains the UPRP for resolving claims that a registrant owns a domain name that infringes an existing trademark. While a large number of disputes are routinely resolved under these

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

procedures, and there may be dissatisfaction with these rules by trademark holders, entry restrictions are an extreme approach to addressing trademark concerns when alternative approaches, such as modifying existing dispute resolution mechanisms, may also help achieve these goals while preserving the benefits of entry to consumers.

52. 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 a domain name or a 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.⁴⁵ Under a more extreme version of the “loser pays” rule, parties with domain names found to violate a trademark can be assessed a penalty.⁴⁶

53. In addition, ICANN has undertaken a process to evaluate concerns of trademark holders by eliciting recommendations for improving mechanisms for protecting trademark holders’ property that help prevent the unauthorized use of trademarks in domain names. In March 2009, ICANN formed the IRT whose purpose is to consider and recommend proposals to help protect the legal rights of trademark owners

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

46. To ensure that firms have sufficient funds to pay penalties, ICANN could require that a bond be posted at the time a dispute is filed or a domain is registered.

focusing on, but not limited to, issues arising with respect to the introduction of new gTLDs.⁴⁷

54. The IRT recently has issued a report which proposes new mechanisms for protecting trademark holders. These include: creating a centralized intellectual property clearinghouse to support new gTLD registries; instituting a mechanism for blocking registration of domain names with certain globally protected trademarks (those contained in the Globally Protected Marks List) in both the top and second level domain name space; and creating a venue for expedited proceedings for blatant trademark infringement and abuse. The IRT's recommendations to the ICANN Board are currently under review, and further public comment is anticipated.

55. Finally, the expansion in the number of TLDs under ICANN's proposal would appear to raise no new issues relating to enforcing and monitoring trademarks that do not arise under the existing domain name system. For example, consider Ford's attempt to protect its domain name *Ford.com*. There are already numerous alternative names it maintains and monitors, including *Fordvehicles.com*, *Lincoln.com*, etc. It is unclear how much 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 Ford marks. The introduction of Ford trademarks in the *.cars* gTLD raises the same concern as in other gTLDs and thus appears to raise no new issues relating to the identification or monitoring of trademarks in domain names.

47. IRT Report (<http://www.icann.org/en/announcements/announcement-4-29may09-en.htm>)

C. OPPONENTS APPEAR TO OVERSTATE THE MAGNITUDE OF THE “DEFENSIVE REGISTRATION” CONCERNS.

56. While concerns regarding the impact of gTLDs on the need for “defensive registrations” merit close attention, relatively little is known about the extent of such registrations. AT&T’s economic report claims to document the extent of “defensive registrations” but appears to overstate the magnitude of such concerns. More specifically, the Kende Report presents data from MarkMonitor for five “representative” firms, suggesting that well over 99 percent of the registrations of these firms are “defensive.” Dr. Kende defines defensive registrations as those which “redirect traffic to a core registration” and claims that these serve no purpose other than to “prevent a cybersquatter from registering them.”⁴⁸

57. However, many registrations that “redirect traffic” to other sites serve productive purposes of attracting and retaining Internet traffic, not merely to prevent cybersquatting. Dr. Kende fails to distinguish between these alternative types of “defensive” registrations.⁴⁹ For example, the following types of registrations that direct traffic to other sites would help attract traffic and would not be maintained simply to prevent cybersquatting:

48. Kende Report, p.7. More fully, Dr. Kende defines defensive registrations as follows: “Defensive Registration: These registrations are not unique, in that they do not resolve, or they redirect traffic back to a core registration, or do not contain unique content – for instance registrations that contain typos of a trademarked name. These are registered to prevent a cybersquatter from registering them instead, or are recovered from cybersquatters who registered them first.”

49. Dr. Kende has not produced the data or survey forms that provide the basis of his analysis. As a result, it is unclear whether survey respondents consider all registrations that merely redirect traffic to other domains as unproductive “defensive” investments or whether this is Dr. Kende’s interpretation.

- Registrations involving trademark names that direct traffic to the website of a corporate parent;
- Registrations involving trademark names no longer in active use;
- Registrations involving trademark names not currently used that may be used in the future;
- Registrations involving common misspellings that redirect traffic to the core site.

