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May 13, 2004

VIA OVERNIGHT MAIL

John Jeffrey
General Counsel
Internet Corporation for Assigned Names and Numbers (ICANN)
4676 Admiralty Way, Suite 330
Marina del Rey, CA 90292-6601

Re: **Process for Selecting .net Registry Operator**

Dear Mr. Jeffrey:

The purpose of this letter is to provide VeriSign, Inc.'s comments on the process for choosing a Registry Operator for the .net Registry upon expiration of VeriSign's existing Registry Agreement with ICANN.

Overarching Principles

Certain fundamental principles governing the process are set forth in, and prescribed by, the existing .net Registry Agreement and ICANN's Memorandum of Understanding with the U.S. Department of Commerce, both of which contain provisions that set standards for choosing a successor Registry Operator:

- The selection process must be open, transparent, and objective (.net Registry Agreement Articles 2.1.1 and 5.2.1, MOU Article V.C.8);
- The process, including the selection criteria, may not be arbitrary, inequitable or unfair to VeriSign or other participants in the process; and neither the process nor the fact that VeriSign is the incumbent Registry Operator shall disadvantage VeriSign in comparison to other entities seeking to serve as the successor Registry Operator (.net Registry Agreement Articles 2.1.3 and 5.2.2, MOU Articles V.C.4 and V.D.3);
- The process must be based on specifications or policies established as a result of a consensus of Internet stakeholders ("Consensus Policies"), taking into account

such factors as the stability of the Internet, the need for a competitive proposal process, and functional capabilities of those seeking to operate the .net Registry, their relevant experience and their demonstrated ability to manage domain name or similar databases (.net Registry Agreement Articles 4.3, and 5.2.4; MOU Article V.C.4);

- The process must involve processes and selection criteria that are subject to public explanation and comment (MOU Article V.8.b); and
- The process must provide opportunities for VeriSign to make appropriate challenges to Consensus Policies, the selection criteria, and/or the selection of a Registry Operator (.net Registry Agreement Articles 4.3.2, and 5.2.5).

RFP Contents and Proposal Process

Consistent with these governing principles, VeriSign believes that ICANN must take the following steps to ensure that the process for choosing a Registry Operator for the .net Registry is fair, open and otherwise legally sufficient:

1. ICANN should issue a Request for Proposals ("RFP") that contains:

    (a)   A set of detailed and clear technical specifications, so that all participants can demonstrate their technical capabilities against clearly articulated requirements.

    (b)   Detailed, clear and objective evaluation criteria, including relevant subfactors under each criterion, so that participants will understand the standards against which their proposals will be measured. The evaluation criteria and their subfactors should consider such matters as those set forth in Exhibit A to this letter.

    (c)   A clearly articulated statement of the relative weight to be provided to each evaluation criterion and each subfactor, as well as the scoring method to be used to rate each proposal against ICANN's requirements. The scoring methodology should convey detailed information that fully explains the basis for each evaluator's rating. Consistent with both the .net Registry Agreement and the MOU, these relative weights should recognize that the stability of the Internet is the most important evaluation criterion and that having a .net Registry Operator with demonstrated relevant experience in managing domain name or similar databases is essential to a stable Internet.

    (d)   A clearly defined evaluation process, including the identity of those who will evaluate the proposals and select the winning proposal, to ensure that the evaluation criteria and associated

subfactors are fairly applied through a transparent, fair and objective process.

(e)   A process through which potential participants, prior to the submission of proposals, can challenge the technical specification, the selection criteria and subfactors, the relative weighting of those criteria or subfactors, and the evaluation process, as contrary to the letter and spirit of the MOU or, as applied to VeriSign, as contrary to the .net Registry Agreement.

(f)   A process through which participants can challenge the selection of a .net Registry Operator as inconsistent with the letter and spirit of the RFP, the MOU, or, as applied to VeriSign, the .net Registry Agreement.

