THE NATIONAL CCTLD DISPUTES:
BETWEEN STATE ACTORS AND NON-STATE ACTORS

Y. J. Park

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Since 1985, non-state actors under Jon Postel's leadership have experimented creating virtual national spaces on the Internet through so-called "country code top level domain names" (ccTLDs). There are 251 ccTLDs on the Internet. In 1998, the Internet Corporation for Assigned Names and Numbers (ICANN) - the newly established coordination body for Internet addresses including ccTLDs - stressed out the principle of private sector leadership instead of public sector administration of Internet identifiers. ICANN's coordination of ccTLDs required state actors to comply with the principle of private sector leadership in a top-down manner. As of 2009, the question of how to govern ccTLDs is still disputed at the national level between state actors and non-state actors, with state actors starting to reassert their power over ccTLDs, ignoring the principle of private sector leadership recommended by ICANN. This study presents five different national ccTLDs dispute cases, to investigate why national ccTLDs disputes have increased after the establishment of ICANN and how are state actors trying to regain control over ccTLDs.

I. INTRODUCTION

Since 1998, state actors and non-state actors have competed for political authority over ccTLDs as soon as the Internet Corporation for Assigned Names and Numbers (ICANN) regime was established. This study was stimulated by the question as to why, especially after the establishment of ICANN, have a series of national disputes arisen, over who should administer ccTLDs.

There is no clear view on which principle ought to guide the awarding of legitimate political authority over ccTLDs, in the presence of competing candidates. Legitimacy of non-state actors came from Jon Postel's legacy, while that of state actors builds on their existing political authority as national governments.[1]

As of 2009, many state actors already reclaimed their sole political authority over ccTLDs.[2] In order to shed some light on the existing framework, this paper explains (1) how – before the onset of the ICANN regime - the symbolic identifiers of countries on the Internet, ccTLDs, were delegated and re-delegated by non-state actors, (2) how the power struggle between non-state actors and state actors has developed under the ICANN regime, and (3) how such tension between non-state actors and state actors in the global ICANN regime has influenced national ccTLDs disputes.

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[*] Y.J. Park is Senior Research Fellow of Economics of Infrastructures at the Faculty Technology, Policy & Management of the TU Delft. Park joined Delft University of Technology in 2008 after receiving her Ph.D in Information, Science and Technology at Syracuse University, USA.

[1] This raises the question of whether the power of state actors can be automatically extended from land to cyberspace.

[2] *See generally* Y.J. Park, The Political Economy of Country Code Top Level Domains (2008) (unpublished Ph.D. Dissertation, Syracuse University) (on file with author) [hereinafter Park, Political Economy] and Y.J. Park, *Administration of Virtual Countries: From Non-State Actors to State Actors*, 22 KOREAN JOURNAL OF POLICY STUDIES 1 (2008) [Park, *Administration of Virtual Countries*].

This paper further presents five case studies of national ccTLDs disputes between non-state actors and state actors over who should manage ccTLDs. After reviewing the five national ccTLDs disputes, it undertakes to investigate the role of ICANN, the role of regional ccTLDs associations, and the role of state actors in the increase of national ccTLDs disputes since 1998.

II. CCTLD AS CRITICAL INTERNET INFRASTRUCTURES[3]

In the real world, people are willing to pay more to live in a fancy neighborhood. They want to live in a nice district if they can afford it. Which factors are decisive in making one neighborhood nicer than others? This depends on (1) whether the neighborhood is convenient to get connected to other cities, (2) whether the neighborhood has a good infrastructure people can take advantage of by living in it, and (3) whether the neighborhood has a positive "brand image", making people associate its name to that of a nice neighborhood.

In the virtual world, an increasing number of people have become aware of the need to secure their own spaces on the Internet and they are willing to pay higher prices for fancy domain names. Some are willing to pay several millions of dollars for particular domain names on the Internet. The rules that determine what are the fancy domain names on the Internet seem to be similar with those of real world real estate industry. Namely, the value of a domain name depends on (1) whether the domain name is easy to remember and type in, (2) whether the domain name is managed by a company with a trustworthy infrastructure, so people can take advantage of it by using the domain name, and (3) whether the domain name has a positive brand image, with widespread awareness of the domain name's quality .

Domain names are not just simple identifiers on the Internet but Internet entities that enable people and institutions to exist in virtual countries. With the perception of domains as a kind of infrastructure in mind, country code top level domains (ccTLDs) operators compete with generic top level domains (gTLDs) operators, as well as other ccTLD operators, to attract more citizens under their own territories.[4] The infrastructure aspect of domain names on the Internet under ccTLDs has also drawn the attention of state actors, making them realize that these critical infrastructures are managed by non-state actors without previous agreement with national authorities.

III.   HISTORY OF CCTLDS

Non-state actors, i.e. groups of engineers and researchers, introduced, under Postel's leadership, the concept of ccTLD space for people or organizations in each nation or territory when they designed the cyberspace of the Internet in the early 80's. When it came to deciding which countries to include on the Internet, Postel decided to refer to the ISO 3166-1 list instead of the list of UN member states. This decision was later to lead to very complicated political and economic dynamics of ccTLDs administration. Postel was in charge of administering names and numbers on the Internet in the name of IANA until he died in 1998.

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[3] UN Internet Governance Forum (IGF) has organized workshop on Critical Internet Infrastructures in Rio IGF in 2007 and in Hyderabad IGF in 2008. Sharm el-Sheik IGF in 2009 will also revisit Critical Internet Infrastructures. However, more attention was paid to IP addresses and global governance of the Internet.

[4] *See generally* Park, Political Economy, *supra* note 2 and Park, *Administration of Virtual Countries, supra* note 2.

This section looks into (1) how Jon Postel allocated ccTLD resources to non-state actors from 1985 to 1998 and (2) how ICANN allocated and re-allocated ccTLD resources to state actors or non-state actors from 1998 to 2009 under the supervision of the U.S. government. It has been noted that ICANN allocated ccTLD resources to more state actors than non-state actors.[5] Allocation of ccTLD resources is called " delegation" of ccTLDs; re-allocation of ccTLD resources is therefore "re-delegation." of ccTLDs.

It has been 25 years since the first ccTLD, *.US*, was created in 1985. However, it was only in the last decade that users were able to recognize and use ccTLD spaces on the Internet. ccTLD space had originally been shaped, by non-state actors, as non-marketable, until ICANN was created in 1998. The number of ccTLDs fluctuated depending on the changes made on the ISO-3166-1 list. As of 2009, there are 251 ccTLD resources coming from ISO 3166-1 list and 250 ccTLD resources were delegated.

