# Some Remarks Concerning Digital Editions of Premodern Chinese Texts

Christian Wittern

2010-03-26

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#### Some general remarks about digital text

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- Description of the project and its workflow

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- Some general remarks about digital text
- Description of the project and its workflow
- Plans for enhancement towards a framework for working with digital text that satisfy rigid requirements for scholarly use



#### Digital texts are still at the incunable stage of development

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- Web publication is **not** the answer
  - it leads to disengagement of the text and its readers

#### ■ (1) creation



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### (1) creation

- birth
- => establishment of base text and its variants, its characters and basic compositional units

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(2) enhancement

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- (2) enhancement
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  - => distribution model, rights, access
- in reality, (2) and (3) form a cycle that is repeated indefinitely

### The most important Daoist textual collection is the Daozang 道藏 (DZ)

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- it contains about 1500 texts with more ca. 5300 scrolls (26 Mio characters)

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- About 60% of the material is from DZ, 40% has been added newly
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- A project was conceived to support this study, genereously supported by CCK and JSPS

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including a digital one in many forms

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Compile a critical, comparative catalog of the DZJY

Establish and publish a new critical edition of the DZJY

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- The following will discuss the progress and methodology of the digital DZJY

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一姓生陰道	一介姓雖公	一齐生陽道	一天遠而人	一介甡一道	- 輪節	一則起困	一尸尅禹	一 介 过 罪	一张生甡
<b>生地生</b> 山	<u> </u>	皇生天生五	天蟻而人更近於天地也他則対爲凶	<b>一</b> 世 剋 介 者	輪範屬先天之學	困剋蠱	副剋介	<b>非</b> 剋焱	<u>甡</u> (1)
川生草木	養萬物培	一行生星シ	八地也他即	日言地可以	。學	蘭范甡	要尅鋋	焱过日	夏生产
小生金玉生	「植二氣町	生金玉山	対点区	、勝天而人		性剋翼	鋋尅班	野村屋	<u><u></u> 二生器</u>
<b>飛禽生</b> 雪	一也	龍馬生日		へ更可勝地		此相尅也	班剋察	風対米	此相生也
姓生陰道生地生山川生草木生金玉生飛禽生雲霧生走獸		<u> </u>		一道甡剋乔者言地可以勝天而人更可勝地葢地近而		竾	<b>雺</b> 尅 艸	《过户	市

姓生陰道生	<b>乔</b> 维隆	天這而人	輪範	帅起困	<b>屵</b> 尅禹	<b>乔</b> 尅 - 華	<b>ポ</b> 生生	山戸車司
地	分為二而生	更甡	副先天之學	困尅覹	出起介	非赵焱	性生爱	3
生山川生草	卷行	近於天地也他則尅為凶	ん学	鼎尅性	栗尅鋋	焱挝器	製生产	
小生金玉生	萬物培植二氟則一			坐尅殿	鎚尅班	器过殿	<b>学生</b> 講	
	明一也 生龍馬生日月生男	山 而人更可勝地益		此相尅也	班尅学	嚴軾然	此相由	fu
言露 生 走 厭	日月生男女	地益地近而		虹也	<b>雺</b> 兙 坤	<b>松尅</b> デ	生也	

