

Ghana Network Information Center
(GhNIC)

Report on

Reform Process for .gh ccTLD

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1.0 Introduction

GhNIC has been in operation since 1997. In May 2001, GhNIC was incorporated as a not-for-profit company under the laws of Ghana to carry on the work of providing Network service for the development of the Ghana network infrastructure. GhNIC has managed the .gh domain name space with a technical contract with NCS to manage the technical management of the .gh.

In April 2003 after my training/duty tour with the World Wide Alliance of Top level Domain (wwTLD) in Bangkok as deputy executive director and representing GhNIC, the ccTLD Manager of .gh, Dr. Nii Quaynor, commissioned me to develop GhNIC into ccTLD organization for Ghana for which the control and management of .gh will be handed over to in line with current ccTLD best practice.

This document is a summary of the proposed changes to be made in the structure and management of GhNIC to make it more participatory and involve the larger Local Internet Community (LIC) in the efficient running of the registry.

The key reforms to be implemented includes expanding the existing board of directors to enhance the efficient running of the registry, a Policy Advisory committee (PAC) to develop technical policy for the organization and setting up of three operational departments for the day to day running of the Registry.

The key policy changes are the certification of registrars within Ghana to sell **.gh** domains, and an online registration facility for both the registry and registrars where possible. A hierarchical domain structures has been adopted for the effective management of the .gh name space. A Second Level Domain (SLD) policy has also been developed. A domain name dispute resolution policy in line with the ICANN's Uniform Dispute Resolution procedures, processes and procedures will also be implemented.

GhNIC is in the process of signing a contract with ICANN to delegate the management of .gh from the ccTLD managers to GhNIC. A website is been developed and will be launched as soon as the board approves of the new policies.

GhNIC will soon invite the proposed members of the GhNIC Board and PAC to approve the transitional procedures, processes and policies for the registry to take off early 2004 as the .gh ccTLD organization.

2.0 Registry Model

In order to implement the registrar – registry system, it would be necessary to adopt a registry model that will be appropriate. A **shared registry system** (SRS) gives some degree of competitiveness to registrars. In this case, the registry service is reduced to minimum to encourage service differentiation by registrars and established registrars may provide some immediate revenue, which can help with cost recovery of Registry Systems. In order to maintain a good database while building the necessary human capital for the effective management of the .gh database, it is proposed that a **thick** registry system be adopted for the three-year transition period. With a thick registry system, data is stored and maintained centrally rather than by the individual registrars. This system can be implemented using the EPP registry software by ISC, which GhNIC is deploying to enable online domain registration. In summary, GhNIC will operate a shared, thick registry system.

3.0 Domain Name Structure

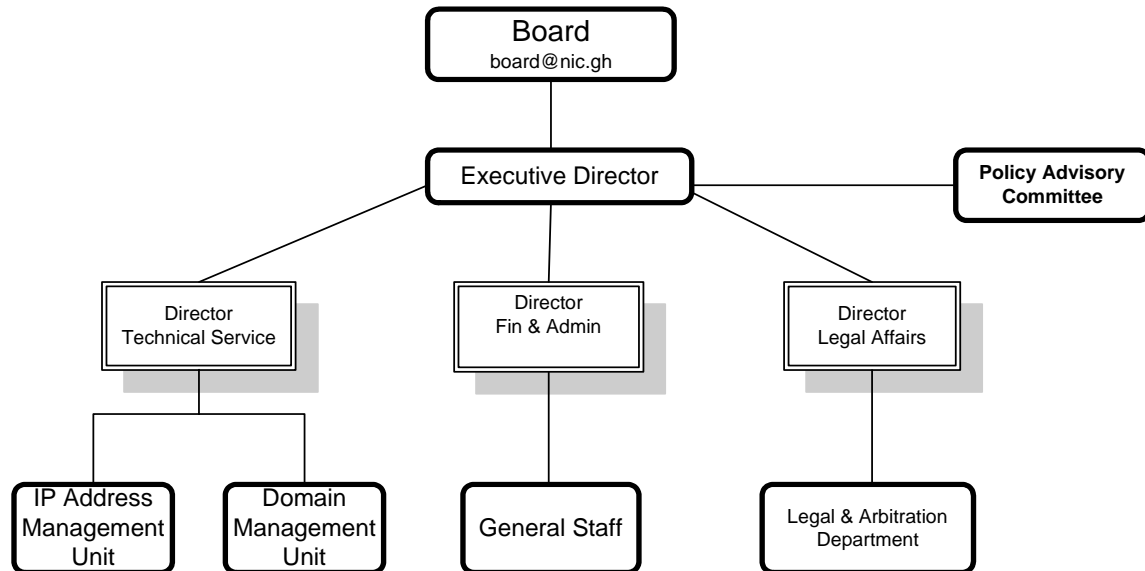
To date GhNIC has been implementing a mixed domain name structure. This means that domains are registered under the top level (.gh) as well as under the second level (.com.gh, .org.gh, .edu.gh etc.) . This practice is not consistent with ccTLD best practice across the nations of the world. A more consistent policy would be to adopt one of the two main structures. In the **flat structure**, domains are registered directly under the TLD i.e. .gh for Ghana. Canada (.ca) and Togo (.tg) practice this system. In the **hierarchical structure**, domains are registered under a second level domain. Many countries have adopted the generic top-level domain such as .com, .edu as the second level domain. For example .gh would have .com.gh, or .edu.gh. Other countries have adopted two-letter suffix as second level domains. For example the UK has adopted.co.uk or ac.uk for commercial and educational domains respectively.

