

Proposal for the Generation Panel for the Chinese Script Label Generation Ruleset for the Root Zone

1. General Information

Chinese script is the logograms used in the writing of Chinese and some other Asian languages. They are called Hanzi in Chinese, Kanji in Japanese and Hanja in Korean.

Since the Hanzi unification in the Qin dynasty (221-207 B.C.), the most important change in the Chinese Hanzi occurred in the middle of the 20th century when more than two thousand Simplified characters were introduced as official forms in Mainland China.

As a result, the Chinese language has two writing systems: Simplified Chinese (SC) and Traditional Chinese (TC). Both systems are expressed using different subsets under the Unicode definition of the same Han script. The two writing systems use SC and TC respectively while sharing a large common “unchanged” Hanzi subset that occupies around 60% in contemporary use. The common “unchanged” Hanzi subset enables a simplified Chinese user to understand texts written in traditional Chinese with little difficulty and vice versa. The Hanzi in SC and TC have the same meaning and the same pronunciation and are typical variants.

The Japanese kanji were adopted for recording the Japanese language from the 5th century AD. Chinese words borrowed into Japanese could be written with Chinese characters, while Japanese words could be written using the character for a Chinese word of similar meaning. Finally, in Japanese, all three scripts (kanji, and the hiragana and katakana syllabaries) are used as main scripts.

The Chinese script spread to Korea together with Buddhism from the 2nd century BC to the 5th century AD. In times past, until the 15th century, in Korea, Literary Chinese was the dominant form of written communication, prior to the creation of Hangul, the Korean alphabet. In the modern Hangul-based Korean writing system, Chinese characters are no longer officially used to represent native morphemes, but still sometimes used by a few Korean people in daily life.






Historically, Chinese characters were also used in Mongolia and Vietnam, but not anymore. Accordingly, the Chinese Generation Panel does not take into account the usage of Chinese scripts within Mongolia and Vietnam.

2 Countries with Significant User Communities for Chinese Script

Chinese script is used to write a diverse set of languages across East Asia and South East Asia.

Some major countries and regions using Chinese script are depicted as follows:



	Traditional Chinese script used exclusively or almost exclusively (Taiwan, Macau and Hong Kong)
	Simplified Chinese script used exclusively or almost exclusively (Mainland China and Singapore)
	Simplified Chinese script used formally but Traditional script still used widely (Malaysia)
	Chinese script used in conjunction with other systems of writing in the same language, Kanji (Japan)
	Chinese script no longer officially used, Hanja (Republic of Korea)

3 Target Script and Scope

3.1 Target Script: Hani

In ISO 15924, the script for Chinese Language is mainly defined in this specification:

ISO 15924 code: **Hani**

ISO 15924 no.: 500

English Name: Han (Hanzi, Kanji, Hanja)

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Following ISO setting, CGP will directly take “Hani” as the Language Tag for Chinese.

3.2 Principal Languages using the Script

As shown in the following non-exhaustive table, Chinese, Japanese and Korean are three main languages using the Chinese script today but it does not imply that unlisted languages are less significant.

For example, there are cases where a language may have a large population, but only a small part of it writes it in Chinese script. Such languages are also excluded from this list. For these language all ISO 639-3 available as “living” are included from <http://www-01.sil.org/ISO639-3/codes.asp>, which may refer to a macro or an individual language.

Language	ISO 639-3 Code(s)	Countries	Local Names of the Script
Chinese	cdo, cjl, cmn, cpx, czh, czo, gan, hak, hsn, lzh, mnp, nan, wuu, yue, zho	China	汉字
Japanese	jpn	Japan	漢字
Korean	kor	Korea	한자

3.3 Scope

In 2004, according to RFC 3743 and RFC 4713, the Chinese Domain Name Consortium (CDNC) submitted to IANA a unified Chinese Character Set (19520 characters) for domain name registration, building up mapping relationships between any given simplified character, its traditional character(s) and its variant(s). All those 19520 characters are included in MSR-1.

