February 7, 2003

BY FACSIMILE & FIRST-CLASS MAIL

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
Acquisition and Grants Office
SSMC4 – Room 7601/OFA61
1305 East West Highway, 7th Floor
Silver Spring, MD 20910

Attention: Carol Silverman, Contracting Officer (FAX: 301/258-4525)
                 Loren Sunell, Contract Specialist (FAX: 301/713-0809)

       Re: Pre-Solicitation Notice NTIA909-3-0050CH; Operation of
                  <u>Internet Assigned Numbers Authority (IANA) Functions</u>

Dear Ms. Silverman,

      I am responding to your Pre-Solicitation Notice NTIA909-3-0050CH within the ten-day period after publication of your procurement synopsis on January 28, 2003. Our company, the Internet Multicasting Service, Inc., is a prospective offeror interested in competing for the agency's requirements for Internet Assigned Numbers Authority (IANA) Functions. We believe the agency should not award a sole-source contract to the Internet Corporation for Assigned Names and Numbers (ICANN). There is more than one responsible source available to meet the agency's needs, and therefore no authority exists to conduct a sole-source procurement under 41 U.S.C. § 253(c)(1). Our detailed understanding of the agency's requirements and our statement of capability are set forth below.

      The Internet Multicasting Service, Inc. (IMS) is a 501(c)(3) nonprofit public research corporation founded in 1993. The company builds and maintains public works projects on the Internet. Although only ICANN has previously performed the IANA functions for your agency, IMS possesses the people, capabilities, and experience to perform the IANA function requirements. We encourage you to visit our web site, http://not.invisible.net/about/, where we list additional information about the projects and experience we have developed.

In this letter, we would like to spell out our concerns about the proposed course of action as follows:

1. The function of the IANA is crucial to the stability, security, and reliability of the Internet.

2. IMS would be qualified to bid on the IANA function.

3. Many other organizations would be qualified to bid on the IANA function.

4. ICANN's performance of the IANA function does not enjoy the support of key constituencies, and this fractured support threatens the stability, security, and reliability of the Internet.

5. The Department of Commerce should conduct an open, competitive bidding process to determine if there are alternatives that better meet the goals of promoting the stability, security and reliability of the Internet.

<u>The IANA function is one of the key Internet administrative functions, and helps insure the stability, security, and reliability of the Internet.</u>

The Internet Assigned Numbers Authority performs three key functions:

1. Review and assignment of unique values for protocol parameters, dissemination of these assigned values, and review of technical documents for consistency with these assigned values.

2. Administration of the contents of the root zone of the Domain Name System.

3. Allocation of top-level delegations for Ipv4 and Ipv6 address space.

All three of these functions are administrative in nature and other bodies perform all policy considerations and determinations. Assignment of protocol parameters is performed under the direction of the Internet Engineering Task Force (IETF) through a Memorandum of Understanding between the IETF and ICANN. Allocation of top-level delegations for Ipv4 and Ipv6 is performed on behalf of the Regional Internet Registries. Administration of the contents of the root zone is performed on behalf of the Department of Commerce and ICANN.

<u>The Internet Multicasting Service should be allowed to participate in an open, competitive bidding process to perform the IANA function.</u>

While the Internet Multicasting Service has not directly operated the IANA function, it does have a long record of participating and working with key Internet bodies, particularly the "clients" of the IANA which includes the number registries and the IETF. IMS has operated and administered large name-spaces, including the tpc.int namespace, which mapped all phone numbers into the Internet DNS system (see Request for Comments 1528, 1529, 1530, 1569, and 1703) and the original Internet SEC EDGAR and USPTO Patent databases. IMS has an experienced board of directors, which includes myself, Rebecca Malamud, Richard Adams, Jr., Dave Farber, and Marshall T. Rose. IMS has successfully performed work for the National Science Foundation on

the EDGAR system and has long experience working with organizations in Washington and throughout the Internet.

In asking for the ability to submit a bid to the Department of Commerce, we are particularly interested in detailing specific ways that the workflow of the IANA function could be modernized, thus providing significant cost savings and productivity increases to users of the IANA, including the IETF, the number registries, and private industry.

The procedures currently in place for the *allocation* of unique values within the IANA date back 20 years or more. No use is made of structured information processing using modern technologies such as XML. There are no significant security provisions (e.g., the identity of the entity making the request is not assured through any use of cryptography and is based on plain-text email), no automated checks on incoming information (such as determining if requested values meet the constraints set out in RFCs and other governing documents) and no workflow automation (e.g., it is impossible to determine where a request is in the work queue or even if such a request has been received). Numerous inconsistencies exist in the current IANA database, such as out-of-date contact information inconsistent citations to references.

In addition, the procedures for *dissemination* of unique values with the IANA are based on technologies that date back 20 years or more. Unique values are hand-edited into ASCII-based, unstructured text files. No consistency checks are provided, there is no systematic mirroring procedure to make sure that multiple locations all have the same data, and there is no notification procedure to let people know when new values are allocated.

