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Gmax Race Sectionals History Feed Specification

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- The Gmax Race system tracks race horses during real-time. Its minimal infrastructure makes it easy and economical to use, and allows the system to be shared between racecourses where travel times permit.

- Various data feeds are available. This document describes the protocol for a 'Sectionals History' feed, which allows access to historical statistics on the distribution of race sectional times. It is intended to assist in putting the sectional times for a particular race in context.

- The system is under active development. Feedback on possible future improvements is welcome.

Sectionals History Feed | Data Summary

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- The data for a particular race type can by requested using HTTP(S), providing an example Gmax 'Sharecode' for a race of this type. This allows data to be easily looked up with reference to a particular race.
- License key is also required and will be provided separately.
- The response is formatted as a ECMA-404 JSON object.
- Data contained within the response is as follows:

Description	Name	Type	Example	Notes
Type	Type	String	"Result" or "Section"	Indicates if the object is providing result information (overall race times) or section information (for the specified Section)
Timing 'Gate'	G	String	"6f"	'Result' object types: a friendly name for the race type 'Section' object types: a friendly name for the section
Length	L	Number	402.3	Distance in meters to the finish line.
Probability	P00 P20 P40 P50 P60 P80	Number	10.91 11.16 11.32 11.39 11.47 11.64	Value representing the time below which the specified likelihood of races will be run. e.g. P00: 0% chance; the fastest time previously recorded P50: 50% chance; the median value P80: 80% chance; historically 20% of races will be slower than this.

Sectionals History Feed | Example

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- Example request:

```
http://www.gmaxequine.com/TPD/client/sectionals-history.ashx?Sharecode=30201812121240&k=[license key]
```

- Example response:


```
[{"Type":"Result","G":"Lingfield 7f1y AW","L":1409.1,"P00":82.25,"P20":83.26,"P40":83.96,"P50":84.24,"P60":84.54,"P80":85.37},
{"Type":"Section","G":"6f","L":1207.0,"P00":13.66,"P20":14.02,"P40":14.31,"P50":14.41,"P60":14.47,"P80":14.75},
{"Type":"Section","G":"5f","L":1005.8,"P00":10.37,"P20":10.84,"P40":11.17,"P50":11.33,"P60":11.39,"P80":11.65},
{"Type":"Section","G":"4f","L":804.7,"P00":10.91,"P20":11.57,"P40":11.76,"P50":11.9,"P60":11.98,"P80":12.23},
{"Type":"Section","G":"3f","L":603.5,"P00":11.47,"P20":11.78,"P40":11.98,"P50":12.11,"P60":12.18,"P80":12.34},
{"Type":"Section","G":"2f","L":402.3,"P00":10.36,"P20":11.16,"P40":11.32,"P50":11.39,"P60":11.47,"P80":11.64},
{"Type":"Section","G":"1f","L":201.2,"P00":10.73,"P20":11.14,"P40":11.29,"P50":11.33,"P60":11.45,"P80":11.8},
{"Type":"Section","G":"Finish","L":0.0,"P00":10.55,"P20":11.26,"P40":11.47,"P50":11.54,"P60":11.68,"P80":12.0}]
```

Discussion | Notes

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- Usage
  - For best efficiency and scalability, we request that the data from this feed is cached by subscribers who are expecting a large number of requests from end users (e.g. consumers using your website or mobile apps).
  - We reserve the right to impose 'fair usage' limits on repetitive requests for the same data.
- Sharecode – race identifier
  - This allows unique identification of the race, composed as follows:
    [2-digit racecourse ID][scheduled start: YYYYMMdd][HHmm]
  - The Racecourse ID value uses the same convention as that used in other Gmax Race data feeds.
- Calculations
  - Times are for the leading horse, rather than all horses. i.e. they represent the speed of the race as whole, rather than the profile for a particular horse (leader may change during the race).
  - Sectional times are named with the 'gate' of the end of the section. The start of timing for each section is the end of the previous section
- Availability
  - Statistics are calculated based on data recorded using the Gmax system over the preceding 12 months (at the point of of request).
  - In some cases insufficient historical data is available for meaningful statistics to be generated. In these cases no data is provided (an empty JSON object).

Future Data | Enhancements

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- Subscribers to this feed will be kept informed of updates, and as far as possible this will be introduced by extending the data feed described herein to ensure backward compatibility. End users should design their applications to be tolerant to additional JSON messages/objects appearing in the data in future.
- Consultation is currently underway on improvements to the horse/racecourse identifier to provide better support for operations globally. This will result in an increased size of racecourse identifier, and possibly the splitting of the current identifier into separate parameters.

If this feed does not meet your requirements, please contact Gmax. Other feeds are also available, including:

- Live tracking data feed, provides the live co-ordinates of each horse in a low-latency data feed
- Live 'Progress' data feed, which summarises the progress of the race as a whole including live running order of the horses, provided as a live low-latency data feed
- By prior arrangement only: a test data feed streaming replays of pre-recorded examples of one or more of the above data feeds, intended for use in final testing by client applications.
- Post-race sectional time data feed, summarising the performance of each horse by section (e.g. at furlong intervals)
- Historical 'Points' data feed, providing the co-ordinates of each horse throughout the race for previously tracked races.
- Racecourse 'Routes': files containing a description of the official running line at racecourses, derived from on-site surveys.

- Please let us know your requirements and we can recommend the most suitable data for your needs.

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