2.   ICANN should strictly follow the process articulated in the RFP and ensure that the selection criteria and subfactors are applied in a manner that is open, fair, and objective. It should be prepared to explain its selection decision both to those offerors who are not selected and to the public at large.

3.   Consistent with Article 4.3 of the .net Registry Agreement, ICANN must establish a proper Independent Review Panel.

4.   It is critical to the stability and security of the DNS that ICANN ensure that offerors are qualified to operate one of the Internet's largest domain name registries. No award should be made unless ICANN makes an affirmative determination based on objective, reliable information that offerors (and all of their subcontractors) are responsible. Absent reliable information clearly indicating an offeror is responsible, ICANN should make a determination of nonresponsibility. Accordingly, ICANN should set forth in the RFP the standards by which it will make a responsibility determination. ICANN's general responsibility standards should require offerors to demonstrate that they:

(a)   possess the capability to perform satisfactorily, including that they:
(i) have adequate financial resources, as evidenced by audited financial information, ratio of assets to liabilities, level of working capital, cash flow projections, credit ratings, profitability and liquidity of assets;
(ii) have the ability to comply with the performance schedule;
(iii) have the necessary production and technical assets to perform;
(iv) have the necessary organization, experience, operational controls, and technical skills;
(v) have a record of satisfactory performance;

(vi) are otherwise qualified; and

(b)   have the tenacity and perseverance to perform, as indicated by their performance record.

Due to the unusual expertise and special facilities required to assume responsibility for operating the .net registry, ICANN should also require offerors to prove through reliable information that they satisfy special standards of responsibility (sometimes referred to as "definitive performance criteria"). ICANN should define such special standards of responsibility in its RFP. Those standards should be specific and objective, and should require offerors to:

(a)   demonstrate minimum experience requirements;

(b)   complete testing and other relevant stability assurance demonstrations;

(c)   demonstrate their possession or control of adequate facilities, equipment and other resources.

We have included a more specific discussion of responsibility standards in Exhibit A, enclosed.

5. Once ICANN issues its RFP, it should take appropriate measures to ensure the integrity of its re-bid process, including ensuring that communications between ICANN and prospective offerors occur only in writing through a point of contact identified in the RFP for this purpose. *Ex parte* and oral communications between ICANN and prospective offerors should be prohibited. This procedure is necessary to ensure that all offerors have equal access to information and the ability to compete on an equal basis. For the same reasons, all clarifications of the RFP or material information provided to any prospective offeror should promptly be reflected in an addendum or amendment to the RFP.

ICANN should also issue a written amendment to the RFP if it changes, increases, relaxes, or otherwise modifies its requirements. Indeed, an amendment should be issued for any change that would have an impact on the proposal competition. ICANN should also publish any RFP addenda or amendments in the same manner as the RFP itself.

6.   ICANN should define how it will ensure that the individuals involved in the selection process are technically qualified and free from bias or conflict of interest.

7.   The decision of each individual involved in the selection process should be supported by documentation showing the relative differences among proposals and their strengths, weaknesses, and risks in terms of the evaluation factors.

8.   As soon as ICANN has made an award, it should: (a) promptly notify all unsuccessful offerors; (2) schedule a debriefing as soon as possible with each unsuccessful offeror who requests one for the purpose of furnishing those offerors with the basis for the selection decision and contract award. The debriefing information should include ICANN's evaluation of the significant weaknesses or deficient factors in the unsuccessful offeror's proposal.

ICANN Planning and GNSO Actions

ICANN has taken certain preliminary steps towards adopting a procedure for designating a successor registry operator. During its March 6, 2004 meeting, the ICANN Board of Directors adopted resolution 04.18, which authorizes ICANN's president "to take steps to initiate the process as specified in Section 5.2 of the .net Registry Agreement for designating a successor operator for the .net registry, including referrals and requests for advice to the GNSO [Generic Names Supporting Organization] and other relevant committees and organizations as appropriate." However, the matter was not referred to the GNSO until twenty-five days later, when Mr. Paul Verhoef, ICANN's Vice President for Policy Development Support, sent a letter dated March 31, 2004 to Mr. Bruce Tonkin, Chair of ICANN's Generic Names Supporting Organization ("GNSO") Council, requesting "guidance" from the GNSO Council concerning the criteria for designating a successor operator for .net. Specifically, Mr. Verhoef requested the GNSO Council to "issue a consensus statement defining criteria and conditions to be applied in the selection of a successor registry operator" for the .net TLD.

