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# Business Rule Variance: .TV/.CC Legacy to Consolidated TLD

Version 1.0



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# Contents

Business Rule Variance: .....	1
.TV/.CC Legacy to Consolidated TLD .....	1
CONTENTS .....	3
FIGURES .....	4
1. INTRODUCTION .....	5
1.1 Terms and Acronyms .....	5
1.2 References .....	5
1.3 Purpose .....	6
1.4 Audience .....	6
2. BUSINESS RULE VARIANCE ANALYSIS .....	7
2.1 Introduction .....	7
2.2 High-Level Variances of Underlying Platforms .....	7
2.3 Provisioning Command Business Rule Variances .....	18
2.4 Resolution and Zone Generation Business Rule Variances .....	20

## Figures

Table 1: Supported Provisioning Protocols .....	7
Table 2: Thick and Thin Registry Support .....	7
Table 3: Registry IDN Encoding Support.....	8
Table 4: Domain Transfer Support .....	8
Table 5: Domain Auto-Renewal Behavior .....	8
Table 6: Variable Pricing For Domains .....	9
Table 7: Matrix of support for IP address functionality across platforms .....	9
Table 8: Communication Encryption.....	10
Table 9: CTLD EPP Domain Status Definitions .....	11
Table 10: CTLD RRP Domain Status Definitions.....	13
Table 11: EPP to RRP domain status mapping in CTLD .....	13
Table 12: .CC Registry Domain Statuses .....	15
Table 13: .TV Registry Domain Statuses .....	15
Table 14: CTLD Host Status Definitions.....	16
Table 15: Grace Period Variances .....	17
Table 16: Pending Period Variances.....	17
Table 17: Zone Generation Frequency Variances .....	20

# 1. Introduction

## 1.1 Terms and Acronyms

VNDS	VeriSign Naming and Directory Services
CTLD	Consolidated Top-Level Domain, a platform being launched by VNDS to support provisioning of many TLDs through a common interface.
ccTLD	Country Code Top-Level Domain: top-level domain assigned to a country, e.g. .TV.
gTLD	Global Top-Level Domain: top-level domain without regional assignment, e.g. .COM.
TLD	Top-level domain, encompassing both gTLDs and ccTLDs.
SDK	Software Development Kit, likely including various language SDKs, documentation and example code.
API	Application Programming Interface, a component of an SDK that provides compiled or source libraries for integration to specific programming language platforms.
SRS Plus	Shared Registry System Plus, a legacy SDK provided by the .TV Registry for provisioning domains in the .TV ccTLD.
RRP	Registry-Registrar Protocol, a standard protocol for provisioning domains.
RRP SDK	A software package used by programmers to integrate RRP using simple function calls rather than low-level RRP protocol commands.
CORE	Existing platform offered by VNDS for provisioning .COM and .NET domains.
IDN	Internationalized Domain Names: names provisioned or resolved using character sets other than traditional ASCII.
HTTP	HyperText Transfer Protocol – an optionally stateful client-server communication protocol on top of TCP/IP.
SSL	Secure Sockets Layer – a scheme for encrypting and authentication two-party network communications.
HTTPS	SSL-secured HTTP.
GPG	GNU Privacy Guard – A Public Key Encryption Scheme implementation of PGP. <a href="http://www.gnupg.org/">http://www.gnupg.org/</a>

## 1.2 References

The following documents are referenced herein and provide supporting documentation of the systems we are comparing.

