



PANEL 2: Duo System



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What do you like about Duo system?

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What do you NOT like about Duo system?

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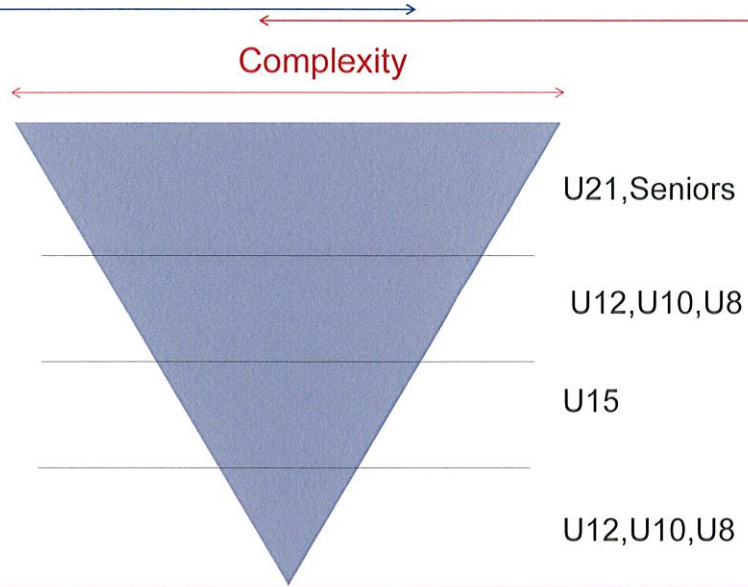
Problems
→ Solutions

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Complexity of Duo System

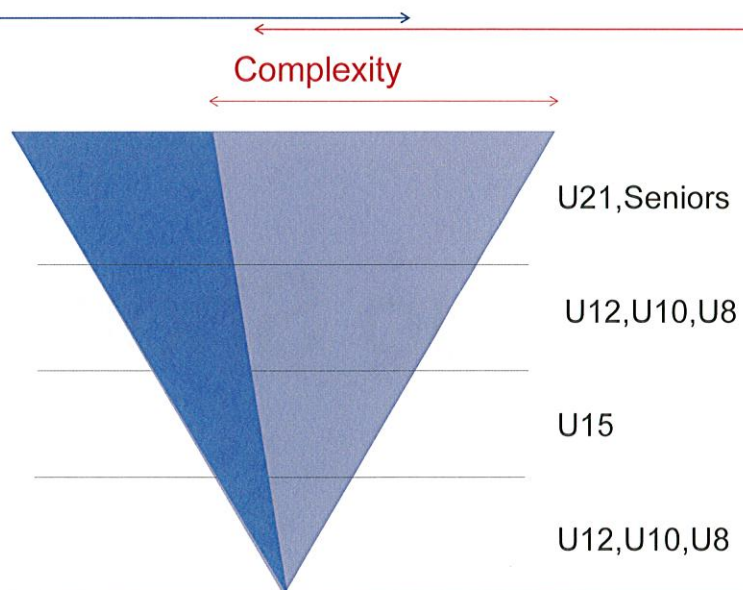


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Complexity of Duo System

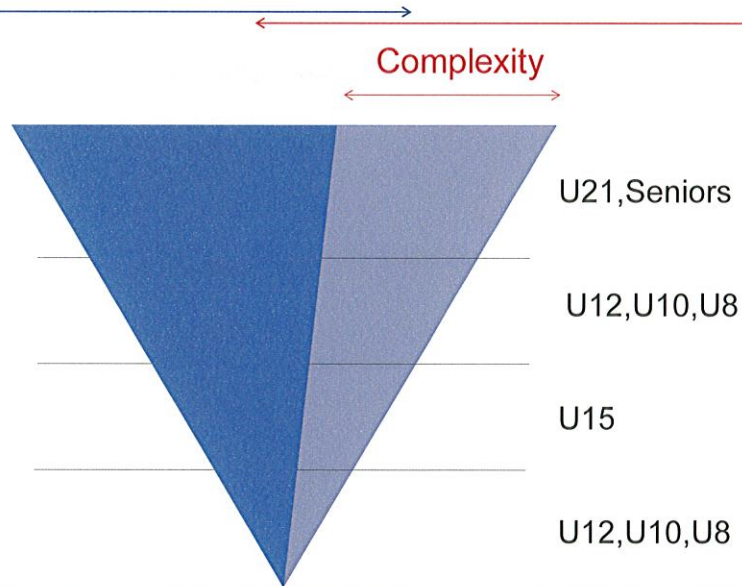


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Complexity of Duo System



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Duo Show

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Duo Situation – Open Questions



- Does the color of the couple influence the results?
- Does the number of Series have an Influence of the results?

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Used statistics:



- Results from Ju-Jutsu-Web (German Program)
- Number of Fights: N_t : 1512
- Number of International Fights: N_i : 604
- Leads to statistical uncertainties of σN_t : 2% and σN_i : 4%

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Which couple wins which series? (N_t)



.Expectation: 50% red 50% blue

.All points used.