58. To take just one small example, my own firm – Compass Lexecon – currently maintains several dozen registrations in addition to *compasslexecon.com*. These include *compass.com* and *lexecon.com*, which were the registrations maintained by the two companies that merged to form Compass Lexecon.⁵⁰ These domains do not currently host content but instead route traffic to *compasslexecon.com*. Maintaining these registrations prevents the potential loss of traffic generated by individuals who may not be aware of the firm’s name change. However, these would be considered unproductive “defensive registrations” under the standard adopted by Dr. Kende.

59. There are a myriad of reasons that firms maintain “defensive” registrations that have little to do with trademark protections.⁵¹ There is no doubt that some registrations are made to prevent trademark abuse. However, Dr. Kende’s failure to distinguish “defensive registrations” designed to prevent cybersquatting alone from those that help attract and maintain Internet traffic (while redirecting it to another site) in

50. In addition, Compass Lexecon maintains a variety of .cc registrations and related registrations that direct traffic to the *compasslexecon.com* site.

51. To cite one additional example, firms may register a variety of “reverse zone” domain names for monitoring the source of Internet traffic. These would be classified as “defensive” by Dr. Kende but are wholly unrelated to trademark protection.

summarizing the MarkMonitor data exaggerates the adverse consequences of ICANN's gTLD proposal.

60. In addition, the relatively limited success of new TLDs such as *.info* and *.biz* suggests that defensive registrations are less important than suggested by AT&T and other commenters. 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*.⁵² 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 in the new gTLDs.

V. PRICE CAPS ARE UNLIKELY TO GENERATE SIGNIFICANT CONSUMER BENEFITS.

61. Various parties have suggested that new gTLDs be subject to price caps similar to those faced by *.com* and other major non-sponsored TLDs such as *.net*, *.org*, *.info*, *.biz* and others.⁵³ The two main concerns motivating this proposal are: (i) that trademark owners' can be charged supracompetitive prices for defensive registrations, and (ii) that incumbent registrants can be charged supracompetitive prices as a result of costs they face from switching to another registry. This section shows that both of these concerns are misplaced.

A. THE AVAILABILITY OF ALTERNATIVE MECHANISMS OF PROTECTING TRADEMARK HOLDERS IMPLIES THAT PRICE CAPS ARE NOT NECESSARY TO PROTECT CONSUMERS.

62. DOJ and other suggest that price caps on new gTLDs are appropriate because new gTLDs will be able to charge supracompetitive prices because the demand

52. ICANN Registry Operator Monthly Reports, January 2009.

53. See e.g. NTIA Letter, p.2 and DOJ Letter p.7

for defensive registrations is likely to be “highly inelastic.”⁵⁴ However, the demand for such registrations is likely to be highly inelastic only if dispute mechanisms for enforcing property rights are ineffective.

63. As discussed above, mechanisms are already in place for resolving disputes, and ICANN has been actively engaged in proceedings designed to modify and improve these mechanisms. In the presence of appropriately designed proposals to protect trademarks, there is no reason to expect that new gTLDs will be able to charge excessive prices, and no need to impose price caps. As discussed in more detail below, the imposition of price caps is likely to discourage investment in new gTLDs and discourage experimentation with new business models with the potential to challenge *.com* and other major TLDs for new registrants.

B. SWITCHING COSTS CREATE INCENTIVES FOR “EX ANTE” COMPETITION AMONG SUPPLIERS.

64. Registrants that adopt a particular Internet domain name face costs from switching registries because the use of the TLD in the domain name prevents Internet addresses from being ported across registries. That is, the holder of a domain name that wants to switch registries must, at a minimum, adopt a new TLD. Switching costs arise for a variety of products and industries and the existence of such costs can make customers, to some degree, beholden to their suppliers. This can create an incentive for registry operators to act opportunistically by raising prices after a registrant obtains a new domain name above levels registrars might reasonably expect at the time they obtain their domain name. Proponents of incorporating price caps for registry services into registry

54. Kende Report, p. 12.

contracts might argue that such caps eliminate the risk of such opportunistic behavior by registries.

65. However, competition among suppliers to attract new customers in markets characterized by switching costs limits or eliminates the suppliers' incentive and ability to act opportunistically. For example, a supplier that imposes unexpected or unreasonable price increases will quickly harm its reputation making it more difficult to continue to attract new customers. Therefore, even in the absence of price caps, competition can reduce or eliminate the incentive for suppliers to act opportunistically.