This delay casts doubt on whether the ICANN Board can both adopt a consensus policy and meet its deadline. Unfortunately, the timing of the Board's action and its delayed referral to the GNSO may have rendered it impossible for the GNSO to develop an appropriate, timely policy recommendation. Indeed, were the GNSO to appoint a task force for this purpose (as suggested in the March 31, 2004 letter to Mr. Tonkin), the most probable date by which the GNSO Council's policy recommendations could be submitted to the Board for consideration (according to the timetables defined in the GNSO's policy development procedures) is 125 days from the date of the referral to the GNSO, or roughly early August 2004.   According to Article III, Section 6 of the ICANN Bylaws, the Board would then be required to publish any proposed policy for public comment for a period of at least 21 days, pushing the most likely date for any Board action to as late as August 2004.

We are concerned that the lack of adequate planning on the part of ICANN may place it in a position in which it will have little choice but to make an award without obtaining full and open competition and otherwise complying with applicable

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requirements. To avoid this outcome, we would urge ICANN to develop a plan which identifies and establishes performance milestones for all essential actions to conduct a successful re-bid process, including:

(a)   a statement of applicable conditions affecting the process, such as requirements for compatibility with the existing .net registry systems and data, and the need to effect a seamless cutover by June 30, 2005;

(b)   a description of required capability or performance characteristics of the .net services;

(c)   a discussion of the expected consequences of trade-offs among various cost, reliability, speed, stability, security, and other capability or performance goals;

(d)   a discussion of technical and schedule risks, including a description of what efforts are planned or underway to reduce risk and the consequences of failure to achieve goals;

(e)   a written plan of action describing ICANN's strategy for carrying out the re-bid process

(f)   a description of how competition will be sought, promoted and sustained throughout the course of the re-bid.

Compounding our timing and planning concerns, the GNSO has not complied with relevant procedures specified in ICANN's own Bylaws. Among other things, the Bylaws require that the GNSO publish an "Issue Report" within fifteen calendar days of receiving a request for the development of a policy recommendation. *See* ICANN Bylaws Art. X §§6, Annex A; *see also* GNSO Council New Rules of Procedure §6. No such Issue Report has been published.

In view of the provisions of the .net Registry Agreement concerning renewal, including the requirements for a fair, open and transparent process, it is imperative that the GNSO faithfully comply with policy-development procedures in an orderly and timely manner. If deadlines and procedures are ignored, this could not only jeopardize the selection process, but also the ability to arrange for any transition in registry operators in a stable and secure manner.

Furthermore, ICANN has suggested that the GNSO consider the process used "with respect to the reassignment of the .org registry." VeriSign believes ICANN's handling of the .org selection process to be a poor example of how an open, competitive process should proceed. The process used by ICANN to select an operator for the .org registry is neither applicable to nor sufficient for the selection of an operator for the .net registry, and VeriSign objects to any suggestion that the .org process be used here. The

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.org process did not comply with the requirements for a transparent, objective and neutral selection process described in this letter. In addition, under the .org Registry Agreement, VeriSign was not eligible to serve as Registry Operator, and VeriSign had obligations with respect to the transfer and new Registry Operator that are not applicable to the .net Registry Agreement.