In 2012, CDNC added 17 more Chinese characters into the character set as requested by HKIRC on behalf of Hongkong community, increasing the set number to 19537. But only 15 of those 17 characters are included in MSR-1.

Thus CGP takes the intersection of MSR-1 and the latest version of CDNC character set, amounting to 19535 characters, without Latin Hyphen, digits (002D, 0030-0039, which are not allowed in LGR for the root zone) and letters (0061-007A), as the repertoire (listed in Appendix A), which consequentially falls in the range of MSR-1.

Before the step of whole label rules, CGP will coordinate with KGP and JGP on the variant

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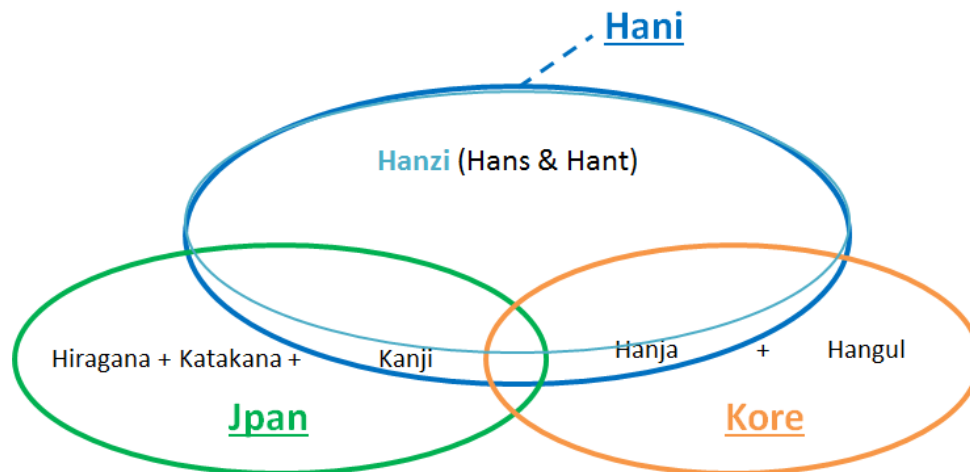
characters inclusion and removal within the range of MSR-1, modifying the CGP repertoire if it is necessary.

3.4 Chinese Characters in Different Languages and Script

Chinese characters are used as Hanzi in Chinese, Kanji in Japanese and Hanja in Korean:

- Hanzi normally consists of two subsets, Simplified Chinese characters (Hans) and Traditional Chinese characters (Hant).
- Kanji is used in Japanese in addition to two other scripts (hiragana and katakana), together known as Jpan (ISO 15924 code).
- Hanja is used in Korean in addition to the Hangul script, together known as Kore (ISO 15924 code).

The relationship between Hanzi, Kanji and Hanja is as shown below, Hanzi (Hans & Hant), Kanji and Hanja will all be covered by CGP.



4 Variants Coordination between C, J and K

As introduced above, different panels (C, J and K) have different views on the variants corresponding to the same Chinese character. This will accordingly generate impacts on the regulation of Chinese script sets and rules for Chinese domain name registration (even results in conflicts during IDN TLD registration). The following will explain it from the aspects of Chinese, Japanese and Korean languages.

Chinese:

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In the Chinese language, there are two types of variant:

The first type is created by regional variations in the standard writing system. There are now two common writing systems: Simplified Chinese and Traditional Chinese. Both writing systems use different subsets of the same Unicode Han script, but they are not mutually exclusive to each other.

The second type is the generic variant. Several Chinese characters are visually different in forms, but treated equally with universal interchangeability. This relationship of interchangeability is much stronger than the relationship between the Traditional and Simplified forms.

This understanding and variants mapping relationship has been reflected in the CDNC Character Set, the IANA IDN table for .CN and .TW.

