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.ASIA IDN Policies Document

Title:	**.ASIA CJK (Chinese Japanese Korean) IDN Policies**

Archive URL:	http://dot.asia/policies/DotAsia-CJK-IDN-Policies-COMPLETE--2011-05-04.pdf
References:	.ASIA ZH / JA / KO IDN Language Tables

Executive Summary

This document describes the IDN Language Policies for the implementation of Chinese, Japanese and Korean IDN registrations for the .ASIA Registry.

The policies are based on and are consistent with the Joint Engineering Team (JET) Guidelines for Internationalized Domain Names (IDN) Registration and Administration for Chinese, Japanese, and Korean ("JET Guidelines" – RFC3743: http://www.ietf.org/rfc/rfc3743.txt), the Registration and Administration Recommendations for Chinese Domain Names ("CDNC Recommendations" – RFC4713: http://www.ietf.org/rfc/rfc4713.txt), along with the IDN Language Tables archived at the IANA Repository of IDN Practices:

- CNNIC Table (cn-ZH): http://www.iana.org/domains/idn-tables/tables/cn_zh-cn_4.0.html
- JPRS Table (jp-JA): http://www.iana.org/domains/idn-tables/tables/jp_ja-jp_1.2.html
- KRNIC Table (kr-KO): http://www.iana.org/domains/idn-tables/tables/kr_ko-kr_1.0.html
- TWNIC Table (tw-ZH): http://www.iana.org/domains/idn-tables/tables/tw_zh-tw_4.0.1.html

The policies were developed in consultation and cooperation with and with the advice from language experts, CNNIC (.CN) in mainland China, JPRS (.JP) in Japan, KRNIC/KISA (.KR) in Korea, HKIRC (.HK) in Hong Kong, based on the above policies and guidelines established for the respective ccTLDs, along with special consideration for the .ASIA Registry as a gTLD.

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1   Introduction

The set of policies for the implementation of Chinese, Japanese and Korean ("CJK") IDN registrations for .ASIA is largely based on the IDN Language Policies that has been developed by the CJK community and experts over the years.

Nevertheless, while the CJK community has been cooperating in the development of the IDN Language Policies, such policies were generally developed for utilization of ccTLDs within their particular context and not in a gTLD perspective. In the preparation for the implementation of CJK IDN registrations for .ASIA, DotAsia engaged with the CJK community, IDN experts and language experts to adapt the local IDN Language Policies for use in the context of .ASIA as a global top-level domain.

The key consideration for such adaptation revolves around the condition that there is a large overlap of characters used between the Chinese, Japanese (Kanji) and Korean (Hanja) languages. Most importantly, these policies take into account the critical difference between the context of IDN registrations under a ccTLD versus a gTLD in that, for example, users expect and are given a context under a ".JP" IDN registration that it is a Japanese IDN, whereas if the domain is under ".CN", it would be a Chinese IDN. Each ccTLD (with the context) allows IDN registrations only for the particular IDN Language within their respective locality. For an IDN registered under ".ASIA" (as a gTLD) however, that context is not the same.

2   Chinese (ZH) IDN for .ASIA

The Chinese (ZH) IDN Language Policy and Language Tables are developed for the implementation of Chinese IDN registrations at the .ASIA gTLD in coordination with the CDNC (Chinese Domain Name Consortium), based on the CDNC IDN Language tables from CNNIC (zh-CN: http://www.iana.org/domains/idn-tables/tables/cn_zh-cn_4.0.html) and TWNIC (zh-TW: http://www.iana.org/domains/idn-tables/tables/tw_zh-tw_4.0.1.html) respectively.

2.1   Simplified Chinese & Traditional Chinese Preferred Variants

DotAsia understands the importance of maintaining the integrity of Chinese IDN registrations through appropriate implementation of character variants for Simplified Chinese (SC) and Traditional Chinese (TC).

