The Zoning Board Approach:
a discussion paper

Prepared by Danny Younger in response to the GNSO Call for Papers

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It is inevitable that at some point in time new top level domains will be added to the root. The question before us is: at what point will this happen, and more specifically, what will be the circumstances that engender this decision? This question goes to the heart of our obligations under the MOU.

ICANN is organized to fulfill a set of purposes; one of those purposes is to carry out the DNS management function described as "Oversight of the policy for determining the circumstances under which new top level domains would be added to the root system".[1]

What precisely are the right circumstances that warrant the introduction of a new top level domain? In large part that might depend upon your view of the domain name system – if you view it primarily as an economic engine then a decision to enter a new gTLD might well equate with the actions taken by bodies such as the U.S. Federal Reserve Board that determines the appropriate circumstances that

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[1] http://www.icann.org/general/icann-mou-25nov98.htm

warrant stimulating a national economy. It goes without saying that such decisions are entered into only after a great amount of deliberation, in light of empirical data, and as a result of a consensus view that an overriding need to supersede the normal interplay of market forces necessitates such action – in short, it is a cautious and restrained approach which is not taken lightly.

If on the other hand the domain name system is viewed primarily as an international public commons, then a different set of circumstances would determine when new top level domains would be introduced. In describing this view of the Internet, Jay Hauben writes[2]:

> By their very nature all things within the public commons are attractive to the commercial sector of society. Central Park in NYC would make a wonderful outdoor market place. The Internet would yield tremendous economic power to whoever could own it. But commercialization and/or privatization of the commons always results in less for the public or at least lower quality.

This particular view recognizes the tension between different spheres of activity and notably the tendency of commercial forces to encroach upon public space. This view of the Internet would deem the circumstances for new gTLD introduction to be pegged upon the relative degree of encroachment and upon an assessment of the magnitude of requests for clearly delineated zones for distinct purposes.
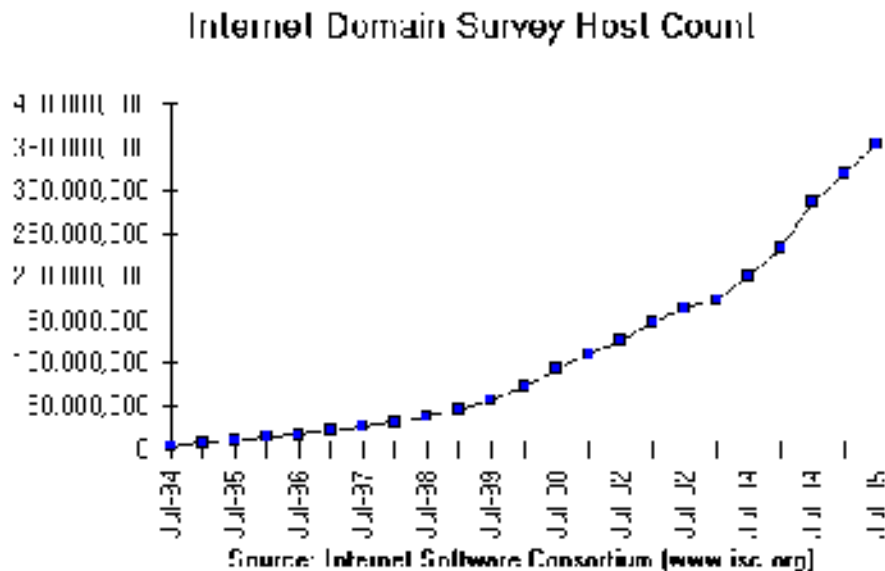
This latter perspective is one that resonates with the architects of the domain name system that in the 1980s created two sets of gTLDs – four that were zoned for specific limited purposes (.mil, .gov, .edu and .int), and three in which registrations were enabled without restriction (.com, .net and .org). Viewing the domain name system as a series of zones naturally leads to a view of ICANN as an Internet Zoning Board that must determine the circumstances that warrant the creation of a new precinct for the global community.