Japanese

There are more than 6,000 Kanji characters used in Japan, 2,000 of which are regularly used. Among those 2,000 Kanji characters, some are in a simplified form (called the “new character form”), derived from the traditional imported form (called the “old character form”).

For Chinese characters used in Japanese (Kanji), it is appropriate to distinguish new and old forms as different and independent characters instead of pure variants. This understanding has been reflected in the IANA IDN table developed by the .JP registry, JPRS, in which no variants are identified for Kanji.

Korean

Hanja is no longer widely used in the ROK. A law enacted on April 14th, 2011 orders all ROK official government documents to be written only in Hangul. Hanja or other scripts can only be written within parentheses if allowed by presidential decree. Many Korean words though derived from Hanja are usually written in Hangul.

Staff from the Korea Internet & Security Agency, the registry operator for the .KR ccTLD, stated that its IDN policy does not allow Hanja to be reflected by the language table submitted to IANA, and nor does they have any intention of allowing the use of Hanja in their domestic market.

Thus, a coordination scheme between different panels is needed in that we expect unified Chinese script generation rules in the DNS root zone. However, if the Chinese script (Hanja) is no longer widely used in the ROK (*we still need conformation of this from the KGP*), this issue turns into coordination mainly between the CGP and the JGP.

During the CDNC meeting in Shanghai (May, 2014), we were glad to see a coordination scheme

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proposed by the Integration Panel. Following are the basic principles :

Each CJK panel creates an LGR and each LGR includes a repertoire and variants.

If an LGR includes Han characters, the variant mappings must agree for all three panels.

The variant types may be different (blocked or allocatable), the variant types do not have to agree across LGRs

Based on the above principles, CGP, JGP and KGP need to cooperate together to define a unified variant mapping table for Chinese scripts, then define variant types (e.g., allocatable or blocked) for each character contained in this table. (as described in the document of “Procedure to Develop and Maintain the Label Generation Rules for the Root Zone in Respect of IDNA Labels”). During this process, we can reasonably anticipate that the CGP repertoire will be increased to add some characters or decreased due to some characters with controversy. All relevant characters are supposed to be included in MSR-1.

After the agreement on the unified variant mapping table is finally achieved, CGP will finalize the Chinese character repertoire for root zone. Following XML-format transforming regulations (draft-davies-idntables-08, Representing Label Generation Rulesets using XML), CGP will generate its own XML table of CGP character repertoire, and mark every variant codepoint with “simplified”, “traditional”, “both” or “block”.

After all above, CGP will enter the step of “generation rule”.

5 The Generation Rule and the Relationship with Past Work

In April 2004, the Joint Engineering Team (JET), a group composed of members of CNNIC, TWNIC, KRNIC, and JPNIC as well as other individual experts, produced RFC 3743, “Joint Engineering Team (JET) Guidelines for Internationalized Domain Names (IDN) Registration and Administration for Chinese, Japanese and Korean”, a guideline for zone administrators, including but not limited to registry operators and registrars and information for all domain names holders on the administration of domain names that contain characters drawn from the Chinese, Japanese, and Korean scripts. It includes various concepts for variant handling, such as bundling, atomic IDL Packages, and reserved variants. It also defines a standard table as well as an algorithm to generate the preferred variant and reserved variants. The key mechanisms of this specification utilize a three-column table,

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called a Language Variant Table, for each language permitted to be registered in the zone.

Collectively, CDNC has devised solutions to handle Chinese domain name variants, such as the bundling of Simplified Chinese (SC) and Traditional Chinese (TC) (“TC-SC Equivalence”) domain names — as defined by the JET in RFC 3743 (April 2004) and for the Chinese language as defined in RFC 4713 (October 2006) — and delegating the applied label, the preferred SC label and the preferred TC label to the same registrant. CDNC’s registration policy on handling TC-SC Equivalence is widely accepted. CDNC IDN Table, developed by many Chinese linguistic and domain name experts over the last 10 years is currently adopted by the Chinese, Taiwanese, Hong Kong, Macau and Singaporean governments, as well as by many new gTLD applicants. With over a decade of operating experience, CDNC’s TC-SC Equivalence solution is the best market-proven practice for handling Chinese variants in domain names.