A. *Delegation of a ccTLD*

In the old days of Postel, "who should administer a ccTLD" was an implementation decision taken as part of a research project, except in some cases. Namely, as part of its experimental global research, Postel allocated a small number of ccTLDs to academics or researchers each year, without governments being aware of such research project related to symbolic identifiers for countries on the Internet.[6] Postel's delegation practice was later to cause a series of national ccTLDs disputes when governments finally learned that non-state actors administer ccTLD resources without any consent from state actors.

Based on his personal network, Postel appointed academics or researchers as ccTLD managers in each country or territory. As of 2009, documentation relating to Postel's decision-making process of is not publicly available.[7] Postel managed to delegate 240 ccTLDs from 1985 to 1998, until the U.S. government decided to intervene in global Internet governance in 1998. ICANN has since then delegated ten ccTLD resources including North Korea *.KP* (2007), while leaving Western Sahara *.EH* unassigned due to political tension over who should administer *.EH*.

B. *Re-Delegation of a ccTLD*

"Who should administer a ccTLD" therefore turned to be a political decision. When a request for re-delegation is submitted to ICANN, the following procedures are conducted. First, the Internet Assigned Numbers Authority (IANA) performs a thorough evaluation about the re-delegation requests by speaking to many affected parties, evaluating the change on a number of criteria[8] and writing a detailed report recommending a course of action to the ICANN Board.

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[5] *See generally* Park, Political Economy, *supra* note 2 and Park, *Administration of Virtual Countries, supra* note 2.

[6] Number of ccTLD Allocation: four ccTLDs in 1985; nine ccTLDs in 1986; eight ccTLDs in 1987;seven ccTLDs in 1988; eight ccTLDs in 1989; eleven ccTLDs in 1990; twenty-two ccTLDs in 1991; seventeen ccTLDs in 1992; twenty-three ccTLDs in 1993; twenty-two ccTLDs in 1994; thirty ccTLDs in 1995; thirty ccTLDs in 1996; forty-seven ccTLDs in 1997 and two ccTLDs in 1998

[7] It is, however, believed that Postel must have documented and maintained the details of his own decisions at the Information Sciences Institute of the University of Southern California where he worked as researcher.

[8]

Re-Delegation Criteria:

1. Operational and technical skills

Second, the ICANN Board makes a decision based on the IANA report. If re-delegation is approved by the ICANN Board, IANA first sends a request to change zone file to the Department of Commerce within the U.S. government for approval and then to VeriSign to perform the update.

According to ICANN's re-delegation record, there were twenty ccTLDs who went through the re-delegation process without further formal contractual relationship with ICANN and the U.S. Government.[9] ICANN identified twelve different re-delegation proceedings and introduced them at the 2003 ITU ccTLD workshop.[10] Out of twelve, nine re-delegation proceedings were strongly connected to national ccTLD disputes. The specific facts of each re-delegation case, however, were not publicly available due to political sensitivity.

IV. POWER STRUGGLE BETWEEN NON-STATE ACTORS AND STATE ACTORS IN THE ICANN REGIME

State actors and non-state actors contend to acquire political authority over ccTLDs.[11] It is hard to imagine two Presidents for one government. Likewise, it is also difficult to have two

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    a.   The prospective manager has the requisite skills to operate the TLD appropriately;

    b.   There must be reliable, full-time IP connectivity to the name servers and electronic mail connectivity to the operators;

    c.   The manager must perform its duties in assigning domains and operating nameservers with technical competence.

2. Operator in Country

3. Equitable Treatment

4. Community and Government support

    a.   The prospective manager has the requisite authority to operate the TLD appropriately, with the desire of the government taken very seriously.(ICP-1; GAC Principle)

    b.   Significantly interested parties in the domain should agree that prospective manager is the appropriately party to receive the delegation (ICP-1; RFC 1591)

See, e.g., IANA, REPORT ON DELEGATION OF THE .RS DOMAIN, AND REDELEGATION OF THE .YU DOMAIN (Oct. 4, 2007), *available at* www.rnids.rs/files/rs-yu-report-11sep2007.pdf (last visited May 15, 2009).

[9] Twenty Re-delegation Cases. In 2005: Tokelau (.TK, October 2005), Iraq (.IQ, July 2005), Kazakhstan (.KZ, July 2005), European Union (.EU, March 2005) Falkland Islands (.FK, January 2005), Timor-Leste (.TL, January 2005), in 2004: Faroe Islands (.FO, November 2004), South Africa (.ZA, November 2004), Libya (.LY, October 2004), Spain (.ES, September 2004), French Southern Territories (.TF, May 2004), Haiti (.HT, 13 January 2004), in 2003: Moldova (.MD, 22 October 2003), Cayman Islands (.KY, 30 June 2003), Palau (.PW, 30 June 2003), Tajikistan (.TJ, 30 June 2003), in 2001: Zaire (.ZR, 20 June 2001), in 2000: Canada (.CA, 1 December 2000) Palestine (.PS, 22 March 2000), Pitcairn Island (.PN, 11 February 2000).

IANA listed the following political problems of re-delegation at 2006 ccTLD Workshop. "(1) Governments lacking a legal or policy basis for closing down an organization (2) Governments seeking political control over the ccTLD (3) Disagreements between operator and government, or between government departments."

[11] ICANN was required

> [T]o develop appropriate relationships with other entities involved in the Internet's operation, to allow it to meet its technical-management responsibilities in a manner that ensures continued stable operation of the Internet. These entities include the managers of the ccTLDs as well as those governments of the affected countries or territories that are prepared to contribute to the overall coordination effort.

different political authorities for the symbolic identifier of a single country on the Internet, i.e. a ccTLD. Both non-state actors and state actors believe they should deserve political authority in the ccTLD and their race for political authority over ccTLDs started with the ICANN regime.[12]

A. Non-State Actors as Legacy (1998 – 2001)

Non-state actors drew on Jon Postel's legacy in seeking political authority over ccTLDs even under the new ICANN regime. Both state actors and non-state actors presented their positions regarding who should hold political authority over ccTLDs. Governments and non-state ccTLDs registries in Europe have been actively engaged in consensus building within the respective camps, to make their voices stronger vis-à-vis ICANN, who is competent to decide re-delegation requests (although subject to approval by the U.S. Government). State actors could present consolidated positions of power at the national level to support their strong desire to regain power over the corresponding virtual countries.

On the other hand, despite the initial advantage by virtue of direct designation by Jon Postel as technical authorities over ccTLDs, non-state ccTLD managers failed to reach consensus of their own. The positions of ccTLDs managers were diverse depending on their identities and strategies of how to handle ccTLD tension with state actors. They could not agree on things as easily as they wished. Non-state actors were also divided between those in support of their corresponding state actors instead of ICANN and the U.S. Government and those in support of the ICANN/U.S. Government system rather than their own corresponding state actors.

