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TP B.27

Sliding Bank System Comparisons

supporting:
"The Illustrated Principles of Pool and Billiards"
http://billiards.colostate.edu

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for **background and demonstrations** see:
"NV L.30 – SLIDING BANK SHOT DIAMOND SYSTEMS … How to Aim Banks at Fast-Speed or Close-to-the-Cushion:"
https://billiards.colostate.edu/normal-video/nv-l-30/

Measured Through-Diamond Bank Reference Lines:

aim point on the banking rail: $\text{aim} := (.5 \;\; 1 \;\; 1.5 \;\; 2 \;\; 2.5 \;\; 3)^T$

where the cue crosses the opposite rail: $\text{cue} := (1.38 \;\; 2.72 \;\; 3.89 \;\; 5.07 \;\; 6.38 \;\; 7.74)^T$

1-More-Than-Twice Through-Diamond System:

$$\text{one\_more}(x) := 2 \cdot x + 1$$

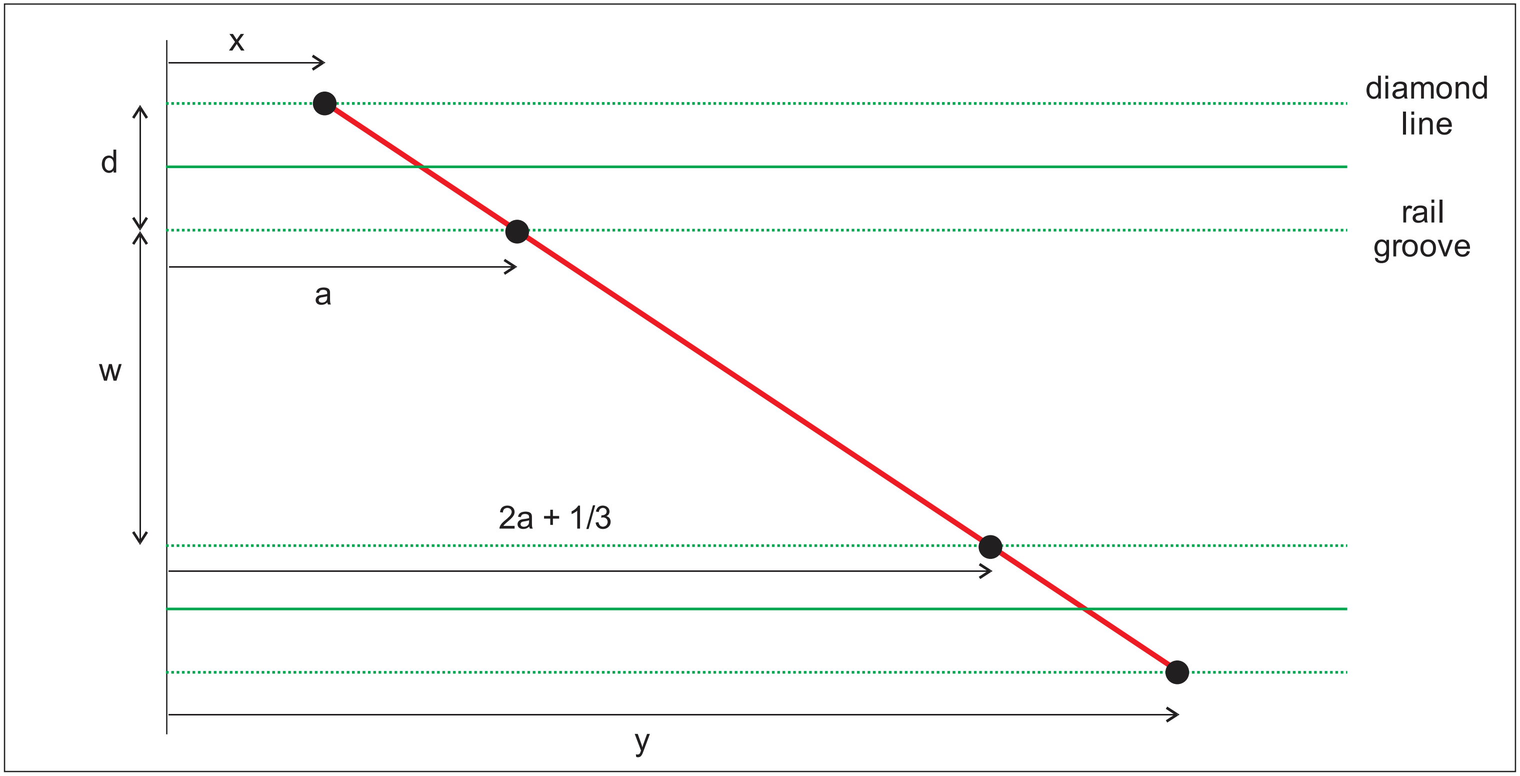
Eckert Aim Between 1/4 and 1/2 or Briesath Adding Thirds Through-Diamond Systems:

$$\text{thirds}(x) := \frac{8}{3} \cdot x$$

Dr Dave Rail-Groove (across diamond) 1/3-of-a-Diamond-More-Than-Twice System:

diamond distance: $D := 12.5$ distance between diamond and rail groove lines (in diamonds): $d := \frac{4.25}{D}$