CGP noticed that the Appendix B in “Representing Label Generation Rulesets using XML, draft-davies-idntables-08” generates every possible combination of variant labels, allocates the original label, SC labels and TC labels, while blocks the other labels.

Generally, in addition to the original applied label, CDNC ruleset delegates only one preferred SC label and only one preferred TC label, totally no more than three labels, to the registrant. The XML-format transforming draft doesn’t give the scenario about how to delegate multiple allocatable labels. Considering the clear and required demand for TC-SC equivalence from Chinese community, CGP is working out an algorithm which contains delegation rule for “TC-SC equivalence” based on the current XML-format transforming draft.

6 Proposed Initial Composition of the Panel

6.1 Panel Chair and Members

The current membership of the Chinese Script Generation Panel (CGP) includes the following (in alphabetical order). All the members will be members of the Generation Panel for Chinese script LGR for the Root zone.

No.	Name	Organization	Country /Region	Language Expertise
1	Chao QI	Mr. CNNIC	China	Chinese
2	Chris DILLON	Mr. University College London	UK	Chinese/Japanese/Korean

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3	Connie Hon	Ms.	IP Mirror	Singapore	Chinese
4	Di MA	Dr.	ZDNS	China	Chinese
5	Guoying LI	Dr.	Beijing Normal University	China	Chinese
6	Holmes LEONG	Mr.	MONIC	Macao	Chinese
7	James SENG	Mr.	21 ViaNet Group Limited	Malaysia	Chinese
8	Jean-Jacques Subrenat	Mr.	ATLAC ICANN	France	French, English, Chinese, Japanese.
9	Jenifer CHUNG	Ms.	Dot Asia	USA/Hongkong	Chinese
10	Jiagui XIE	Mr.	CONAC	China	Chinese
11	Jonathan SHEA	Mr.	HKIRC	Hong Kong	Chinese
12	Joseph YEE	Mr.	Afilias	Canada	Simplified Chinese, Traditional Chinese, (Familiar with Japanese)
13	Kenny HUANG	Dr.	TWNIC	Taiwan	Chinese
14	Linlin ZHOU	Ms.	CNNIC	China	Chinese
	Lu QIN	Prof	Hong Kong Polytechnic University	Hong Kong	Chinese
15	Nai-Wen HSU	Dr.	TWNIC	Taiwan	Chinese
16	Ryan TAN	Mr.	SGNIC	Singapore	Chinese
17	Shutian CUI	Ms.	Ministry of Industry and Information Technology	China	Chinese
18	Wei WANG	Dr.	CNNIC	China	Chinese
19	Xiaodong LEE	Dr.	CNNIC	China	Chinese
20	Yuxiao LI	Dr.	Beijing University of Posts and Telecommunications	China	Chinese
21	Zheng WANG	Dr.		China	Chinese
22	Zhiwei YAN	Dr.	CNNIC	China	Chinese
23	Zhoucai ZHANG	Prof	UniHan Digital Tech., Ltd.	China	Chinese mainly

6.2 Panel Diversity

The Generation Panel (GP) for the Chinese Script LGR gathers experts from a variety of backgrounds (bringing varied linguistic and technical perspectives), including those who are national and regional policy makers, members from the technical community directly working with the DNS (e.g. registries and registrars), security, academia (technical and linguistic), members of community based organizations, and members with experience of local language studying.