Adopting a mix structure does not scale. Selecting one structure to replace the mix structure could be dicey. However, hierarchical structure has more advantages in that it offers more options for domain name registration. Hierarchical structure would be the best way to go. This means domain names registered under the flat structure would not be renewed after they expire. GhNIC would therefore adopt a **hierarchical** domain name structure for scalability because it offers a greater number of options for registration of domains.

4.0 Registry Structure

In order ensure an efficient and smooth running of the registry; a proper organizational structure needs to be put in place. These structures must be set in such a way as to ensure that domain names are registered fairly in view of the fact that the registry holds the .gh domain in trust for the people of Ghana. Of paramount concern is the need for enhanced participation of stakeholders in the industry and Local Internet Community (LIC). GhNIC intends to setup the following structures for the smooth and efficient running of the registry.

GhNIC Organograph



4.1 The Board

The board will be the highest-level decision-making body for the registry. The board would be responsible for approving all policies of the registry. Membership of the transitional board would be as follows:

- ❑ Current ccTLD manager - Chair
- ❑ GISP representative
- ❑ Internet users or users group
- ❑ Civil Society
- ❑ Academic and research Community
- ❑ Private Sector
- ❑ One member of registry(registrar) to be voted in at AGM
- ❑ Network Operators
- ❑ Registrar General (Ex-officio non-voting member)
- ❑ NCA Representative (Ex-officio non-voting member)
- ❑ Ministry of Communication (Ex-Officio)
- ❑ Executive Director – Member Secretary (non-voting)

The roles, functions and powers of the board have been enshrined in the GhNIC by-laws.

4.2 Policy Advisory Committee

The Policy Advisory Committee (PAC) will be the policy making body of the registry. The PAC will take policy inputs from the secretariat and public fora that the registry would organize from time to time. The PAC will submit its policy work to the board for approval through the Executive Director. The membership of the PAC would include the following:

- ❑ ICT Policy Development Specialist
- ❑ Current CcTLD Technical contact -chair
- ❑ GISPA Representative
- ❑ LIC Representative
- ❑ Network Operators
- ❑ One members of the registry voted into office at an AGM.
- ❑ Ministry of Communication

A full detail of the roles, functions, and power of PAC is enshrined in the GhNIC by-laws.

4.3 Membership

All .gh domain registrant will become automatic members of the registry from the coming into effect of the new procedures processes and policies. This membership would be an **ordinary membership**. A membership mailing list will be setup for managing membership. The Finance & Admin operational department will manage the membership. Registrars will also be **extraordinary members** of the registry. All members may participate in the Annual General Meeting (AGM) of the registry and are eligible to vote and to be elected to office in the registry. Ordinary members would have a single vote while extraordinary members would have three (3) votes. A full detail of the membership can be found in the GhNIC by-laws.