Unlike in the case of ccTLDs (e.g. for .CN or .TW) where one form of the Chinese characters is predominantly used, .ASIA, as a gTLD is inherently global and requires the consideration of an environment where some of the users will be user SC (e.g. in Mainland China, Singapore, etc.), while others may be using TC (e.g. in Hong Kong, Macau, Taipei, etc.). Therefore, the DotAsia Chinese IDN Language Table implementation combines the 2 zh-CN and zh-TW tables into an integrated table for "ZH".

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More specifically, the .ASIA Chinese IDN Language Table table includes 2 Preferred Variant Columns: 1. The zh-CN Preferred Variant column (Preferred SC); and 2. The zh-TW Preferred Variant column (Preferred TC).

As an example, when an applicant submits a Domain Name Applied for: "網絡域名.ASIA":

- Preferred SC IDN Variant would be: "网络域名.ASIA"

- Preferred TC IDN Variant would be: "網絡域名.ASIA"

Note that the Preferred TC IDN Variant is the same as the Domain Name Applied For. The IDN Package for: "網絡域名.ASIA" will therefore include:

- Primary IDN: "網絡域名.ASIA" (active and included in zone)

- Preferred IDN Variant(s): { 网络域名.ASIA } (active and included in zone)

- Other IDN Variant(s): { 網絡域名.ASIA; 网絡域名.ASIA } (reserved and not included in zone)

The situation that the Domain Name Applied For and one of the Preferred IDN Variant is the same can generally be expected because for most cases, registrants would submit a Domain Name Applied For fully composed of Simplified Chinese Characters or fully composed of Traditional Chinese Characters.

In the case that an applicant submits a Domain Name Applied For composed of both Simplified Chinese Characters and Traditional Chinese Characters, e.g.: "网絡域名.ASIA", the set of Preferred Variants would still essentially be the same:

- Preferred SC IDN Variant would be: "网络域名.ASIA"

- Preferred TC IDN Variant would be: "網絡域名.ASIA"

The IDN Package in that case however would include:

- Primary IDN: "网絡域名.ASIA" (active and included in zone)

- Preferred IDN Variant(s): { 网络域名.ASIA;網絡域名.ASIA } (active and included in zone)

- Other IDN Variant(s): { 網絡域名.ASIA;网絡域名.ASIA } (reserved and not included in zone)

2.2 Hong Kong Supplementary Characters

The CDNC Recommendations and the CNNIC (cn-ZH) and TWNIC (tw-ZH) tables were developed mainly among the experts in Mainland China and Taiwan. Certain Chinese characters which are commonly used in Hong Kong (as well as Macao and Cantonese speaking communities) were not included in the previous versions of the CDNC tables.

For the .ASIA deployment as a gTLD, some additional Hong Kong characters have been added. The additions were based on recommendations from language experts in Hong Kong, and took into consideration the Hong Kong Supplementary Character Set (HKSCS: http://www.ogcio.gov.hk/ccli/eng/hkscs/introduction.html) maintained by the Office of the Government Chief Information Officer (OGCIO) of the Hong Kong Special Administrative Region, which has been adopted into Unicode, along with the International Ideographs Core (IICORE:

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http://www.ogcio.gov.hk/ccli/eng/structure/iicore.html), which specifies a more commonly used subset of Chinese characters for day-to-day use. Furthermore, considerations of character variants were studied based on Easily Confused Chinese Characters table (http://www.ogcio.gov.hk/ccli/unicode/structure/download/Easily_Confused_Chinese_Characters.pdf), accompanied by expert advice from language experts on the subject.

As a summary of the additional Hong Kong Supplementary Characters:

- A total of 160 new entries were added to the CDNC table. These characters were added to the CDNC table based on the HKSCS and IICORE standards (marked as "HK" in the .ASIA Chinese (ZH) Table)

- 103 entries did not include further variants

- 53 new entries added involved additional character variants, with 49 having IDN Variant Characters that already exist in the CDNC Tables, and 4 having additional IDN Variant Characters that do not already exist in the CDNC Tables (for a total of 57 entries – marked as "HK:CV" in the .ASIA Chinese (ZH) Table)

- For the 49 Hong Kong Supplementary Characters with IDN Variant Characters a total 97 existing entries of the CDNC were affected (marked as "HK:U+xxxx" in the .ASIA Chinese (ZH) Table). These characters are amended to existing CDNC entries as a result of IDN Variant Character set intersection between newly added Hong Kong Supplementary Characters with IDN Variant Characters and existing characters (entries) in the CDNC table.

