

# Perspectives on the Role of ccTLDs

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# An Extremely Brief History

- Original theory:
  - Global TLDs
    - COM/ NET/ ORG/ EDU
    - Two [US] Government Domains (GOV/ MIL)
    - Infrastructure/ transition (ARPA)
  - All purpose-specific
- Country-code domains added at request of UK to permit local administration/ use
- INT came later, originally at NATO request

# Role of DNS Names

- Identify network resources
  - Host machines
  - Special provisions for email
  - Maintenance and structuring records
- Intended to be deeply hierarchical

# RFC 1591

## Codified Established Practices

- Global TLDs still purpose-specific, but referred to as “generic”
  - EDU and GOV narrowed, ORG broadened, INT added
- ccTLD names bound to IS 3166
  - 3166-1 when standard was expanded with added parts
  - Some historical deviations (even after UK/GB)

# RFC 1591

## ccTLD Assumptions

- Managed primarily for in-country use and benefit
- Managed as a service, not a commercial enterprise
- Provide alternate policy models

# RFC 1591

## ccTLD Conditions

- Admin contact in country
- Trustee for nation and global internet community – responsibilities and service
- Fair and equitable registrations
- Agreement among concerned parties

# Dispute Resolution

## IANA stays out of the middle...

- Trademark issues: introduce disputing parties
- Determination of “country” left to IS 3166
- Determination of legitimacy tied to
  - Admin contact in country
- In-country disputes
  - Agreement of relevant parties
  - Fallback mechanisms
    - Seldom used; history of education

# A Changed Environment

- Explicit use of DNS names in Web URLs
  - Good idea for a prototype, lousy for global system
- Still no decent directory system for Internet
  - DNS does exact lookups only
  - Company and product names in URLs
  - Flattening the structure – high domain:host ratio
- DNS not well-suited for resource location in distributed-copy environment



# ccTLDs as Generic Domains

- Pose risk of confusion and trademark problems if not treated as generic domains
- But...treating internally-operated domains as generic/ global may
  - Unreasonably increase costs
  - Impose international regime where national one is more appropriate
  - Eliminate safeguards and checks of policy diversity

# Flattening the World

## Reversing 50,000 Years of Experience

- Once upon a time, single names, just “Og”
- Then the next cave was discovered...
  - “Og from cave by the river” and “... near mountain”
  - “Og son of Oop” and
  - “Og the wheelmaker”
- Developing uniqueness by attributes and classifiers

# The Return to Single-Level Names

- No more attributes or classifiers
- Og would be amazed  
probably even offended  
that we would think we could make this work

# Now we are going to make it *really* hard

- Need to make the Internet more international
- Must preserve global uniqueness of names
- Multilingual access to DNS
  - Need to encode names
  - Issues of coding, transliteration, and translation create new opportunities for name conflicts
  - Still no attribute or classification structure

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