# Wimbledon Men's Singles Final 2009 – Match Analysis

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Although I originally did not plan to do so, I nevertheless thought it worthwhile to analyze the Wimbledon 2009 final in similar fashion to the analysis performed on the 2008 final between Roger Federer and Rafael Nadal. Both finals can be regarded as epic in several respects, the 2008 final lasting longer in time than any previous singles final while the 2009 match was the longest in terms of number of games played (77). Federer defeated Andy Roddick 5-7 7-6 (8-6) 7-6 (7-5) 3-6 16-14 in the 2009 final.

As a matter of interest, the longest match ever played at Wimbledon since the tournament began in 1877 was the 2006 quarter-final doubles match in which Todd Perry and Simon Aspelin lost 5-7 6-3 6-7 (5-7) 6-3 23-21 to Mark Knowles and Daniel Nestor after six hours and seven minutes. The longest previous match at Wimbledon was Greg Holmes' 5-7 6-4 7-6 (7-5) 4-6 14-12 victory over Todd Witsken in five hours twenty-eight minutes in the second round of men's singles in 1989 - a match spread over three days.

Of particular interest in terms of time analysis is the dominance of the serve in the 2009 final, during which a total of 77 aces were served. The total number of aces for the 2008 event was a mere 31 by comparison. **Was there more tennis to be watched in the 2008 final?**