ICANN's initial decisions regarding new TLDs demonstrated an ongoing commitment to this zoning approach; much like popular video game "Sim City" that established zones for airports, farms, museums, commercial enterprises,

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[2] http://diac.cpsr.org/cgi-bin/diac02/pattern.cgi/public?pattern_id=86

parks for individuals and libraries for general information, so too did the ICANN Board establish comparable top level domains: .aero, .coop, .museum, .biz & .pro, .name and .info in their follow-up round of TLD additions. These early decisions by the ICANN Board were ensconced within an approach that was eminently predictable and which was guided by the admonition to proceed in a measured and responsible manner.[3]

Zoning, as a concept, has been widely used on a world-wide basis to manage the phenomenon of growth and congestion, and recent trends continue to indicate that the domain name system remains in a growth mode[4]:

Internet Domain Survey Host Count

Source: Internet Software Consortium (www.isc.org)

Yet the concept of zoning, in and of itself, is not a perfect panacea as it does occasion a phenomenon that has become known as "exclusionary zoning"; the very act of zoning has been known to produce racial and economic segregation.

We that monitor the development of the DNS understand that we are now at a stage in the maturity of the domain name system wherein we must guard against the possibility that our current collection of zones is inadvertently serving to exclude certain definable broad communities – such as the non-ASCII community -- from active participation. We have listened as the non-ASCII world has made it known that they expect new zones to be created.[5]

In response to this appeal for new domains, we as an organization have established internal study groups that have already arrived at certain preliminary principles to guide the decisions made by our Board. In particular, our ICANN IDN Committee has generally agreed on two principles that relate specifically to non-ASCII TLDs, namely: the core purpose of introducing non-ASCII TLDs would be to make the DNS service easier to use for Internet users whose native languages include non-ASCII characters; and a new TLD should only be introduced if user demand can be demonstrated to exist.[6]

This latter principle, however, remains somewhat problematic – there are those, such as Karl Auerbach, that have successfully argued that the telephone was not invented in response to a perceived "need", but rather was an experiment that occasioned the development of a need:[7]

> Why should an innovation have to depend on the pre-existance of public demand? Had the internet had to wait for "overwhelming public demand" than we would never had an internet. Similarly, had the telephone had to wait for "overwhelming public demand" we would never had a telephone system. The point is this - innovation *precedes* demand.

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[5] "International Domain Names – Briefing draft document for discussion" by Elisabeth Porteneuve: "General dissatisfaction of the worldwide Internet with ICANN and its incapability to became international body, triggering off a strong reactions from various horizon, including requests for international characters in domain names."
http://www.centr.org/docs/2002/02/centr-ga13-idn.pdf

[6] http://www.icann.org/committees/idn/non-ascii-tld-paper.htm

[7] http://gnso.icann.org/mailing-lists/archives/ga/msg03271.html

This consideration forces us to acknowledge that in addition to zones to accommodate recognizable need, we also require zones wherein experimentation may proceed so that future needs may thereby be enabled.

As stated in the ICANN Policy Document ICP-3[8]:

> "Experimentation has always been an essential component of the Internet's vitality. Working within the system does not preclude experimentation, including experimentation with alternate DNS roots. But these activities must be done responsibly, in a manner that does not disrupt the ongoing activities of others and that is managed according to experimental protocols.

> DNS experiments should be encouraged. Experiments, however, almost by definition have certain characteristics to avoid harm: (a) they are clearly labeled as experiments, (b) it is well understood that these experiments may end without establishing any prior claims on future directions, (c) they are appropriately coordinated within a community-based framework (such as the IETF), and (d) the experimenters commit to adapt to consensus-based standards when they emerge through the ICANN and other community-based processes. It should be noted that the original design of the DNS provides a facility for future extensions that accommodates the possibility of safely deploying multiple roots on the public Internet for experimental and other purposes.

> As noted in RFC 1034[9], the DNS includes a "class" tag on each resource record, which allows resource records of different classes to be distinguished even though they are commingled on the public Internet. For resource records within the authoritative root-server system, this class tag is set to "IN"; other values have been standardized for particular uses, including 255 possible values designated for "private use" that are particularly suited to experimentation.

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[8] http://www.icann.org/icp/icp-3.htm
[9] http://rfc.dotsrc.org/rfc/rfc1034.html

> As described in a recent proposal within the IETF, this "class" facility allows an alternate DNS namespace to be operated from different root servers in a manner that does not interfere with the stable operation of the existing authoritative root-server system. To take advantage of this facility, it should be noted, requires the use of client or applications software developed for the alternate namespace (presumably deployed after responsible testing), rather than the existing software that has been developed to interoperate with the authoritative root."