Geographically, the GP for the Chinese script has members from across the relevant regions, including East Asia and Southeast Asia. There are also experts from non-Chinese-speaking regions equipped with profound knowledge in oriental languages as well as culture. The members belong to

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seven different countries/regions from these areas. The members and their expert backgrounds are listed as follows:

Wei Wang is the chair of CGP. He is the deputy chief engineer of CNNIC and former deputy director of CNNIC. As the co-secretary of CDNC, he worked as a member of ICANN's Chinese VIP team. His expert background in Chinese domain name registration and management helps to control the overall progress of the CGP, and to propose and evaluate the key schemes and policies.

Kenny Huang is the co-chair of the CGP, in charge of the coordination between C, J and K. He is on the APNIC executive council, the DotAsia advisory council and is a TWNIC board director and chair of the International Affair Committee. He worked as the APNIC policy SIG chair from 2002 to 2007 and on ICANN's ASO Address Council from 2001 to 2011. He is the co-author of IETF RFC 3743. He is an IDN expert and helps to coordinate with the JGP and KGP to regulate Chinese variant mapping rules.

Xiaodong Lee is a policy expert. He is the CEO and CTO of CNNIC. He acts as the former vice president of ICANN and is also the organizer of several international and domestic technology standards in the fields of domain names and email. He is the co-author of RFC 4713 and is the CGP's policy expert.

Jean-Jacques SUBRENAT is a representative from ATLAC, and also from Europe community. He is the member of the "NTIA IANA Functions' Stewardship Transition Coordination Group"; member of ALAC (2010-12, again 2012-14); former member of ICANN Board (2007-10); former diplomat (1971-2005) and retired Ambassador (1998-2005). His working languages include French, English, Chinese and Japanese.

Chris Dillon is a linguistic expert. He was a member of ICANN's Chinese VIP team. He was a member of the joint ccNSO/gNSO IDN working group, is Co-Chair of the GNSO's Translation and Transliteration PDP WG and provides linguistic advices to the CGP. As a non-native Chinese linguist, he provides valuable professional opinions from the European community.

Guoying LI is a linguistic expert. He is the Vice-Dean of the School of Chinese Language and Literature of Beijing Normal University. He is also the director of the Research Center of Classification

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and Standardization of Chinese Characters, supported by Beijing Normal University and the Language and Information Division, Ministry of Education of China.

Joe Zhang is a Chinese script processing expert. From 1989 to 2003, he was the key developer of ISO/IEC 10646, chaired the CJK group as CJK JRG, and is an IRG rapporteur and contributing editor. As the CEO of UniHan Digital Technology, he acts as the invited researcher of the Language Application Institute under the Ministry Education of China. His background of Chinese language and Chinese culture provides support for variants set regulation.

Lu QIN is a linguistic expert. Prof. She has successfully helped to make structured encoding of Chinese character components which lead to a much faster encoding process for Chinese characters. She spearheaded the standardization of the Hong Kong Supplementary Character Set, the first and only commonly adopted character set for Hong Kong. She is the Rapporteur of the ISO/IEC JTC1/SC2/WG2/IRG.

Shutian CUI is a government representative. She serves as the Division Director at the Telecommunication Administration Bureau of Ministry of Industry and Information Technology (MIIT), PRC, involving namely registry and registrar policy making, supervision on the DNS operation, protection of the public interest and the user's information, development of the Chinese TLDs, coordination of the IP address designation and allocation, etc.

Yuxiao LI is a legal expert. He is the Dean at Institute of Cyber Governance and Law in Beijing University of Posts and Telecommunications (BUPT), China. He has rich experience on Internet governance and law research.

Chao QI is a registry expert. He is a R&D engineer of CNNIC, takes responsibility for SRS, RDDS and DNS systems for CC TLD and New gTLD and has practical experience of Chinese variant issues in the registration for Chinese domain name.

Jonathan SHEA is a registry expert. He is the CEO of HKIRC and HKDNR. He was a member of ICANN's Chinese VIP team. From 2012, he was a member of the Joint ccNSO/gNSO IDN Working Group. He is the representative of registries/registrar in Hong Kong and also provides advice for the regulation of variants set and rules.