RRP 2.1.2 Technical Specification	The technical specification for RRP. Available to registrars at: <a href="http://www.verisign.com/products-services/naming-and-directory-services/naming-services/com-net-registry/page_001047.html">http://www.verisign.com/products-services/naming-and-directory-services/naming-services/com-net-registry/page_001047.html</a>
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Production Registrar SDK version 2.1.0	The SDK for integrating RRP. Includes software libraries and user guides. Available to registrars at: <a href="http://www.verisign.com/products-services/naming-and-directory-services/naming-services/com-net-registry/page_001047.html">http://www.verisign.com/products-services/naming-and-directory-services/naming-services/com-net-registry/page_001047.html</a>
SRS Plus Toolkits	The SDK and supporting documentation for provisioning names through the .TV Registry. Available to registrars at: <a href="http://www.srsplus.com/en/srsplus/partners_dev_library.shtml">http://www.srsplus.com/en/srsplus/partners_dev_library.shtml</a>
CTLD Product Guidebook	A User Guide for provisioning names through the CTLD Platform, including documentation of business rules, protocols and procedures. <a href="http://www.verisign.com/stellent/groups/public/documents/guides/016282.pdf">http://www.verisign.com/stellent/groups/public/documents/guides/016282.pdf</a>
Registrar Reference Manual, version 2.2	A User Guide for provisioning .COM and .NET names through the CORE Platform, including documentation of business rules, protocols and procedures. A useful reference for RRP and business rules, since the CTLD platform will emulate most protocols and business rules in place in CORE. <a href="http://www.verisign.com/Resources/COM_NET_Registry_Resources/index.html">http://www.verisign.com/Resources/COM NET Registry Resources/index.html</a>

### 1.3 Purpose

The purpose of this document is to analyze the differences in business rules between the legacy .TV and .CC Registry systems compared to the Consolidated TLD platform's business rules. The goal is to clarify the upgrade path for registrars and internal users from the legacy systems to the CTLD system. The functionality of the legacy .TV and .CC Registries is being phased out by VeriSign in conjunction with the launch of the Consolidated TLD (CTLD) Platform. The CTLD Platform offers a consistent interface for numerous TLDs and is intended to replace the disparate legacy interfaces and systems that registrars must deal with today.

### 1.4 Audience

The audience for this document is software developers and support personnel planning to upgrade their software from using legacy .TV and .CC interfaces to the CTLD interfaces.

## 2. Business Rule Variance Analysis

### 2.1 Introduction

This section analyzes each function or use-case offered by the system and examines the differences in business rules associated with each. Full documentation of the business rules of the CTLD system is provided in the various documents listed in the *References* section of this document. This document does not attempt to enumerate all business rule variations, only to highlight important differences that may prove to be stumbling blocks in the upgrade process.

### 2.2 High-Level Variances of Underlying Platforms

There are many differences between the TV and CC legacy systems and the CTLD system. Highlights of these differences include: Changes in supported provisioning protocols, removal of “thick” registrant data and variable domain pricing, changes in grace and pending periods, and the support of domain transfers.

#### 2.2.1 Provisioning Protocols

Legacy systems provisioning protocols will be replaced by several offerings from CTLD. Full documentation of the protocol variances between systems is provided in the various documents listed in the *References* section of this document.

.CC	.TV	CTLD
RRP 1.1.0	RRP 1.4.1 SRS Plus API	RRP 2.1.2 EPP 1.0 over TCP/SSL EPP 1.0 over HTTPS

**Table 1: Supported Provisioning Protocols**

#### 2.2.2 Thick and Thin Registries

The .TV Registry system supports “thick” data; it allows the provisioning and association of registrant contacts for domains. The legacy .CC system operates in the “thin” registry model. The CTLD platform also uses the “thin” model; no registrant data is stored in the CTLD Registry. The registrar is required to manage and publish all registrant contact and whois information.

.CC	.TV	CTLD
THIN	THICK	THIN

**Table 2: Thick and Thin Registry Support**

### 2.2.3 IDN Provisioning

The CTLD platform and RRP SDK support provisioning of punicode-encoded ASCII domains with a “language tag” flag within the provisioning protocols. This document will not detail the nuances of managing or encoding these different IDN representations. ACE-encoded domains supported by the legacy registries will no longer be supported by CTLD. Existing ACE-encoded multilingual domains will be migrated at CTLD launch.

	.CC	.TV	CTLD
<b>Encoding</b>	ACE	ACE	Punicode
<b>Resolution</b>	URL-redirection as registry service	URL-redirection as registry service	Redirection via client plug-in

**Table 3: Registry IDN Encoding Support**

### 2.2.4 Domain Transfer

The .TV Registry does not support registrar-to-registrar transfers. The CTLD platform does support this. The legacy .CC Registry supports transfers, and there are no substantial business-rule variations between legacy and CTLD transfer processes. Details of domain transfer business rules can be found in the Product Guidebook, cited in the *References* section of this document.