4.4 Secretariat

The GhNIC secretariat shall be the official place of business of the registry. An Executive Director, who will report to the board, is the head the secretariat. All GhNIC operations will be coordinated from the secretariat.

4.5 Operational Departments

The registry would operate under three operational departments: Technical, Finance & Admin and Legal.

The **technical department** to be headed by a director would be solely responsible for the technical management of the name servers.

The **finance & admin** department, headed by a Manager or Director, would be responsible to the management of the registry membership and all other secretarial duties as well as financial transaction

The **legal** department would be responsible for all legal issues in the registry including domain name dispute resolution.

5.0 Policy Framework

The registry shall be run by procedures, process and policies. A GhNIC Procedures, Processes and Policies handbook is attached to this document and will be basis for future discussion for changes as and when it becomes necessary and will go through approval by the board when changes are made.

Transitional draft policies have been developed in three area of the registry's operation:

1. Domain Registration
2. Registrar Certification Process
3. Domain Name Dispute Resolution

5.1 Domain Registration

GhNIC envisions that once the reforms are complete, domain name registration can be made online as well as offline. Domain name registration may be done directly by the registry or through GhNIC certified registrars. A **Ghana Presence Requirement** (GPR) has been created to define who qualify to register .gh domains and the presence in Ghana as a necessary condition for registration of domain names. A WHOIS server has been installed and would be linked to the GhNIC Website, which will be commissioned at the AGM. A prospective domain registrant would first check from the WHOIS to determine whether a domain name is taken or not. Once the domain is available, the registrant can now go ahead and register the domain either online or offline. Domain Name Registration Procedure and Policy Documents have been developed and would be made available on the GhNIC website.

Since the registry is adopting a hierarchical structure, a **Second Level Domain** (SLD) procedure and policy has been developed for registering geographic domains and limited number second level domains for identified group of user. This would also be made available on the website.

A **registrant Agreement** has also been developed to minimize domain name disputes.

5.2 Registrar Certification

Introducing the novelty of certifying some service providers in the industry to act as registrar for .gh domain name would require certain minimal qualification such as

knowledge of DNS. Once these basic qualifications are met, a service provider would be processed to become a registrar. The process involves a prospective registrar filing and sending out an online Expression of Interest (EOI) form to the Registry. A **GPR for Registrars** has also been developed for purpose of pre-qualifying prospective registrars. Once the registry studies this and finds the prospect to be qualified, the registry would send e-mail to the prospect who will now fill an application form (to be downloaded from the Web) and submit it in triplicate to the registry plus the application, registration and a deposit against domains to be registered in future. Upon certification, a registrar agreement is signed between the Registrar and the Registry. A full Registrar Certification Process has been developed and is available on the Website.

5.3 Domain Name Dispute Resolution

A GhNIC Domain Name Dispute Resolution Policy (DNDRP) and procedure has been developed to ensure efficient dispute resolution over domain names in the .gh namespace. The DNDRP was based on the ICANN Uniform Dispute Resolution Policy and WIPO Dispute Resolution Service has been appointed as a dispute resolution service provider. The policy stipulates that the registry will enter into informal dispute resolution initially but if the dispute were not resolved, then the service provider would be notified by the complainant for formal arbitration process to begin.

6.0 ICANN Contract

GhNIC has already initiated processes to sign a contract with ICANN for full recognition as a ccTLD Organization for Ghana. Under the contract, GhNIC will pay to ICANN an agreed amount in return for recognition. The current changes in the Global ccTLD constituency require the registry to join the new representative body, ccNSO, which is a constituency of ICANN.

7.0 Challenges

GhNIC intends to ensure that the .gh namespace is managed properly for the people of Ghana, which it holds in trust for and the global Internet community. Bringing stakeholders together to ensure that this objective is met, I believe, will make the registry's operation more transparent and fair. I believe that we will receive the full cooperation of all stakeholders in this regard. The herculean task would be to ensure we have a fully functional online registration system, which would be the first of its kind in sub-Saharan Africa. The registry, I believe is capable of managing this transition smoothly and efficiently.

8.0 Conclusion

Haven studied different registry systems around the world, I am confident that our modest attempt to develop a registry system along these lines would be successful. The onus is on all stakeholders to make the reforms work thereby making Ghana's already imprinted global footprints in ICT remains in the limelight.