# A Natural Language URL-Shortener

David Branner Hack and Tell eBay, New York 20140610

URL shorteners and their benefits are well known – create very short pointer to a long URL:

create very short pointer to a long URL:

http://bit.ly/TGIQtH

create very short pointer to a long URL:

http://bit.ly/TGlQtH

https://www.hackerschool.com/manual#sec-history

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less susceptible to corruption in transmission

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less susceptible to corruption in transmission concealment of final destination

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less susceptible to corruption in transmission concealment of final destination can be used to track visitors to the main site

- > http://7.ly/jMau
- > http://2.gp/zkSE
- > http://qr.net/Bozx
- > http://bit.ly/TGlQtH
- > http://x.vu/KC4s4e
- > http://ow.ly/xQNbx
- > https://t.co/ZfUR4euiph

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ugglesome in the extreme compressed, hence rarely readable easy to remember?

http://bit.ly/HStory

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→ https://www.hackerschool.com/manual#sec-history

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easier to remember

http://bit.ly/HStory

https://www.hackerschool.com/manual#sec-history

easier to remember short only if you get there first (tend to be long)

(Talon-sharpening exercise at Hacker School recently.)

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The trick to picking always-readable short URL-paths:

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The trick to picking always-readable short URL-paths:

use the characters for the most common Chinese words.

2635 in the current official HSK proficiency exam

```
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compare to paired Roman letters (of either case):  $52 \times 52 = 2704$ 

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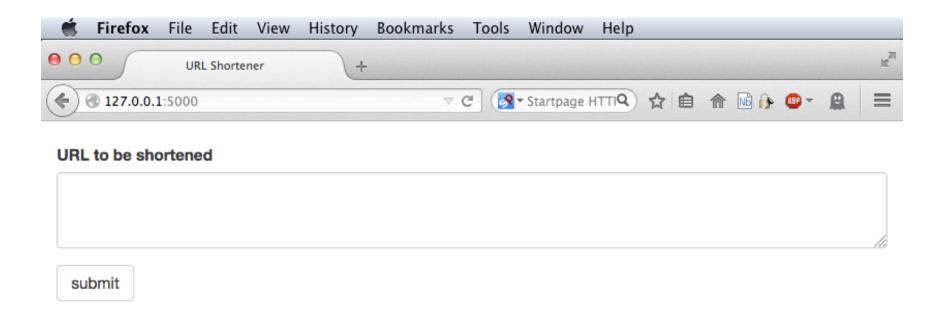
kind	random 字	random Roman digraph
#	2635	2704

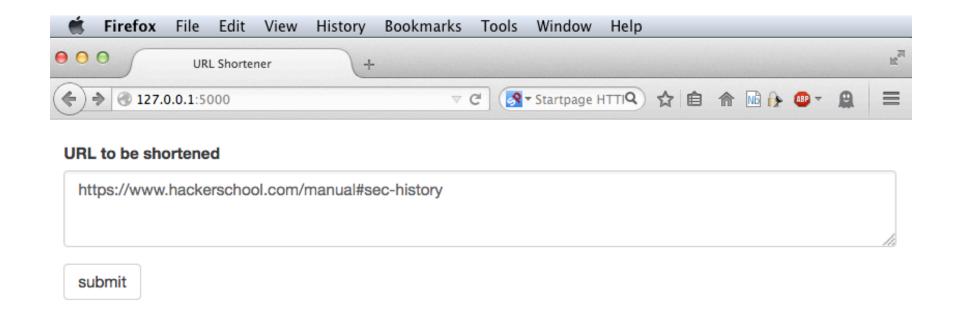
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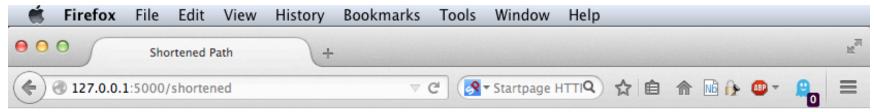
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kind	random 字	random Roman digraph
#	2635	2704
readable?	guaranteed	probably not

# Code for proof-of-concept on my public Git repository.







The URL you submitted: https://www.hackerschool.com/manual#sec-history has been shortened to http://127.0.0.1:5000/fil

### First c. 2650 URLs → one character

http://127.0.0.1:5000/印

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Next c.  $2650 \times 2650 = 7022500$  URLs  $\rightarrow$  two characters

http://127.0.0.1:5000/厉吉

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Next c.  $2650 \times 2650 = 7022500$  URLs  $\rightarrow$  two characters

http://127.0.0.1:5000/厉吉

Next 18,609,625,000 URLs  $\rightarrow$  three characters

http://127.0.0.1:5000/天鼻歪

# Always readable

Note:

Note: many custom shorteners allow Chinese characters:

http://bit.ly/史

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Also note: the advantage of shortening to Chinese does not mean bandwidth savings:

http://bit.ly/史 may be sent from your browser as

http://bit.ly/%E5%8F%B2

# Afterthought:

Someone commented that without knowing Chinese, she would find this system perhaps of limited use.

An intermediate solution would be Korean Hangul, where fully pronounceable syllables are written in one-character-width glyphs composed of alphabetic subunits. There are 2100 recognized glyphs that can be composed of these according to simple principles, although another 9000 are possible graphically. Learning the 40 component subunits is a more manageable task than learning the two-plus thousand basic Chinese characters:

¬пしにに己口日배入从〇ス双之ヲE立方 トHㅑㅒㅓᅦㅕᅨㅗᅪᅫᅬㅛㅜ눠뒈ᅱㅠーᅬㅣ.

> Branner, A Natural Language URL-Shortener Hack and Tell, 20140610. p. 41/42

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