Proposal for Generation Panel for Japanese Label Generation Rules for the Root Zone

1. General Information

Major scripts used for writing modern Japanese are Kanji (Han), Hiragana, Katakana and alphanumeric (Latin alphabets and Arabic numerals). Kanji was imported from China around the 5th Century AD. Hiragana and Katakana are phonetic syllabaries that were invented in Japan around the 10th Century AD from cursive forms or parts of Kanji. The Latin alphabet was imported from Western Europe after the 16th century, and since the 19th century it has been used widely.

Hiragana and Katakana have been used mixed with Kanji since their invention, and this combination of scripts has become established as the Japanese writing system. Furthermore, since modern times, alphanumeric scripts began to be used mixed with Kanji, Hiragana and Katakana. For example, registered trade names often use alphanumeric script and Kanji mixed. This multi-script mixed writing system has become common and widely used in Japan.

1.1. Target Script for the Proposed Generation Panel

As stated above, scripts for Japanese writing system are Kanji, Hiragana, Katakana and alphanumeric.

The following are the ranges of Japanese scripts used for Japanese Domain Names.

In ISO 15924, the script for Japanese language is mainly defined in the following specifications :
ISO 15924 code: Jpan
ISO 15924 no.: 413
English name: Japanese (alias for Han + Hiragana + Katakana)

The ranges of Kanji (CJK Unified Ideographs) defined in Unicode are:
CJK Symbols and Punctuation: 3005, 3006
CJK Unified Ideographs: 4E00-9FCC
CJK Unified Ideographs Extension A: 3400-4DB5
CJK Unified Ideographs Extension B: 20000-2A6D6
CJK Unified Ideographs Extension C: 2A700-2B734
CJK Unified Ideographs Extension D: 2B740-2B81D

(CJK stands for Chinese, Japanese and Korean)

The ranges of Hiragana and Katakana defined in Unicode are:
Hiragana: 3041-3096, 309D-309E
Katakana: 30A1-30FA, 30FC-30FE

In ISO 15924, the alphanumeric script is defined in the following specifications:
ISO 15924 code: Latn
ISO 15924 no.: 215
English name: Latin

The range of the Latin alphabet defined in Unicode is:
Basic Latin: 0061-007A

1.2. Principal Languages using the Script

The Japanese writing system usually uses four scripts. They are: Kanji, Hiragana, Katakana, and alphanumeric.

Kanji (Han) has been used in Mainland China, Taiwan, Macau, Malaysia, Singapore, Korea, Japan and elsewhere. The Kanji used in Japan were originally imported from China, but during over 1,000 years of the history of Japanese, the creation of Japanese-particular characters (Kokuji) and character simplification in the Japanese particular way (Shinji) occurred. The Kanji for Common Use (Joyo Kanji) was defined as a set of Kanji used in official documents, newspapers and generic magazines, and more than 2,100 characters were prescribed there. Furthermore, the Kanji for Personal Names (Jinmeiyo Kanji) that are not included in Joyo Kanji were defined, and more than 860 characters were prescribed there. JIS X 0208 is the most widely used character standard in Japan and consists of the Joyo Kanji, Jinmeiyo Kanji and other characters to represent geographical names and historical names, and more than 6,300 characters are prescribed there. There exists a correspondence between Old-form Kanji (Kyuji) which are not simplified and New-form Kanji (Shinji) which are simplified as variants in Japan, but Kyuji and Shinji are often distinguished in the context of personal names and organizational names.

For the Han script in Chinese, there are Simplified Characters (used in Mainland China, Singapore, etc.) and Traditional Characters (used in Taiwan, Hong Kong, Macau, etc.). Simplified Characters are transformed forms of frequently used Traditional Characters for easy writing, and these are recognized as interchangeable variants in Chinese. Note that the usage of Traditional Characters in the Simplified Chinese area is very low, and vice versa. In addition, mixed usage of Simplified Characters and Traditional Characters is very low.
Hanja is the Korean name of Chinese characters. Hanja used in South Korea are mostly Traditional forms, but only Hangul is used in the modern

Korean writing system with few exceptions, and the usage of Hanja in public documents, newspapers, and general magazines is supplementary.

Hiragana and Katakana are characters invented in Japan, and used only in Japan, not in other countries or regions[1]. Hiragana and Katakana are both syllabic characters and there's one-to-one mapping between Hiragana character and Katakana character with the same pronunciation, but they are not recognized as variants. Hiragana is mainly used as suffixes to Kanji to complete the full reading of the word, for adverbs, conjunctions, and to rewrite difficult Kanji into forms for easy reading. Katakana is mainly used to represent loanwords and onomatopoeic words.