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Jiagui XIE is a DNS expert. He is the director of the new gTLD Lab in CONAC (the 政务 and 公益 new gTLD Registry). He has rich experience in DNS/gTLD/ccTLD/IDN and EPP technologies.

Linlin ZHOU is an IDNA expert. She is the author of several Whois-related IETF drafts with working-group status.

Nai-Wen HSU is a DNS/IDNA/Unicode expert. He is the technical department director at TWNIC and co-author of RFC4713. He helps to evaluate the variant mapping rules.

Ryan Tan is a registry/registrars expert. Since 2000 he has been involved in IDNs of various languages in both technical and policy aspects. In 2005 he pioneered the Chinese and Tamil IDN testbed for SGNIC which laid the ground work for the eventual launch of Chinese.com.sg and Chinese.sg domain names in 2009 and Chinese.新加坡 and Tamil.சிங்கப்பூர் in 2011.

Zhiwei YAN is a DNS expert. He is in charge of the DNS and IPv6 researches in CNNIC and he is also the invited professor of Waseda University (Japan) since 2013.

Zheng WANG is a representative for China mainland community. He used to be the director of joint labs in CONAC and is also the architect of CONAC's registry system. He is a member of ICANN's Internationalized Registration Data Working Group.

Di MA is a registrar expert. He is the laboratory director of the Internet Domain Name System Beijing Engineering Research Centre (ZDNS), the ICANN accredited registrar and New gTLD back-end service provider hosting over 20 new gTLDs including more than 10 Chinese gTLDs.

Joseph YEE is a IDNA/Unicode expert. He works for Afilias and is also an expert in Japanese language and provides advice for Chinese characters usage in the Japanese language.

Connie HON is a representative for Singapore community. She works in Business Development and Strategy with IP Mirror Pte Limited.

Holmes LEONG is a representative for Macao community. He is the Chief Operations Officer at HNET Asia Limited.

Jennifer CHUNG is the representative for Hongkong community and USA community. She is the current Policy and Organisational Relations lead for DotAsia Organisation and based in the US. She is a member of the Translation and Transliteration of Contact Information PDP working group within the

GNSO.

James SENG is a representative for Malaysia community. James also participates actively in several standard organizations (such as ISO/IEC JTC1 and IETF) and also served on the board/committee of several Internet organizations.

7 Work Plan

7.1 Suggested Timeline with Significant Milestones

The Generation Panel intends to divide the work on the LGR for the Root zone into five stages:

1. Finalization of Code Points
2. Finalization of unified variant mapping table
3. Finalization of Chinese repertoire and variant type
4. Finalization of Whole Label Rules
5. Finalization of LGR Documents for Chinese Script and Submission to ICANN

In the first phase of each stage, the general principles and framework will be decided, on which further decisions will be based. After the principles are finalized, in the second phase the data (character repertoire, variants, and labels) will be analyzed to make concrete decisions. It is anticipated that the work will take at least half a calendar year. The tentative work plan is depicted in the chart below. Though the chart depicts a linear progression, it is understood that discussion and feedback at each stage will incrementally and cyclically develop the previous portion(s) of the work as well, including both principles and data. Further, though it is anticipated that the work will finish in 2014, the actual time is up to the feedback received by the community and the IP at various stages and phases of the work and may conclude by the end of 2014.

7.2 Public Comment Process

In each stage listed above, we will keep exchanging opinions with CDNC and cooperate with JGP and KGP for wider feedback. At the same time, comments from IP and the community are always welcomed through websites and interviews.

Based on the feedback and comments from CDNC, JGP, KGP, IP, ICANN and the community, the work in each stage will be carefully refined in order to satisfy broader requirements and application scenarios. Each of the five tasks above will be finalized after one or more public comment periods.

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7.3 Proposed Schedule of Meeting and Teleconferences

Most of the work will be accomplished through the email list. CGP will be holding regular teleconferences, for the period of the work. In addition, CGP will also organize a series of face-to-face discussion during CDNC meetings or ICANN meetings in 2014.