Figures 1 to 4 below show the results of the time-to-serve analysis performed on the 2009 match. Although there never was a question of either Federer or Roddick exceeding the time allowed for continuous play on a regular basis, it is instructive to see how these results compare to the corresponding statistics of the 2008 final.
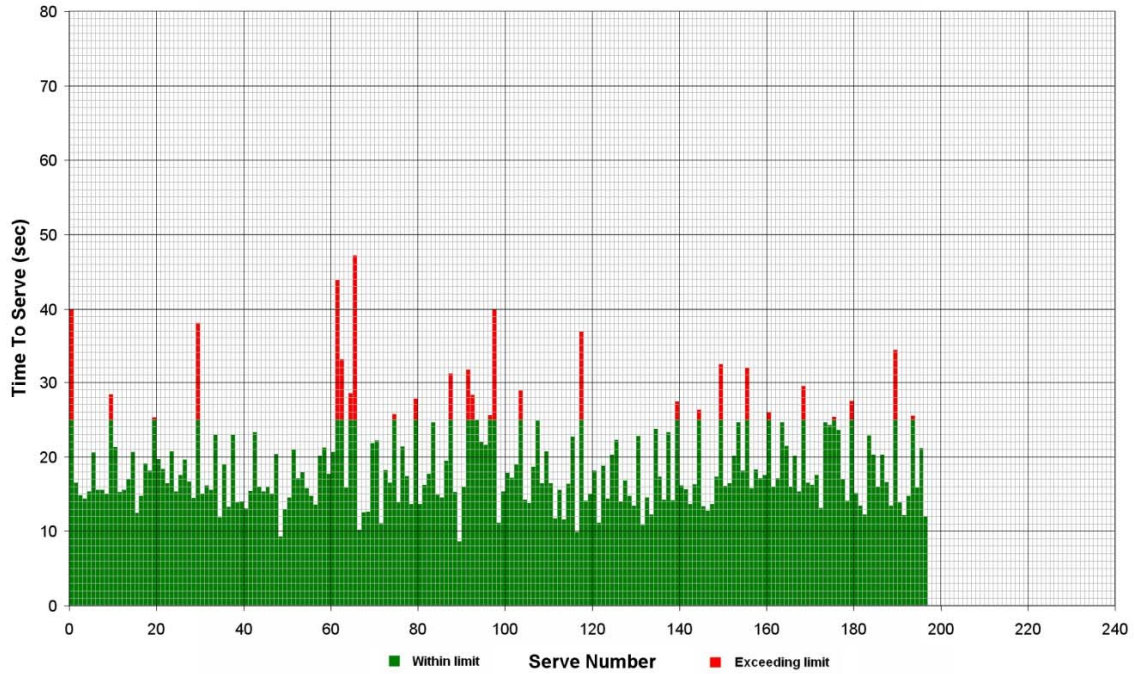
Figure 1. Federer's Time To Serve for the Wimbledon 2009 Final, time limit 25 seconds
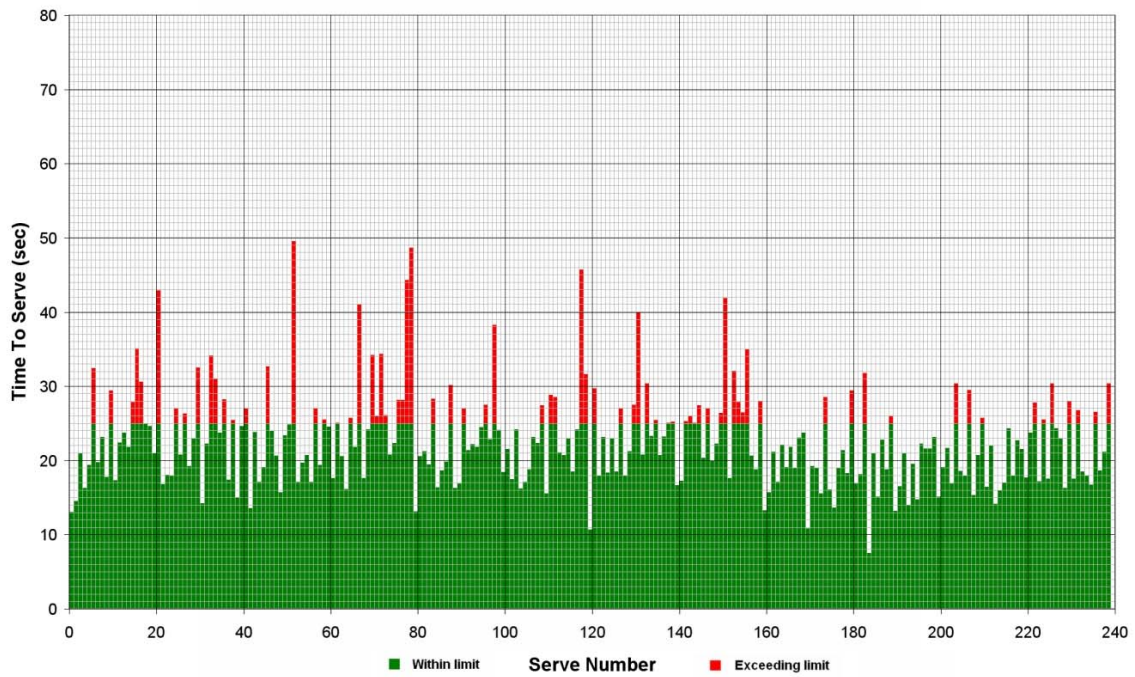


