APNIC FOO (Funding, Organization and Operation)

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Overview

- Background
- Funding
- Organization
- Operation

History

- Jan ‘92APNIC “Experiments”
- Aug ‘93 -- APNIC “Pilot Project”
- Apr ‘94 -- 202 and 203 Delegation received
- Jul ‘94 -- APNIC “Interim Project”
- Jan ‘95 -- First APNIC Meeting

Objectives of APNIC

- Provide Internet resource infrastructure
- Promote the establishment of:
  - AP Region Internet
  - National NICs
  - Service Providers

Requirements

- Appropriate allocations of Internet resources
- Maintenance of accurate registration records
- High availability of public databases
- Minimal obstruction to Internet growth

Funding - 3 Generic Proposals

- APNIC Goes Away
- APNIC Operates in Same Fashion
- APNIC Operates with Funding
  - Donations
  - Self-funding

APNIC Goes Away

- APNIC only exists to serve the AP region
  - If APNIC gets in the way, it should end
- Without a resolution to the resource issue
  - APNIC services will degrade as the AP Internet grows
  - APNIC will obstruct Internet growth

APNIC Operates in Same Fashion

- Current Situation
  - All volunteer labor
  - All donated facilities
- Paid job requirements means APNIC gets last priority
  - APNIC services will degrade as the AP Internet grows

APNIC Operates With Funding

- Where does the funding come from
  - Donations
  - Self-funding (Charging)
- How does the funding get to APNIC

Donation Model

- Most common model of operation
- Depends on generosity of contributors
  - Unstable in times of economic hardship
  - Tendency to promote bias
  - Can require significant time
- Can be stable given enough contributors

Donations - Who?

- Governments
  - InterNIC model
- Service Providers
  - RIPE model
- Other commercial organizations
- Others?

Charging Model

- Funds derived from selling something
  - IP resources
  - Time
  - Services
- Can be stable
  - depends on the market

Charging - Who?

- National NICs
- Service Providers
- Organizations
- Individuals

How to get the money

- The Problem:
  - APNIC is not currently a legal entity
- Solutions
  - APNIC incorporates
  - APNIC finds a proxy

APNIC Incorporation

- Where?
- Profit or non-profit?
  - Can depend on where
- Who are the officers?

APNIC Proxy

- Who?
- Fee for service?
- Legal issues?

Organization

- APNIC is currently fairly free form
  - “Project Manager”
  - “Consultative Committee”
  - “Regional representatives”
  - “Function managers” (e.g., DNS, Info, etc)
- Requires significant time contributions

Current APNIC Model

- Advantages
  - Cheap!
- Disadvantages
  - Very poor quality control
  - Highly variable services

Other Organization Models

- RIPE Model
  - Centralized RIPE-NCC staff
- InterNIC Model
  - Distributed functions
    - » Each sub-function centralized
- Others?

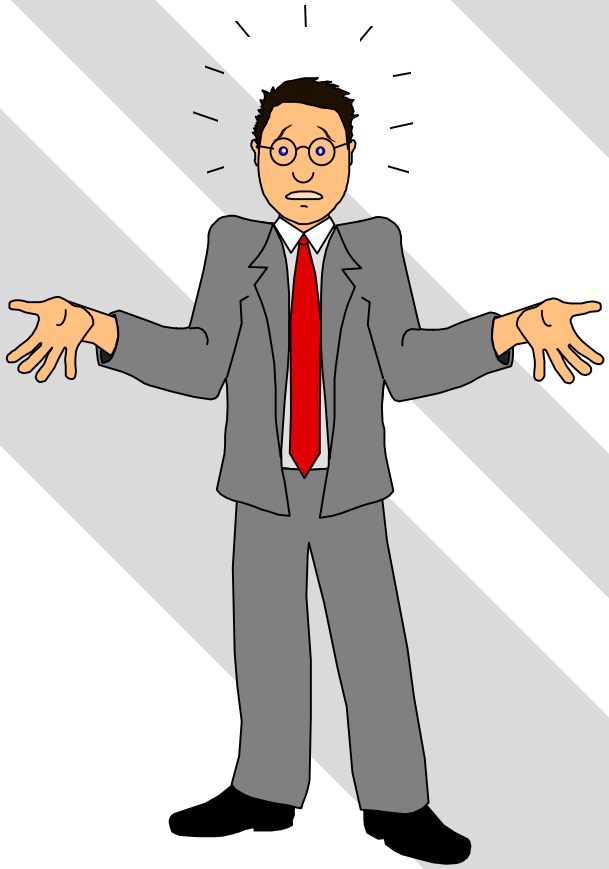
RIPE Organizational Model

- Centralized responsibility
- Advantages
  - High quality assurance
  - Coordination and redundancy not a problem
- Disadvantages
  - Requires significant funding
    - » RIPE Budget ~USD 500,000

InterNIC Organizatinal Model

- Distributed responsibilities, centralized functionality
- Advantages
  - High quality assurance per function
- Disadvantages
  - Expensive
    - » InterNIC Registration Services budget alone is USD 1,000,000+
  - Coordination and redundancy can be a problem

Other Models?



Operation

- IP allocation
- DNS
- Other

IP Allocation

- Requests come in and are broadcast to all APNIC representatives
- Single person does assignments (with consultation as necessary)
- Assignments (usually) occur within 1 week

Problems

- What if a representative is on vacation?
  - Assumes 100% coverage on a weekly basis
- What if the single person gets sick/runs away?
  - Assume single person has no life

Solutions

- Largely depend on the re-organization of APNIC
  - If funding exists, extra staff can be hired to handle requests
  - If volunteers exist, software will need to be modified
  - If APNIC goes away, it's InterNIC's problem.

Summary

- 3 possible funding solutions
- 3 possible organizational models
- Operational model depends on the funding and the organization