## HOW ARE COMPETITION LEVELS DETERMINED?

The Photo Club uses a graduated point allocation system to award points to winning photographs throughout the year. The graduated system allows for movement between the groups and also ensures placement of photographers into groups of competitors with a similar level of photographic skill. (See the section below "Why Do We Use a Graduated Point Allocation System" for more information.) The competition levels are balanced for equitable, fair competitions, which may not result in the same number of competitors in each level. An explanation follows.

## I. Why Are There So Many More Photographers Placed in Level I Than in Level III?

At the end of every photo club year, the points earned from the year's competition are tallied for each member. Here is an example of what that might look like:

| Photographer | Previous Level | Score | Submission Rate |
|---|---|---|---|
| Photographer A | Master | 88 | 4.000 |
| Photographer B | Master | 82 | 4.000 |
| Photographer C | Master | 77 | 4.000 |
| Photographer D | Advanced | 72 | 3.500 |
| Photographer E | Advanced | 49 | 3.750 |
| Photographer F | Master | 39 | 4.000 |
| Photographer G | Advanced | 25 | 2.000 |
| Photographer H | Intermediate | 25 | 2.375 |
| Photographer I | Advanced | 24 | 3.750 |
| Photographer J | Master | 22 | 3.250 |
| Photographer K | Intermediate | 19 | 2.000 |
| Photographer L | Advanced | 18 | 2.375 |
| Photographer M | Intermediate | 16 | 1.750 |
| Photographer N | Advanced | 15 | 0.875 |
| Photographer O | Intermediate | 10 | 2.375 |
| Photographer P | Intermediate | 9 | 1.000 |
| Photographer Q | Advanced | 8 | 1.500 |
| Photographer R | Advanced | 4 | 2.375 |
| Photographer S | Intermediate | 2 | 3.750 |
| Photographer T | Intermediate | 2 | 0.375 |
| Photographer U | Intermediate | 1 | 0.250 |
| Photographer V | Intermediate | 0 | 0.250 |
| Photographer W | Intermediate | 0 | 0.250 |
| Photographer X | Intermediate | 0 | 0.250 |
| Photographer Y | Intermediate | 0 | 0.250 |
| Photographer Z | Intermediate | 0 | 0.250 |

Figure 1.

The "Previous Level" indicates the competition level for that photographer for the year that has just ended. The "Score" is the total of all points accumulated (for 1st, 2nd and 3rd place wins) during the competition year. We will discuss "Submission Rate" later.

It has been suggested that we should take these names and divide them into 3 equal groups for the next year's levels. If we did that, the list would look like this:

|  | Photographer | Previous Level | Score | Submission Rate |
|---|---|---|---|---|
| **LEVEL III** | Photographer A | Master | 88 | 4.000 |
|  | Photographer B | Master | 82 | 4.000 |
|  | Photographer C | Master | 77 | 4.000 |
|  | Photographer D | Advanced | 72 | 3.500 |
|  | Photographer E | Advanced | 49 | 3.750 |
|  | Photographer F | Master | 39 | 4.000 |
|  | Photographer G | Advanced | 25 | 2.000 |
|  | Photographer H | Intermediate | 25 | 2.375 |
|  | Photographer I | Advanced | 24 | 3.750 |
|  |  |  |  |  |
| **LEVEL II** | Photographer J | Master | 22 | 3.250 |
|  | Photographer K | Intermediate | 19 | 2.000 |
|  | Photographer L | Advanced | 18 | 2.375 |
|  | Photographer M | Intermediate | 16 | 1.750 |
|  | Photographer N | Advanced | 15 | 0.875 |
|  | Photographer O | Intermediate | 10 | 2.375 |
|  | Photographer P | Intermediate | 9 | 1.000 |
|  | Photographer Q | Advanced | 8 | 1.500 |
|  | Photographer R | Advanced | 4 | 2.375 |
|  |  |  |  |  |
| **LEVEL I** | Photographer S | Intermediate | 2 | 3.750 |
|  | Photographer T | Intermediate | 2 | 0.375 |
|  | Photographer U | Intermediate | 1 | 0.250 |
|  | Photographer V | Intermediate | 0 | 0.250 |
|  | Photographer W | Intermediate | 0 | 0.250 |
|  | Photographer X | Intermediate | 0 | 0.250 |
|  | Photographer Y | Intermediate | 0 | 0.250 |
|  | Photographer Z | Intermediate | 0 | 0.250 |

Figure 2.

