

New RIRs and the ICANN Process

Afrinic Meeting

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Motivation

- The ICANN Process
 - Background Context
 - Yesterday, Today, Tomorrow
 - What is it?
 - What does it do?
 - Why does it not do?
 - Why does it exist?
 - What has it done?
 - What has it to do?
 - How does it work?
- New Regional Internet Registries (RIRs)
 - What? Why? How? When?
 - Discuss the RIR Draft Criterion for the Establishment of New Regional Internet Registries
 - DRAFT v 0.2 May 4th 2000
 - 10 Principles for Successful
 - Establishment
 - Operation



Part I: The ICANN Process





What does ICANN do?



What does ICANN do?

Coordinates policies relating to the unique assignment of:

- Names Internet domain names
- Numbers Numerical IP Address
- Protocols Protocol Port and Parameter Numbers

Coordinates the DNS Root Server System

- through Root Server System Advisory Committee

**... Technical
Coordination**

ICANN: The Basic Idea

ICANN =

An Experiment in
Technical Self-Management
by the
global Internet community

(An experiment that must succeed!)

ICANN: The Basic Bargain

ICANN =

Internationalization
of Policy Functions for DNS
and IP Addressing systems

+

Private Sector
(non-governmental) Management



What does ICANN **not do?**



So does ICANN make law?

- Or: Is ICANN a cyber-government for the Internet?

A: **NO!**

- ICANN has **no** inherent coercive power, only the ability to enter into contractual relationships through a process of consensus & consent
- ICANN is not a substitute for the powers of governments (i.e., courts and laws)

Does ICANN regulate/govern?

- **No: ICANN coordinates.**
- **But:** technical coordination of unique values sometimes requires touching non-technical policy areas:
 - Data privacy protection
 - (WHOIS database)
 - Intellectual property/trademark law
 - (UDRP)
 - Competition law
 - (Registrars)



So why does ICANN exist?



Situation Before ICANN

Most Internet DNS and IP Address coordination functions performed by, or on behalf of, the US government

- Defense Advanced Research Projects Agency (DARPA)
 - Information Sciences Institute (ISI) of University of Southern California
 - Stanford Research Institute (SRI)
- National Science Foundation (NSF)
 - IBM, MCI, and Merit
 - AT&T, General Atomics, Network Solutions, Inc.
- National Aeronautics and Space Administration (NASA)
- US Department of Energy

... Things works and
life was good

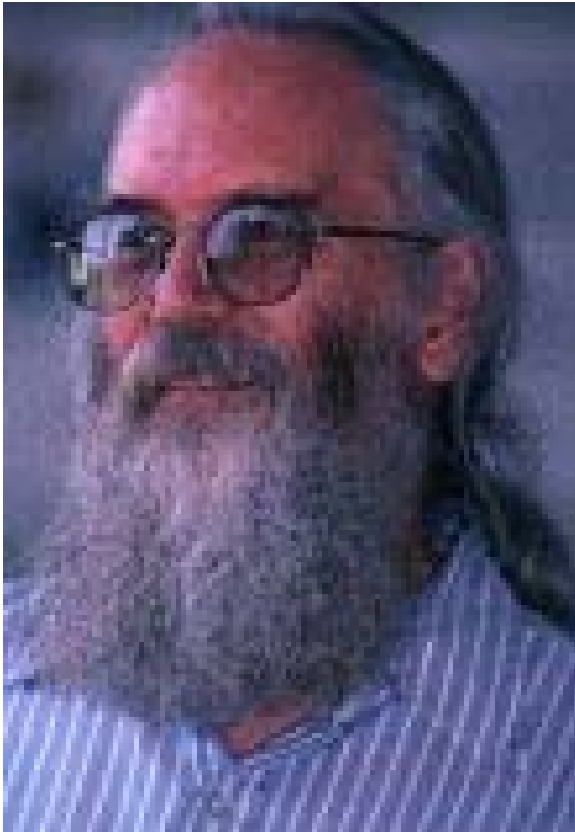
Key Role of the IANA

- IANA acted for 30 years to mediate disputes and to assure proper technical coordination and function of all parts of the domain name system.
- These functions are still critical to the successful operation of Internet which is now a GLOBAL and rapidly growing medium.