The Latin script is used in many countries and regions in the world as well as Arabic numerals. In Japanese it is mainly used to represent loanwords and abbreviations. Furthermore, it is sometimes used mixed with Kanji, Hiragana and Katakana to represent company names and trade names.

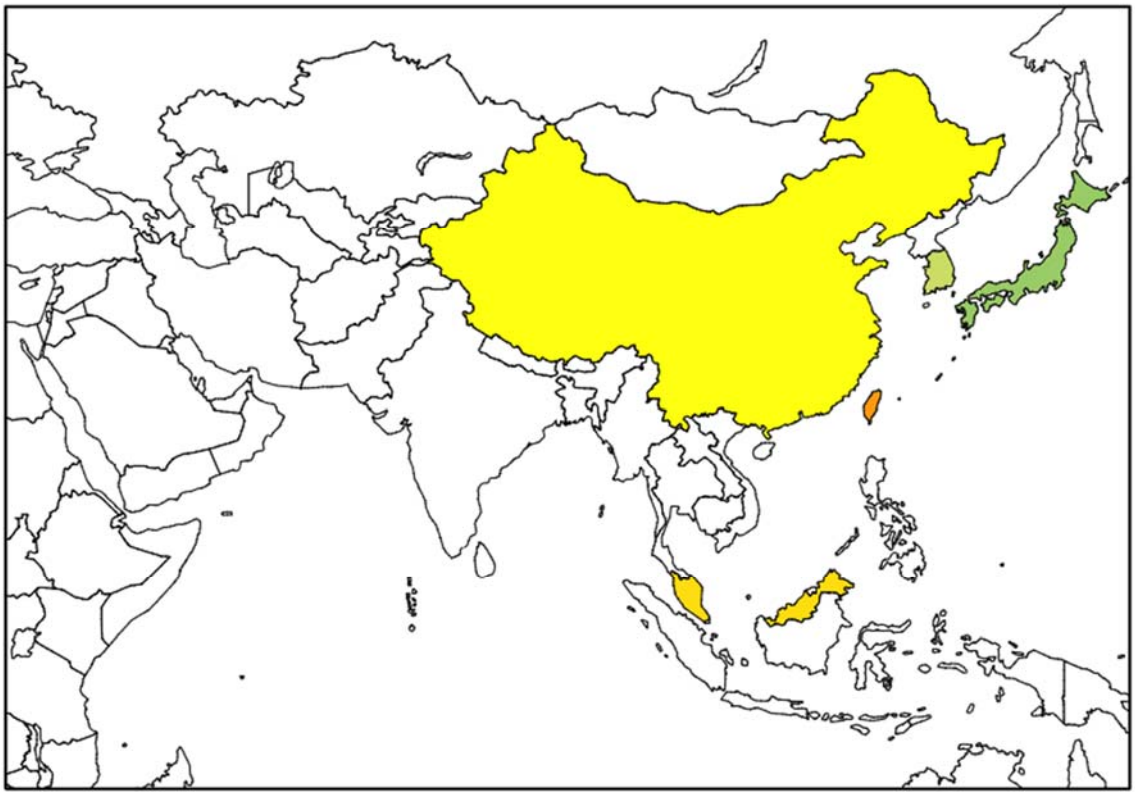
1.3. Countries with Significant User Communities for the Script

Kanji (Han) has been used in Mainland China, Taiwan, Macau, Malaysia, Singapore and more, where the Chinese language is used. In addition, in countries such as Japan and Korea, Kanji (Hanja) was imported and used. Hiragana and Katakana were invented in Japan and are being used only in Japan.

The Latin script is used in English speaking countries. In addition, decorated versions of Latin Script-based characters are used in countries where Latin script-based languages are used (such as France and Germany).

Countries where Kanji are used are shown in the world map below. (This map is derived from the CGP proposal.)

[1] Japanese is defined as one of official languages in Angaur, but not used in daily life. See also: <http://en.wikipedia.org/wiki/Angaur>



	Kanji (Chinese script) used in conjunction with Hiragana and Katakana in the same language (Japan)
	Hanja (Chinese script) used in conjunction with Hangul in the same language (Republic of Korea)
	Hans (Simplified Chinese) used exclusively or almost exclusively (Mainland China)
	Hant (Traditional Chinese) used exclusively or almost exclusively (Taiwan, Macau and Hong Kong)

	Hans (Simplified Chinese) used formally but Hant (Traditional Chinese) continue to be used widely

2. Proposed Initial Composition of the Panel

2.1. Panel Chair and Members (with Expertise)

Hiro Hotta (chair)

- Director of Corporate Planning, Japan Registry Services (JPRS)
- Council member of ICANN ccNSO
- Board member and Treasurer of APTLD
- Board member of the Internet Association Japan (IAjapan)
- Former chair of Asia&Pacific Internet Association (APIA)
- Former chair of the JPNIC International Relations Working Group
- Former member of CJK Joint Engineering Team (JET)
- Former member of JPNIC IDN Taskforce (IDN-TF)