Now, we need to look at Submission Rates. Each photographer has a Submission Rate, which indicates how often he/she is submitting photos for competition. To calculate Submission Rate, the total number of submissions for the year is divided by the number of competitions (8). For example, if a photographer has submitted the maximum of 4 images every competition, he would have submitted 32 images for the whole year. His Submission Rate would be 32 divided by 8, which is 4. This means that this photographer has an average Submission Rate of 4 images per competition. He submits 2 print and 2 digital images per competition. Note that a Submission Rate of .25 indicates that the photographer only submitted 2 images the whole competition year. The Submission Rate is a calculation that is an average submission rate for each photographer, based on the prior year's submissions. Of course, there is no way to predict what any one individual will do the following year, but the prior year's data provides the best estimation.

Using the Submission Rates from the above chart and totaling the submission rates in each Level, the approximate number of entries in each Level for the upcoming year would be:

Level I:  3 entries
Level II:  9 entries
Level III:  16 entries

This means there would be 3 entries in the Level I print competition and 3 entries in the Level I digital competition on average, 9 in each of print and digital at Level II, and 16 in each for Level III. So, a competitor in Level I, on average, would only have to submit an image (any image) in order to receive a 1st, 2nd or 3rd place win.

For obvious reasons, we do not divide the groups in this manner. In order to balance the **number of entries** for competitions, we try to equalize the total Submission Rates for each level.

Using the above example and regrouping to achieve this goal would look like this:

| | Photographer | Previous Level | Score | Submission Rate |
|---|---|---|---|---|
| LEVEL III | Photographer A | Master | 88 | 4.000 |
| | Photographer B | Master | 82 | 4.000 |
| | Photographer C | Master | 77 | 4.000 |
| | Photographer D | Advanced | 72 | 3.500 |
| | Photographer E | Advanced | 49 | 3.750 |
| | | | | |
| LEVEL II | Photographer F | Master | 39 | 4.000 |
| | Photographer G | Advanced | 25 | 2.000 |
| | Photographer H | Intermediate | 25 | 2.375 |
| | Photographer I | Advanced | 24 | 3.750 |
| | Photographer J | Master | 22 | 3.250 |
| | Photographer K | Intermediate | 19 | 2.000 |
| | Photographer L | Advanced | 18 | 2.375 |
| | | | | |
| LEVEL I | Photographer M | Intermediate | 16 | 1.750 |
| | Photographer N | Advanced | 15 | 0.875 |
| | Photographer O | Intermediate | 10 | 2.375 |
| | Photographer P | Intermediate | 9 | 1.000 |
| | Photographer Q | Advanced | 8 | 1.500 |
| | Photographer R | Advanced | 4 | 2.375 |
| | Photographer S | Intermediate | 2 | 3.750 |
| | Photographer T | Intermediate | 2 | 0.375 |
| | Photographer U | Intermediate | 1 | 0.250 |
| | Photographer V | Intermediate | 0 | 0.250 |
| | Photographer W | Intermediate | 0 | 0.250 |
| | Photographer X | Intermediate | 0 | 0.250 |
| | Photographer Y | Intermediate | 0 | 0.250 |
| | Photographer Z | Intermediate | 0 | 0.250 |

Figure 3.