.CC	.TV	CTLD
YES	NO	YES

**Table 4: Domain Transfer Support**

### 2.2.5 Domain Auto-Renewal

The .TV Registry supports optional auto-renewal of domains. As such, a domain may be deleted by the registry upon expiration when auto-renewal is not selected. The CTLD platform requires auto-renewal and never deletes domain names, except by request of the managing registrar. Details of domain auto-renewal business rules within the CTLD and .TV Registry systems can be found below, in the *Grace and Pending Periods* section, as well as in supporting documents cited in the *References* section of this document.

.CC	.TV	CTLD
REQUIRED 45-day delete grace period	OPTIONAL No delete grace period	REQUIRED 45-day delete grace period

**Table 5: Domain Auto-Renewal Behavior**

### 2.2.6 Common Web Administration Interface

The .TV and .CC implementations offer various web interfaces to allow registrars to perform provisioning commands, construct and view reports and the like. The CTLD

system supports a full-featured web administration interface available as a component of the Namestore Customer Console.

## 2.2.7 Variable Pricing For Domains

The .TV Registry and SRS Plus support variable pricing for domains, or “premium names”. This support means additional function calls to query and submit prices for domains. The CTLD platform and RRP SDK do not support variable pricing for domains: each registrar has a single price for a domain.

.CC	.TV	CTLD
NO	YES	NO

**Table 6: Variable Pricing For Domains**

## 2.2.8 IP Address Variances

The .TV implementation only supports one IP address per host, the .CC implementation supports up to 13 IP addresses per host. Additionally, all legacy implementations have a unique constraint on IP addresses, such that only one unique IP may be used for any hosts within the registry. The legacy registries do not support IPv6 IP addresses. The CTLD platform does support provisioning of IPv6 addresses, although inclusion of IPv6 addresses in the DNS zone will not be rolled out until a future release.

	.CC	.TV	CTLD
<b>Multiple IP addresses per nameserver</b>	YES	NO	YES
<b>IP address must be unique within registry</b>	YES	YES	NO
<b>IPv6 Provisioning</b>	NO	NO	YES
<b>IPv6 Resolution</b>	NO	NO	NO

**Table 7: Matrix of support for IP address functionality across platforms**

## 2.2.9 Communication Encryption

Legacy RRP interfaces require SSL encryption with client-certificate authentication. Additionally, SRS Plus (for .TV) uses PGP encryption (typically implemented as GNU Privacy Guard, or “GPG”) for authentication and encryption of commands. The CTLD system’s provisioning interfaces also require encryption with client-certificate authentication. CTLD provisioning interfaces require a 128-bit client certificate issued by VeriSign or Thawte. Legacy implementations accepted 40-bit certificates or better. The CTLD system will validate the certificate’s common name against a common name optionally provided to the Registry. If no common name is on record at the Registry, no CN validation is done.

	.CC	.TV	CTLD
<b>PGP</b>	NO	Yes, with SRS Plus API	NO
<b>SSL/Client Cert</b>	YES	YES	YES
<b>SSL cert requirements</b>	40-bit+	40-bit+	128-bit+ issued by VeriSign or Thawte
<b>CN verification</b>	NO	YES, with PGP/SRS Plus	Optional

**Table 8: Communication Encryption**

## 2.2.10 Domain Statuses

Domains and associated domain status codes exist in a one-to-many relationship. That is, a domain name may have more than one associated status at any given time, although some domain statuses are by definition mutually exclusive. The Registry may change the status of all registered domain names, while registrars may only change the status of domain names that they have registered.

The CTLD system supports both RRP and EPP provisioning interfaces. Domain status codes differ widely between RRP and EPP. This document outlines the statuses provided by both interfaces. It is important to note that the underlying CTLD system stores statuses using the EPP conventions, and that the RRP statuses are emulated using a mapping algorithm. Full status documentation is available for each provisioning protocol in documents referenced within the *References* section.