Akinori Maemura (vice chair)

- General Manager, Internet Development Department, Japan Network Information Center (JPNIC)
- Chair of APNIC EC
- Member of Coordination Council of NETmundial Initiative
- Director of JPCERT Coordination Center
- Former Member of NETmundial EMC
- Former Board member of Japan Network Information Center (JPNIC)
- Former member of JANOG committee

Shigeki Goto

- Professor at Department of Computer Science and Engineering, Waseda University, Japan
- President of Japan Network Information Center (JPNIC)
- Advisor to Asia-Pacific Advanced Network (APAN)
- Chair of JP Domain Name Advisory Committee
- Former member of Telecommunications Council, Japanese Government

- Former vice chair of Japan Internet Domain Name Council
- Former chair of Japanese Domain Names Association (JDNA)
- Former member of CJK Joint Engineering Team (JET)
- Former member of JPNIC IDN Taskforce (IDN-TF)

Kazunori Konishi

- NOC Director of Asia-Pacific Advanced Network (APAN)
- Former professor of Cyber University
- Former Board member of Japan Network Information Center (JPNIC)
- Former Board member of Japanese Domain Names Association (JDNA)
- Founder of CJK Joint Engineering Team (JET)
- Former member of JPNIC IDN Taskforce (IDN-TF)
- Co-author of JET Guidelines (RFC 3743)

Tsugizo Kubo

- Professor, Senshu University Law School, Japan
- Panel of Experts appointed by WIPO in the WIPO Internet Domain Name Process 1999
- A member of the Advisory Committee of the Internet Association Japan (IAjapan)
- Former chairman of the Trademark Committee of the Japan Intellectual Property Association (JIPA)
- Former managing Director of the Japan Trademark Association (JTA)
- Former member of the Advisory Council of the Japan Network Information Center (JPNIC)
- Former chair of the JPNIC Domain Name Working Group (DOM-WG)
- Former chairman of the JPNIC Domain Name Dispute Resolution Policy Taskforce (DRP-TF)
- Former DRP panelist of the Prefecture Type JP Domain Name Sunrise of Japan Registry Services Co., Ltd. (JPRS)

Yoshitaka Murakami

- Senior Consultant, Consulting Group, Brights Consulting Inc.
- Project Leader, New gTLD Project Team, Brights Consulting Inc.
- Accredited Paraprofessional Interpreter/Paraprofessional Translator (Australia)

Shuichi Tashiro

- General Manager, Open Standards Promotion Center Technology Headquarters, Information-technology Promotion Agency, Japan
- Member of ISO/IEC JTC1/SC2/WG2/IRG
- Secretary of IPA Character Information Infrastructure
- Former member of CJK Joint Engineering Team (JET)
- Former member of JPNIC Domain WG (DOM-WG)
- Former member of JPNIC IDN Taskforce (IDN-TF)

Yoshiro Yoneya

- Senior Researcher, Research and Development Department, Japan Registry Services (JPRS)
- Co-chair of IETF precis WG
- Board member of DNS operator group Japan (DNSOPS.JP)
- Former member of ICANN IDN VIP Chinese Case Study Team
- Former secretary general of Japanese Domain Names Association (JDNA)
- Former member of CJK Joint Engineering Team (JET)
- Former chair of JPNIC IDN Taskforce (IDN-TF)
- Co-author of downgrading mechanism for EAI (RFC 5504)

2.2. Panel Diversity

The members of the initial Japanese Generation Panel consist of experts with various backgrounds. Each member has experience in one or more of the areas of IDN standardization, CJK discussion in JET (cf. Section 2.3), establishment of Japanese Domain Name rules, policy making in ICANN through the participation from various sectors.

Although all the members of the initial Japanese Generation Panel are Japanese, most of them have experience in internationalization (multilingualization) of the Internet worldwide, therefore, they have a deep knowledge of Japanese and other (especially Asian) languages in terms of internationalization of the Internet.

2.3. Relationship with Past Work or Working Groups

JP Domain Names started an IDN registration service in February 2001. It is a domain name registration service called “General-use JP Domain Name”, which registers ASCII and IDN labels on the second level under .JP. Also, in November 2012, the domain name registration service called “Prefecture Type JP Domain Name” started, and it registers ASCII and IDN labels on the third level where the second level is a prefecture name.

In General-use JP Domain Names, as of 1 November 2014, 13% of the 93.9K registered domain names are IDNs, and in Prefecture Type JP Domain Names, 25% of the1.2K registered domain names are IDNs.