With little public recognition of governments' ultimate political authority over ccTLDs at the beginning of the power struggle, the Governmental Advisory Committee (GAC) managed to build consensus on ccTLD delegation and administration. Governments' concerns about ccTLD delegation and final authority over ccTLDs started to appear in its second Berlin GAC communiqué (May 1999).[13] GAC clearly stated governments are the final public authority in its third Santiago communiqué. (September 1999)[14]

March 2000 ICANN Meeting in Cairo: ccTLD Delegation and Administration Policies, http://www.icann.org/en/meetings/cairo2000/cctld-topic.htm. *See also* Memorandum of Understanding Between U.S. Department of Commerce and Internet Corporation for Assigned Names and Numbers (nov. 25, 1998), *at* http://www.icann.org/en/general/icann-mou-25nov98.htm (last visited May 16, 2009).

[12] In the ICANN regime, state actors work with other state actors through Governmental Advisory Committee (GAC) and non-state actors work with other non-state actors through ccTLD constituency and Country Code Names Supporting Organization (ccNSO).

[13] "Where the delegate of a ccTLD does not have the support of the relevant community, in the context of the ISO 3166 Code, and of the relevant public authority or government, that, upon request, ICANN exercise its authority with utmost promptness to reassign the delegation." ICANN, *Communiqué of the Governmental Advisory Committee*, May. 25, 1999, Berlin, Germany, *at* http://www.icann.org/en/committees/gac/communique-25may99.htm (last visited May 16, 2009).

[14]

> 1. The GAC reaffirmed its May resolution [Berlin communiqué] that the Internet naming system is a public resource and that the management of a TLD Registry must be in the public interest.

> 2. Accordingly, the GAC considers that no private intellectual or other property rights inhere to the TLD itself nor accrue to the delegated manager of the TLD as the result of such delegation.

On February 23, 2000, GAC presented the "Principles for Delegation and Administration of ccTLDs".[15] On February 24, 2000, the divided non-state ccTLD managers finally agreed to present the Best Practice Guidelines for ccTLD Managers of the Council of European National Top Level Domain Registries (CENTR, European Regional ccTLD Association) as a form of counteraction against GAC's proposal.[16]

On March 3, 2000, those who could not agree on CENTR's Best Practice presented an "Alternate ccTLD Best Practices Draft."[17] This second proposal placed strong emphasis on RFC 1591 and ICANN as legal authority, criticizing the fact that CENTR's first proposal had given little or no role to ICANN. The second proposal also expressed concerns in the lack, within CENTR's proposal, of a mechanism for enforcement and appeared to depend on the GAC draft for that purpose.

Non-state actors who felt threatened by state actors' claims over ccTLDs initiated the latter proposal. Drafting committee of the second proposal was composed of Nii Quaynor (Ghana *.GH* AFTLD founding member), Antony Van Couvering (President, IATLD), Perter DeBlanc (US Virgin Island *.VI*, NATLD founding member), Oscar Robles (Mexico *.MX*, LACTLD) and J. William Semich (Niue *.NU*, APTLD executive committee member).

Unlike CENTR's first proposal and GAC's proposal, the second proposal from ccTLD managers specifically suggested how to resolve disputes over ccTLD management. They recommended national ccTLD disputes should be resolved by ICANN acting by and through the Internet Domain Name Board (IDNB).[18] It is interesting to note that the majority of supporters of the second proposal were island ccTLDs and developing country ccTLDs.[19]

B. State Actors as Public Authority (2002 – 2005)

State actors emerged as ccTLD's political authority after ICANN failed to have contracts with non-state ccTLD managers. As of 2002, ICANN managed to establish only two ccTLD

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3. The GAC also reaffirmed that the delegation of a ccTLD Registry is subject to the ultimate authority of the relevant public authority or government. The GAC discussed the development of best practices for the administration of ccTLDs and agreed to continue this discussion.

ICANN, *Communiqué of the Governmental Advisory Committee*, Aug. 24, 1999, Santiago, Chile, *at* http://www.icann.org/en/committees/gac/communique-24aug99.htm (last visited May 16, 2009).

[15] *See* ICANN, *Principles for Delegation and Administration of ccTLDs presented by Governmental Advisory Committee* (Feb. 23, 2000)*, at* http://www.icann.org/en/committees/gac/gac-cctldprinciples-23feb00.htm (last visited May 16, 2009). *See also* GAC Statements Concerning ccTLDs, http://www.icann.org/en/cctlds/gac-statements-concerning-cctlds-16dec01.htm (describing its ccTLD battle from Singapore in March 1999 to Montevideo in September 2001).

[16] CENTR, Best Practice Guidelines for ccTLD Managers (2000) *available at* https://www.centr.org/main/lib/g6/2765-CTR.html (requires authentication) (last visited May 16, 2009).

[17] *See* Alternate ccTLD Best Practices Draft, http://www.icann.org/en/meetings/cairo2000/altbestpracdraft-v2-05mar00.htm.

[18] "The IDNB shall consist of no fewer than seven members to be appointed by ICANN. The members shall consist of [ccTLD managers, technical experts, nominees of the Names Council] A vote of at least 2/3 of the members shall be necessary to take actions." *Id.*

According to the letter from drafting committee of the second proposal, ccTLD Best Practices, 81 ccTLDs indicated they support continuation of RFC 1591 when queried in May 1999 but it was not clear whether 81 ccTLDs also endorsed the 2000 alternative proposal.

[19] This proposal, however, could not be developed further. Instead, the leaders of the second proposal decided to keep working with CENTR to incorporate their views in the process.

contractual relationship with Australia and Japan. Lynn, the CEO of ICANN, learned that it would be very difficult to have contractual relationship with ccTLDs if governments did not support it. Lynn's ICANN Reform initiative (2002) declared that governments have equal footing with ccTLD managers in the decision-making process. On the other hand, GAC got more organized in conjunction with the UN World Summit on the Information Society (WSIS) process. The UN WSIS (2003, 2005) recognized state actors as the final political authority over ccTLDs.

ccTLD managers, however, could still not agree on anything among themselves including issues of operating their own ccTLD secretariat for ccTLDs, of organizational structure for ccTLDs, and of collective positions on government. The ccTLD secretariat was designed to be independent of ICANN, however it became a part of the ICANN secretariat under ICANN's control as a result of conflicts among ccTLD managers. Europe and Asia Pacific were very competitive on who should operate the ccTLD secretariat and could not build a strategic cooperation between them. When the ccTLD secretariat was operated in Bangkok in 2002, lack of financial support to maintain it led to the failure of an independent ccTLD secretariat project.