### 2.2.10.1 Domain Statuses within CTLD/EPP

EPP Status values that can be added or removed by a client are prefixed with "client". Corresponding status values that can be added or removed by a server are prefixed with "server". Status values that do not begin with either "client" or "server" are server-managed. More than one status may be set for a domain at one time. The following statuses are available within the CTLD EPP provisioning interface:

<b>Status</b>	<b>description</b>
OK	This is the normal status value for an object that has no pending operations or prohibitions. This value is set and removed by the server as other status values are added or removed.
clientDeleteProhibited serverDeleteProhibited	Requests to delete the object <b>MUST</b> be rejected.
clientHold serverHold	DNS delegation information <b>MUST NOT</b> be published for the object.

clientRenewProhibited serverRenewProhibited	Requests to renew the object MUST be rejected.
clientTransferProhibited serverTransferProhibited	Requests to transfer the object MUST be rejected.
clientUpdateProhibited serverUpdateProhibited	Requests to update the object (other than to remove this status) MUST be rejected.
redemptionPeriod	Object has been removed from the registry, but is eligible for restoration using the <restore> command.
pendingDelete pendingTransfer pendingRestore	<p>A transform command has been processed for the object, but the action has not been completed by the server. Server operators can delay action completion for a variety of reasons, such as to allow for human review or third-party action. A transform command that is processed, but whose requested action is pending, is noted with response code 1001.</p> <p>With one exception, transform commands MUST be rejected when a pendingDelete or pendingTransfer status is set. The only exception is that a &lt;transfer&gt; command to approve, reject, or cancel a transfer MAY be processed while an object is in "pendingTransfer" status.</p> <p>When the requested action has been completed, the pendingDelete or pendingTransfer status value MUST be removed. All clients involved in the transaction MUST be notified using a service message that the action has been completed and that the status of the object has changed.</p>

**Table 9: CTLD EPP Domain Status Definitions**

The following prohibitions apply for combining EPP statuses, other status combinations not expressly prohibited MAY be used.

- "ok" status MUST NOT be combined with any other status.
- "pendingDelete" status MUST NOT be combined with either "clientDeleteProhibited" or "serverDeleteProhibited" status.
- "pendingTransfer" status MUST NOT be combined with either "clientTransferProhibited" or "serverTransferProhibited" status.
- The pendingDelete, pendingTransfer status values MUST NOT be combined with each other.

## 2.2.10.2 Domain Statuses within CTLD/RRP

The Registry currently provides the following status codes through the RRP interface:

Status	description
ACTIVE	Domain is unencumbered by restrictions or other statuses. Domain name in this status may be modified by the Registrar of Record and will appear in the appropriate Zone file if there is at least one name server associated with the domain name.
REGISTRY-LOCK	The domain name may not be modified (except by the VeriSign NDS to modify the REGISTRY-LOCK status), transferred, or deleted by the registrar. Registry must remove the REGISTRY-LOCK status for the registrar to modify the domain. When the domain name is in this status, it may be explicitly renewed, and is included in the Zone file if the domain has at least one associated name server.
REGISTRY-HOLD	The domain name may not be modified (except by the Registry to modify the REGISTRY-HOLD status), transferred, or deleted by the registrar. Registry must remove the REGISTRY-HOLD status for the registrar to modify the domain name. When the domain name is in this status, it may be explicitly renewed, but is NOT included in the Zone file.
REGISTRAR-LOCK	The Registrar of Record for the domain name sets the domain name to this status. If a domain is under REGISTRAR-LOCK, then a registrar cannot modify, transfer, or delete the domain name and any child name servers. The Registrar can still explicitly renew the domain in this status. The REGISTRAR-LOCK status of the domain name will first need to be removed by the Registrar of Record to return the domain to the ACTIVE status before it can be modified, transferred, or deleted. When a domain is on REGISTRAR-LOCK it is included in the Zone files if the domain has at least one associated name server
REGISTRAR-HOLD	The Registrar of Record for the domain name sets the domain name to this status. Domain names placed under REGISTRAR-HOLD are treated the same as domain names placed under REGISTRAR-LOCK; however, the domain name is NOT included in the Zone files.
PENDING DELETE	This status is set by the Registry once the 30 day Redemption Period is concluded. This status lasts 5 calendar days. This status cannot be removed by the Registry or Registrar. Domain names in this status are pulled from the zone file and will be deleted. A domain name in this status cannot be redeemed.