Insofar as ICANN recognizes the value of responsible experimentation, if it is to proceed as a Zoning Board determined to avoid exclusionary zoning, then it will soon have to assess the results of the legitimate test-bed operations that have already been launched and will have to arrive at a determination as to whether conditions are now ripe for the introduction of the new gTLDs as suggested by the results of such test-beds.

This is not purely a hypothetical consideration. The Arabic Domain Names Pilot Project[10] was launched in March 2004; the project spanned 22 nations under the auspices of the Arab League and has met all of its deliverables. The ICANN Board must now decide whether the "Mono-IDN" approach successfully used within this test-bed has demonstrated that (1) "user demand exists", and that (2) the goal of making "DNS service easier to use for Internet users whose native languages include non-ASCII characters" has been met for those within this language group. If these conditions have been met, then new TLDs should be introduced with the speed necessary to demonstrate that the Board does not willing engage in exclusionary zoning.

That said… a zoning board faces still other considerations. Resource management implicates policy considerations. Ultimately, who will be responsible for the policies employed within such a zone? To answer this question, we can take guidance from the successful practices of other resource management teams. For example, the State of Washington passed a Growth Management Act[11] that established a number of regional growth management

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[10] http://www.icann.org/announcements/adnpp-v02-12dec05.pdf

[11] http://www.gmhb.wa.gov/

hearings boards to resolve local land use disputes quickly. The responsibility for policy development was conferred from the state to the regional entities.

In similar fashion, ICANN has already has formulated a category of TLDs that are described as "sponsored". A sponsored TLD is a specialized TLD that has a sponsor representing the narrower community that is most affected by the TLD. The sponsor thus carries out delegated policy-formulation responsibilities over many matters concerning the TLD.[12]

The Arabic Domain Names Pilot Project, however, presents us with a difficult sponsorship problem to solve. In the first instance, a decision must be made as to whether the considered new zones are to be regarded as sTLDs (and therefore under the rubric of policy determinations settled upon within the Generic Names Supporting Organization), or as a new class of sponsored TLDs which are best managed under the auspices of the CCNSO.

Thus far, the test-bed community has argued that "ccTLD managers should be given the ability to implement Mono-IDN and develop their language guidelines and share them with ICANN"[13]. The clear implication of this statement is that individual ccTLD managers believe that the formulation of Mono-IDN policy considerations should devolve upon their individual sponsoring organizations as registries.

What this approach overlooks is the fact that the test-bed itself was developed on a collaborative regional basis[14]. Presumably, if ICANN (in resource management fashion), adopts a model similar to that utilized in the aforementioned Washington State example, TLDs designed to accommodate languages that transcend national borders will have their policies determined not by individual ccTLD managers but rather by a regional board that encompasses those territories within which the language is spoken – in this case, sponsorship would seemingly be offered to the entity known as the League of Arab States[15].

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[12] http://www.icann.org/tlds/

[13] http://www.icann.org/announcements/adnpp-v02-12dec05.pdf at page 26

[14] http://www.arabic-domains.org/docs/ADNPP-Experiences-New.doc

[15] http://www.arableagueonline.org/arableague/index_en.jsp

This hybrid form of sponsorship would clearly place the respective TLDs outside the scope of the ccNSO which is chartered solely with the purpose of "developing and recommending to the Board global policies relating to country-code top-level domains"[16]; instead, it would fall under the scope of the GNSO that currently provides guidance for sponsored gTLDs such as .CAT (which is similarly constituted as a regional cultural and linguistic community).

Whatever the final decision taken, we must recognize that new zones/TLDs on the internet will require extensive deliberations between parties to resolve sponsorship concerns. When sponsorship is finally conferred, it is a statement of trust. It is a decision taken by ICANN, a public trust, to delegate authority to another entity "for the public good – that is ICANN's reason for existence[17]."

The "public good" is that which should determine whether a new TLD should be introduced.

According to our Articles of Incorporation, "The Corporation shall operate for the benefit of the Internet community as a whole… for charitable and public purposes[18]." But again, how do we settle on a suitable definition for public trust, public good or public purposes? The document "Applying the Public Trust Doctrine to the Governance of Content-Related Internet Resources[19]" offers a measure of guidance:

> "The Public Trust Doctrine is an historical and currently evolving concept relating to the ownership, protection and use of essential natural and cultural resources. Title to these essential resources or the common are held by the State, as sovereign, in trust for the people. The purpose of the trust is to preserve resources in a manner that makes them available to the public for certain public uses.