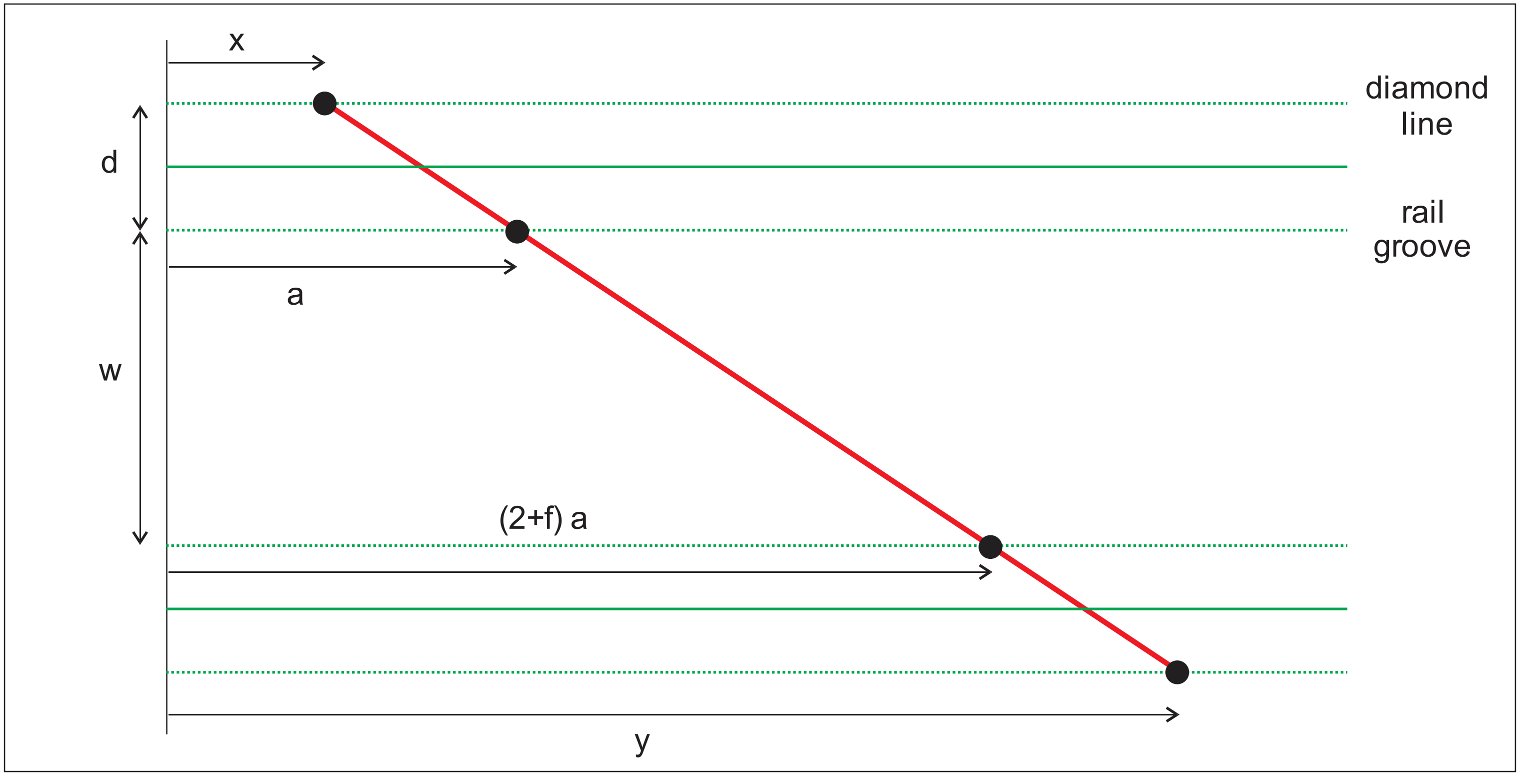
measured width across table between rail grooves (in diamonds): $w := \frac{48.25}{D}$



rail-groove across-diamond point (a) based on through-diamond aim point (x):

$$x(a) := a - \frac{a + \frac{1}{3}}{w} \cdot d \qquad a(x) := \frac{d + 3 \cdot w \cdot x}{3 \cdot w - 3 \cdot d} \qquad one\_third(a) := 2 \cdot a + \frac{1}{3} + \frac{a + \frac{1}{3}}{w} \cdot d$$

Optimal System (measuring across from the diamonds in the rail grooves at a fraction (f) more than twice):



