ICANN/IANA: Role and Structural Considerations

24 March 2014

The announcement¹ by NTIA that it seeks to transition its role in the Internet's Domain Name System to the "global multistakeholder community" opens an important debate. NTIA's role is broad. All the components of the role are inextricably linked.

NTIA's role as steward of the DNS has been noteworthy, culminating in the nature of the transition we are now starting to discuss. Its role as contractee for the IANA and RZM (root zone management) agreements has been critical to that stewardship. They allow direct influence (the contracts can be changed), and indirect influence arising from those contracts' existence. NTIA has used that influence effectively in this stewardship role, helping guide the DNS and its institutions, ICANN included, to today's position.

ICANN has been asked to convene global stakeholders to develop a proposal to transition the current role played by NTIA. This development process must be a multistakeholder one, with all those touched by this debate included as part of it, and no existing institution seeking to dominate the debate or preclude options at the beginning of the conversation.

We draw the community's attention to four things in particular:

- The components of the role NTIA is giving up, which includes these elements:
 - o Contractee for the IANA function and the RZM function
 - o Administrative role in various IANA processes
 - o Overall steward of the Internet's DNS
- The necessity of a settlement that deals with all these components, not just some
- The importance of accountability throughout the new settlement
- The importance of not taking for granted the existing institutional settlement in developing the new settlement

ICANN has a rational self-interest as a well-resourced stakeholder in this discussion to try and shape it in its own interests – in a range of obvious and subtle ways. In whatever process for this conversation emerges, all stakeholders should be aware of the interests of all the others.

In starting the conversation, it is important to consider a very wide range of possible models. The attached set of diagrams is intended to spur your thinking. They set out the array of functions involved in the DNS at a global level, and present some options for how these functions might be divided between current or future actors.

We hope to stimulate helpful discussion, and we welcome any feedback.

InternetNZ

Contacts:

Jordan Carter, <u>jordan@internetnz.net.nz</u>; Jay Daley, <u>jay@nzrs.net.nz</u>; Keith Davidson, keith@internetnz.net.nz; Debbie Monahan, dnc@dnc.org.nz.

¹ Media release 14 March 2014: http://www.ntia.doc.gov/press-release/2014/ntia-announces-intent-transition-key-internet-domain-name-functions

Overview of functions

OVERSIGHT

Stewardship through top-level principles:

- Multistakeholderism
- Competitive market
- · Public accountability
- · Security and stability

Contractual oversight:

- Issue and monitor the IANA contract
- · Issue and monitor the RZM contract
- · Specific DNS root operations:
- Authorise changes

POLICY

Common to all areas:

Monitor IANA SLA

gTLD contracts:

- Authorise, contract and regulate gTLDs
- · Authorise, contract and regulate Registrars

gTLD policy:

- Set policy by multistakeholder consensus
- Issue delegation / re-delegations instructions to IANA in line with policy

IP / A5 Address

- Set local policy by community consensus
- Issue change requests to IANA in line with global policy.

IP / AS Address

- Set global policy by community consensus
- Issue delegation / re-delegations instructions to IANA in line with policy

ccTLD policy

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ccTLD policy

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Protocol parameters

- · Set policy by community consensus
- Issue change instructions to IANA

IANA FUNCTIONS

Operate all registries:

- Implement changes in line with published policies.
- Measure performance against SLA
- Refer complex / unclear changes.
- Publish all change requests

Specific DNS root operations:

- Implement delegations / re-delegations in line with policies.
- Check changes are technically compliant
- Sign root.

RZM FUNCTIONS

Specific DNS root operations:

- Check changes are technically compliant (second pair of eyes)
- Publish root.

Current overlay of organisational split

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NTIA

POLICY

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IP / AS Address

RIRS

ccTLDs

- Set local policy by community consensus
- Issue change requests to IANA in line with

Set global policy

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ccTLD policy

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IP / AS Address

re-delegations instructions to IANA in line with policy

by community

Issue delegation /

consensus

ccTLD policy

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Protocol parameters

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VERISIGN

IETF/IAB

ICANN

Proposed by ICANN to SO/AC chairs

OVERSIGHT

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IP / AS Address • Set global po

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IGP proposal

OVERSIGHT

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policy

Protocol parameters

· Set policy by community consensus

Issue change instructions to IANA

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POLICY Common to all areas: IANA FUNCTIONS Contract Monitor IANA SLA Operate all registries: Implement changes in line with published policies. gTLD contracts: Measure performance against SLA Authorise, contract and regulate gTLDs Refer complex / unclear changes. · Authorise, contract and regulate Registrars Publish all change requests Specific DNS root operations: Implement delegations / re-delegations gTLD policy: in line with policies. Set policy by multistakeholder consensus DNSA Check changes are technically Issue delegation / re-delegations instructions to compliant IANA in line with policy Sign root. IP / AS Address RZM FUNCTIONS IP / AS Address Set global policy Set local policy Specific DNS root operations: by community by community Check changes are technically **ICANN** consensus consensus compliant (second pair of eyes) Issue change Issue delegation / RIRS Publish root. requests to IANA re-delegations. in line with instructions to IANA in line with global policy. policy ccTLD policy ccTLD policy · Set local policy · Set global policy by community by community consensus consensus Issue delegation / ccTLDs Issue change requests to IANA re-delegations instructions to in line with IANA in line with global policy.