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[16] http://www.icann.org/general/bylaws.htm#IX

[17] http://www.icann.org/icp/icp-3.htm

[18] http://www.icann.org/general/articles.htm

[19] http://www.ecommons.net/aoir/aoir2003/index.php?t=17

Under the doctrine, the State has the inalienable responsibility of preserving resources that are crucial for intergenerational equity, and it is forbidden to transfer the public's ownership of those resources to any particular individual or group. The underlying criterion here is that future generations should not be deprived of a common resource that previous generations have had the opportunity to enjoy.

When it comes to cyberspace, the PTD has primarily been invoked as an argument to justify structures for the governance of certain aspects of the Internet considered, by definition, rivalrous in use and/or susceptible to depletion, such as control of the root server and administration of the Domain Name System (DNS). Indeed, much of the debate surrounding the establishment of the Internet Corporation for Assigned Names and Numbers (ICANN) has to do with ensuring that it truly functions as a public trusteeship representing Internet users at large, so that decisions concerning the Net's infrastructure, protocols and standards do not benefit a particular sector in detriment of the others."

The public trust doctrine mandates that while ICANN may call upon the services of its stakeholder communities to offer guidance when and where appropriate, its ultimate responsibility is unequivocally to the broader community – to the public at-large. As such, the views of individual constituencies within the ICANN process (such as those within the GNSO) are to be regarded as important, but not as decisive; the views of these special interest communities are to be taken into account, but they are not (even if in total accord) to be regarded as anything more than the views of a minor subset of the general public that ICANN has the duty to serve.

How then do we arrive at a decision as to what will best serve the public good with respect to new TLDs?

If special interest communities are regarded as stakeholders within the ICANN process, and if the "public" per se is by contrast not similarly structurally integrated into the ICANN process, how then does the ICANN Board reasonably determine that which constitutes the public good?

This is a fair question to ask since such determinations have stumped political leaders and brilliant thinkers alike.

One could say that the ICANN Board determines what serves the public good by following the same set of procedures that are used by zoning boards everywhere, namely, they listen to both proponents and opponents present their cases, they ensure that individual Board members have disclosed all potential conflicts of interest and have made arrangements for recusal when required, and they then confer amongst themselves in private in the attempt to reach unanimity on the best course forward (guided by their experience, common sense and best judgment).

As it pertains to ICANN, however, one can only hope that the public good is being served… under normal circumstances, the public itself is the ultimate arbiter that votes out zoning board officials if the conclusion is reached that the public good has not been served. In other words, the public retains checks and balances that ensure, through the voting process, that ultimately the public good will prevail. Unfortunately, within ICANN we have no such checks on the decision-making of the Board; we only have the oversight provided by the U.S. Department of Commerce.

This lack of an ouster mechanism to keep Board members "on their toes" is why the public comment process takes on singular importance for the Internet community. Since we can't "throw the bums out", we have to ensure that they receive substantive public commentary as a counterpoint to the views of special interests that would otherwise predominate.

The ICANN Board, fortunately, has recognized the role of the public in this process, and has through its bylaws accorded the public two opportunities to forward their views: once at the outset of the GNSO policy development process, and once again in response to the statements articulated by ICANN's special interest communities – in essence, they are affording an opportunity both to proponents and opponents as do all other zoning boards. The advocates for zoning changes are allowed to propose their variances, and opponents of those proposals are then given the opportunity to counter the submitted proposals.

This mechanism has shown itself over time to be eminently workable in leading to zoning changes that serve the public good. With this is mind, one should have a further look into the processes invoked at most zoning board hearings. Most noticeable in recent zoning hearings worldwide has been a phenomenon known as the "impact study". When changes in land use are contemplated, very often a zoning board must evaluate factors such as environmental impact concerns or gentrification concerns that might result in displacement of lower-income people, etc.

As a board that functions very much like a zoning board, ICANN is also concerned with impact assessments, so much so that within its bylaws it requires that constituency statements tendered in response to a policy development process provide "An analysis of how the issue would affect the constituency, including any financial impact on the constituency"[20]. After the receipt of these impact assessments from ICANN's special interest groups, the Board then considers the impact assessments put forth by the public through the following process spelled out in the bylaws:

> 1. With respect to any policies that are being considered by the Board for adoption that substantially affect the operation of the Internet or third parties, including the imposition of any fees or charges, ICANN shall:
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> a. provide public notice on the Website explaining what policies are being considered for adoption and why, at least twenty-one days (and if practical, earlier) prior to any action by the Board;
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> b. provide a reasonable opportunity for parties to comment on the adoption of the proposed policies, to see the comments of others, and to reply to those comments, prior to any action by the Board; and
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> c. in those cases where the policy action affects public policy concerns, to request the opinion of the Governmental Advisory Committee and take duly into account any advice timely presented by the Governmental Advisory Committee on its own initiative or at the Board's request.