For the sake of this selection process and those to follow, VeriSign believes it is critical that the GNSO operate openly, transparently, objectively and fairly in formulating selection criteria. We believe fairness dictates that members of the GNSO Council who have an interest in any entity that may wish to compete for the position of .net Registry Operator (or its subcontractors) should disclose that interest in advance of their participation in developing specifications and policies for the selection of the .net Registry Operator. Similarly, ICANN and the GNSO should engage in broad public outreach in an effort to ensure that the views of all interested parties are solicited and considered. And, openness and transparency can only be accomplished if the documentation requirements of the .net Registry Agreement Article 4.3.1(c) are faithfully and thoroughly met.

Finally, please let this letter serve to advise you both of VeriSign's intention to participate fully in the process for the selection of the operator for the .net registry, and that VeriSign intends to compete for the award of the .net Registry Agreement.

Very truly yours,

Kevin C. Golden
Vice President, Associate General Counsel
VeriSign, Inc.

Enclosure

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Exhibit A

Evaluation and Responsibility Criteria For .net TLD

1. Internet Stability: Internet stability should be the key evaluation criterion when deciding upon a Registry Operator. Additional criteria relating to Internet stability are set forth below.

2. Stability of Resolution System: The successful resolution of .net domain names is critical to the stability of the Internet. Applicants should be required to demonstrate past and current performance against key metrics of performance.

Key metrics of .net performance, by way of standards, should include:
- Response times from .net authoritative servers measured from various points around the globe. This should be measured in accordance with current ICANN DNS Registry Operator Specifications. However, in order ensure that current performance is maintained, the performance target set should correspond to performance levels currently being achieved on .net.
  - Response times should be equal to current performance, which is averaging 40ms.
  - Packet loss target should be less than 1%
- 100% availability of .net authoritative name servers. 75% of name servers should be available at any given time.
- 100% accuracy of .net zone data for resolution (no data corruption). The data that resolves is an exact replica of data in the data base. Applicant should demonstrate processes, tools and automated monitoring in place to ensure this is continuously achieved.
- Diversity of DNS resolution infrastructure with no single point of vulnerability due to vendor equipment, design, implementation methodology or zero-hour security exploits.
- Demonstrated diversity and redundancy of network and DNS infrastructure to handle bandwidth congestion and network failure of ISPs and host providers.

3. Scale of Resolution system: The operational system must be scalable to support ongoing performance of .net at all times. Applicants should be required to provide specific volumes and performance measures that they will be capable of supporting, such as:
- Scale sufficient to handle the existing number of names and projected growth.
- Scale to handle existing DNS query loads including normal peaks and projected growth.

- Scale to handle events such as DDoS attacks and traffic generated by viruses, worms and Spam. RFC 2870, "Root Name Server Operational Requirements", requires excess query capacity of three times the measured peak rate for those critical name servers. In our opinion, this value would be the very minimum for any critical authoritative name servers in light of modern-day threats. Attacks and malicious activity are on the increase and can generate as much as 10x -20x peak load. It is expected that these events will continue to grow in frequency. A DDoS attack resulting from a worm infecting thousands of computers with access to high-bandwidth Internet connections is a very real possibility and must be anticipated. The operator should have the scale to handle increase traffic caused by these attacks. Excess capacity of at least ten times sustained average query rate is required.
- Demonstrated restart capability from complete outage to avoid prolonged outage due to initial overload.
- Multiple geographically dispersed point of presence to handle simultaneous attacks across the network.

4. Stability of Registration System: The applicant must possess the capability and infrastructure to support equivalent access to the shared registration system by all Registrars with response times equal to those that Registrars currently experience. Among other things, applicants should be required to demonstrate past and current performance against key metrics of performance in terms of such factors as:
- The availability of the system with specific focus on unplanned outage time. This should not exceed 99.99% for unplanned outage time.
- Response time performance – the time to check the availability of a requested name and to add a requested name. The target should be less than 100ms for a check and 150ms for an add command.

5. Scale of Registration Systems: Applicants should be required to demonstrate their capability to support a scaleable registration system, including demonstrating such capabilities as:
- Scale to handle current volumes and projected growth.
- 2x name base capacity to withstand a "registration add attack" from a compromised registrar system.
- Scale to handle through-put rates currently achieved by .net Registry

6. Security of Infrastructure: Applicants should be required to demonstrate their capability to establish the following:
- A secure environment in which the registry infrastructure is to be operated.