Need for Change

- ◆ Globalization of Internet
- ◆ Commercialization of Internet
- ◆ Need for accountability
- ◆ Need for more formalized management structure
- ◆ Dissatisfaction with lack of competition
- ◆ Trademark/domain name conflicts

IANA



Jon Postel *1943-1998*

- 1996 - Postel initiates Internet Ad Hoc Committee (IAHC) with support from Internet Society (ISOC) to institutionalize the IANA functions and open top level domains to competitive registration
- This proves to be very difficult with many people with differing views and interests. The debate doesn't come to closure...

US Government Steps In

- 1998 - Ira Magaziner, at the request of President Clinton, initiates an effort to facilitate formation of a neutral, industry-sponsored oversight organization to continue the IANA functions performed in the past under US Government contract in a global, consensus building setting.
- 'Green' and 'White' Papers developed

White Paper Principles

White Paper: new policy/management structure must promote 4 goals:

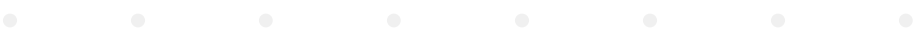
- ◆ Stability
- ◆ Competition
- ◆ Private, bottom-up coordination
- ◆ Representation

White Paper Implementation

- ◆ Internet community to form non-profit corporation meeting White Paper's 4 criteria
- ◆ US Government (through Commerce Department) to transition centralized coordination functions
- ◆ Amendment of Network Solutions agreement to require competitive registrars in gTLD registries
- ◆ WIPO (World Intellectual Property Organisation) to recommend solutions for trademark/domain-name dilemma



**What has ICANN Done?
What has ICANN to do?**



What has ICANN Done?

- ✓ 25 November, 1998 - ICANN recognized in MoU
- ✓ June, 1999 - Cooperative agreement among ICANN, US Government, root server operators
- ✓ 10 November, 1999
 - ICANN and Network Solutions sign gTLD registry and registrar agreements
 - DoC transfers root authority over gTLDs to ICANN
- ✓ 9 February, 2000
 - Contract with US Government to complete transfer of IANA functions

What has ICANN to do?

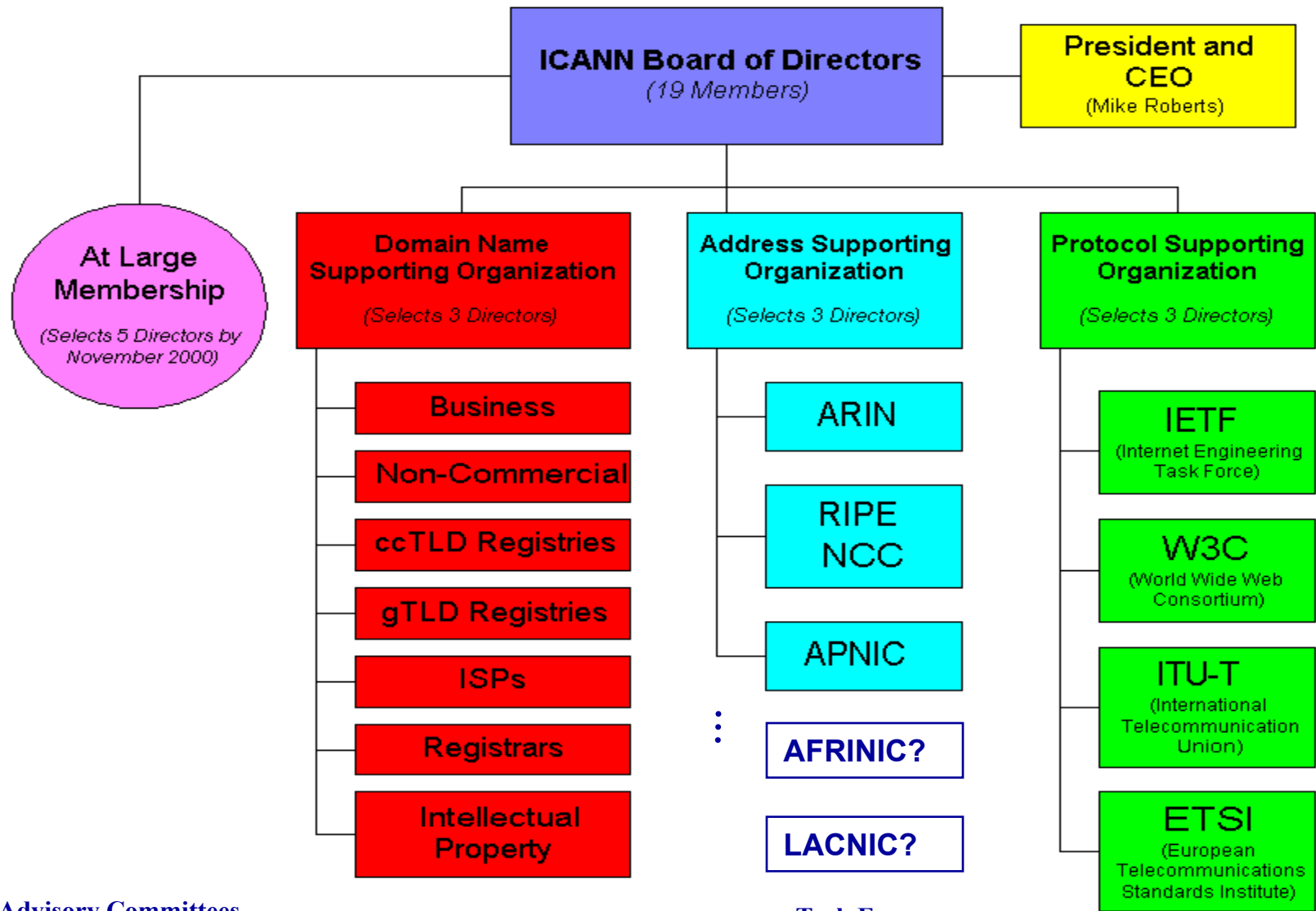
- Year 2000:
 - ccTLD registry agreements
 - IP Address registry agreements
 - Root server operator agreements
- September 30, 2000 - Target date for ICANN to settle all registry + registrar + root server relationships