C. State Actors in Power (2005 – 2008)

State actors regained their political power in the cyberspace. The perception of national governments as holding final political authority over ccTLDs got clearer. Many ccTLD managers used to recognize Internet Assigned Numbers Authority (IANA) as their political authority on ccTLD matters, as opposed to their own government. Especially after the UN WSIS, governments emerged as the political authority for ccTLDs with little resistance. This in turn led to an increasing power of the GAC in the ICANN decision-making process despite what should be, in principle, a merely advisory status.

At first, ICANN supported non-state actors by placing high emphasis on the principle of private sector management. GAC strongly objected to this. ICANN later supported governments by recognising government to be a critical stakeholder and national authority in the ICANN process. ICANN furthermore used GAC's principles for delegation and administration of ccTLDs.[20]

ICANN's ambiguity over the issue of political legitimacy of ccTLD control resulted in inconsistent behavior when state actors and non-state actors litigated for political authority at the global level. ICANN's hesitation was repeated in national ccTLD disputes. ICANN was situated in the middle between non-state actors and state actors. However, ICANN's 'play-by-wind strategy' in national ccTLD disputes allowed it to gaining political legitimacy as de-facto global coordinator.

V. TRIANGULAR DYNAMICS OF NATIONAL CCTLD DISPUTES

As of 2009, OECD member states and BRIC countries (Brazil, Russia, India, China) resolved their national ccTLD disputes.[21] However, many ccTLDs in Africa, Asia and Latin America still deal with ongoing national ccTLD disputes between non-state actors and state

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[20] GAC expressed its appreciation in its tenth Montevideo communiqué (September 2001) that "the GAC appreciate the ICANN using the GAC Principles for Delegation and Administration of Country Code Top Level Domains as a useful guide in matters associated with agreements between ICANN and ccTLDs".

[21] *See generally* Park, Political Economy, *supra* note 2 and Park, *Administration of Virtual Countries, supra* note 2.

actors that often invite ICANN as a global ccTLD coordinator. This section looks into triangular dynamics among state actors, non-state actors and ICANN in terms of national ccTLD disputes.

National ccTLD disputes present the following questions. Can a ccTLD manager as non-state actor claim that he has legitimate rights to manage the ccTLD? Can a government as a state actor claim that state actor should have legitimate rights to manage the ccTLD for public interests? Is ICANN in a position to solve this political dispute between a ccTLD manager and a government on who should hold political authority over a ccTLD?

ICANN has tried to establish itself as legitimate global ccTLD coordinator among state actors and non-state actors by coordinating national ccTLD disputes, even though the role of ICANN in the national ccTLD dispute is still in dispute. ICANN is a *de facto* global coordinator for national ccTLD disputes, which often leads to political debates. Some argue that ICANN as a *de facto* coordination body should exercise its power over national ccTLD disputes. Others counter-argue that ICANN is merely a technical coordination body so it should not trespass its natural boundary.

The current practice of ICANN's global coordinator role in national ccTLD disputes raises the following questions (1) whether ICANN is capable of solving the political disputes as technical coordination body, (2) whether ICANN is willing to solve the political disputes by taking the risk of getting involved in national politics, (3) whether ICANN should delegate such political coordination to other existing UN bodies or work with other existing UN bodies to lessen the risk.

In many cases, non-state actors in national ccTLD disputes are highly respected scientists or researchers in their countries so the national ccTLD disputes become more complicated when such highly respected scientists confront government. National ccTLD disputes reach a climax when a ccTLD manager rejects the re-delegation initiative of his or her government. In so doing, non-state actors would believed that their global private authority regime, ICANN, would support them in their conflict with national governments. ICANN did so mostly when dealing with politically weak state actors, such as the Niue government.

National ccTLD disputes between state actors and non-state actors became more evident when ICANN promoted its principle of private sector leadership.[22] On the other hand, ICANN had no choice but to recognize state actors as political authority in order to increase state actors' participation in the ICANN regime protecting non-state actors' role as decision-makers. This led to ICANN's records of inconsistent decisions depending on the political situation of each dispute.

If a government seems determined to take over its ccTLD ignoring ICANN's authority as global coordinator, ICANN accepts the reality. In reality, ICANN has no legally binding power when it comes to ccTLD coordination. When the government of South Africa took over its ccTLD, ICANN could just observe. Initially, the *.ZA* ccTLD manager thought the ICANN community would have backed him up. It never happened. If a government accepts ICANN's authority, ICANN decides to get involved with the national ccTLD disputes more actively.

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[22] ICANN, *Bylaws*, *at* http://www.icann.org/en/general/bylaws.htm#I. According to ICANN's Bylaws, the principle of private sector leadership is recorded as one of ICANN's core values. "While remaining rooted in the private sector, recognizing that governments and public authorities are responsible for public policy and duly taking into account government's or public authorities' recommendation." *See also* MILTON MUELLER, RULING THE ROOT (MIT Press, Boston 2002).

However, as of 2009, the details of the ccTLD dispute negotiation are not available in public for sovereignty matters.

VI.   CASE STUDIES OF NATIONAL CCTLD DISPUTES

Most state actors deal with their own national ccTLD dispute as a matter of sovereignty, so the details of each state's national ccTLD dispute have not been publicly available. In reviewing the different ccTLD re-delegation reports written by IANA, this paper adopts a triangular analytical tool (1) how ICANN as a global coordination body reacted to each national ccTLD dispute, (2) how regional ccTLD associations reacted to the national ccTLD dispute of a member country and (3) how state actors reacted to their national ccTLD dispute. The following five cases of national ccTLD disputes of the Philippines, Kenya, Nigeria, Ukraine, and Libya are presented.

A. Case Study of Philippines

Almost every nation at some point after ICANN's establishment encountered, or is encountering, the issue of who owns the ccTLD. The Government of the Philippines is no exception. In 2001, the Philippine government started to investigate how their national domain name on the Internet was operated. The ccTLD registry has been marketing *.PH* as an extension for "PHONE", without previous government consultation. Like many developing countries, the Philippine government had a hard time understanding how the ccTLD managers of its country operate *.PH* in their individual capacity without approval from the government.[23]

In 2004, exchanges of views on who should operate *.PH* between Joel Disini, *.PH* ccTLD manager, and interested parties from Philippines illuminate how the ccTLD manager of *.PH* felt that the ccTLD should be managed in a market-driven perspective, without government intervention, while the other side argued that the ccTLD manager had no rights to run the registry.

