The Very Very Short ccTLD Overview
The DNS is a hierarchical database used to translate “names” as used by you and I into “numbers” as used by computers.

- www.icann.org. > 208.77.188.103
  - Can also be used in reverse
  - 103.188.77.208.in-addr.arpa. > www.icann.org
<table>
<thead>
<tr>
<th>Level</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Root)</td>
<td>.</td>
</tr>
<tr>
<td>Top Level Domain (TLD)</td>
<td>ORG, UK, INT</td>
</tr>
<tr>
<td>Second Level Domain (SLD)</td>
<td>ICANN, CTU</td>
</tr>
<tr>
<td>(Other levels)</td>
<td></td>
</tr>
<tr>
<td>Hostname</td>
<td>WWW, NEWS</td>
</tr>
</tbody>
</table>

(FQDN) Fully Qualified Domain Name includes all layers (www.icann.org.)
TLDs

- Top Level Domains are the level directly under the “root”.
- ccTLD stands for Country Code Top Level Domain.
  - ISO-3166-1 defines those codes
    - Maintained by International Organization for Standards (www.iso.org)
    - Two letter codes are used for ccTLDs: HT = Haiti

www.nic.HT
• Architecturally all levels of the DNS hierarchy (except hostname) are very similar

• They vary in complexity and size but the fundamentals remain the same!
A dataset

- Registrants
  Which name (example.ht)
  Details of registrant
  Billing, DNS info, etc.

- Back Office

- Data

- DNS
  DNS Records
  Zone File

- Web, Whois
Operational vs Policy (simplified)

• Operational:
  – The people, systems and tools needed to collect, store and manage the zone and related data.
    • Do you have engineers
    • What Database software shall we use?

• Policy:
  – The rules under which the data is collected, stored and managed.
    • Who can register a name?
    • Who can access the data?
Operational Needs

• Facilities:
  – Buildings, Power, Connectivity

• People:
  – Engineers, Lawyers, Administrative staff.. Etc..
  Etc.

• Systems:
  – Routers, Switches, PCs, Servers, Software...

All the things any modern business needs
but with focus on databases and DNS
Policy needs

• A mechanism to make policy decisions
  – Some way to decide issue such as
    • Who can buy a domain name?
    • How much does it cost?
    • How do you settle an argument about a name?
• “Le bon Dieu est dans le detail”
  • Gustave Flaubert (1821-80)

• “The Devil is in the detail”
  • Ludwig Mies van der Rohe (1886-1969)

– We will get into more detail during the week!