




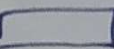
7/6/19

CAPTCHAs

* Completely automated public Turing Test to Test Computers + Human Apart

(1) GimpY → reading / interpreting disordered text, text displayed in different Orientations
* 7 words in " " / duplicated
and is expected to identify the three

(2) ReCaptcha - Google Books - Control word / unknown word - way to digitize scanned words that are non readable; employed by Google

(3) Question Captchas -
There are 1 , 3 , 4  in a box. How many stationeries 

(4) Collage Captchas - click a specific object(s) from a collage of images.

(5) video and Aural Captchas
enter words from video → uttered distorted words to be entered.

Good CAPTCHA: * Avoids exploitable Variants

words to be
Good CAPTCHA: * Avoids exploitable Variants
* Segmentation resistant *
"IMPACTS USABILITY"

Proposal:-(i) Background - High Contrast better readability
black text on white B/g - optimal legibility
"positive text" - v/v \rightarrow negative text

(ii) # of Confusing characters :- 0-0; 2-Z; b-b
5-S; 1-l, vv-w, nn-m;

(iii) curved stray lines - affects readability; but
Increases security

(iv) g and j ; b-p } aural Confusing pairs

(a) Count of NO of Confusing char $\propto \frac{1}{\text{usability}}$ (c)

(b) Distortion level (d) $\propto \frac{1}{\text{usability}}$ (d)

(c) Noise line Count (l) $\propto \frac{1}{\text{usability}}$ (l)