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·自武匠 · · · · · · · · · · · · · · · · · · ·	贈劉方處士	日月無寒無暑無四時自從修到無	被我捉来騎一衛上朝歸碧落碧落廣闊無東西無曉	重直待虎嘯折巅拳驪龍奪得玄珠弄龍吞玄寶忽昇飛飛	一粒名千般一中有一為丹母火莫然水莫凍修之煉	真鉛及至用鉛還不用或名龍或名	用鉛不	突坑自言便是丹砂精宜向鼎中烹	日早總看畢不覺自醉如恍惚恍惚	何一言許肯更無難數篇奇怪文人手一夜挑燈讀	「直載軍要 日帝詩集	贈劉方處士	日月無寒無暑無四時自從修到無爲地始覺奇之又怪之	被我捉來騎一翥上朝歸碧落碧落廣闊無東西無曉無夜	重直待虎嘯折崩峯驪龍奪得支珠弄龍吞支寶忽昇飛飛龍	一粒名干般一中有一為丹母火莫然水莫凍修之錄之須珍	算鉛及至用鉛還不用或名龍或名虎或號嬰兒並姹女丹砂	真須得具中物不用鉛不用汞還丹須向鑪中種支中之支號	突抓自言便是丹砂精宜向鼎中烹凡質凡質本來不化質化	日早總看畢不覺自醉如恍惚恍惚之中見有物狀如日輪明	傳一言許肯更無難數篇奇怪文人手一夜挑燈讀不了曉
a stanter	スヨシャティラを	圣.	廣闊無東西無曉無夜無			用或名龍或名虎或號嬰兒並蛇女丹砂	用汞還丹須向爐中種立中之支號	化真	協之中見有物状如日輪明	一手一夜挑燈讀不了曉来	日朝室集小		為地始覺奇之又怪之	廣闊無東西無曉無夜無	示弄龍吞支寶忽昇飛飛龍	<b>众然水莫凍修之鍊之須珍</b>	I虎或號嬰兒並姹女丹砂	須向鑪中種玄中之玄號	究質凡質本來不化價化	之中見有物狀如日輪明	(手一夜挑燈讀不了曉來

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- This makes it very difficult to use for premodern text
- It is thus next to impossible to study changes in orthography and character usage in digital text

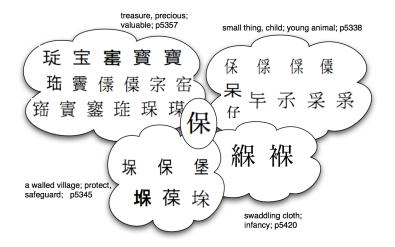
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A new model for digitizing Chinese text is needed

# Example for the difficulties in establishing the relationship to modern characters



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#### Establish a new model for digital Chinese text

#### Facsimile or Transcription -> Facsimile and Transcription

#### Establish a new model for digital Chinese text

- Facsimile or Transcription -> Facsimile and Transcription
- Not character codes, but position of the characters in the text as primary reference

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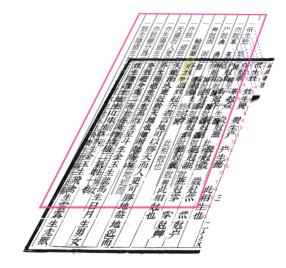
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Multiple representations can then be related positional

#### Conceptual view of the model



input according to the Chongkan edition

- input according to the Chongkan edition
- scan of page images, image preparation

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- input according to the Chongkan edition
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upload into the editing environment

- input according to the Chongkan edition
- scan of page images, image preparation

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- upload into the editing environment
- proofreading and annotating

- input according to the Chongkan edition
- scan of page images, image preparation
- upload into the editing environment
- proofreading and annotating
- workbench for analysis, annotation and translation

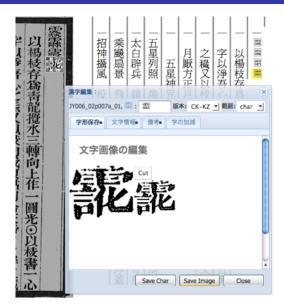
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#### The editing environment

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~ 經備仙翁	出 家 水 星 初 彩 風 利 亨 災 災	月歴方正月戌二月酉遊數之遇本 字以淨春心之悉又以枝向我腹點 宗の湯枝存為青龍攪水三轉向上作 議電詭	上衞仙翁	出 家 國 利 亭	水星卻災	月厭方正月戌二月酉逆數之遇本月方宜動步灑淨之職又以枝向壇上點三點念記澄湖化爲三天之境又從	字以淨吾心之炁又以枝向我腹點明合天帝日以淨五臟以楊枝存爲青龍攪水三轉向上作一圓光〇以枝書一心竊密詭	<b>贝休字● 贝质● 個考● 圓希</b> 凱希版(=KX) CK: 圆× KX: 穢× ->JYE
1	遊 名 木 家 利王 裔 昌			遊宴十方	木徳致昌	本月方宜動 豊 潮 化 鳥 三 王	點明合天帝□	ск: 國 x кx: 泓 x ->JYE ск: 飇 x кx: 颫 x ->JYE
氏集	五字 滎 蒙 察 常 焉 淵 禍 禍	月方宜動步灑淨		五雲浮蓋	受惑消禍	少灑淨	白 以 授 書 一 心 臓	Search:

Figure: A page from the DZJY Chongkan edition in the editing environment

#### .. in action



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establishing of a reliable text

- establishing of a reliable text
- all major witnesses available as facsimile

- establishing of a reliable text
- all major witnesses available as facsimile
- user/reader has full control over (his version of) the text

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annotation, commentary, translation

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  - private, shared or public

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  - private, shared or public
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- annotation, commentary, translation
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- The pedigree of the edition needs to be explicit

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  - for all public and private versions, there needs to be a way to establish the differences and the degree of relationship

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- it should be possible to
- Distributed version control systems to the rescue?

## DVCS evolved out of traditional (centralized) version control systems

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DVCS do not require a central server or central control

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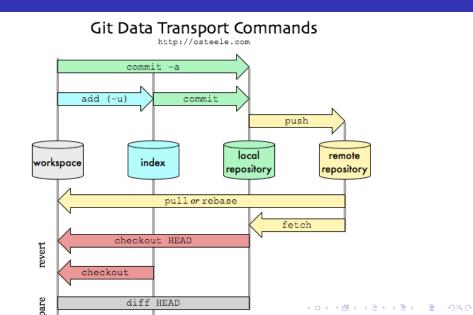
seems ideal suited for the research community

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- seems ideal suited for the research community
  - but there might be barriers to the entry

#### Example of a DVCS based workflow



#### Example(1): Zutang ji (Record of the Hall of Patriarchs)

#### <pb:ZTJ\_K45n1503\_1-101>¶ 加密度要效一個

祖堂集卷第三¶

ſ

牛頭和尚,嗣四祖。師諱法融,潤州延陵人也,姓¶ 文。四祖在雙峰山,告眾曰: 「吾未至此山時,於武¶ 德七年秋,於廬山頂上東北而望,見此蘄州雙¶ 峰山頂上有紫雲如蓋,下有白氣,橫分六道。| 四¶ 祖問五祖曰: 「汝識此瑞不? | 五祖曰: 「莫是師腳下¶ 横出一枝佛法不? 」四祖曰: 「汝會我意,汝善住矣,¶ 吾過江東。| 便夫。至牛頭山幽棲寺見數百僧並¶ 無道氣,乃顧問僧曰:「寺中有多少住持?其中有道¶ 人不? | 僧曰: 「禪和大相輕, 夫出家者, 阿那个不¶ 是道人? | 四祖曰: 「何者是道人? | 僧無對, 乃云: 「山上有嬾¶ 融,身著一布裘,見僧不解合掌,此是異人也,¶ 禪師 自往看。| 四祖乃往庵前過來過去,謂曰:「善¶ 男子!莫入甚深三昧。」融乃開眼。四祖曰:「汝學為¶ (mando -U:---zti.org 11% (1594,0) Git:master

Figure: The established text of the  $ZTJ_{P}$ , z = 1, z = 1

#### <pb:ZTJ K45n1503 1-101>¶ 祖堂集卷第三¶ Zǔtáng jí Fascicle Three ¶ 牛頭和尚, Preceptor Niútóu 嗣四祖。 succeeded to the Fourth Patriarch; 師諱法融, his canonical name as master was Făróng; 潤州延陵人也, he was a man from Yánlíng in Rùn province and his family name was Wén. 姓¶文。 The Fourth Patriarch addressed the 四祖在雙峰山,告眾曰: 11% (1591,0) Git:translation U:---zti.or

Figure: ZTJ text, reformatted and with translation (by C. Anderl)



#### A new way of handling for digital Chinese texts has been proposed



 A new way of handling for digital Chinese texts has been proposed

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Some changes to the way text is established

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- Some changes to the way text is established
- A different model for publications of a text

- A new way of handling for digital Chinese texts has been proposed
- Some changes to the way text is established
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- Empower the readers to share as much (or as little) of the traces of their reading with as many (or as few) others

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Work in progress, update to follow