66. The economic literature recognizes the role of "ex ante" competition in discouraging opportunistic behavior by suppliers of products that embody switching costs. For example, a leading academic study of switching costs notes:

The monopoly power that firms gain over their respective market segments leads to vigorous competition for market share before consumers have attached themselves to suppliers.⁵⁵

67. The economic literature further recognizes that a firm that acts opportunistically in dealing with customers facing switching costs is likely to suffer harm to its reputation, which limits its ability to attract new customers in the long-run:

... every seller has "captive" buyers in the short run. We should not worry about slight degrees of monopoly power; the free market will take care of them faster than antitrust law could do. The seller who exploits its "monopoly" over replacement parts will find himself without many purchasers of his original equipment in the next period.⁵⁶

55. Klemperer, Paul. "Markets with Consumer Switching Costs" *Quarterly Journal of Economics* 102 (1987), 375-394, p. 377. I reached similar conclusions in my own analysis of the *Kodak* case. Carlton, Dennis. "A General Analysis of Exclusionary Conduct and Refusal to Deal – Why *Aspen* and *Kodak* are Misguided," *Antitrust Law Journal* 68 (2001), 659-683, p. 679.

56. Posner, Richard. *Antitrust Law*, 2nd Edition. Chicago: University of Chicago Press, 2001, p. 230.

68. This sentiment is also echoed by Carl Shapiro (1995), the current Deputy Assistant Attorney General in the Antitrust Division of the U.S. Department of Justice, in his analysis of the U.S. Supreme Court's decision in *Eastman Kodak Co. v. Image Technical Services, Inc.*⁵⁷ This case involved claims that Kodak violated antitrust laws by limiting its customers' ability to obtain replacement parts from firms other than Kodak. Shapiro concludes that suppliers in growing markets face the strongest incentives to preserve their reputation and thus to avoid opportunistic behavior.⁵⁸ This is because, in a growing market, an opportunistic firm risks greater future losses than do similar firms in stable or declining markets. Thus, the rationale for imposing price caps is weakest in rapidly growing industries.

69. Ex ante competition serves to protect both uninformed consumers, which face greater risk of opportunistic price increases, as well as better informed consumers because both sets of consumers pay the same prices. In addition, other contractual mechanisms can be negotiated to avoid opportunistic behavior by suppliers. For example, firms and customers may enter into long-term contracts with renewal provisions that specify a supplier's ability to change prices over time.

C. COMPETITION AMONG EXISTING AND NEW TLD REGISTRIES LIMITS CONCERNS ABOUT OPPORTUNISTIC BEHAVIOR.

70. As early as 1998, the Federal Trade Commission ("FTC") concluded that the existence of switching costs faced by holders of domain names did not raise a significant impediment to the privatization of the Internet Domain Name System. In

57. Shapiro, Carl. "Aftermarkets and Consumer Welfare: Making Sense of *Kodak*," *Antitrust Law Journal* 63 (1994), 483-511.

58. Shapiro (1994), p 490.

response to the National Telecommunications and Information Administration's request for comments on this issue, the FTC concluded:

It would appear plausible that the absence of domain name portability across registries could impose a switching cost on users who change registries... It is theoretically possible, therefore, that a supplier could raise the future prices to locked-in customers...

The economic analysis of markets with switching costs has identified a number of factors that, in appropriate circumstances, can diminish the ability and the incentive of a supplier to act opportunistically with respect to its locked-in customers....

Overall, we would conclude that while the possibility of supplier opportunism exists, the potential benefits to customers from enhanced competition – such as possible price reductions and quality improvements – argue in favor of [assignment of registries to for-profit firms].⁵⁹

71. Today, competition among a variety of TLDs reduces concerns about opportunistic behavior by new gTLD registries that may result from switching costs faced by registrants of new domain names. First, new gTLD registries face competition from a wide variety of alternatives, including the major existing TLDs (.com, .net, .org), less established existing TLDs (e.g., info, .biz), country-code TLDs, sponsored TLDs (such as .museum, .aero), and other new gTLD entrants. The existence of these alternatives implies that new gTLDs are unlikely to be successful in attracting a significant number of new registrants if they engage in opportunistic behavior that harms their reputation. Under these circumstances, price caps are not necessary to protect registrants using the new gTLD registries.