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[20] http://www.icann.org/general/bylaws.htm#AnnexA

Knowing that ICANN utilizes zoning board methodologies to arrive at a determination of what constitutes service toward the public good, we now need to return to the question of what will best serve the public good with respect to new TLDs from the vantage point of such a board.

Zoning boards have certain characteristics in common; these commonalities have been the subject of studies. One such study "Separation of Use or Misuse: Multifaceted Empirical Study of Zoning Variances", is a thesis put forth by Jaclyn Marisa Dispensa[21] which states:

> "The process is compared to Molotch's Growth Machine theory which states that localities are in economic competition with other localities, therefore entities and individuals that support those entities (real estate professionals, lawyers, judges and the like) will work towards the economic growth of their area as it benefits themselves in return. As a result of the Growth Machine process, regulations are hardly enforced, specifically when zoning becomes too burdensome on the real estate, zoning is changed and/or variances given."

The author's analysis reveals that zoning boards are prone to adopting a laissez-faire attitude toward those special interests that promote growth activities within certain zones, and also that such Boards will often "look the other way" with respect to compliance issues and will usually accommodate the needs of certain select stakeholder groups if such accommodation serves the overall purpose of "growth".   One could easily argue that these characteristics are also shared by our own ICANN Board (as evinced by its failure to hire compliance officers, as demonstrated by the propensity of its staff to coddle the VeriSign organization, and as shown by its failure to enforce registrar data escrow provisions).

A zoning board with these predispositions will necessarily view the public good as that which is served by a decision-making process that protects incumbent interests while nonetheless leading to an incremental growth through the establishment of zones designated for novel or clearly delineated community usage. Examples of novel zones might include enterprise development zones

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[21] http://www.google.com/scholar?hl=en&lr=&q=cache:RnCmoRvLy6AJ:dspace.library.drexel.edu/retrieve/2654/dispensa_j_thesis.pdf+a+study+of+zoning+boards

within low-income communities, while examples of clearly delineated zones might include a red-light district. In ICANN terms, this would correspond with acceptance of proposals for TLDs such as .jobs and .xxx.

There are still other characteristics that are common to zoning boards, such as the occasional issuance of "conditional use" or "special use" permits that are used by municipalities in order to implement "innovative land use controls". In order to adopt an ordinance that requires conditional use permits, these municipalities must first have a master plan and a planning board.

Innovative land use controls may include, but are not limited to[22]:

- timing incentives
- phased development
- intensity and use incentive
- transfer of density and development rights
- planned unit development
- cluster development
- impact zoning
- performance standards
- flexible and discretionary zoning
- environmental characteristics zoning
- inclusionary zoning
- accessory dwelling unit standards
- impact fees
- village plan alternative subdivisions

In the ICANN context, conditional use zoning might well be occasioned by elements found within the ICANN Strategic Plan (which would by correlation equate with a municipal master plan) or within the recently released ICANN Strategic Planning Issues Paper[23] -- this latter document having been generated

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[22] http://www.nhmunicipal.org/Public_Documents/NHLGC_Officials/LegalQA0106

[23] http://www.icann.org/strategic-plan/strategic-planning-issues-paper-04oct05.pdf

from the raw output of a number of consultative sessions held at ICANN's Luxembourg meeting[24].

At these sessions, members of the community were asked about the factors that they thought would have a significant impact on ICANN over the next three to five years. In that some of the major factors that were identified were IDN and ENUM, we can reasonably expect that ICANN, functioning as a zoning board, will issue conditional use permits for these developments in due time. In fact, as has been noted by Judith Oppenheimer, "Buried among and receiving little notice within the 47 new TLD applications under public review is .tel, "A Top-Level Domain For The Emerging Internet-Telephony Industry" sponsored by Pulver.com and iTAB (Internet Telephony Addressing Board.) Its premise is ENUM with a twist."[25]

Whether the Pulver TLD application or some other TLD application for .tel prevails, the probability is strong that a zone for ENUM will ultimately be established. As Karl Auerbach writes, "ENUM is an answer to a problem that has disappeared, yet ICANN is gearing up to become the uber-manager of ENUM."[26]

If we can argue that ICANN Board directors are following a basic zoning board model, then we can likely anticipate their future actions based upon examples drawn from other zoning boards that have likewise acted in the "public interest".

