

The Ko2M staff is always trying to refine our match to be the best it can be at letting our shooters distinguish themselves amongst their peers. We have revised our scoring in the past to try to give more points to the accomplishments that we value. Shot multipliers to highlight the importance of first round hits. Points proportionate to distance so shots at longer ranges are worth more. Since our first match the value of a target has been simply its distance in yards so an unmodified shot at one mile was 1760 points and at two miles 3520.

The problem is, this does not adequately reflect the proportionate difficulty in hitting a target with that disparity in distance. Simply put, a target at 2 miles is more that twice as hard to hit as a target at 1 mile. To correct for this, we have come up with a system that awards disproportionately fewer points to closer targets while maintaining the value of the 2 mile target.

To further encourage first round hits and to better incorporate it into the match, the Cold Bore Gong will now be for points with a 5x multiplier and the same increasing returns system the other targets will have.

The value of a target will be $(\text{distance in yards}) \times (\text{distance in yards} - 1000) / 2520$

A target at 1200 yards will be $1200 \times (1200 - 1000) / 2520 = 95$

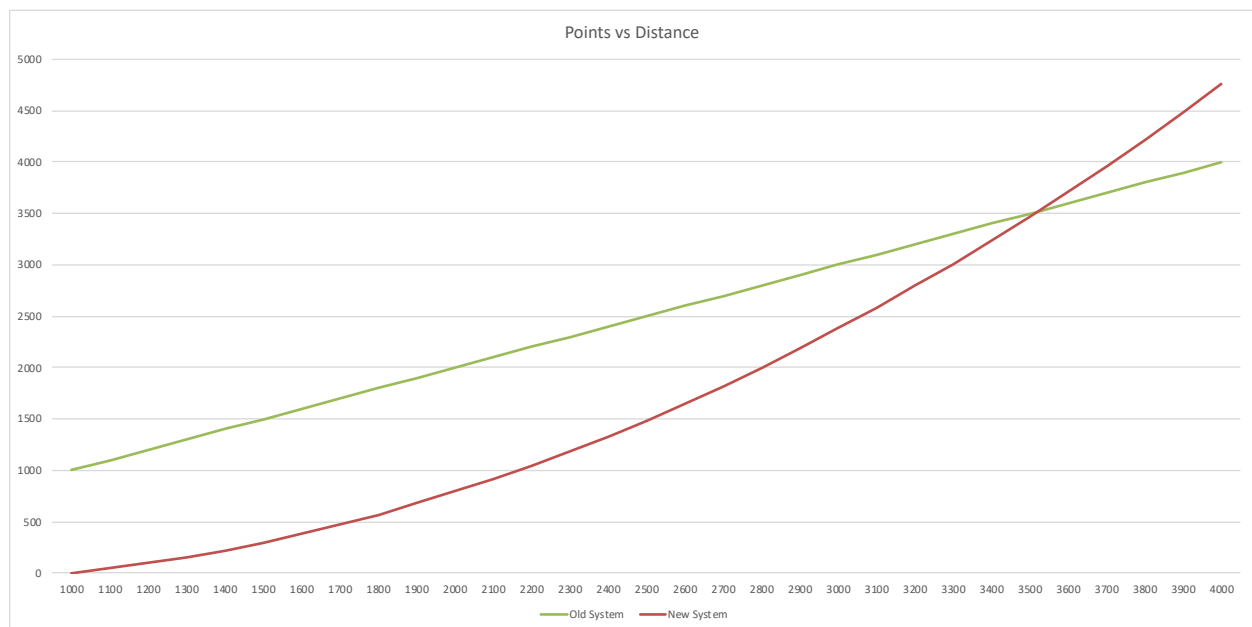
A target at 2500 yards will be $2500 \times (2500 - 1000) / 2520 = 1488$

A target at 2 miles will be $3520 \times (3520 - 1000) / 2520 = 3520$

A target at 4000 yards will be $4000 \times (4000 - 1000) / 2520 = 4762$

The guiding principle is that 1000 yards is not ELR by anyones standards and points for ELR rankings should not include close range shots. The other side of the coin is that shots at 2 miles are hard and beyond that they are even harder so they deserve more points. Beyond 2 miles the point values end up with an additional multiplier.

The outcome produces a curve like this:



When applied to the course of fire from 2018, the results are as follows.

2018 Scoring Values New and Old				
Shot	Range	Multiplier	Old Score	New Score
1	1547	5	7735	1679
2	1547	4	6188	1343
3	1547	3	4641	1007
4	1547	2	3094	672
5	1547	1	1547	336
6	1719	3	5157	1471
7	1719	2	3438	981
8	1719	1	1719	490
9	1890	3	5670	2003
10	1890	2	3780	1335
11	1890	1	1890	668
12	2095	3	6285	2731
13	2095	2	4190	1821
14	2095	1	2095	910
1	2727	5	13635	9344
2	2727	4	10908	7475
3	2727	3	8181	5607
4	2727	2	5454	3738
5	2727	1	2727	1869
6	3166	5	15830	13606
7	3166	4	12664	10885
8	3166	3	9498	8164
9	3166	2	6332	5443
10	3166	1	3166	2721
11	3525	5	17625	17660
12	3525	4	14100	14128
13	3525	3	10575	10596
14	3525	2	7050	7064
15	3525	1	3525	3532
		Total	198699	139278

One of the other results of this system is that it allows for more direct comparison between scores from our match and other matches that have similar courses of fire. The comparison is imperfect of course as some courses of fire have more shots per stage, differences in target size and so forth. As a way to generate a meaningful way to rank ELR shooters, this is a start. We are still waiting on a few match directors to get us their raw match data but once we have it we will publish rankings based upon each shooters personal best at any match.

For anyone interested, a blank spreadsheet has been set up at:
<https://www.dropbox.com/s/v2cjria2pkjudfm/FCSA%20ELR%20Scoring.xlsx?dl=0>

Anyone that would like to use it for their own matches is welcome to, and if help is needed with customization, feel free to ask.