PENDING RESTORE	“Restore” command has been issued for this domain and it is awaiting submission of a Restore Report to be moved to Active status.
REDEMPTION PERIOD	This status is set by the Registry when a registrar deletes a domain name. This status can only be removed by the registrar. The registrar must use the RESTORE command to remove the Redemption Period status. Domain names in this status are pulled from the zone file.

**Table 10: CTLD RRP Domain Status Definitions**

For complete documentation on domain statuses within CTLD and RRP, consult the *Registrar Reference Manual*, cited in the *References* section.

### 2.2.10.3 Domain Status Mapping Within CTLD

The CTLD offers both an RRP and EPP provisioning interface. The following is a status mapping matrix between CTLD RRP and CTLD EPP statuses. Since statuses are stored in the underlying system using the EPP convention, some conflicts in behavior can occur when using RRP statuses.

RRP status	EPP Status
REGISTRAR-HOLD	clientHold
	clientDeleteProhibited
	clientUpdateProhibited
	clientTransferProhibited
REGISTRAR-LOCK	clientDeleteProhibited
	clientUpdateProhibited
	clientTransferProhibited

**Table 11: EPP to RRP domain status mapping in CTLD**

**Important Note:** As is clearly visible in the table above, the RRP REGISTRAR-LOCK status is (by RFC definition) a subset of the RRP REGISTRAR-HOLD status- the difference being that REGISTRAR-HOLD also removes a domain from the DNS zone. Based on the mappings, a registrar using the RRP interface will experience unexpected behavior in situations where a domain is on both REGISTRAR-HOLD and REGISTRAR-LOCK. Specifically, if a registrar were to remove the REGISTRAR-HOLD status from the domain, the REGISTRAR-LOCK would also be removed due to the mapping overlap. The only viable workaround for this is to use REGISTRAR-HOLD and REGISTRAR-LOCK statuses exclusively.

## 2.2.10.4 Domain Statuses within .CC/RRP

The .CC RRP implementation does not support the “restore” command. Consequently, the two additional statuses “PENDING RESTORE” and “REDEMPTION PERIOD” are absent from the .CC legacy registry system.

Status	description
ACTIVE	Domain is unencumbered by restrictions or other statuses. Domain name in this status may be modified by the Registrar of Record and will appear in the appropriate Zone file if there is at least one name server associated with the domain name.
REGISTRY-LOCK	The domain name may not be modified (except by the VeriSign NDS to modify the REGISTRY-LOCK status), transferred, or deleted by the registrar. Registry must remove the REGISTRY-LOCK status for the registrar to modify the domain. When the domain name is in this status, it may be explicitly renewed, and is included in the Zone file if the domain has at least one associated name server.
REGISTRY-HOLD	The domain name may not be modified (except by the Registry to modify the REGISTRY-HOLD status), transferred, or deleted by the registrar. Registry must remove the REGISTRY-HOLD status for the registrar to modify the domain name. When the domain name is in this status, it may be explicitly renewed, but is NOT included in the Zone file.
REGISTRAR-LOCK	The Registrar of Record for the domain name sets the domain name to this status. If a domain is under REGISTRAR-LOCK, then a registrar cannot modify, transfer, or delete the domain name and any child name servers. The Registrar can still explicitly renew the domain in this status. The REGISTRAR-LOCK status of the domain name will first need to be removed by the Registrar of Record to return the domain to the ACTIVE status before it can be modified, transferred, or deleted. When a domain is on REGISTRAR-LOCK it is included in the Zone files if the domain has at least one associated name server
REGISTRAR-HOLD	The Registrar of Record for the domain name sets the domain name to this status. Domain names placed under REGISTRAR-HOLD are treated the same as domain names placed under REGISTRAR-LOCK; however, the domain name is NOT included in the Zone files.
PENDING DELETE	This status is set by the Registry once the 30 day Redemption Period is concluded. This status lasts 5 calendar days. This status cannot be removed by the Registry or Registrar. Domain names in this status are pulled from the

	zone file and will be deleted. A domain name in this status cannot be redeemed.
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**Table 12: .CC Registry Domain Statuses**

For complete documentation on domain statuses within CTLD and RRP, consult the *Registrar Reference Manual*, cited in the *References* section.