- 4 pairs of characters (total of 8 entries) were identified by HKIRC to be character variants, and have not been implemented into the CDNC tables yet (marked as "(HKIRC:U+xxxx)" in the .ASIA Chinese (ZH) Table).

2.3   .ASIA Chinese (ZH) IDN Language Policy Profile

IDN Tag:	ZH
IDN Language Description:	Chinese
Minimum Length:	A-Label: 3; U-Label: 1
Maximum Length:	A-Label: 63
Total Number of Included Characters:	19,720
Additional Contextual Rules:	A Domain Name Applied For must include at least one non-LDH character
IDN Variants:	IDN Package includes Primary Domain and Preferred Variant(s) to be activated

The .ASIA Chinese (ZH) IDN Table is included in Annex A.

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3   Japanese (JA) IDN for .ASIA

The Japanese (JA) IDN Language Policy and Language Tables are developed for the implementation of Japanese IDN registrations at the .ASIA gTLD in coordination with JPRS (Japan Registry Services), based on the JPRS Japanese IDN Language table (jp-JA: http://www.iana.org/domains/idn-tables/tables/jp_ja-jp_1.2.html).

3.1   Kanji Only Domain Names

DotAsia is committed to maintaining the integrity of .ASIA IDN registrations and understands the multilingual nature of the .ASIA zone as a gTLD. Unlike in the case of ccTLDs (e.g. for .JP) where only Japanese IDN registrations are expected, both Chinese and Japanese IDNs are expected for the .ASIA domain. Because of the unified Han Ideograph approach for Unicode, there is an overlap between the character repertoire between the Japanese and Chinese IDN Scripts, more specifically, Kanji characters used in Japanese can also be found in Chinese. This means that it is possible that a Japanese IDN consisting of Kanji characters only can appear to be like a Chinese domain name for a Chinese .ASIA domain name user.

In light of the context of the .ASIA registry as a gTLD, this Japanese language table will also integrate the CDNC (Chinese Domain Name Consortium) IDN Language tables, based on the CNNIC (zh-CN: http://www.iana.org/domains/idn-tables/tables/cn_zh-cn_4.0.html) and TWNIC (zh-TW: http://www.iana.org/domains/idn-tables/tables/tw_zh-tw_4.0.1.html) tables, and consolidated for the .ASIA (ZH) Chinese IDN Language Table as described in Section 2 above.

For example, for a Domain Name Applied For: "日本語.ASIA", the IDN Variant: "日本语.ASIA" will be reserved (but not included in the zone) and not available for registration.

A total of 3,342 entries incorporated variant considerations based on the CDNC tables. Note that both Preferred Variants and Character (Other) Variants are included as Character (Other) Variants, with no variants considered as Preferred Variants.

3.2   Guideline for Japanese Domain Name Zone Administrators

This language policy also incorporates the "Guideline for Japanese domain name zone administrators" from JPRS Japanese IDN Language table http://www.iana.org/domains/idn-tables/tables/jp_ja-jp_1.2.html by reference herein.

3.3   .ASIA Japanese (JA) IDN Language Policy Profile

IDN Tag:	JA
IDN Language Description:	Japanese
Minimum Length:	A-Label: 3; U-Label: 1
Maximum Length:	A-Label: 63
Total Number of Included Characters:	6,571

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Additional Contextual Rules:	A Domain Name Applied For must include at least one non-LDH character
IDN Variants:	IDN Package includes Primary Domain only, with all other variants to be reserved

The .ASIA Japanese (JA) IDN Table is included in Annex B.