Furthermore, about 4% of these IDNs are Latin script mixed IDNs.
The Japanese Domain Names rules for JP are registered to IANA’s Repository of IDN Practices as .jp Japanese (Language Tag: ja-JP), and are also used in .asia registration rules.

JPNIC convened various experts such as domain name experts, trademark experts, character code experts and so on, and has led discussions since September 2000, and developed rules for Japanese Domain Names. During the development process, specifications were published to the community and there was a call for public comments. Major characteristics of the specifications of Japanese domain names are:

- String consists of alphanumeric script, Kanji, Hiragana and Katakana which must include one or more Kanji, Hiragana or Katakana.
- Kanji must be in range of JIS X 0208 first level and second level (6355 characters). Moreover, Hiragana (85 characters), Katakana (89 characters) and quasi-Kanji (5 characters) must be in the same range.
- No variants exist.

During about 14 years experience of service delivery, there were no complaints or objections to these Japanese Domain Name rules.

CJK have the possibility of using the same Han (Kanji) characters in common. But the ranges of the Han characters and the definitions of variants are different for each of CJK.

Through the consideration of Internationalizing Domain Name in Applications (IDNA) in the IETF, there was a discussion regarding which part should process variants. During the discussion, there was an argument that variants should be processed at protocol level, but there was the issue that it is impossible to process variants which require different treatment in each language at protocol level.

Therefore, countries and regions that use CJK established the JET (Joint Engineering Team), and discussed variant processing together. Finally JET got consensus that it should be processed at domain name registration and utilization level (not at protocol level), and published RFC 3743.

3. Work Plan

3.1. Characteristics of the Japanese LGR

Among the characters defined in 1.1, character repertoire defined by Japanese LGR will be selected from those defined in MSR-1.

As described in 1.3 and 2.3, Japanese language uses Kanji script that is also used by Chinese community and Korean community. However, the characters used in Chinese, Japanese, and Korean languages have different character sets and variant definitions. Therefore, Japanese Generation Panel (JGP) needs to cooperate and coordinate with Chinese Generation Panel (CGP) and Korean Generation Panel (KGP) in defining Japanese LGR in order for the RootLGR to be defined as harmonized as possible.

3.2. Suggested Timeline with Significant Milestones

2014

Aug – Dec Preparation for establishment of JGP
Development of Japanese LGR
Investigation of the subject matter of CJK coordination

2015

Jan	Development of Japanese LGR
	Investigation of the subject matter of CJK coordination
Feb	Application for establishment of JGP
	Announcement of application for JGP establishment [domestic]
	CJK coordination committee meetings
Mar-May	Development of Japanese LGR
	CJK coordination committee meetings
May	Submit draft Japanese LGR to ICANN
June-	Coordination with IP

Note: This schedule will be updated in a timely manner according to the increasing/decreasing number of action items, the CJK coordination situation, and so on.

3.3. Proposed Schedule of Meeting and Teleconferences

Meeting are scheduled once or twice per month.

3.4. Sources of Funding for Travel and Logistics

JPNIC or JPRS, Secretariat of JGP, to provide meeting rooms and remote participation facilities if necessary. Each panel member or their affiliations to defray travel expenses and facilities for remote participation.

3.5. Need for ICANN Provided Advisors

Not anticipated at the start of the Japanese Generation Panel. However, advice to be requested if needed during the progress of the discussions.

References

- About Japanese Language

Japanese language
<http://en.wikipedia.org/wiki/Japanese_language>

- About Japanese trade mark and trade name law

About the designation of the standard characters to prescribe in Trademarks Law Article 5 Clause 3 (In Japanese)
<http://www.jpo.go.jp/shiryou/kijun/kijun2/pdf/syouhyoubin/19_01.pdf>

Japan's trademark system
<http://www.jetro.go.jp/en/invest/setting_up/laws/section5/page2.html>

About using Roman characters for trade names (In Japanese)
<http://www.moj.go.jp/MINJI/minji44.html>

- Character Standards

JIS X 0208
<http://en.wikipedia.org/wiki/JIS_X_0208>

Unicode
<http://www.unicode.org/>

- Internet Standards

Joint Engineering Team (JET) Guidelines for Internationalized Domain Names (IDN) Registration and Administration for Chinese, Japanese, and Korean
<http://tools.ietf.org/html/rfc3743>

- ICANN Related Documents

Root Zone LGR Project
<https://community.icann.org/display/croscomlgrprocedure/Root+Zone+LGR+Project>

Report on Chinese Variants in Internationalized Top-Level Domains <http://archive.icann.org/en/topics/new-gtlds/chinese-vip-issues-report-03oct11-en.pdf>

Proposal for the Generation Panel for the Chinese Script Label Generation Ruleset for the Root Zone <https://www.icann.org/en/system/files/files/chinese-script-lgr-proposal-24sep14-en.pdf>