Figure 2. Roddick's Time To Serve for the Wimbledon 2009 Final, time limit 25 seconds
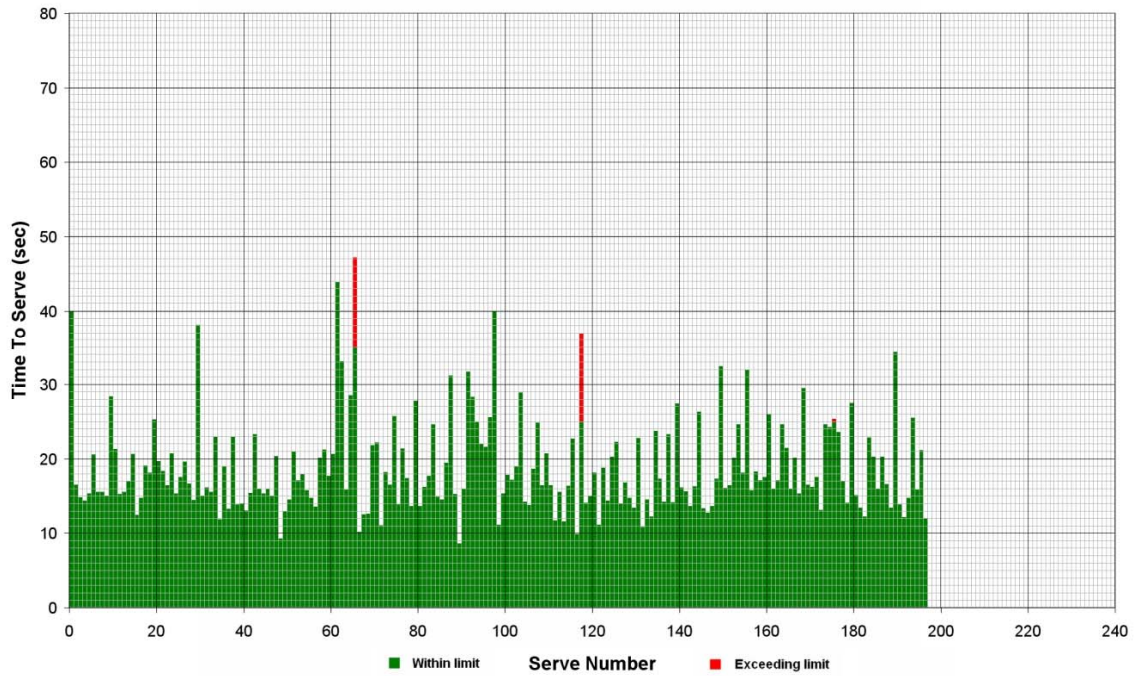
Figure 3. Federer's Time To Serve for the Wimbledon 2009 Final, proposed time limit scheme
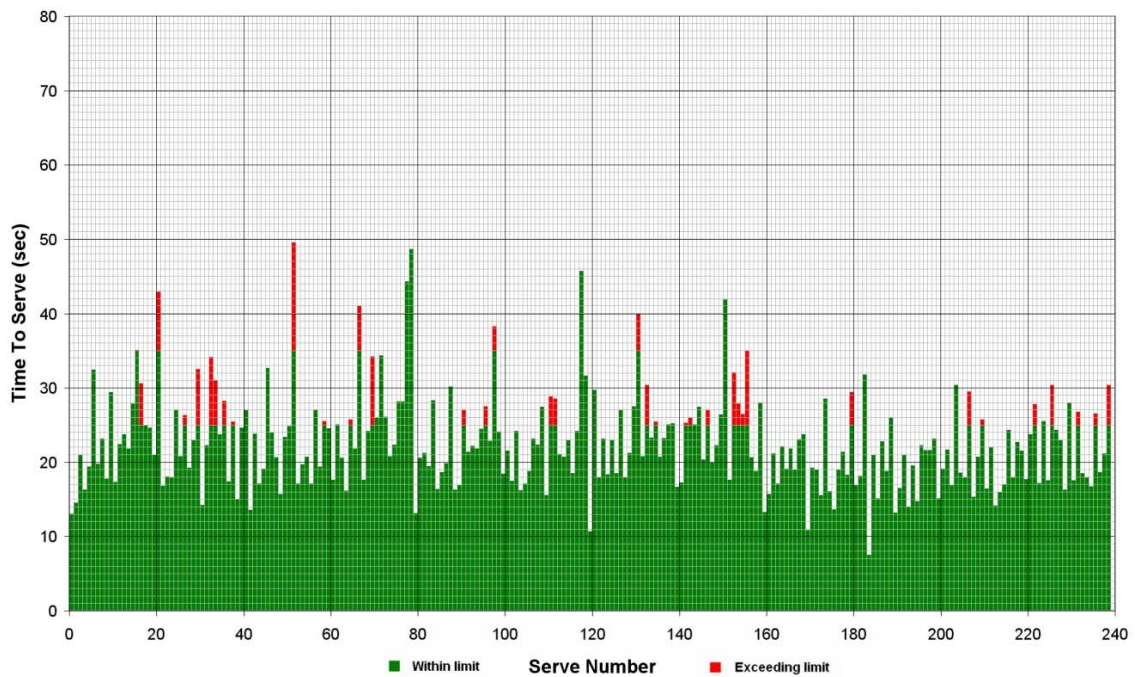