Structure of ICANN...

How does it work?





Advisory Committees



Task Forces



ICANN Board of Directors

At Large Directors:

- Esther Dyson (USA) – Chairman
- Geraldine Capdeboscq (France)
- George Conrades (USA)
- Greg Crew (Australia)
- Frank Fitzsimmons (USA)
- Hans Kraaijenbrink (Netherlands)
- Jun Murai (Japan)
- Eugenio Triana (Spain)
- Linda S. Wilson (USA)

ASO Directors (Numbers)

- Blokzijl (Netherlands)
- Fockler (Canada)
- Wong (Hong Kong, China)

DNSO Directors (Names):

- Abril i Abril (Spain)
- Cohen (Canada)
- Pisanty (Mexico)

PSO Directors (Protocols):

- Abramatic (France)
- Cerf (USA)
- Davidson (U. K.)

Geographic and Cultural Diversity

- **Geographically diverse Board of Directors**
 - **Directors selected by Supporting Organizations**
 - 4-Europe
 - 3-North America
 - 1- Latin America
 - 1-Asia/Pacific
 - **At Large Directors - current**
 - 4-North America
 - 3 Europe
 - 2-Asia Pacific
 - **At Large Directors - future**
 - 1 from each of 5 regions + 4 (to be determined)

At Large Membership

- Open to any individual with verifiable name, email address, physical address
- Free to join and to vote
- Members will directly elect 5 ICANN Directors by November 2000
- Election by Region
- Nominations committee + petition process
- 6-month study period to follow
- Membership Implementation Task Force
- JOIN! <<http://members.icann.org>>

Applications for Membership

- Africa

–257 (2.33%)

- Asia/Pacific

–937 (8.50%)