### 2.2.10.5 Domain Statuses within .TV

Domain status modification is not available through the .TV legacy provisioning interfaces. The following statuses are currently employed within the .TV Registry, and may be set by the Registry only:

Status	description
ACTIVE	Domain is unencumbered by restrictions or other statuses. Domain name in this status may be modified by the Registrar of Record and will appear in the appropriate Zone file if there is at least one name server associated with the domain name.
LOCK	The domain name may not be modified or deleted by the registrar. Registry must remove the LOCK status for the registrar to modify the domain. When the domain name is in this status, it may be explicitly renewed, and is included in the Zone file if the domain has at least one associated name server.
HOLD	The domain name may not be modified or deleted by the registrar. Registry must remove the HOLD status for the registrar to modify the domain name. When the domain name is in this status, it may be explicitly renewed, but is NOT included in the Zone file.

**Table 13: .TV Registry Domain Statuses**

### 2.2.11 Host Statuses

With the advent of EPP provisioning, the concept of Host statuses was introduced. In legacy RRP interfaces, there is no concept of Host or Nameserver statuses beyond that which is inherited from the parent domain.

Hosts and associated host status codes exist in a one-to-many relationship. That is, a host may have more than one associated status at any given time, although some host statuses are by definition mutually exclusive. The Registry may change the status of all registered hosts, while registrars may only change the status of hosts that they have registered. This document outlines the statuses provided by the EPP interface for CTLD.

### 2.2.11.1 Host Statuses within CTLD/EPP

EPP Status values that can be added or removed by a client are prefixed with "client". Corresponding status values that can be added or removed by a server are prefixed with "server". Status values that do not begin with either "client" or "server" are server-managed. More than one status may be set for a domain at one time. The following statuses are available within the CTLD EPP provisioning interface:

Status	description
OK	This is the normal status value for an object that has no pending operations or prohibitions. This value is set and removed by the server as other status values are added or removed.
linked	The host object has at least one active association with another object, such as a domain object. Servers SHOULD provide services to determine existing object associations.
clientDeleteProhibited serverDeleteProhibited	Requests to delete the object MUST be rejected.
clientUpdateProhibited serverUpdateProhibited	Requests to update the object (other than to remove this status) MUST be rejected.

**Table 14: CTLD Host Status Definitions**

The following prohibitions apply for combining EPP statuses, other status combinations not expressly prohibited MAY be used.

- "ok" status MAY only be combined with "linked" status.
- "linked" status MAY be combined with any status.

### 2.2.12 Grace and Pending Periods

Operational “Grace” and “Pending” periods are business-rule time windows in which registry objects are subject to special conditions or business rules that do not apply to those objects in typical situations. An example of a grace or pending period is the “Add Grace Period”, a span of time after creating a domain during which that domain may be immediately deleted with a full financial credit to the provisioning registrar. The CTLD system provides grace-periods consistent with CORE. Please see the *CTLD Product Guidebook* for specific documentation of all grace and pending periods.

#### 2.2.12.1 Grace Periods

Type	.CC	.TV	CTLD
Add	5 days	None*	5 days
Explicit Renew	5 days	None	5 days
Auto-Renew	45 days	30 days	45 days

Transfer	5 days	None	5 days
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**Table 15: Grace Period Variances**

\* A 5 day grace period is allotted and manually credited for ICANN-accredited registrars

### 2.2.12.2 Pending Periods

Type	.CC	.TV	CTLD
Delete	5 days	Not applicable	5 days
Transfer	5 days	Not applicable	5 days
Redemption	30 days	Not applicable	30 days
Restoration	7 days	Not applicable	7 days

**Table 16: Pending Period Variances**

## **2.3 Provisioning Command Business Rule Variances**

This section examines the business rule variances for specific provisioning commands.

### **2.3.1 Create Domain Business Rule Variance**

CTLD and RRP require that a nameserver be registered prior to associating it with a domain. .TV Registry and SRS plus do not require this; nameserver are created implicitly when they are used by a domain. In SRS Plus, when no nameservers are explicitly indicated for a domain registration, a default set of nameservers *may* be assigned to the domain.

In RRP a domain name (including the four characters in .com and .net) can contain up to 67 characters consisting of letters, numbers, and/or hyphens. Hyphens cannot begin or end a domain name.