Figure 4. Roddick's Time To Serve for Wimbledon 2009 Final, proposed time limit scheme

Some points of time-to-serve exceeding the new time limit as proposed in the 2008 match analysis article however need to be clarified and are listed in Table I below.

| Federer serves exceeding proposed time limit | | | | |
|---|---|---|---|---|
| Serve # | Point # | Score F-R | TTS (s) | Comment |
| 66 | 144 | S3, 0-0, 0-0 | 47.22 | Roddick walks to the wrong end of the court |
| 118 | 262 | S4, 2-5, 30-0 | 37.08 | Roddick slips and falls |
| 175 | 379 | S5, 10-10, 15-0 | 25.38 | Loses ball |
| Roddick serves exceeding proposed time limit | | | | |
| Serve # | Point # | Score F-R | TTS (s) | Comment |
| 21 | 40 | S1, 4-4, 0-0 | 42.95 | Federer changes rackets |
| 33 | 56 | S1, 5-5, 40-40 | 34.21 | Loses ball |
| 52 | 89 | S2, 2-2, 0-0 | 49.59 | Federer changes rackets |
| 67 | 120 | S2, 5-5, 0-0 | 41.02 | 'He'll take his time, so much for 20s between points' |
| 70 | 123 | S2, 5-5, 15-30 | 34.27 | Umpire asks Roddick whether he wants to challenge |
| 98 | 181 | S3, 4-3, 0-0 | 38.27 | Loses ball |
| 111 | 202 | S3, 6-5, 15-15 | 28.88 | Loses ball |
| 131 | 240 | S4, 1-3, 0-0 | 39.98 | Federer changes rackets |
| 133 | 242 | S4, 1-3, 15-15 | 30.43 | Loses ball |
| 156 | 281 | S5, 1-0, 40-30 | 35.04 | Falls |
| 207 | 386 | S5, 11-10, 15-30 | 29.54 | Loses ball |
| 226 | 419 | S5, 14-13, 15-30 | 30.43 | Interruption from the spectators |
| 239 | 436 | S5, 15-14, A-40 | 30.43 | Last point |

Table I   Serves of Federer and Roddick exceeding proposed time limit

When the time delay is not caused by the server, the time excess should be subtracted for that serve, which means that Federer exceeded the proposed time limit only for his serve number 175, by 0.38 seconds. Roddick's excess has to be reduced by 72 seconds in total for the 25 second time limit and by 42 seconds for the proposed time limit scheme.

| 2008 Final | TTS (Total in sec, 25s limit) | Excess (25s limit) | Excess (new limit) |
|---|---|---|---|
| Federer | 3974 (195x, ave = 20.4 sec) | 219 sec ( 3′39″) | 11 sec |
| Nadal | 6629 (218x, ave = 30.4 sec) | 1375 sec (22′55″) | 853 sec (14′13″) |
| 2009 Final | TTS (Total in sec, 25s limit) | Excess (25s limit) | Excess (new limit) |
| Federer | 3710 (197x, ave = 18.8 sec) | 139 sec ( 2′19″) | 0.4 sec |
| Roddick | 5453 (239x, ave = 22.8 sec) | 332 sec ( 5′32″) | 120 sec (2′00″) |

Table II   Time to serve (TTS) as measured from end of previous point to first serve played

In Table II the Time-To-Serve of both players was not adjusted for those instances where a delay was caused by the receiver, only the excess with respect to the time limits was reduced according to Table I.