- Europe

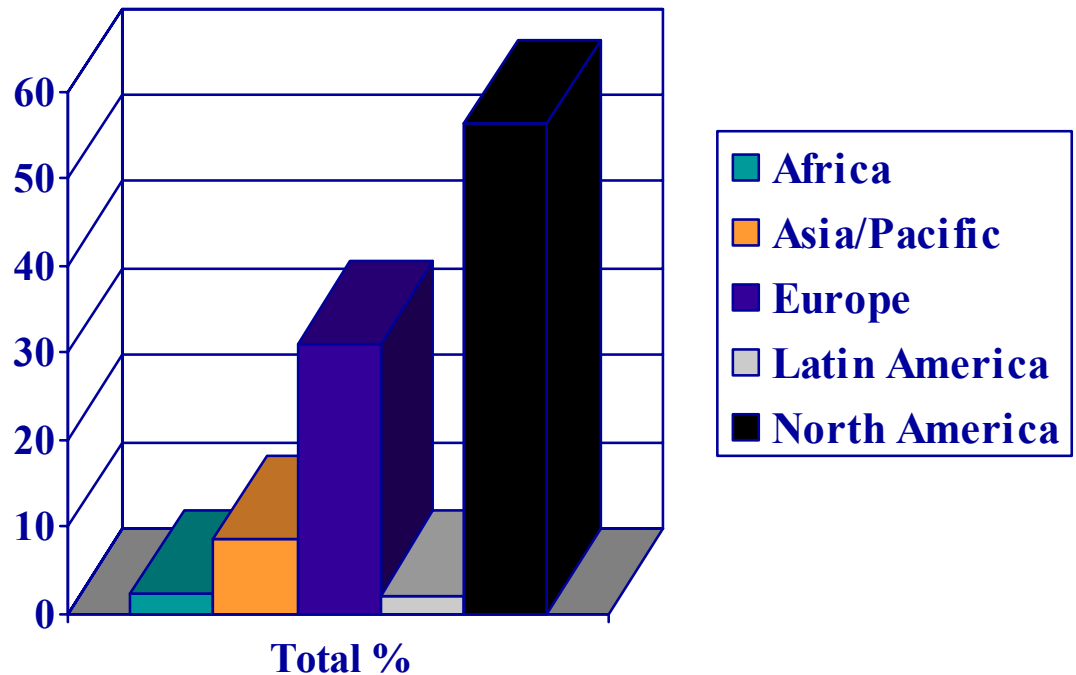
–3395 (30.79%)

- LA/C

–227 (2.06%)

- North Am

–6209 (56.32%)



ICANN Staff

New Model: Lightweight, minimal staffing
(= minimal bureaucracy)

Current Staff:

- ◆ Interim President and CEO (Mike Roberts)
- ◆ Vice President/General Counsel (Louis Touton)
- ◆ CFO/Policy Director (Andrew McLaughlin)
- ◆ IANA staff (2.3 full-time)

