## Title: TCA Feedback on N4716. Source: TCA Action: For consideration by JTC1/SC2/WG2

After TCA got the proposal of n4716, we convened a meeting of philological experts to discuss this proposal. Our experts include 李鍙(Li Xian),王寧(Wang Ning), 張文彬(Wen-bin Chang),王立軍(Wang Liun), 鍾柏生(Bor-sheng Jung), 許學仁(Xue-jen Hsu), 季旭昇(Hsiu-sheng Chi), 魏林梅(Wei Lin Mei), 陳壯(Chen zhuang), 王曉明 (Wang Xiaoming), as well as the experts form the Project of Chinese Character Repertoire, China Electronics Standardization Institute, Chinese Foundation for Digitization Technology. In our meeting, our opinion is that we don't agree with encoding Shuowen Small Seal in Source-based Variation Selector. Our reasons are as follows:

(1) Why we propose to encode Shuowen small Seal characters?

The book Shuowen Jiezi (說文解字, abbreviated as Shuowen) isn't a usual record or dictionary. The period of small seal characters is the final stage of the ancient Chinese characters. Shuown has been standardized from Qin (秦) dynasty (221 B.C. to 206 B.C.), chosen and systematized by Xu Shen (許慎) in East Han (東漢) dynasty (25 to 220), then proofread and corrected completely by Duan Yucai (段 玉裁) in conclusion in Qing (清) dynasty (1644 to 1911). We don't have to arrange the small seal characters (in this book) again. Even some odd small Seal characters discovered from tombs do not surpass the collection of Shuowen.

The importance of encoding small Seal characters is that it's significant base of all ancient Chinese characters. Shuowen's 540 radicals are the base of modern radicals, we used to classify ancient Chinese characters on its conventional practice.

(2) Why do not encode all of versions?

We consider that differences of glyphs among variety of versions come from scribing rather than applying. Most of their differences are quite minor, like length of strokes, slanting or interlacing or not. These factors wouldn't confuse us with their structures, so we don't need to encode all glyph due to their tiny differences.

藤花樹本 (THX)	Ê	Xout	<b>X</b> 同	No.	RUSS
陳昌治本 (CCZ)	阐	日常	飘	誦	Nan Y

Figure 1 Difference of 网-Head Characters between THX and CCZ.

(3) Why we do not choose other versions, but Tenghuaxie version (藤花樹本)? The earliest versions of Shuowen are residual volumes of radical wood and radical mouth of Tang dynasty handwritten book (唐寫本木部殘卷、口部殘卷), they only include about 200 characters, which are 2% of Shuowen. Furthermore, three of existing Song (宋) dynasty (960 to 1279) versions, small characters version by Wang Chang of Qingpu(青浦王昶宋小字本), small characters version by Wang Zhong (汪中所藏宋小字本) and version by Huang Zhichun ("黃氏志淳" 本), they may originate from the same sources. And their glyphs have more damages, disappearances or rough scribes. Therefore, they can't be materials of design of small Seal encoding.



Figure 2 唐寫本木部殘卷 and 口部殘卷

Currently, three of the accepted better versions are Jiguge version(汲古閣本), Tenghuaxie version (THX,藤花樹本) and Pingjingguan version(PJG,平津館本), which are based on Song dynasty version. So we can compare the others versions below:

决血 扶巫 ÷E 分 切呼 切武 切胡 切門 切工 切 切武 切工 九 切居 围 稚旨 围 奴 切職切奴切則 曲制 Ψ 切古 切苦 切百 II H Я TI 自意我 可衍琵 蠠虐 責 可衍登 切中 切音切知 为广切丘切静切中切有切知 切皮切丘切許 切ん

Figure 3 THX(left) and PJG(right).

Obviously, THX's glyph figures are much clearer than PJG's. That's the reason why we choose THX at first. Second, we will expand the glyph resting on DYC, PJG, XiaoXu version, and so on. Duan Yucai is regarded as the greatest expert of Shuowen in the Qing dynasty. He changes some components of glyph systematically, that is valuable.

(4) Why do not unify components of glyph in THX?

Although Small Seal is a glyph system organized based on the real using way in Qin dynasty. For this reason, the glyphs can't be consistent completely. These differences can be found in other versions, as figure4 below. And existence of different figures of  $\bowtie$  is a common phenomenon in every versions. If the non-radical component of a character is complicated, it's usually created vertically constructed with radical . Therefore, we can't expect a version unified internally or integrate



all versions into a consistent system. To respect historic facts, the best way is choose a better version to encode.



Figure 4 Different Structure of 齒 and 鬥 in Jiguge Version(汲古閣本).

Small Seal is the base of ancient character textual criticism, can't be replaced. It's a certified character set of the academic community. To respect historic text, there's two requests below:

- (1) Encode Small Seal independently except in Source-Based Variation Selector.
- (2) We anticipate encode it in 2 phases. First, encode the Small Seal glyph of THX. Second, expand characters different from THX in Chen Changzhi version (陳昌志本), DYC, PJG, XiaoXu version (小徐本) and so on.

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