Now, the average number of entries would be:
Level I:  8 entries
Level II:  10 entries
Level III:  10 entries

This method of determining competition levels allows for more balanced competitions. Using known data to project possible future submission rates of photographers allows for equitable and fair competitions while still enabling movement among the levels when appropriate.

## II. Why Do We Use a Graduated Point Allocation System?

In the past, the Club has used a non-graduated point allocation system that was ineffective at properly placing photographers in groups with others of similar skill level and allowing vetting of photographers in their movement between groups.

We can take the data in Figure 3 and recalculate it using the non-graduated points of 1 point for 3rd place, 2 points for 2nd place and 3 points for a 3rd place win, regardless of Level assignment. It would look like this:

| | Photographer | Previous Level | Score | Submission Rate |
|---|---|---|---|---|
| Level III | Photographer D | Advanced | 30 | 3.500 |
| | Photographer H | Intermediate | 25 | 2.375 |
| | Photographer B | Master | 22 | 4.000 |
| | Photographer E | Advanced | 22 | 3.750 |
| | Photographer A | Master | 21 | 4.000 |
| | | | | |
| Level II | Photographer K | Intermediate | 19 | 2.000 |
| | Photographer C | Master | 17 | 4.000 |
| | Photographer M | Intermediate | 16 | 1.750 |
| | Photographer I | Advanced | 10 | 3.750 |
| | Photographer O | Intermediate | 10 | 2.375 |
| | Photographer F | Master | 9 | 4.000 |
| | Photographer P | Intermediate | 9 | 1.000 |
| | | | | |
| Level I | Photographer G | Advanced | 7 | 2.000 |
| | Photographer N | Advanced | 6 | 0.875 |
| | Photographer L | Advanced | 6 | 2.375 |
| | Photographer J | Master | 4 | 3.250 |
| | Photographer S | Intermediate | 2 | 3.750 |
| | Photographer Q | Advanced | 2 | 1.500 |
| | Photographer T | Intermediate | 2 | 0.375 |
| | Photographer R | Advanced | 1 | 2.375 |
| | Photographer U | Intermediate | 1 | 0.250 |
| | Photographer V | Intermediate | 0 | 0.250 |
| | Photographer W | Intermediate | 0 | 0.250 |
| | Photographer X | Intermediate | 0 | 0.250 |
| | Photographer Y | Intermediate | 0 | 0.250 |
| | Photographer Z | Intermediate | 0 | 0.250 |

Figure 4.

The obvious inefficiency in this system is that photographers are able to move from Level I to Level III without a successful vetting process. In other words, movement should be one level at a time in order to successfully demonstrate skill level in each group. In the past, it has been the club's experience that individuals who moved from Level I to Level III under this method received no wins the following year at Level III. They therefore moved back to Level I the next year and subsequently bounced back and forth, never moving to the middle group, which may be where their skill level would suggest they should be. Another inequity in this system is that the individual bouncing 2 levels from Level I to Level III and back again indefinitely is most likely receiving an inordinate number of wins at Level I, which is unfair to the others at that level.

It has been determined that, mathematically, the best method in order to more efficiently order competitors and encourage vetting and movement one level at a time is to use a graduated point allocation method as we use now. The points for winning images during the year are allocated as follows:

Level I: 1 point for a $3^{rd}$ place win     Level II: 4 points for a $3^{rd}$ place win     Level III: 7 points for a $3^{rd}$ place win
       2 points for a $2^{nd}$ place win           5 points for a $2^{nd}$ place win           8 points for a $2^{nd}$ place win
       3 points for a $1^{st}$ place win           6 points for a $1^{st}$ place win           9 points for a $1^{st}$ place win

The club has worked very hard to develop a fair, equitable process for determining competition levels. The goal has been to have a system that allows photographers to experience competition with other individuals of similar skill level in order to enhance the learning experience that comes from our unique competitions. This system is a mathematical process that makes determinations as calculations. It does not rely on subjective guesses or favoritism.

Further questions can be directed to a member of the Competition Committee.