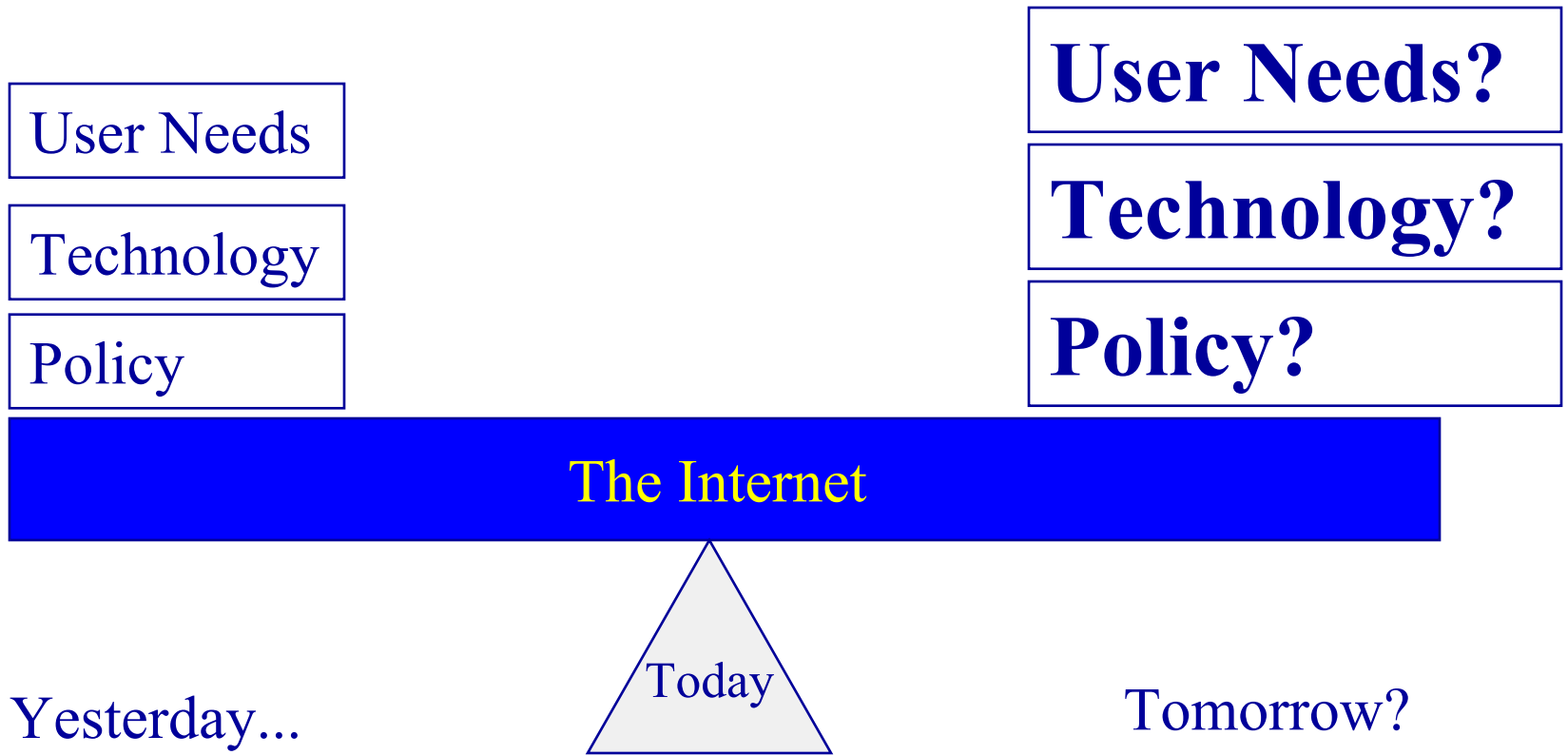
... Permanent CEO
Search Underway



So what really is the ICANN Process?



The ICANN Process: Finding Balance



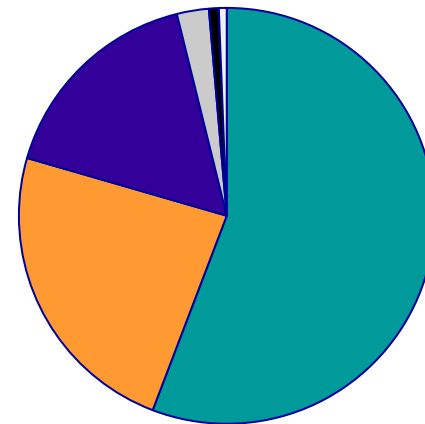
Today

- 8.5m Level 2 Domains in .com, .net, .org (*NSI Jan 00*)
- 75 Million Hosts (*Est. Jan 2000*)
- 212/246 countries + territories with IP (*NW June 1999*)
- 201 Million Users (*NUA Nov 1999*)
- (950 Million Telephone Terminations)

Users on the Internet

Africa	- 1.72M
Asia/Pac	- 33.61M
CAN/US	- 112.4M
Europe	- 47.15M
Latin Am	- 5.29M
Mid-east	- 0.88 M

Total - 201.05M
(NUA-Nov'99)