Whereas my analysis of the 2008 final focused mainly on the time-to-serve limit of the ATP rules, this article focuses rather on the duration of active play during the 2009 final as summarized in Table III. Although the 10.56 second average duration of points during the 2008 final appears to be only marginally longer than the 8.43 second average duration of the 2009 final, it can be interpreted as **us having seen a little over 25% more 'tennis'** (actual play) during the 2008 final as compared to this year's.

| 2008 Final | Total time (active play) | Average duration (sec) |
|---|---|---|
| Federer | 1847 sec (195 serves) | 9.46 |
| Nadal | 2517 sec (218 serves) | 11.55 |
| Match (active play) | 4364 sec (1h12:44, 413 points) | 10.56 |
| Match (duration) | 4h47 | |
| 2009 Final | Total time (active play) | Average duration (sec) |
| Federer | 1630 sec (197 serves) | 8.27 |
| Roddick | 2046 sec (239 serves) | 8.56 |
| Match (active play) | 3676 sec (1h01:16, 436 points) | 8.43 |
| Match (duration) | 4h17 | |

Table III   Active play as measured from first serve played to end of point

An interesting way of looking at the duration of points is to present the data in the form of a histogram. The maximum duration of any point during both finals was less than 50 seconds. Selecting a time scale subdivision of 2 seconds, we can calculate the number of points that lasted between 0 and 2 seconds, then the number that lasted between 2 and 4 seconds and so forth. Figure 5 below shows the histogram calculated for the 2008 final. On Federer's serve 27 points lasted between 0 and 2 seconds and 51 between 2 and 4 seconds. For the match the total number of points that lasted less than 4 seconds is 121 of 413, or 29.3%. A point that lasted less than 2 seconds would typically be an ace or a serve that could not be returned. A point that lasted between 2 and 4 seconds would typically be a good serve followed by a weak return, which is then put away by the server.
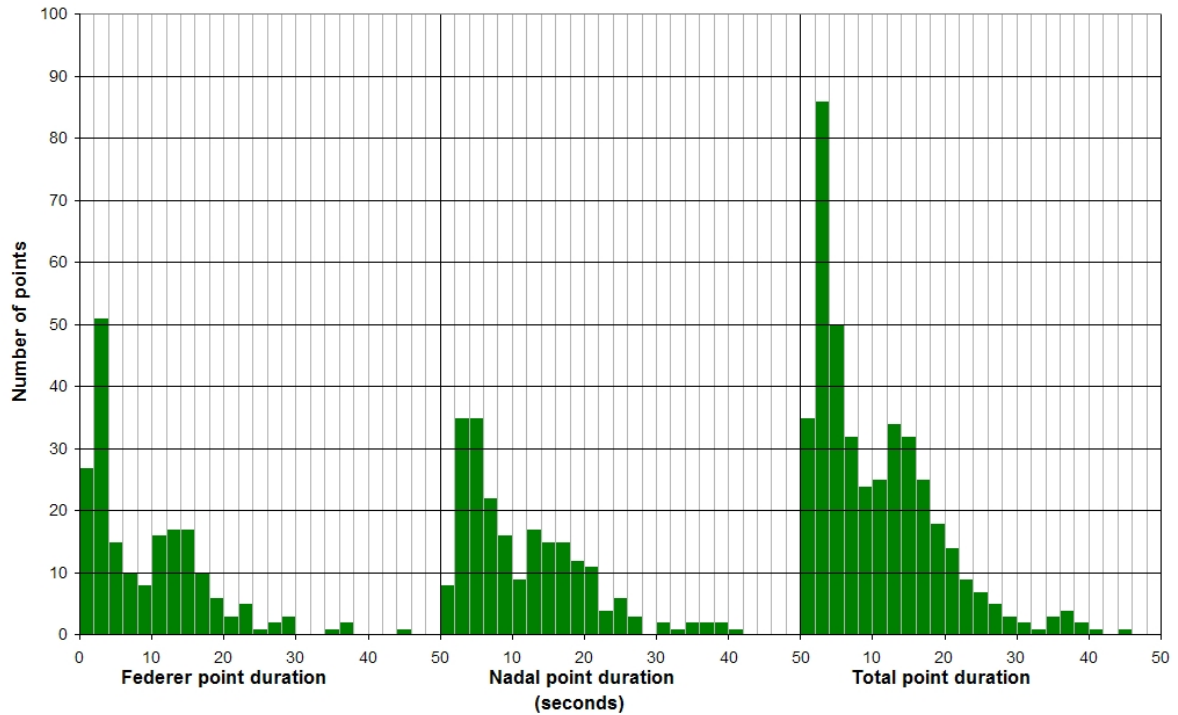
Figure 5. Histogram of 2008 Wimbledon Final point duration (Federer/Nadal/Match)