7.4 Sources of Funding for Travel and Logistics

Foremost, all the members of the panel will contribute their time to fulfill this purpose. The work has travel and logistic support requirements. ICANN will support the logistics of the group (e.g. conference calls, assisting in coordination, wiki pages for posting information, etc.) to a limited extent. Members of the working group are encouraged to find sources of funding to attend face-to-face meeting(s) related to the GP. ICANN provides fund for a limited number of members who are active in the proceedings of the working group, and support for remote participation for the members unable to attend the meeting(s).

7.5 Need for ICANN to Provide Advisors

No advisors are needed at this time, based on earlier discussions and experience during the case study on Chinese Script Issues. When discussions of the development of the LGR for the Root zone arise the need of ICANN advisors, it is favorable to win the support of ICANN advisors. At ICANN 49 (Singapore), ICANN 50 (London), ICANN 51 (LA) meeting agendas on the GP may be necessary.

(The Generation Panel will remain active after the finalization of the LGR documents that continue to address comments from the community, ICANN, and the Integration Panel.)

Task	Duration	Start	Finish
LGR for Chinese Script	293 days	14-Mar-14	31-Dec-14
Joint Conference of CGP and CDNC	2 days	14-Mar-14	15-Mar-14
Discussion of members			
Discussion of proposal			
Formation of Generation Panel	8 days	16-Mar-14	23-Mar-14

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<i>Introduce members</i>	1 day	16-Mar-14	16-Mar-14
<i>proposal version-1</i>	7 days	17-Mar-14	23-Mar-14
ICANN 49 Singapore	1 day	24-Mar-14	24-Mar-14
Character Set	93 days	25-Mar-14	25-Jun-14
<i>Definition of repertoire (code point)</i>	65 days	25-Mar-14	28-May-14
<i>Joint Conference of CGP and CDNC</i>	2 days	29-May-14	30-May-14
<i>proposal version-2</i>	25 days	31-May-14	25-Jun-14
ICANN 50 London	1 day	25-Jun-14	25-Jun-14
Cooperation with JGP and KGP	87 days	26-Jun-14	20-Sep-14
<i>Proposal version-3</i>	25 days	26-Jun-14	20-July-14
<i>Unified variant mapping table</i>	10 days	21-July-14	30-July-14
<i>Interaction with IG for feedback</i>	20 days	31-July-14	19-Aug-14
<i>Release for public comments</i>	32 days	20-Aug-14	20-Sep-14
CGP Repertoire	21 days	21-Sep-14	11-Oct-14
<i>Variant type</i>	3 days	22-Sep-14	24-Sep-14
<i>Interaction with JGP and KGP for feedback</i>	6 days	25-Sep-14	30-Sep-14
<i>Interaction with IP for feedback</i>	5 days	1-Oct-14	5-Oct-14
<i>Release for public comments</i>	6 days	6-Oct-14	11-Oct-14
ICANN 51 LA	1 day	12-Oct-14	12-Oct-14
CGP generation ruleset	46 days	13-Oct-14	27-Nov-14
<i>Generation rule based on XML draft</i>	10 days	13-Oct-14	22-Oct-14
<i>Interaction with JGP and KGP for feedback</i>	10 days	23-Oct-14	1-Nov-14
<i>Interaction with IP for feedback</i>	5 days	2-Nov-14	6-Nov-14
<i>Release for public comments</i>	21 days	7-Nov-14	27-Nov-14
Finalization of LGR Documents	34 days	28-Nov-14	31-Dec-14
<i>Finalizing Document</i>	15 days	28-Nov-14	12-Dec-14
<i>Finalizing LGR XML Structure</i>	9 days	13-Dec-14	21-Dec-14
<i>Submission to ICANN</i>	10 days	22-Dec-14	31-Dec-14

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