.Equal points are excluded

.Reality:

.Series A: 44% : 56%

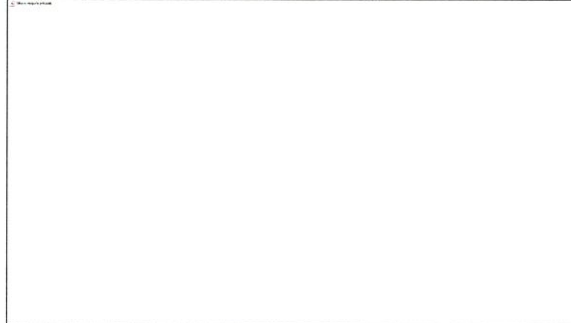
.Series B: 60% : 40%

.Series C: 45% : 55%

.Series D: 59% : 41%

.In Series A and C, red starts in B and D starts!

.It seems that the second couple of the series tend to get higher Points, but all values are in a 2σ interval of statistic errors



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Which couple wins which series? (N_i)



.Expectation: 50% red 50% blue

.All points used.

.Equal points are excluded

.Reality:

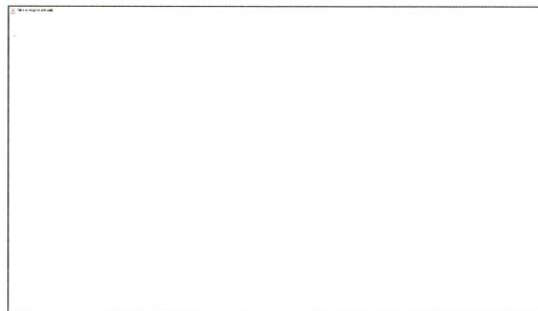
.Series A: 42% : 58%

.Series B: 62% : 38%

.Series C: 45% : 55%

.Series D: 59% : 41%

.Similar with results from all Tournaments



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Which couple wins which series? (N_t)



.Expectation: 50% red 50% blue

.Highest and lowest points are removed

.Equal points are excluded

.Reality:

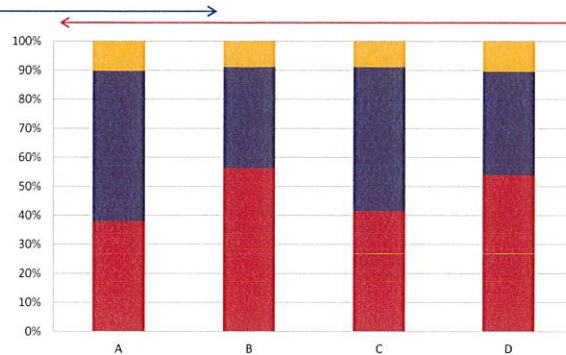
.Series A: 38% : 42%

.Series B: 62% : 38%

.Series C: 46% : 54%

.Series D: 60% : 40%

.No difference compared to "all Points used", still every value within 2σ



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Which couple wins the match ?



.Expectation: 50% red 50% blue

.No tournaments with placing in competitors

.Reality: 53% : 47%

. Equal within 1σ

.Does the number of Series influence the results?

.The couple that was ahead in series C wins in 97% of the cases!

.There is no significant change of the result with changing from 4 to 3 series

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Flags instead of Points?



- Proposal from NED federation
- Idea to check:
 - Check the points the referee gave for red with the points for blue.
 - red > blue = flag for red
 - blue > red = flag for blue

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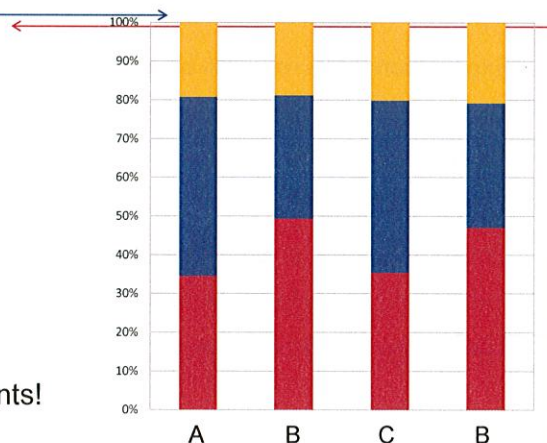


Flags instead of Points?



- All referees together:
- Series A: 35% : 45% : 19% equal
- Series B: 49% : 32% : 19% equal
- Series C: 35% : 45% : 20% equal
- Series D: 47% : 32% : 21% equal
- 20% of the referees give equal points!

• The trend is similar, but a conclusion is not possible, because we don't know what the "equal" would referees do



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Conclusions and To-Do



- Conclusion:
- The current duo system is fair concerning the colors of the competitors
- There is no change of this with going down to 3 series
- The effect of flags is unclear because the referees do 20% of the referees do not decide
- Making a similar analysis with the program of the international federation

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• Thanks to Jörg Böhme from Ju-Jitsu-Web

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