NOTE: While no "Preferred Variant" is included in the IDN Package for Japanese, the IDN Language Table contains an entry in the Preferred Variant column which is the same as the Base Character.

4 Korean (KO) IDN for .ASIA

The Korean (KO) IDN Language Policy and Language Tables are adopted from the KRNIC Korean IDN Language table (ko-KR: http://www.iana.org/domains/idn-tables/tables/kr_ko-kr_1.0.html) for the implementation of Korean IDN registrations at the .ASIA gTLD. In preparation of this language table, DotAsia has coordinated with KISA (Korea Internet & Security Agency) on the applicability of the KRNIC Korean IDN Language table for the .ASIA gTLD.

4.1 Hanja Characters

Hanja characters are not included in the .ASIA Korean (KO) IDN Language Table. Mixture of Hanja characters with Hangul characters for domain names is not encouraged. Registrants interested in registering domain names with Hanja characters only may consider utilizing a registration based on the "ZH" IDN-Tag.

4.2 Hangul Characters

The .ASIA Korean (KO) IDN Langauge Table implements the full repertoire of Hangul characters based on the KRNIC kr-KO table, including 11,172 Hangul Syllables (along with the 36 LDH characters, "a-z", "0-9" and "-" for a total of 11,209 Characters in the table).

4.3 .ASIA Korean (KO) IDN Language Policy Profile

IDN Tag:	KO
IDN Language Description:	Korean
Minimum Length:	A-Label: 3; U-Label: 1
Maximum Length:	A-Label: 63
Total Number of Included Characters:	11,209
Additional Contextual Rules:	A Domain Name Applied For must include at least one non-LDH character

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IDN Variants:	N/A

The .ASIA Korean (KO) IDN Table is included in Annex C.

NOTE: While no "Preferred Variant" is included in the IDN Package for Korean, the IDN Language Table contains an entry in the Preferred Variant column which is the same as the Base Character.

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5   Glossary

.ASIA IDN TLD	The term ".ASIA IDN TLD" is used to describe an IDN TLD managed by the .ASIA Registry that represents the term "ASIA" in an IDN language. For example, ".亚洲" or ".아시아" or ".एशि", etc. could become .ASIA IDN TLDs.
.ASIA Registrar / Accredited Registrar	Accredited Registrar means an ICANN Accredited Registrar that is also Accredited for the .ASIA Registry in this document
.ASIA Registry or Registry	The ".ASIA Registry" or "Registry" is the TLD Registry Sponsored and operated by DotAsia Organisation Ltd. ("DotAsia"). DotAsia is a not-for-profit, limited-by-guarantee corporation incorporated in Hong Kong.
<ASCII>.ASIA	ASCII (American Standard Code for Information Interchange) is a character-encoding scheme based on the ordering of the English alphabet (http://www.unicode.org/charts/PDF/U0000.pdf). In the context of this document, the term "<ASCII>.ASIA" denotes a domain name registered under the ".ASIA" TLD that is not an IDN (Internationalized Domain Name).
<IDN>.ASIA	<IDN>.ASIA denotes an IDN registered under the ".ASIA" (ASCII) TLD
A-Label	An "A-Label" refers to an ASCII-Compatible Encoding (ACE) form of an IDN label (a domain "label" refers to a text string between 2 dots in a domain name, i.e. "domain" is a domain label in "www.domain.asia").
ACE	ACE (ASCII-Compatible Encoding) means the standard encoding based on the IDNA standards.
Applicant	The Applicant of a domain name is the collective of entities implicated by the associated contacts of a domain registration application. More specifically, this includes the Registrant Contact and the contact used in making the declaration that an application meets the Charter Eligibility Requirement.
CDNC	Chinese Domain Names Consortium
Charter Eligibility Requirements	Charter Eligibility Requirements mean the basic requirements to qualify as a domain registrant for the .ASIA Registry. A separate document, Charter Eligibility Requirement Policy provides further details on the subject.