- Their Failure/ Disaster Recovery Capability, including a plan and assets to support failure of any or all of the infrastructure, with a 4 hour disaster recovery time for registration and a 1 hour disaster recovery time for a gTLD site.
- An independent annual security audit (SAS 70 or comparable).

7. Operational Expertise: Applicants should have staff in place with technical skills, expertise and experience to operate the Registry in order to maintain current levels of performance, including:
- To operate at current and projected volume.
- To maintain operation during periods of increase traffic or activity such as DDoS.
- To identify and diagnose unusual activity such as DDoS attacks targeted at either the Registry operator or other critical Internet infrastructure.
- To minimize vulnerabilities in infrastructure.
- To completely mitigate security vulnerabilities before they are publicly announced.
- To manage any planned outages to minimize impact to Registrars and end users.
- To contribute to standards creation and other issues of Internet development.

8. Track Record: Applicants should possess a record of proven performance to handle operations comparable to .net, including:
- Comparable performance levels.
- Comparable scale.

9. Demonstrated Commitment to Performance: Applicants should have a track record of performance sufficient to demonstrate their ability to measure and perform against appropriate SLAs.

10. Migration Plan: Applicants should be required to demonstrate a clear and sufficient plan to migrate from the existing operator, including a plan demonstrating that the migration will have:
- No impact on performance of registration system.
- No impact on performance of resolution system.
- Minimal impact or cost to Registrars.

11. Standards Compliance: Applicants should have a demonstrated commitment to compliance with applicable standards designed to improve the user experience on the Internet.

12. Support of New and Emerging Technologies: Applicants should have the technical expertise and resources to support new technical initiatives, such as IPv6, designed to

improve usability, performance and security of the internet. A focus should be given to technologies which have a demonstrable demand and measurable user benefit.

13. Network Coverage / Geographic footprint: Applicants should demonstrate capability with respect to the following measurement standards:

- Number of name servers and points of resolution sufficient to provide 100% availability. Analysis has shown that this number should be a minimum of 8 physically diverse sites plus a minimum of two swing or hot standby sites for maintenance.
- Network coverage of key geographic centers of the Internet in the Americas, Europe and Asia Pacific, and providing .net resolution close to the end user.
- The support of growing and emerging markets so that those people in these markets experience the same levels of performance as those in the developed world.
- Demonstrated efforts to expand stability in underserved markets.

14. Customer Service: Applicants should possess:

- Skilled staff operating 24x7 to support Registrars' hours of operation.
- Sufficient staff to support current and projected registrar volumes.
- International language skills.
- Technical on-site assistance available (engineering) on 24*7 basis.

15. Feature Functionality: Applicants should possess the following:

- Ability to support current feature functionality of .net to avoid any feature regression. This includes
  - o Internationalized Domain Names
  - o Support of IPv6
  - o Ability to provide real time updates

- Demonstrated ability to support key product features and capabilities demanded by Registrars and end users, including IDNs.
- Demonstrated flexibility of system to incorporate new rules/ standards/ business practices with minimum negative impact on Registrars.

16. Track Record of Opening New / Underserved Markets: The applicant should have a track record in successfully investing in underserved markets and new geographies even if financial return does not justify investment. For example, VeriSign has continued to expand the geographic footprint of its network outside the North American market. In addition, the applicant should have a demonstrated willingness to support initiatives driven by market demand.

17. Financial Stability: Significant investment will be required to establish the initial registry system to support the scale and performance levels of .net. This includes the people and capital required to establish a global resolution footprint, capable of handling traffic spikes caused by DDoS attacks and other non standard operational events. The applicant should be required to demonstrate resources sufficient to make an investment at levels required to scale the operation initially and maintain and grow the domain base and infrastructure. The applicant also should possess substantial cash reserves and a record of sustained growth in revenue and profitability.