> Mr. Disini cannot run the domain name as a business. What is his investment in the domain name? Practically nothing. It's not that he would like to paint it that he put up a business and the government is trying to take it away from him, it's not the case here, he was appointed care taker of something basically it is not even the property of anyone.[24]

> DotPH services are world-class. Either Mr. Yu doesn't realize that running DotPH like a business means making life easy for consumers; or he hasn't taken the time to really look at all that DotPH offers. Domain buyers have a choice - PH or COM, NET, ORG, INFO, BIZ, etc. The domain market is highly competitive; people look for the best deals, quickest service, robust

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[23] NTC   Draft   Guidelines, http://www.domains.ph/news.asp?more=http://registrarnews.ph/dotphnews/archives/000230.html#more. According to NTC's draft guidelines in January 2004, government noticed the power to decide who should run ccTLDs coming from IANA/ICANN.

[24] Winthrop Yu, Philippine Internet Commerce Society, *quoted in* Press Release, dotPH, dotPH Comments on Business World Article, *available at* http://dotph.domains.ph/news/dotph-comments-on-business-world-article (last visited Dec. 3, 2004).

and reliable operations - they can't afford to have their email or websites go down.[25]

Joel Disini, ccTLD manager of *.PH,* kept fighting back against his government, asserting that the government has no sovereign right over the national ccTLD, in his additional comments on the guidelines in March 2004. "The Government does not have sovereign rights over the *.PH* domain. Asserting such rights violates the principle by which Top Level Domains are operated." It brought up controversy on who owns such right over *.PH* in Philippines. Is it Joel Disini? He later clarified that government claimed ownership rights first but there is no such concept according to ICANN. ccTLDs fit better within a framework of analysis based on the concepts of "responsibilities" and "service", rather than "sovereign power" or "ownership".

In March 2005, Disini published two open letters to Secretary Virgilio Peña, Chairman of the Commission on Information and Communications Technology (CICT). Disini expressed his concern that ccTLD operation under government's oversight would result in "mom-and-pop" operation, criticizing the government's unlawful attempt to take over a well-running ccTLD. In that letter, he highlighted that running a ccTLD registry is mainly a technical function, rejecting the idea for state actors to take up a role in this context.

As of 2009, *.PH* has been run as a private company despite serious concerns in its profit-seeking management model. ICANN as global coordinator made no effort to solve this ccTLD dispute. Asia Pacific Top Level Domain Names (APTLD), a regional ccTLD coordinator, did not make any effort to get involved with the *.PH* situation, understanding this national dispute as a sovereign matter. Unlike most national ccTLD disputes, state actors suddenly stop the dispute.

During the Rio IGF in 2997, Alan Alegre, ICT activist from Philippines in the UN WSIS and IGF process, asked a question to a panel in the course of a ccTLD workshop whether there is a global Internet community's self-regulatory mechanism to address this issue of national ccTLD disputes. No one in that panel could answer that question. Alegre also shared his concern that civil society in the Philippines has made every effort to persuade government to regulate the *.PH* administration for the public; government officials, however, later decided to support Disini's position. however some of government officials later decided to work with Disini.

B. Case Study in Kenya

Kenya *.KE* was delegated to Dr. Shem J. Ochuodho (Kenya) as administrative contact and Randy Bush (United States) as technical contact in 1993. It was not uncommon, with respect to developing countries, to delegate the technical contact to someone. In May 2000, Kenya's government launched an initiative to form an entity located in Kenya to manage both the administrative and technical functions of the *.KE* ccTLD registry. The Kenya government learned that ccTLDs have become increasingly complex for one person to single-handedly manage such resources. Instead, a suitable organization for ccTLD management should be established under the government's support.

In 2001, the Kenya Network Information Center (KENIC) was set up by the government. KENIC attempted to have a dialogue with then ccTLD administrative contact on re-delegation. There was no response from the administrative contact. KENIC representatives contacted IANA to formally request re-delegation of *.KE* from the current administrative contact to KENIC in June 2002.

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[25]   Press   Release,   dotPH,   dotPH   Comments   on   Business   World   Article,   *available   at* http://dotph.domains.ph/news/dotph-comments-on-business-world-article (last visited Dec. 3, 2004).

        IANA forwarded KENIC's request to Dr. Ochuodho for his comments. Dr. Ochuodho was uncooperative.[26] The Permanent Secretary of the Kenyan government's Ministry of Transport and Communications wrote to ICANN to reiterate the Kenyan government's recognition of KENIC as the appropriate entity to manage *.KE*. KENIC was delegated as KE registry in December 2002. The Kenya government then endorsed the ccTLD contract with ICANN.

        In case of the *.KE* national ccTLD dispute, ICANN was heavily involved and supported the re-delegation request from state actors expecting them to later sign a contract with ICANN, which they did. However, Africa Top Level Domains (AFTLD) did not get involved with *.KE*'s national ccTLD dispute believing it to be a sovereign matter. Like many state actors in Africa, the government of Kenya was very determined to restore its power over the ccTLD.

C. Case Study in Nigeria

        Nigeria *.NG* was delegated to Ms. Lyabo Odusote from Yaba College of Technology, Lagos, (Nigeria) as administrative contact and Mr. Abraham Gebrehewit, from IAT, Pisa (Italy) as technical contact in 1995. In March 1998, IANA received two expressions of interest to re-delegate the *.NG* to Nigeria Telecommunications Limited, PTT (NITEL) but also to Nigeria Internet Group (NIG).[27] The Nigeria Internet Group (NIG), a non-profit organization, has asked for re-delegation once again in March 2003. However, Ms. Odusote, then ccTLD administrative contact, did not support the request and wrote to ICANN that the composition of NIG's Board of Trustees did not reflect diverse stakeholders of Internet community in Nigeria.

        CEO of ICANN, Paul Twomey, asked both parties to convene a stakeholders' meeting of the Internet community in Nigeria to resolve the issue in August 2003. The first meeting was hosted by the Science and Technology Minister, Prof. Turner Isoun, with officials of NIG and the National Information Technology Development (NITDA) in October 2003. Ms. Odusote was absent. The second meeting was hosted in November 2003 and 22 people participated in the consultation meeting. Out of 22 attendees, 17 were from NIG, NITDA, and the Science and Technology Ministry. Ms. Odusote attended the meeting but soon abandoned it, criticizing that people in the meeting did not adequately represent the Internet community.