72. Concerns about opportunistic behavior by registry operators are further limited to the extent that new gTLDs provide services using existing registrars. It would

59. Comment of the Staffs of the Bureaus of Economics and Competition of the FTC – In the Matter of Improvement of Technical Management of Internet Names and Addresses” March 23, 1998, p. 3-4.

be expected that registrars' on-going involvement in the provision of domain-name related services leaves them well informed about potentially opportunistic behavior by registry operators and in a position to shift potential customers away from new gTLDs that act in this manner.

73. The fact that the existing major TLDs are currently subject to price caps further constrains the ability of new gTLD registry operators to charge non-competitive prices. More specifically, the current agreements between the U.S. Department of Commerce, ICANN, and VeriSign cap the price increases that VeriSign can charge registrars for the .com and .net TLDs. Several other non-sponsored TLDs (such as .info and .biz) are also subject to price caps. While the appropriateness of these price caps may be debatable, the existence of the caps limits the prices that new gTLDs can charge by capping the price that the major registry operators can charge.

74. While the major TLDs are subject to price caps, a number of the new sponsored TLDs, such as *.museum*, *.travel*, and *.tel*, are not. I am unaware of any complaints from registrars or end-users that obtain services from these new sponsored TLDs that their registries have acted opportunistically by raising prices significantly to existing customers. This provides further evidence that price caps are not necessary to protect registrants from opportunistic behavior by new gTLD registries.

75. Finally, the continuing growth of Internet services further reduces concerns about opportunistic behavior by operators of the new gTLD registries. As noted above, incentives for opportunistic behavior are lower in rapidly growing industries. The number of registered domain names as well as aggregate Internet usage has grown dramatically in recent years and is expected to continue its rapid growth. In addition, the

number of Internet users in the U.S. has grown from roughly 31 million in 1997, to 90 million in 2000 and to more than 183 million in 2007.⁶⁰ The Internet is projected to continue this growth in the future. For example, total IP traffic is projected to increase six-fold from 2007 to 2012.⁶¹ Under these circumstances, operators of new gTLD registries that acted opportunistically would face the loss of significant future business.

VI. CONCLUSION

76. 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. The draconian remedy of precluding entry as means of preventing the possibility of a need for defensive registrations is unlikely to be an efficient mechanism for dealing with these costs because it deprives consumers of the benefits of entry.

77. In addition, there is no economic rationale for imposing price caps on registries of these new gTLDs. The existing and proposed ICANN procedures that are

60. Statistical Abstract of the United States 2007: Internet Usage and Online Services (<http://www.census.gov>)

61. See “Cisco Visual Networking Index – Forecast and Methodology, 2007-12” available at http://newsroom.cisco.com/dlls/2008/prod_061608b.html

designed to protect the rights of trademark holders reduce the need both for defensive registrations as well as price caps to protect trademark holders. Apart from concerns about protecting trademark holders, there are a variety of market mechanisms that protect consumers who face switching costs, such as holders of domain names of new gTLD registries. In the absence of price caps, operators of new gTLD registries that attempt to act opportunistically by raising prices to registrars after registrants sign up for domain names face significant risk of harming their reputation and the loss of future customers. These risks are heightened by the availability of domain names from a wide variety of alternative registries, by the fact that prices charged by the major registries are already subject to price caps, and by the expected continued growth of the Internet. At the same time, requiring new gTLDs to cap their prices limits their flexibility in attempting to attract new customers, conflicting with ICANN's well-considered goal of fostering competition in the provision of registry services by facilitating the introduction of new gTLDs.

78. In sum, given ICANN's ability and incentive to modify existing procedures and adopt new ones that protect registrants' the property rights, it would be a mistake at this time to address this concern through the draconian remedy of a ban on all new TLDs.

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Lewis Bernstein Memorial Antitrust Lecture, Washington, D.C., 2006
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Milton Handler Lecture, New York, 2004
Keynote Address to the International Competition Network, Mexico, 2004
Alexander Brody Distinguished Lecture, Yeshiva University, 2000
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Advisory Board, Massachusetts Institute of Technology, Department of Economics, 1999 - present
Co-Editor, Competition Policy International (CPI), 2004 – present
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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)
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Editorial Board, *Intellectual Property Fraud Reporter*, 1990 - 1995
Consultant on Merger Guidelines to the U.S. Department of Justice, 1991 - 1992
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- "Valuing Market Benefits and Costs in Related Output and Input Markets," American Economic Review, (September 1979).
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