The corresponding histograms for the 2009 final are shown in Figure 6. In this case the number of points that lasted less than 4 seconds was 175 of 436, or 40.1%. This percentage is substantially higher than the 29.3% of the 2008 final, confirming that the serve played a much more dominant role in the 2009 final.
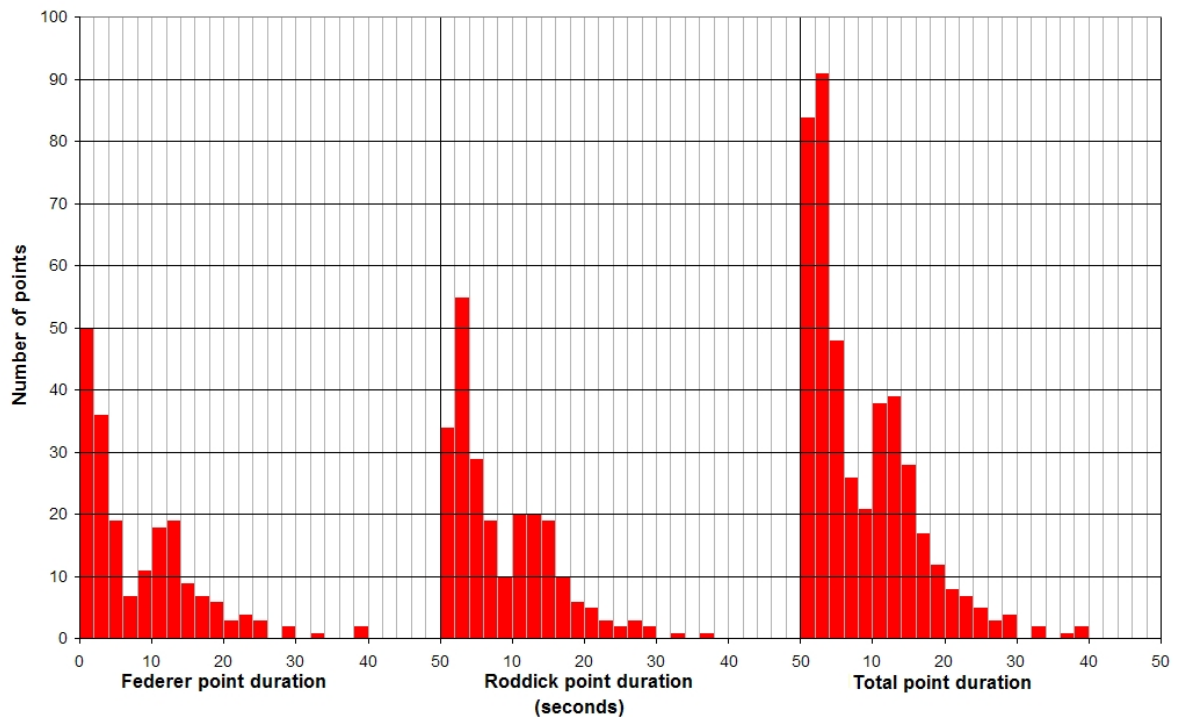
Figure 6. Histogram of 2009 Wimbledon Final point duration (Federer/Roddick/Match)