If the Internet Multicasting Service were allowed to bid to perform the IANA function, we would stress the cost savings to consumers and industry and the increased reliability and stability of the Internet through modernization of the IANA function. We have already invested considerable time in an XML-based workflow system for the allocation and distribution of names and numbers that is based on strong cryptographic techniques, well-defined rules, and a straightforward separation of the policy functions of IANA clients from the administrative functions of the IANA. Details of our technical approach can be viewed in an Internet-Draft at http://trusted.resource.org/ANANA//draft-anana-datastore.html. We believe such a modernization would provide better quality control, would be able to handle a larger volume of work at lower cost, and would more quickly and effectively respond to customer requests

<u>Other organizations would be qualified to participate in an open, competitive bidding process to perform the IANA function.</u>

In addition to the Internet Multicasting Service, many other organizations have the resources and expertise to provide the IANA function. We have not contacted any of these organizations and they have not expressed any desire to bid for such a function, but we do believe that the Department of Commerce would best serve the interests of Internet stability, security, and reliability with an open competitive bidding process which would determine if any of these or other organizations have an interest in performing the IANA function:

1. The American Registry for Internet Numbers (http://www.arin.net/) is a non-profit corporation that has long performed the task of administering key protocol resources for the Internet. It is one of the 4 key Internet number registries, has well-developed consensus-based procedures for allocation, a qualified staff, and a distinguished and experienced Board of Trustees.

2.   The Corporation for National Research Initiatives (http://www.cnri.reston.va.us/) is a non-profit corporation that has a distinguished record of contributions to Internet infrastructure and research. CNRI is responsible for the Internet Engineering Task Force secretariat, which, among other tasks, is responsible for the administration of key Internet document databases such as the Internet-Drafts series of documents.

3.   The Internet Society (http://www.isoc.org/) is a non-profit corporation that provides the institutional home for the IETF and the IAB. The Internet Society is also responsible for the operation of the .org Top Level Registry. The Internet Society has a well-developed consensus-based set of operating procedures, an experienced and capable staff, and a distinguished Board of Trustees.

Numerous other groups in both the non-profit and for-profit sectors are also qualified to perform the IANA function. The interests of Internet stability, security, and reliability are best served with an open bidding process, which will determine the alternatives available to the Department of Commerce for performance of this function.

<u>ICANN's performance of the IANA function is a subject of considerable controversy, which threatens the stability, security, and reliability of the Internet.</u>

As ICANN struggles with internal reform, the IANA function has become the subject of considerable controversy. The Internet Architecture Board has noted "deep concerns" about the operation of the protocol parameter function. The details of their concerns has been spelled out in a series of formal communiqués they have transmitted to ICANN including the "IAB Response to ICANN Evolution and Reform" (June, 2002, http://www.iab.org/Documents/icann-response.html), the "IAB Response to ICANN Evolution and Reform Committee Second Interim Report" (September, 2002, http://www.iab.org/Documents/icann-response-2.html), and the "IAB Response to ICANN Evolution and Reform Committee Final Implementation Report" (October, 2002, http://www.iab.org/Documents/icann-response-3.html). These unusually frank communiqués from the IAB underline the fundamental lack of confidence in the current administration of the IANA.

Similarly, the Regional Internet Registries have taken the highly unusual step of issuing a joint statement, which proposes that the IP address allocation function be split off into an Internet Number Resource Registry (NRR). The details of the plan were transmitted to ICANN in a communiqué entitled "RIR Blueprint for Evolution and Reform of Internet Addresses Management" (October, 2002, http://www.apnic.net/community/icann/docs/blueprint/nrr-blueprint-20021010.html).

ICANN's most visible functions are the allocation and operation of the Top-Level Domains. This function has been highly controversial and involves the regulation of industry participants who are also users of IANA. In addition, the internal reform process has been highly controversial. We respectfully submit that the controversy surrounding the non-IANA and IANA-based functions of ICANN has been a huge distraction and threatens the stable and secure operation of the IANA. The interests of the Internet community-at-large, industry, and the clients of the IANA would be best served without this surrounding controversy.

<u>An open, competitive bidding process for performance of the IANA function would best meet the Department of Commerce goals of stability, security, and reliability of the Internet.</u>

ICANN's operation of the IANA function has generated considerable controversy and has attracted diminishing support from important groups such as the Internet Architecture Board and the Regional Internet Registries. The operation of the IANA function has received little attention to modernization, which has led to decreased reliability and increased costs. There are numerous organizations that are qualified to submit bids that would propose less controversial and more efficient provisions of these key services.

We feel that the interests of the Department of Commerce and the Internet community at large would be better served through an open, competitive bidding process that would establish if there are credible alternatives to the ICANN administration of the IANA function. If after such an open and thorough analysis it turns out ICANN is best qualified to perform the task, then it would make sense to award the contract to them. However, the IANA function is too important to the stability, security, and reliability of the Internet to make such a decision without a thorough examination of the possible alternatives through an open, competitive bidding process.

Please feel free to contact me if you need any further information about IMS. If there are any specific areas of concern that you would like us to address further, I would certainly be willing to discuss them with you. Please also notify me in writing of the agency's determination on whether it will conduct a competitive procurement. Your assistance in this matter is appreciated.

Very Truly Yours,

Carl Malamud
Chairman, Internet Multicasting Service