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Option: New oversight entity and structural separation

OVERSIGHT

Stewardship through top-level principles:

- Multistakeholderism
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- Public accountability
- Security and stability

Contractual oversight:

- Issue and monitor the IANA contract
- Issue and monitor the POLICY contract
- Specific DNS root operations:
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NEW ENTITY 1

POLICY Common to all areas: Monitor IANA SLA gTLD contracts: Authorise, contract and regulate gTLDs. · Authorise, contract and regulate Registrars Set policy by multistakeholder consensus Issue delegation / re-delegations instructions to IANA in line with policy IP / AS Address IP / AS Address Set local policy Set global policy by community by community **ICANN** consensus consensus Issue delegation / RIRS Issue change requests to IANA re-delegations in line with instructions to IANA in line with global policy. policy ccTLD policy ccTLD policy · Set local policy · Set global policy by community by community consensus consensus ccTLDs Issue change Issue delegation / requests to IANA re-delegations instructions to in line with IANA in line with global policy. Protocol parameters Set policy by community consensus IETF/IAB Issue change instructions to IANA

IANA FUNCTIONS

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Specific DNS root operations:

- Implement delegations / re-delegations in line with policies.
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NEW ENTITY 2

RZM FUNCTIONS

Specific DNS root operations:

- Check changes are technically compliant (second pair of eyes)
- Publish root.

Option: New policy entity (1) and structural separation

OVERSIGHT

Stewardship through top-level principles:

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Contractual oversight:

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ICANN

POLICY

Common to all areas:

Monitor IANA SLA

gTLD contracts:

- Authorise, contract and regulate gTLDs
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- Set policy by multistakeholder consensus
- Issue delegation / re-delegations instructions to IANA in line with policy

IP / AS Address

RIRS

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IANA FUNCTIONS

Operate all registries:

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Specific DNS root operations:

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NEW

RZM FUNCTIONS

Specific DNS root operations:

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NEW

ENTITY 1

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ENTITY 2

Option: New policy entity (2) and structural separation

OVERSIGHT

Stewardship through top-level principles:

- Multistakeholderism
- Competitive market
- Public accountability
- Security and stability

Contractual oversight:

- Issue and monitor the IANA contract
- Issue and monitor the POLICY contract
- Specific DNS root operations:
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ICANN

POLICY

Common to all areas:

Monitor IANA SLA

gTLD contracts:

- Authorise, contract and regulate gTLDs
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- Set policy by multistakeholder consensus
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IP / AS Address

RIRS

ccTLDs

- Set local policy by community consensus
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IP / AS Address

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ENTITY 1

NEW

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ccTLD policy

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- Issue change requests to IANA in line with global policy.

ccTLD policy

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- Set policy by community consensus
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IANA FUNCTIONS

Operate all registries:

- Implement changes in line with published policies.
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Specific DNS root operations:

- Implement delegations / re-delegations in line with policies.
- Check changes are technically compliant
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NEW **ENTITY 2**

RZM FUNCTIONS

Specific DNS root operations:

- Check changes are technically compliant (second pair of eyes)
- Publish root.

Option: Multiple policy entities and structural separation

OVERSIGHT Stewardship through top-level principles: Multistakeholderism Competitive market Public accountability **ICANN** Security and stability Contractual oversight: Issue and monitor the IANA contract Issue and monitor the POLICY contract Specific DNS root operations: Authorise changes POLICY Common to all areas: IANA FUNCTIONS Monitor IANA SLA Operate all registries: Implement changes in line with published policies. gTLD contracts: Measure performance against SLA Authorise, contract and regulate gTLDs Refer complex / unclear changes. · Authorise, contract and regulate Registrars Publish all change requests Specific DNS root operations: Implement delegations / re-delegations NEW in line with policies. NEW Set policy by multistakeholder consensus Check changes are technically **ENTITY 2** Issue delegation / re-delegations instructions to **ENTITY 1** compliant IANA in line with policy Sign root. IP / AS Address IP / AS Address RZM FUNCTIONS Set global policy Set local policy Specific DNS root operations: by community by community Check changes are technically consensus consensus compliant (second pair of eyes) Issue delegation / RIRS Issue change Publish root. requests to IANA re-delegations in line with instructions to IANA in line with global policy. policy ccTLD policy ccTLD policy · Set local policy · Set global policy by community by community consensus consensus ccTLDs Issue change Issue delegation / requests to IANA re-delegations instructions to in line with IANA in line with global policy.

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policy

Set policy by community consensus

Issue change instructions to IANA