

F2D News - September 2008

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This month, I've decided to focus my column on statistics. I don't know how the situation is internationally, but American sports programs on TV are semi-obsessed with stats. Perhaps the best example comes from baseball, where it is not uncommon to be flooded with strange comments such as "this next batter is 3 for 7 against left-handers in the month of September when his team is down by more than 2 runs after the 6th inning..." Clearly nobody cares about this information, but at the same time it does seem that some stats are in fact useful for evaluating a team/player's performance. Unfortunately, unlike Major League Baseball, the CIAM doesn't have throngs of statisticians keeping track of information on F2D pilots/competitions. This does not prevent us from speculating, however, which information could be useful or interesting to keep track of during a season.

The idea for this column came to me this summer at the World Championships in Landres, France. There I had several interesting discussions with various people about stats and the like. It all started after the 3rd round as we were trying to assess the US team's performance up to that point. According to the scoreboard we had 9 wins among our 3 pilots (a perfect record), but behind the scenes we all had the feeling that things were not as rosy as this picture would lead one to believe. At the moment, it was summed up best by someone (sorry I've forgotten who it was now!) who pointed out that all combined, after 9 matches, our team had scored a total of I believe 11 cuts. Damn...

Although 11 cuts may sound pretty good, spread out among three pilots over three rounds that comes out to only 1.2 cuts per match. What does this mean? Specifically, it means that in most of the matches our pilot got a "kill," i.e. took the whole streamer in one pass. Clearly this not a championship trajectory; apparently, the cuts/match stat contains information beyond what is captured by the simple W/L count of the scoreboard.

The cuts/match stat can be an interesting, if not useful, indicator of one's personal performance (like a batting average). If you're averaging below 1 CPM (cut per match), then I would say you have a problem. At the same time, I don't think it's necessarily good or useful to aim for a very high CPM average. I tend to take a minimal (lazy?) philosophy towards flying combat, and believe that the best strategy is to win the match with the minimum amount of work necessary. With the high speeds and various streamer materials being used these days, it is rare to see very high scoring matches. Most matches are won 2-1, 1-1 (+ airtime), and occasionally 3-1 or 3-2. Four cuts is a rarity. Thus if you're consistently taking 4 and 5 cuts to win, as awesome as that is, it probably means that you're giving up too many to your opponents as well. If you're winning these matches 5-1, more power to you, but you may be taking unnecessary risks to keep combatting after the match is clearly put away. For winning championships, sometimes it's important to "know when to say when." The point of this is just to say that I bet that if you can average between 2-3 CPM, you should be in very good shape.

Speaking of streamers, there has been quite a bit of discussion lately in various circles about what the best material is to use for streamers and string. For wet/rainy conditions there may not be any substitute for the plastic tablecloth material, but in the dry there are many options available. Quite frankly, I don't think the plastic is near the top of this bunch. I wish I had the stats, but at the World Championships (where plastic material was used) there were way too many 1 cut matches where the whole streamer would break off at the string or knot. Evidently, the aggregate CPM average of an entire contest could be a useful indicator of streamer properties. If we make an effort to try out a variety of streamer materials over several contests each, it may be possible to evaluate the performance of various materials and settle on something better than the standard paper or plastic. As a side note, in preparing streamers for a recent contest, Greg Wornell noticed that different batches of the plastic tablecloth (same company, identical packaging) can have vastly different thicknesses. If you're going to use the plastic tablecloth, be sure that the starting material for the two colors you choose is nearly the same; even crappy streamer material can be tolerated when it's the same for everybody. If there are systematic differences between colors, however, this is problematic (here's another interesting stat to watch – over the course of an entire contest, which color receives more cuts?).

After all of this concrete (and feasible) stuff, it's fun to speculate what other stats would be interesting to see. In keeping with my minimalist philosophy of combat, one that I would be interested to see is number of maneuvers per match (or alternatively number of maneuvers per cut). New fliers often tend to do a lot of maneuvers, many of which

serve no purpose. In general, you're more vulnerable (and slower) while turning, so if you can avoid maneuvering when there's no reason, it may have some benefit. Of course this is just my personal theory and speculation, and I'm not even sure if maneuvers per cut would be a meaningful statistic to look at. However, it seems interesting so if someone were to keep track I'd definitely be interested to look!

If you have time, try getting a notebook and keep track of your own cuts over the course of a few contests. Compare your results for individual contests and see if there's a correlation with final result. What other stats would be useful or interesting to see? I'm sure there are many, and although we'll probably never have a way to keep track of them all, it's fun to think about. If you have any ideas or find anything from your own stats, I'd be really interested to hear about it and to see the data!