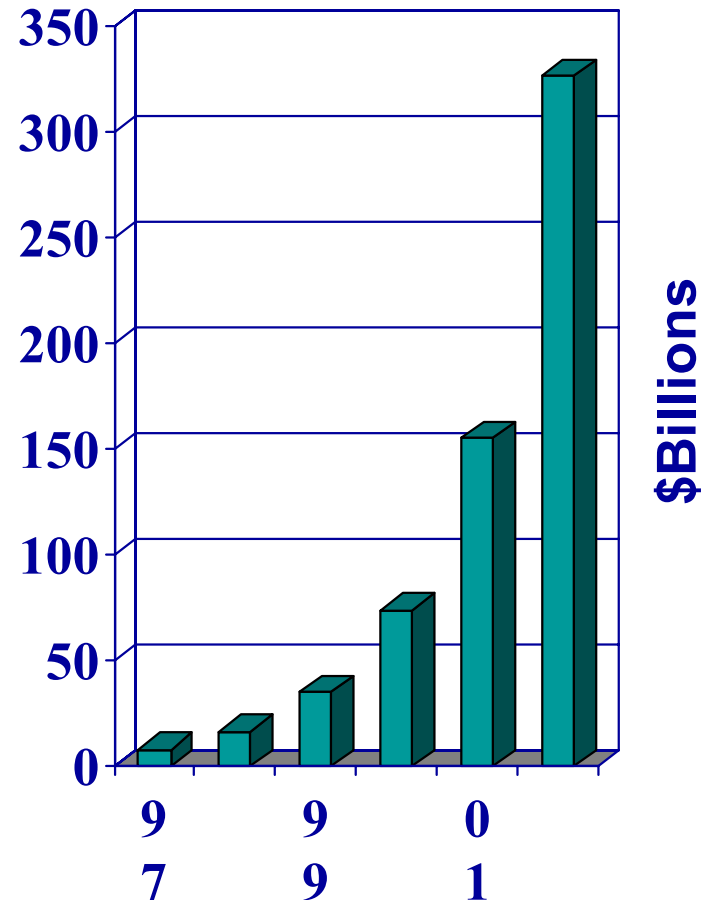


What about Tomorrow?

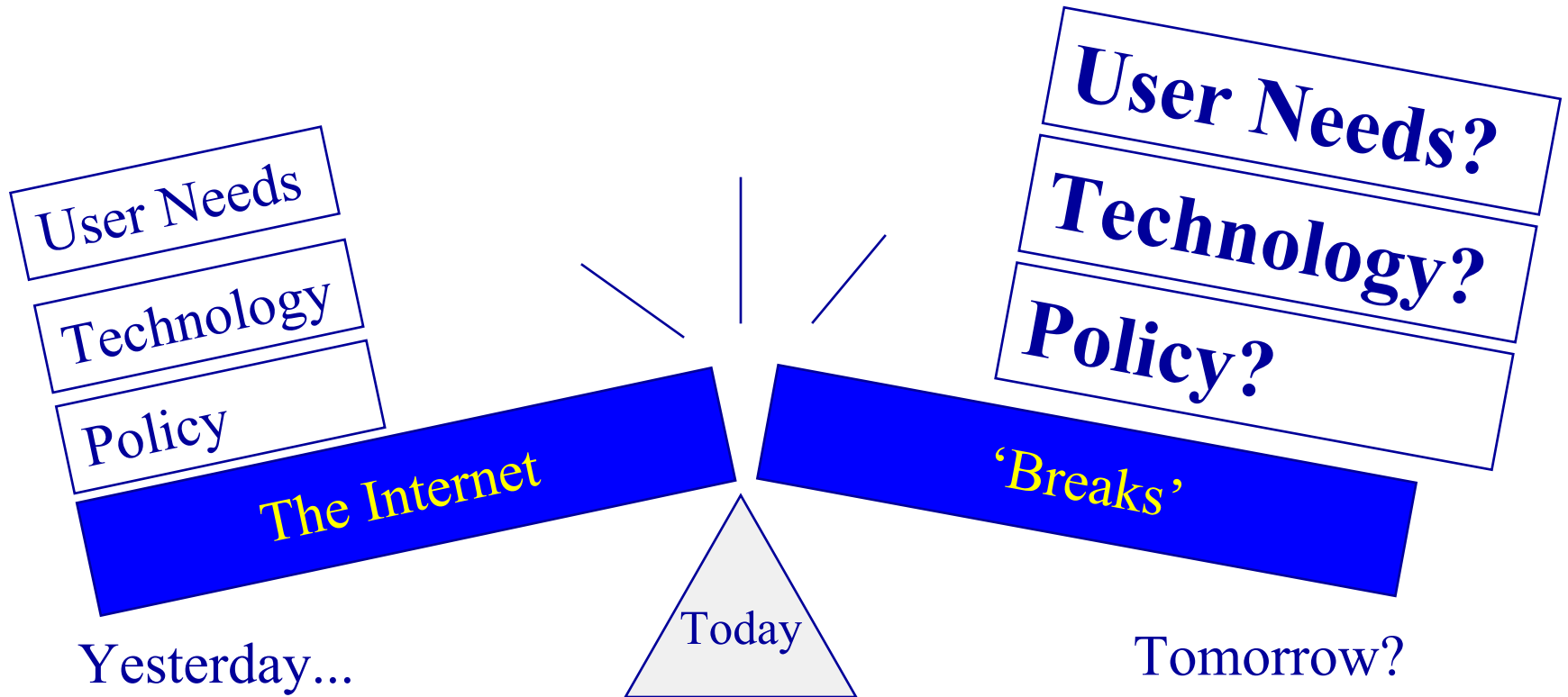
Internet Transactions (\$Billions)

- Goods and services traded between companies:
 - \$8 billion in 1999
 - \$327 billion in 2002

Source: Forrester Research



What is Failure?



