

Creating a data design model for sports multimedia

Sports multimedia involves the delivery of live scoring as well as pre-match statistics within various electronic platforms (such as PC and iphone). In doing so decisions need to be made within each sport as to the amount of data that is captured live and post-match, the frequency of updating the live scoring and the level of predictions that are displayed on the scoreboard. Table 1 provides a summary of the above where a Tier I sport provides that highest level of detail followed by Tier II, Tier III and Tier IV. An example is now given in men's singles tennis.

| Tier | Match results | Match statistics | Scoring | Predictions |
|-------------|---|-------------------------------|---------------------|--|
| I | All league results All match results since (x) | Detailed match statistics | Real-time scoring | Rating predictions Tournament predictions Live-match predictions |
| II | All league results since (x) All match results since (y) | Simplified match statistics | Progressive scoring | Tournament predictions Live-match predictions |
| III | All match results since (y) | Simplified match statistics | Progressive scoring | Live-match predictions |
| IV | All league results since (y) | Match statistics not required | Post-match scoring | Pre-match predictions |

Table 1: Data design model

Barnett (2013) provides a classification of online and commercially available data for the men's and women's singles professional tennis circuit. The various data sources are categorized by data type (e.g. ratings, point-by-point data, match statistics), tournament type (e.g. grand slam, Olympics, ITF Circuit) and the year commencing. Table 2 provides a data design model for men's singles tennis. The 'leagues' given in table 1 have been equated to grand slam results in table 2. The grand slam results can be traced back to 1877 with the beginning of Wimbledon. The match results include all matches that obtain rating points. Note that progressive scoring is updating the scoring after a fixed duration of time (e.g. at the completion of each game in tennis). Simplified match statistics are statistics given for the entire match progressively whereas detailed match statistics are statistics given for the entire match as well as set-by-set progressively.

| Tier | Match results | Match statistics | Scoring | Predictions |
|-------------|---|----------------------------------|-------------------------|--|
| I | All grand slam results All match results since 1968 | Set-by-set match statistics | Real-time scoring | Rating predictions Tournament predictions Live-match predictions |
| II | All grand slam results since 1968 All match results since 1990 | Simplified match statistics | Game-by-game scoring | Tournament predictions Live-match predictions |
| III | All match results since 1990 | Simplified match statistics | Game-by-game scoring | Live-match predictions |
| IV | All grand slam results since 1990 | Match statistics not required | Post-match scoring | Pre-match predictions |

Table 2: Data design model for men's singles tennis

Reference

Barnett T (2013). Summarizing tennis data to enhance elite performance. *Coaching & Sport Science Review* 61, 21-24.