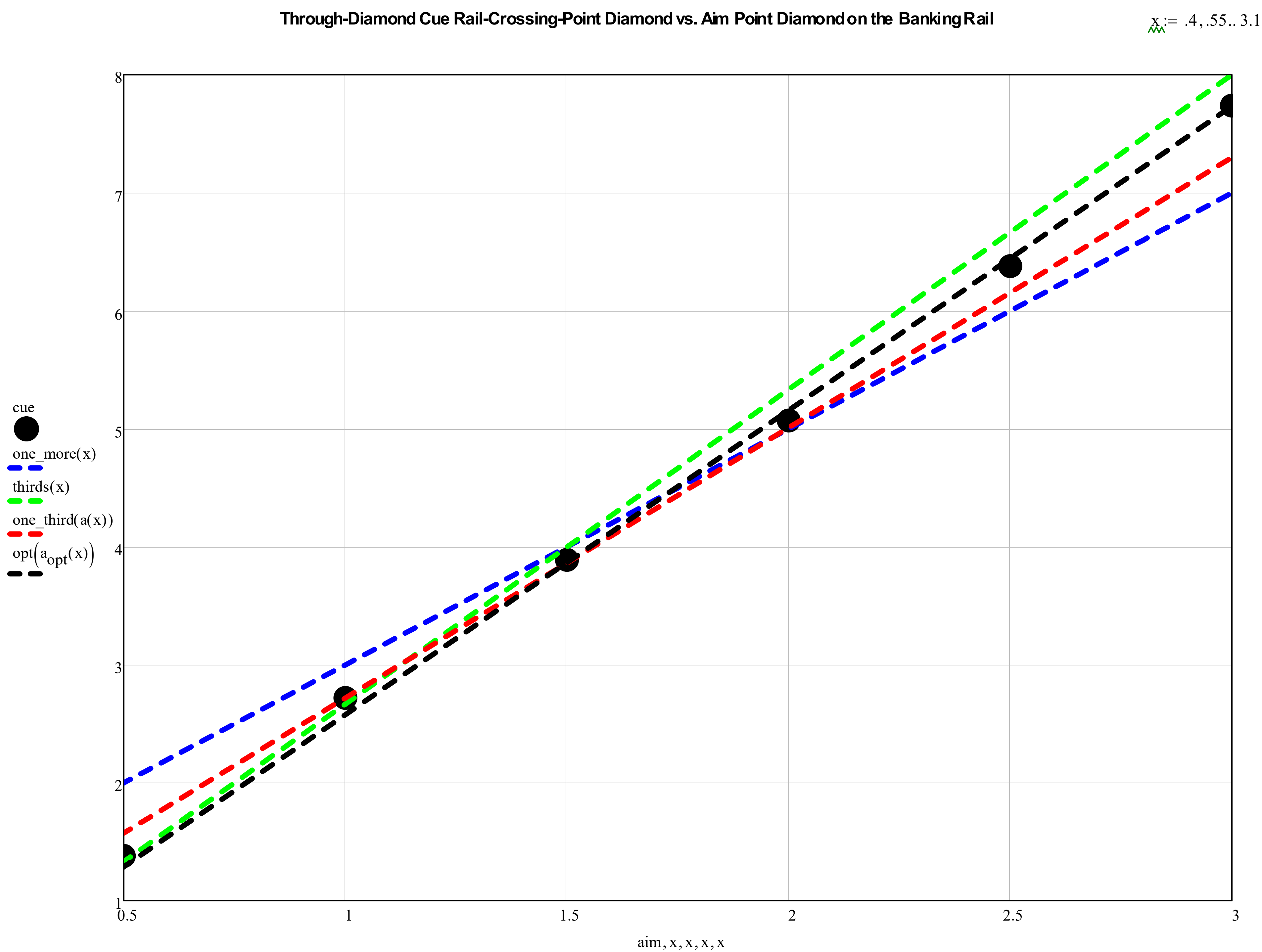
optimal factor (for best fit of measured data below): $f := \frac{1}{5}$

$$x_{opt}(a) := a - \frac{(1+f)\cdot a}{w}\cdot d \qquad a_{opt}(x) := \frac{x}{1 - \frac{d\cdot(1+f)}{w}} \qquad opt(a) := (2+f)\cdot a + \frac{(1+f)\cdot a}{w}\cdot d$$

example banking rail rail groove across diamond numbers: $aim^T = (0.5\ \ 1\ \ 1.5\ \ 2\ \ 2.5\ \ 3)$

corresponding cue crossing point in opposite rail groove: $(2+f)\cdot aim^T = (1.1\ \ 2.2\ \ 3.3\ \ 4.4\ \ 5.5\ \ 6.6)$

OPTIMAL SYSTEM: twice plus 10% (or a tenth) of twice, measured in the rail grooves across from the diamonds


Through-Diamond Cue Rail-Crossing-Point Diamond vs. Aim Point Diamond on the Banking Rail
x := .4, .55 .. 3.1
cue
one_more(x)
thirds(x)
one_third(a(x))
opt(a_opt(x))
aim, x, x, x, x