What is Success? The Internet Keeps Growing Transparently

User Needs?
Technology?
Policy?

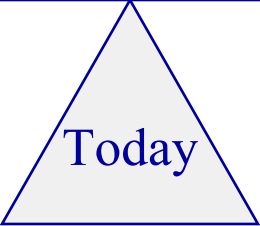
User Needs?

Technology?

Policy?

The Internet

Yesterday...



Tomorrow?

Lessons from the Experiment So Far?

- Global consensus is difficult to define; even harder to achieve
 - Consensus can be achieved in the technical community from which ICANN was created, because you can test options
 - Consensus on policy questions is elusive, because you can't rely on objective data



Part II: New Regional Internet Registries



What? Why? How? When?

- So you want to form a new Regional Internet Registry...
 - Why?
 - How?
 - When?
- Any Guidelines or Criteria?

Current Status

- Existing RIR's have produced a **draft** document
 - 'Criteria for the Establishment of New Regional Internet Registries'
 - DRAFT v 0.2 May 4th 2000
 - Comment?
- 10 Principles for Successful
 - Establishment
 - Operation

The 10 Principles (Draft)

- 1) The region of coverage should meet the scale to be defined by ICANN, given the need to avoid global address fragmentation.
- 2) The new RIR must demonstrate that it has the broad support of the LIRs (ISP community) in the proposed region.
- 3) Bottom-up self-governance structure for setting local policies.
- 4) Neutrality and impartiality in relation to all interested parties, and particularly the LIRs.
- 5) Technical expertise
- 6) Adherence to global policies regarding address space conservation, aggregation and registration
- 7) Activity plan
- 8) Funding model
- 9) Record Keeping
- 10) Confidentiality

Principle 1: Regional Coverage

The proposed RIR must operate internationally in a large geographical region of approximately continental size.

Each region should be served by a single RIR, established under one management and in one location. The establishment of multiple RIRs in one region would almost inevitably lead to competition amongst registries, which works strongly against the resource management goals of the registry system.

The establishment of a "distributed" RIR, with branches in multiple locations within a region, is also not supported, as it may lead to:

- fragmentation of address space within the region;
- difficulty for co-ordination and co-operation between RIRs;
- confusion for the community within the region;
- possible competition between separate branches of the same RIR, or else the creation, effectively, of two "sub-regions" within the region.

Principle 2: Broad 'Community' Support

Clear consensus must be demonstrated within the community that a very substantial majority of the ISPs in the region are prepared to support the new RIR. The community must state that it is interested in receiving services from this new RIR and that they are convinced the new RIR can and will provide this. The community must also show that it is willing to support this new RIR vigorously, not only with their active participation in its bottom-up development but also financially.

The new RIR must show that every effort has been made to contact and convince existing LIRs in their region to gather support for the establishment of a new RIR in this region (e.g. by way of archives of public mailing lists, web sites, records of contacts with individual LIRs).

Principle 2: Continued

It must be demonstrated that when established the new RIR's membership will include a significant percentage of the existing LIRs within the new RIR's region of coverage, specifically including those LIRs already receiving IP address registration services and/or other related services from an existing RIR.

This point is critical, as it may be difficult to "force" an LIR to go to a new RIR, if they are already being served by an existing RIR. At the same time it would not be logical for some LIRs to be getting address registration services from an existing RIR and others from a new RIR. Eventually, the entire region should be served by the new RIR and the existing RIRs must be able to propose to their customers from this region to migrate existing service agreements to the new RIR.

Relevance of Principle 2

34 African
Economies at
AFNOG?

Any One
Here from?

Algeria
Central African Republic
Chad
Djibouti
Guinea-Bissau
Ivory Coast
Libya
Sierra Leone
Somalia
Zambia
Zimbabwe

Principle 3: Bottom-Up Structure

The new RIR needs to have and to clearly document defined procedures for the development of resource management policies which may be implemented regionally, as well as those that may be recommended to the Address Council for consideration as global policies. These procedures must be open and transparent, be accessible to all interested parties, and ensure fair representation of all constituencies within the region.