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Domain Name Applied For	The text string of the domain name, not including the TLD, submitted for registration
DotAsia Community	The DotAsia Community is defined based on the geographical boundaries described by the ICANN Asia / Australia / Pacific region (AP Region): http://www.icann.org/montreal/geo-regions-topic.html
ICANN	Internet Corporation for Assigned Names and Numbers (http://www.icann.org).
IDN	Internationalized Domain Names. Domain names that contain characters beyond the LDH repertoire.
IDN Language	The term IDN-Language will be used to represent the intended 'language' of registered IDNs. IDN-Language is distinguished from 'language' in that it does not imply that semantic and otherwise rules that the given verbally described language is applied to the discussion. Also, note that one IDN-Language may have multiple IDN-Scripts.
IDN Language Policy	An IDN Language Policy is a profile maintained at the Registry that includes the IDN LanguageTag, IDN Language Table as well as additional policy elements: maximum and minimum length of domain, character contextual rules, IDN Variant rules, etc., for a particular domain registry.
IDN Language Table	There are 2 main types of IDN-Language-Tables: 1. An IDN Language Table for IDN Scripts that do not require IDN Variant considerations is a collection of valid Unicode codepoints (Character Inclusion Table) allowed for registration plus the designated IDN Tag. 2. An IDN Language Table for scripts that do require IDN Variant considerations or contextual rules consists of the collection of valid Unicode codepoints and for each character, the corresponding IDN Variant Characters (Variant Mapping Table) and other relevant contextual rules.
IDN Language Tag / IDN-Tag	An IDN Language Tag will be a code based on registry policy and submitted by the registrar (on behalf of registrants) to indicate and declare the intended IDN Language of a given registration. IDN Language Tags for the .ASIA Registry will be based on RFC5646: Tags for Identifying Languages (http://www.ietf.org/rfc/rfc5646.txt).

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IDN Package / IDN Bundle	An IDN Package or an IDN Bundle is a set of IDNs, including the Primary IDN and the IDN Variants that is generated by the Domain Name Applied For (Primary IDN) based on the corresponding IDN Language Policy.
IDN Script	Script can generally be described as the collection of characters used by a language or set of languages. In the IDN registration policy context, an IDN Script is distinguished from 'script' and defined as the collection of valid Unicode codepoints allowed for registration, identified by a specific IDN Language.
IDN Variant	An IDN Variant is a syndicate domain generated from a Primary IDN based on the corresponding IDN Language Policy.
	Preferred IDN Variants: Preferred IDN Variants are IDN Variants that syndicated based on the corresponding IDN Language Policy for which the resulting IDN consists of Preferred Character Variants OR otherwise designated as a Preferred IDN Variant based on contextual rules in the IDN Language Policy.
	Other IDN Variants: Other IDN Variants are IDN Variants that are generated based on the IDN Language Policy that are not Preferred IDN Variants.
LDH	Letter-Digit-Hyphen. A special term to describe the expression of a Fully Qualified Domain Name utilizing only the ASCII alphabet: A-z and digits: 0-9, plus the hyphen.
Primary IDN	In the context of this document, a Primary IDN is essentially the Domain Name Applied For.
Sponsoring Registrar	The Accredited Registrar for which a domain name is registered with.
TLD	Top Level Domain
U-Label	A "U-Label" refers to a representation of an IDN label in Unicode characters.
Unicode	Unicode is a standard maintained by the Unicode Consortium (http://www.unicode.org) allowing computers to represent characters used for most of the world's languages and scripts. Unicode is the encoding standard used for IDN.

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Appendices:

Annex A: .ASIA ZH (Chinese) IDN Language Table

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Annex B: .ASIA JA (Japanese) IDN Language Table

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http://dot.asia/policies/AnnexB-ASIA-JA-1.1.pdf

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Annex C: .ASIA KO (Korean) IDN Language Table

Version 1.0

http://dot.asia/policies/AnnexC-ASIA-KO.pdf

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