A direct overlay of the histograms of the both finals is shown in Figure 7. The hatched areas represent an overlap between the overlaid histograms. Apart from the dominance of the serve in the 2009 final, an interesting observation is that the number of points as a function of time duration does not fall continuously from the peak between 0 and 4 seconds to zero at 50 seconds. In the histograms of both finals a secondary peak appears between 12 and 14 seconds, suggesting that the advantage of the serve is lost when the point lasts longer than 6 to 8 seconds, and that those lasting between 12 and 14 seconds most likely represent crucial points during which both players played with caution.
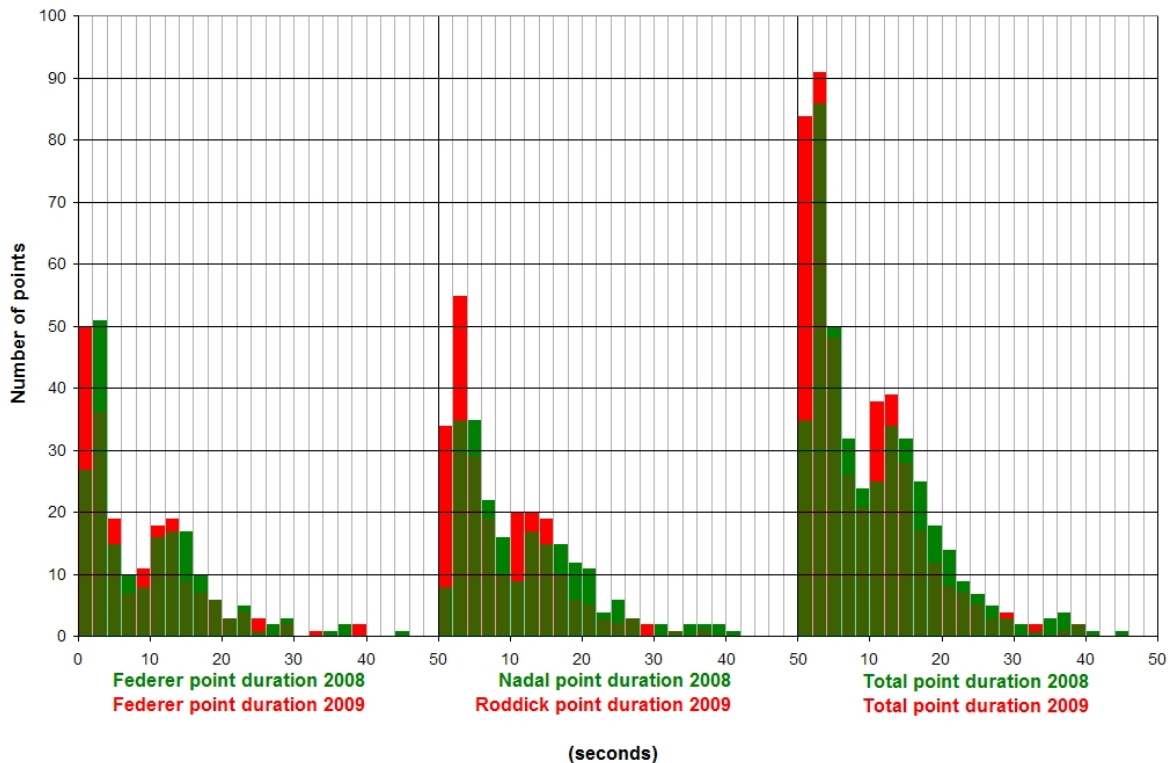


Figure 7. Overlay of 2008 and 2009 Wimbledon Final point duration histograms

Regardless of how much 'tennis' we saw in these two finals, there is no question that both can indeed be classified as 'epic'. Both were characterized by the fighting spirit on both sides of the net and the emotions at the end, and I am convinced that there was not a single soul who cared about statistics during any of these matches. May there be many more like these to come!

Download the complete 2009 Wimbledon Final match statistics here