One of the most prevalent trends among zoning boards is to adopt "inclusionary zoning programs"[27] (a conditional use variance) with the "affordability factor" being the overriding public interest consideration – zoning for affordable housing that meets the needs of low-income communities is regarded as an imperative that sustains the overall public good.

As ICANN begins to consider top level domain allocation methodologies such as auctions that have the potential to discriminate against less affluent applicants, the implication is that ICANN, functioning as a typical zoning board, will provide

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[24] http://www.icann.org/strategic-plan/consultation-process-LUX/output.pdf

[25] http://icbtollfree.com/pressetc/telenumberpolicy.html

[26] http://www.cavebear.com/cbblog-archives/000198.html

[27] http://www.policylink.org/EDTK/IZ/resources.html

"set-asides" for those that would otherwise be marginalized in a competitive bidding process. Note: such a process is described in the paper by Karl Manheim and Lawrence Solum entitled "Equity Enhancing gTLD Auctions"[28].

Zoning boards as land use management bodies understand that within every communal space there will be both fashionable addresses (.com) and low-rent commercial districts (.biz). They know that there will be designated districts for professionals (.pro) and for the average Joe (.name). They know that they need to balance the requirements of cultural communities (.museum) with the needs of a populace that is often just looking for general information (.info). They realize that they must establish space for municipal management requirements (.gov) as well as spaces for non-commercial needs (.org).

In time they also realize that communities appreciate both professional athletics (.sport) and private exercise initiatives (.club) and act accordingly to set aside zones (stadiums and parks) to accommodate such community needs.

In short, zoning boards act in a slow and measured manner with an eye to the future needs of the broader community. Not every requested variance is granted, and not every petition is favorably received, but over time new zones invariably are added to the current mix to meet the growth requirements of the overall public good. If a community needs a zone to accommodate a particular cultural and linguistic community (.cat), and the request does not negatively impact a set of neighbors[29], then eventually such a zone is added. This slow but responsive approach is what we can expect from the ICANN Board.

When a rationale exists for the establishment of a new zone, it will become self-evident to the members of a zoning board. When criteria need to be established to address a zoning board's goals of expanding the use and usability of available spaces, these too will become manifest. When allocation methodologies are

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[28] http://gtld-auctions.net/eeauctions.html

[29] From the GAC's Cairo Communiqué: "Recognising ICANN's responsibilities to achieve consensus in the creation of any new gTLDs, ICANN should avoid, in the creation of new gTLDs the alpha-3 codes of ISO 3166-1; well known and famous country, territory or regional language or people descriptions; or ISO 639 codes for representation of languages, unless in agreement with the relevant governments or public authorities.
http://www.icann.org/committees/gac/communique-08mar00.htm

established to implement such zones, consideration will be given to processes that don't compromise the needs of others. When policies are required to guide the development of publicly available contractual criteria, zoning boards will request expert guidance to formulate applicable housing codes.

We are looking at a process that has withstood the test of time. It is grounded in the understanding that actions are not taken precipitously, but rather, slowly and judiciously. Growth is managed – it is not allowed to sprawl as an uncontrolled blight occasioned by the mere whims of commercial or other interests. The possession of technical ability to develop structures for a populace is, by itself, an insufficient justification for zone establishment. Developers abound that have the both such skills and the financial wherewithals to launch major public use projects; but such initiatives are not automatically approved (as the mere combination of developer skills and funds for project capitalization do not trump the rights of a community to manage their own growth considerations).

Over time I look forward to seeing many new top-level domains, but I fully expect them to be rolled-out slowly and only when the rationale for each such new zone becomes fully self-evident on a case-by-case basis to the members of our ICANN Zoning Board.

In the final analysis, we need to ask ourselves: what policy guidance may the GNSO offer the ICANN Board with respect to the introduction of new gTLDs? If I had the ear of the Board, I would counsel our directors to continue to proceed in a measured and responsible manner (while bearing in mind that unduly slow growth may serve to stall what has become a robust economic engine). The initial guidance offered by the GNSO remains valid.