        NIG President, Mr. Ekuwem, CEO of Telecom International Limited, a broad band Internet Service Provider (ISP) in turn criticized Ms. Odusote who was then associated with the Nigeria Computer Society (NCS). NCS President, Mr. Nwanenna sent another protest letter to ICANN CEO and President of Nigeria, President Obasanjo in Dec 2003.[28]However, the Nigerian Government, through the Federal Ministry of Science and Technology, recognized the National IT Development Agency (NITDA) as the appropriate delegee for the *.NG* ccTLD and expressed

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        [26] *See* ITU, *Case Study on .KE ccTLD Redelegation*, ccTLDs Doc 35 (Workshop on Member States' Experiences with ccTLD, Geneva, Mar. 3-4, 2003), *available* at www.itu.int/itudoc/itu-t/workshop/cctld/035r1_ww9.doc (last visited May 16, 2009). Technical contact was not cooperative in this process. "Randy Bush in January 2003, without notice or consultation with the KENIC administration, declined to process any .KE registrations. Mr. Bush's lack of transparency in the technical operations of ccTLDs put ICANN's redelegation policies on the spotlight. KENIC reinstated domain name registration services in Feb 2003." *Id.*

        [27] *See* IANA, REPORT ON REDELEGATION OF THE .NG TOP-LEVEL DOMAIN (Jun. 10, 2004), *available at* www.iana.org/reports/2004/ng-report-10jun04.html (last visited May 15, 2009). The details of the records are not available as of 2006 "because those requests happened before the formation of ICANN."

        [28] *See* Sonny Aragba-Akpore, *Dispute Rages Over Nigeria's Internal Domain Name*, GUARDIAN, Dec. 29, 2003.

an interest to have NITDA formally recognized by ICANN as the delegee for the .NG ccTLD in Dec. 2003.[29] No further protests were recorded and the re-delegation of *.NG* was processed in June 2004.

National ccTLD disputes often provide opportunities for the involved parties to evaluate the best model in operating a ccTLD registry. The Internet community of Nigeria woke up when *.NG* was disputed. Registration service for *.NG* was hosted by CNUCE in Pisa, Italy from 1995 – 2000.[30] It was then transferred to Randy Bush of the Network Startup Resource Center as the technical contact. The transfer made people in Nigeria question the following critical issues pertinent to their national infrastructure: (1) whether the country is ready for a technical contact in Nigeria and (2) whether the country is ready for operating at least one domain name server (if not a primary one, at least a secondary one) for their TLD.[31] Despite concerns expressed by the Nigerian Internet community, the technical contact point is still in the USA and their name servers are located in South Africa, United States, Sweden and Antarctica as of 2006. They used to be located in South Africa, United States, Sweden and Australia.

In case of the *.NG* national ccTLD dispute, ICANN was also active in the dispute in the role of coordinator. However, AFTLD was not involved in the dispute for the same reason as in the *.KE* dispute. State actors in the *.NG* national ccTLD dispute were very willing to restore their power over the ccTLD, but they were also very eager to comply with the ICANN's rule on multi-stakeholder governance.

D. Case Study in Ukraine

Ukraine *.UA* was frozen for a while when Dmitry Kohmanyuk, the ccTLD manager of *.UA*, fled Ukraine's ailing economy for the West. Taking advantage of such a vacuum, Sluzhba Bezpeki Ukraini (SBU), the security service of Ukraine and successor of the KGB, wanted to take over *.UA* operation and asked for re-delegation from ICANN in 2001. However, Kohmanyuk expressed his concerns in the SBU as an appropriate entity to run the *.UA* ccTLD. Kohmanyuk officially has control of the domain name registration of *.UA* through ICANN, with a group of volunteers in the U.S. and Ukraine, and has expressed willingness to give up ccTLD management responsibilities, but only to a service based on the Internet principle of nondiscrimination, and open to everybody. In light of this, he has viewed with SBU with skepticism.

As of today, both the administrative contact, Dmitry Kohmanyuk, and technical contact, Igor Sviridov (Mountain View, California) are based in USA and not in Ukraine. ICANN is not responding to the SBU's re-delegation request for political reasons. As of 2009, *.UA* managements has not joined any regional ccTLD association. Even though state actors are very willing to control their own ccTLD, *.UA*, they have no power when ICANN refuses to take action to redress the situation.

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[29] Unlike other redelegation contests, .NG delegation seemed to be also involved with competition among ministries within the Nigeria Government.

[30] *See* African Domain Names – Malawi, http://www.afridns.org/mw. CNUCE threatened to pull the plug on the country's domain by the end of August, 2000. The Nigerian Government believes a local ISP may be capable of taking over. But unless arrangements can be made within the next month, the .NG domain may go offline.

[31] *See* Untangling the Nigerian Top Level Registration Palaver, http://www.jidaw.com/itsolutions/itnigeria2.html

E. Case Study in Libya

Libya *.LY* disappeared from the Internet on April 7th, 2004 due to the failure of the master name server.[32] That drew attention from the world, suspecting the accident might have been a political manipulation on the part of the U.S. Government. The reason, however, turned out to be a battle between a self-claimed *.LY* ccTLD administrative contact, Dr. Tayeb, a resident of Tunisia, and Lydomains.com based in the UK, selling Libyan domain names. Dr. Tayeb initially asked Lydomains to operate *.LY* domains on behalf of him. The name servers of *.LY* are based in the UK and run by a UK company, Magic Moments. Lydomains had been the main sales point for several years and claimed substantial authority over *.LY*.

The *.LY* ccTLD was first delegated to Mr. Khalil Elwiheishi at the Alshaeen for Information Technology as administrative and technical contact in 1997. When ownership of the *.LY* domain came under dispute in 2002, the designated institution, Alshaeen for Information Technology, no longer existed. According to Dr. Tayeb, he was a member of Alshaeen's board and he later set up the Alfoursan International Company with headquarters in Tripoli in 2000, to whom he claimed control over the *.LY* domain had moved after the disappearance of Alshaeen.

Lydomains had a commercial strategic relationship with Magic Moments, which run name servers of *.LY*, thereby giving Lydomains effective control over the *.LY* domain. Dr. Tayeb, on the other hand, asked Magic Moments to work with him rather than with Lydomains. Faced with competing requests, Magic Moments decided to duck out of the battle and stop its server from answering requests for *.LY* domains. Knowing of this decision shortly before Magic Moments turned off its servers, Lydomains emailed its customers blaming IANA. "The ccTLD, *.LY* has made repeated official requests to IANA to relocate the name servers to an independent environment to ensure the continued operation of the *.LY* zone. Unfortunately, these requests so far have been declined by IANA."

Dr. Tayeb sent out an email on April 14, in which he explained that he was in charge of *.LY* and everything was fine. It came from a Tunisian email address.[33] He also attempted to join CENTR but was refused in February 2002. *.LY* was finally re-delegated to General Post and

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[32] "Minimal functionality was restored when the last good copy of the .LY zone was slaved by the former master name server to a master." "The proposed delegee began offering name service for .LY domain on 10 May on a limited basis." To date (Oct. 18) their servers have responded well to the load." ICANN – Approved Board Resolutions, http://www.icann.org/minutes/resolutions-18oct04.htm (Oct. 18, 2004).