In SRS Plus there is no explicit limitation on the length of the domain name. There is however an implicit limitation of 128 characters, not including the “.TV” component.

### **2.3.2 Create Nameserver Business Rule Variance**

The .TV Registry system and SDK support only one IP per host. The CTLD system and RRP SDK support up to 13 IP addresses per host. SRS Plus and .TV Registry only allow nameserver creation for in-zone hosts, while out-of-zone hosts are created implicitly when they are used by a domain.

### **2.3.3 Check Domain Business Rule Variance**

In the CTLD System, no validation is performed on the domain name being checked. The availability response is based solely on whether the supplied domain exists in the registry; an available response may not indicate that the domain may be provisioned.

### **2.3.4 Check Nameserver Business Rule Variance**

There is no check nameserver function in SRS Plus. SrsNameserverInfo may function in a similar capacity. The info command will retrieve information for a previously-registered nameserver. Absence of nameserver info may indicate nameserver availability.

In the CTLD System, no validation is performed on the nameserver being checked. The availability response is based solely on whether the supplied nameserver exists in the registry; an available response may not indicate that the nameserver may be provisioned.

### **2.3.5 Delete Domain Business Rule Variance**

In the CTLD System, a domain cannot be deleted if it has child nameservers. The .TV Registry will automatically delete child nameservers.

### **2.3.6 Delete Nameserver Business Rule Variance**

In the CTLD System, a nameserver cannot be deleted if it is hosting other domains in the registry (“linked” status).

### **2.3.7 Modify Domain Business Rule Variance**

No status modification is available in the SRS Plus API.

### **2.3.8 Modify Nameserver Business Rule Variance**

The CTLD/RRP system allows a registrar to modify or update a nameserver (on behalf of a registrant) within the registry. RRP also supports renaming a nameserver.

The SRS Plus API does not support modifying nameservers. To modify a nameserver in SRS Plus it is necessary to delete and then (re)create the nameserver with the new (updated) values.

### **2.3.9 Renew Domain Business Rule Variance**

Both systems support single or multiple year renewals in increments of one year. CTLD/RRP caps registration periods at ten years. If a requested renewal would extend a domain’s total registration period beyond ten years, but less than eleven years, the domain’s registration will be extended to the maximum allowed amount. If a requested renewal would extend a domain’s total registration period eleven years or beyond, the command will fail.

### **2.3.10 Status Domain Business Rule Variance**

There is little variance in business rules for status domain. The registrar must be the current registrar of record for the domain in order to status it.

### **2.3.11 Status Nameserver Business Rule Variance**

In SRS Plus, anyone can “status” a nameserver. In CTLD/RRP only the managing registrar may status the nameserver. In the CTLD System, each registrar may register an identical out-of-zone nameserver.

### 2.3.12 Transfer Domain Business Rule Variance

The .TV Registry does not support transfers, so the SRS Plus API cannot handle transfers for .TV domains (despite having transfer functions in place for other TLDs). The CTLD/RRP system supports transfers. Please consult the supporting documentation cited in the *References* section for more information.

## 2.4 Resolution and Zone Generation Business Rule Variances

There are a number of business rule variances controlling resolution and zone generation.

### 2.4.1 Zone Generation Frequency

The following table shows the variances in the frequency on the TLD zone generation process.

.CC	.TV	CTLD
Twice daily	Every four hours	Twice daily

Table 17: Zone Generation Frequency Variances

### 2.4.2 Zone Generation Host Inclusion

There are a few subtle variances in the business rules surrounding host/nameserver A Record inclusion in the TLD zone.

- .CC includes A Records for hosts that are not linked to an active domain. That is, any in-zone host in the system whose parent domain is not on hold will be included in the zone. This is the behavior of the .COM/NET registry as of this writing.
- .TV ONLY includes A Records for in-zone hosts that are hosting their own parent domain. For example, if the host *ns1.domain.tv* is associated as a hosting nameserver for the domain *domain.tv*, then it will be included in the zone. If that same nameserver was not hosting its parent domain, it would not be included in the zone. The idea is that the authority for resolving the host is delegated to the domain's hosting nameservers via the NS record for the domain.
- CTLD includes A Records for hosts in linked status only. That is, hosts which are actively hosting domains within the system,