These procedures should include holding at least one annual policy development meeting that is open and accessible to all interested parties. In addition to public meetings, the new RIR needs to maintain public archived mailing lists to discuss policy development.

Further, the new RIR should have the capability to undertake its responsibility to host an Address Council General Assembly Meeting, as described in section 5 of the ASO MoU.

Principle 4: Neutral and Impartial

All organisations that receive service from the new RIR must be treated equally.

The policies and guidelines proposed and implemented by the RIR need to ensure fair distribution of resources, and impartial treatment of the members/requestors.

The new RIR should be established as an independent, not-for-profit and open membership association.

Principle 5: Technical Expertise

The new RIR must be technically capable of providing the required allocation and registration services to the community in its region. Specific technical requirements include provisioning by the RIR of:

- production grade global Internet connectivity, in order to provide access to all services offered and for exchange of registry data to and from the other RIR-whois database server(s);
- DNS servers to support ReverseDNS delegation;
- suitable internal infrastructure for operational purposes; and
- enough technically capable staff to ensure appropriate service levels to the LIRs, and to the Internet community.

Principle 6: Adherence to Global Policies

Policies of the new RIR must be established to ensure that the main goals of the registry system, in particular conservation of IP address space and aggregation of routing information, are respected. Furthermore, local policies that are developed in addition to established global policies need to be consistent with these and other global policy goals. All RIR policies need to be fully documented and publicly accessible.

‘Internet Physics’

Principle 7: Activity Plan

With its application for recognition, the new RIR should provide a published activity plan containing activities that are clearly within the purview of an RIR, and which is explicitly supported by the community of organisations supporting the new RIR.

It is recommended that new RIRs should not restrict activities exclusively to IP address allocations and assignments (registration services). Traditionally, the neutral and independent nature of RIRs have encouraged their use by their communities for wider support, communication, education and/or co-ordination purposes. Activities provided by existing RIRs in addition to registration services include: technical training, public mailing list maintenance, information services, database maintenance, meeting organisation, and general liaison and co-ordination tasks. However, any such additional activities should always be supported by the RIR's membership as consistent with both the basic operating principles of RIRs and the interests of the members.

Principle 7: Continued

However, it is strongly recommended that the new RIR should not be involved in forward domain name assignment or administration, due to the entirely different user communities, geographic boundaries, policy environments, and business models which are involved. So different are the requirements of DNS and Internet resource related functions, that where located within one organisation, they would compete destructively for resources, or else be eventually partitioned into separate independent organisations.

‘Don’t Mix Numbers with Names’

Principle 8: Funding Model

As mentioned, the new RIR should be established as a not-for-profit association. A budget related to the activity plan must be drawn up and published, and should demonstrate explicit support from the community of organisations supporting the new RIR.

Initial sponsorship, government grants and private grants and/or donations are perfectly acceptable, but the RIR must be demonstrably independent and autonomous in its operations. For this reason, it is seen as inevitable that a new RIR would eventually be financially independent, and financially supported entirely by its membership

Principle 9: Record Keeping

All RIRs must maintain proper records of all registry activities, including the archiving of all information collected from LIRs in the process of making IP address space assignments. This data is needed for internal purposes (namely, the evaluation of subsequent requests from the same customers), and also to maintain the audibility of RIR operations, essential in demonstrating responsible and neutral operations.

As English is considered the official language of the registry system, all archival information should be kept in English. This is necessary to be consistent with the existing registry system and to communicate with other RIRs and with IANA.

Principle 10: Confidentiality

Information collected by a RIR in the registration process must be kept in strict confidence, and used for registration purposes only. It must be transmitted only to another RIR or IANA upon request, but will not be transmitted to any other party unless explicitly agreed to in writing by the LIR / ISP served.

RIRs may establish their own local standards and policies for confidentiality, providing that the basic confidentiality provisions are maintained.

Next Steps

- Ask yourself the basic questions
- ICANN ASO General Assembly
 - 19th May Budapest, Hungary
- ICANN is ‘Bottom-Up’
 - RIR Draft
 - Comment
 - When you are ‘ready’ submit a Proposal for Recognition
 - Sign the ASO MoU
 - Arrange a contract with ICANN

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For Further Information:

<http://www.icann.org>

JOIN! <http://members.icann.org>

email: pindar@hk.super.net

Thank You! ;)

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