[33]

> Dear all,
>
> Thank you very much for your concern about .LY ccTLD. People do care around! Concerning the actual situation, we have assigned a new root service company that will deliver a better service to the code country of Libya. We have informed IANA to do the technical modification necessary. And we are waiting for IANA to do necessary modification and very soon the www.nic.ly will be active and if you need any more information you can contact me and I will be glad to answer any question.
> Let me remind you guys that everything that is related to the management of .LY ccTLD is done through www.nic.ly Network Information Center of Libya.
>
> Sincerely yours,
> Dr. Hosni Tayeb .LY ccTLD caretaker"

Kieren McCarthy, *Dr Hosni Tayeb and the case of the disappearing Internet*, THE REGISTER, Apr. 16, 2004, *available at* http://www2.theregister.co.uk/2004/04/16/why_libyanet_fell/page2.html (last visited May 16, 2009).

Telecommunication Company (GPTC) by IANA in October 2004. According to IANA report on re-delegation on.*LY*, ICANN received an expression of interest to re-delegate the *.LY* to GPTC in 2003. The request was supported by the Libyan Government which recognized GPTC as the appropriate delegee: GPTC is the national operator and regulator for all the telecommunications services in Libya.

      Unlike *.UA*, ICANN was willing to take action to re-delegate *.LY* to one of the government agencies in Libya. AFTLD was not involved with the national ccTLD dispute at all. State actors were, finally, very actively seeking to restore their power over their ccTLD.

VII. CONCLUSION

      This paper set off from the issue of why the creation of ICANN has led to more national ccTLD disputes since 1998. For this purpose, the main three reasons can be provided. First, ICANN could not hold consistent positions in dealing with national ccTLD disputes. This inconsistency, in turn, increased tension between state actors and non-state actors. Second, regional ccTLD associations also decided not to engage with national ccTLD disputes. Therefore, non-state actors, while all being members of regional ccTLD associations, ultimately had to deal with state actors' attempt to take over their ccTLDs individually. Third, many state actors rejected the principle of private sector leadership.

A. Political Coordination of the ICANN Regime with National ccTLD Disputes

      In dealing with the national ccTLD dispute in Philippines, ICANN stuck to the position that ICANN has no power to be engaged in *.PH* ccTLD disputes. The government of Philippines has brought up two issues associated with *.PH* in 2001 to justify taking over *.PH*: First, "whether DotPH has engaged in pricing-setting detrimental to consumers and second whether the 'value-added' features introduced by DotPH, specifically expanding the country domain *.PH* to be also the 'phone' domain is disadvantageous to the Philippines."[34]

      In the case of national ccTLD disputes in Ukraine, ICANN claimed once again not to have any power to engage in the *.UA* ccTLD dispute, due to the political nature of the local situation. ICANN asked the government of Ukraine to solve the problem on their own. As of 2008, both administrative and technical contacts are based in USA and the government of Ukraine has no possibilities to solve this problem without global coordination of ccTLD disputes.

      As we learned from the *.PH* ccTLD dispute and the *.UA* ccTLD dispute, it is hard to predict the outcome of ccTLDs negotiations with ICANN, due to the political nature of such negotiations. It is also difficult to predict when ICANN delegates its own coordination capacity to the local Internet community in solving their ccTLD disputes. ICANN's passive reaction to the ongoing ccTLD dispute has the effect of protecting existing arrangements, i.e. the so-called "Postel's legacy" situation. All in all, it therefore seems that ICANN does exercise its political coordination power, sometimes actively and sometimes passively, in making decisions over who should administer a ccTLD.

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[34] The .PH ccTLD registry was bound by the jurisdiction of the Department of Trade and Industry (DTI) according to the E-Commerce Law and the Consumer Act in 2001.

B. Passive Regional Country Code Top Level Domains (ccTLDs) Association

Non-state actors have attempted to defend themselves from state actors' intervention by forming regional ccTLD interest groups. However, such effort turned out to be unsuccessful except in Europe. For the sake of convenience, ccTLDs are divided into five regions and each region has their own interest groups to represent itself in the ICANN process.[35] CENTR, the European regional ccTLD group, has been showing its leadership in coordinating the global ccTLD process.

Why has CENTR been comparatively successful in sustaining non-state actors' independent role while non-state actors from other regions have no choice but to accept state actors' intervention one by one as we confirmed in the five national ccTLD dispute case studies? In case of ccTLD managers in Asia, non-state actors tried to cope with such pressures from governments.[36] Such effort, however, was not simple at all. The following reasons have contributed to the failure of ccTLD regional body coordination, especially in Asia.

First, the Government-centered political culture: Most governments of OECD countries in the 90's did not pay attention to the Internet, possibly, because they did not know the implications of domain names as a critical infrastructure of the Internet. Governments were also unaware of the fact that the Internet Assignment Numbers Agency (IANA) in the United States maintains a non-state-actor ccTLD administrators' list.[37] Tension started to increase after governments came to know there is an official record of its own ccTLD administrators' database maintained by ICANN and the U.S. Government, without consultation with the corresponding governments. Even though governments were not ready to take over ccTLDs technically in the late 90's, state actors from a more government-centered political culture started to recognize ccTLDs should belong to governments instead of private parties.

Second, Government funding was involved: When a ccTLD was first delegated to a researcher in each country in Asia, it was usually operated as a purely academic research project under national governmental funding. If such an operation grew bigger, it was commissioned to one of the related sub-governmental bodies through coordination between the researcher and its corresponding government. Lots of public services have lately been provided through sub-

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[35] Asia Pacific Top Level Domain (APTLD) for Asia Pacific region, Council of European National Top-Level Domain Registries (CENTR) for Europe, Latin America Top Level Domain (LACTLD) for Latin America, Africa Top Level Domain (AFTLD) for Africa, and North America Top Level Domain (NATLD) for North America.

[36] Under *.KR* administrator's leadership, Kilnam Chon, ccTLD administrators in Asia Pacific region made attempt to organize collective action against governments' pressure to transfer their rights to administer country code top level domains to the governments.

[37] This concern was addressed in the 1997 OECD report.

> A growing number of issues are emerging for government consideration as the Internet community introduces reform to cope with the rapid expansion of access to the network and proliferation of services. At the same time, to date, most OECD governments have not played a leading role in Internet governance. In large part this s because 'rights of governance' have been inherited from the Internet's historical origins in the academic community and not from law makers in the same way as many other communication services in the recent past… Policymakers are also conscious of the fact that premature regulation by government may impede the development of a dynamic part of global information infrastructure. This does not mean, however, that governments should not look toward reforms being introduced by others to see if they are consistent with national and international communication policy objectives.

OECD, *Internet Domain Names Allocation Policies*, OCDE/GD(97)207 (OECD, Paris 2007), *available at* www.oecd.org/dataoecd/12/11/2091363.pdf (last visited May 16, 2009).

governmental organizations in Asia, and the ccTLD service has been no exception, either. Taiwan *.TW*, China *.CN*, Malaysia *.MY*, Japan *.JP*, Korea *.KR*, Singapore *.SG* were commissioned to one of the sub-governmental bodies without tension between state actors and non-state actors before ICANN was set up.

Third, each country had a different institutional arrangement of country code top level domains and had different relations with its corresponding government.[38]

Fourth, every country had different tensions and backgrounds depending on personal negotiation style and reactions from government: *.SG* (Singapore)'s ccTLD administrator was apolitical and did not want to be involved in a power game. He himself turned in Singapore *.SG* and helped SGNIC's technical operation. Korea *.KR*, Taiwan *.TW*, China *.CN*, and Japan *.JP* have been managed by sub-governmental body making reports to superior governmental body. However, some ccTLD administrators may develop tension with people from the government especially when ccTLD administrators have a clear identity as non-state actors. Based on such personal relations between ccTLD manager and government officers, each country ended up with different institutional arrangement for ccTLDs.

Fifth, lack of cooperation among ccTLD managers: Asia Pacific regional division made this situation more complicated than it was within more like-minded groups in Latin America or in Europe.[39] Australia *.AU* and New Zealand *.NZ* had less tensions with their corresponding governments with more emphasis on private sector leadership based on mutual consensus. Some ccTLDs from Asia had serious tensions with governments about the latter's involvement. Other ccTLDs from Asia had no tension at all since ccTLD administration already belonged to state actors. Additionally, when it comes to ccTLDs, management of the top level domain is often recognized as a purely sovereign issue that managers of other national ccTLDs or other governments cannot intervene in. This led to a lack of cooperation among ccTLDs managers in the context of national ccTLD disputes.

Sixth, lack of political experience: ccTLD managers under pressures from their governments had two choices. First, a ccTLD manager could recognize his own government as a legitimate political authority for the ccTLD, accepting a reduction of its prerogatives by working as an agent of the government. Alternatively, a ccTLD manager might refuse to "back down" and undertake litigious confrontation with his own government under international pressure of the private sector management mantra. Usually those who chose the second option out of their lack of political experience ended up with stronger government intervention, along with their diminishing role in DNS management.

C. State Actors' Strong Wills to Control ccTLDs

National ccTLD disputes are closely related with the degree of state actors' willingness to control their own ccTLDs. State actors usually view ccTLDs as a critical infrastructure with

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[38] Before APTLD was set up, .VN (Vietnam) and .KH (Cambodia) were already taken over by the government. Unlike .VN administrator, .KH ccTLD administrator, Norbert Klein, a German living in Cambodia, has shared his concern in the ICANN how technically inefficient Cambodia government forcefully made him give up the delegated rights to administer .KH ccTLD and charge unreasonable price for domain names for its people.

[39] .AU (Australia) and .NZ (New Zealand) actively involved in shaping APTLD from the beginning. Due to constraint of English language barrier in the meetings and reserved personal styles of ccTLD administrators in Asia, APTLD's leadership has been dominated by those two country codes unless there are proactive members in Asia. Their political culture is more similar to Anglo-Saxon style rather than reserved Asian one. They are also actively involved in CENTR's process.

security implications. State actors became more determined to control their ccTLDs after realizing that such critical infrastructure, was not managed by state actors, and was instead left to non-state actors, without seeking previous approval on the part of the former. As we have seen, every state actor wants to administer ccTLDs despite the principle of private sector leadership promoted by ICANN. As observed from Nigeria ccTLD (*.NG*), some governments including Brazil (*.BR*) are willing to compromise with the principle of private sector leadership by creating a multi-stakeholder governance ccTLD administration model, albeit always under the leadership of state actors.

After looking into five different national ccTLD disputes, it is possible to conclude that the strength of a state actor's desire to administer its national ccTLD appears to have the greatest bearing on its ultimate delegation, together with securing ICANN's cooperation with the state actor's plan. When this has not occurred, instead, governmental initiatives have obtained little success, proving the difficulty in implementing a state actor's plan without ICANN's cooperation as global coordinator of DNS.

Table 1: National ccTLD Disputes

	.PH	.KE	.NG	.UA	.LY
ICANN, Global Coordinator	No	*Yes*	*Yes*	No	*Yes*
Regional ccTLD Association	No	No	No	No	No
State Actor's Wills	Yes→No	*Yes*	*Yes*	*Yes*	*Yes*
Outcome of Dispute	Non-State	State	State (Multi-Stakeholder)	Non-State	State

When state actors have a strong will to administer ccTLDs, the lid is lifted over the issue of whether private sector ought to manage an infrastructure deemed to be crucial for the. Governments often claim that the domain name system is a public resource, and that final authority over such resource ought to rest with the government. In 2004, the French government made a very strong point about that at the ITU's workshop. "The ccTLD is held to be a public or collective resource that cannot come under the heading of private property and must be managed in the general interest, and that governments in the final instance have authority over the ccTLDs pertaining to their territory."[40]

VIII.   CHALLENGES AHEAD

National disputes over ccTLD ownership got more complicated by tensions associated with global leadership. Even though non-state actors and state actors compete for political authority at the national level between themselves, both state actors and non-state actors are not ready to accept ICANN as the global coordinator for 251 ccTLDs, including their own ccTLD, especially when the U.S. government plays the role of a supervisor for ICANN alone.

For the past ten years, most state actors were occupied with resolving their own national ccTLD disputes with or without ICANN's coordination. After building on national consensus on how to manage their own ccTLDs - either respecting Postel's non-state actor legacy or

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[40] ITU, *Arrangements for the management of ".fr"*, ccTLD Doc 34-E (Workshop on Member States' experiences with ccTLD, Geneva, 3-4 March 2003), *available at* www.itu.int/itudoc/itu-t/workshop/cctld/cctld034_ww9.doc (last visited May 16, 2009).

restructuring ccTLD management under government's leadership - state actors are finally able to pay more attention to global coordination of ccTLDs. During the WSIS and IGF, state actors addressed the U.S. government's sole veto power in regulating ICANN, a *de facto* Internet regulation body.

This paper focused on national ccTLD disputes, while leaving global disputes on how ccTLDs should be delegated and re-delegated untouched. How to coordinate ccTLD delegation at the global level was one of main debates among state actors in the UN WSIS from 2003 to 2005. The challenge of global ccTLD coordination was implicitly transferred to the Internet Governance Forum from 2006 to 2010 in a multi-stakeholder environment. However, debates on global ccTLD coordination have not yet been staged at the Internet Governance Forum as of 2009.

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