Request for Quotes for Software Development

The WPF wishes to commission score-tracking software for use during World Sudoku Championship (WSC) and World Puzzle Championship (WPC) competitions.

The primary purpose of this software is to provide an all-in-one system for tournament hosts to score contestants and to publish results both in printed form onsite *and* to simultaneously make them available online.

Software Requirements

It is anticipated that the software will be primarily implemented via Excel or an Excel-like environment (for sections 1-6 below) and via web pages that will run locally using Javascript (for sections 7-8 below), but this is not a requirement. External hosting requirements for section 6.1 are open to discussion.

Requirements *in italics* are optional.

The software must allow the host to:

1. Tournament Setup

1.1. Manage a minimum of two tournaments, to handle both the WSC and WPC.
1.2. Have an arbitrary number of rounds per tournament
1.3. Allow an arbitrary number of puzzles per round.
1.4. Allow the host to enter a score for each puzzle for each round.
1.5. Allow rounds to be labelled as team-only rounds where individual player scores will not be entered.
1.6. Allow final rounds to be labelled as play-off rounds which allow re-ordering of player positions rather than changes of score.
1.7. *Allow a puzzle type for each puzzle to be entered, e.g. classic, visual, etc.*
1.8. *Allow each round to have a different bonus setup which can depend on:*
	- *Number of correct questions*
	- *Remaining time*

2. Player Setup

2.1. Allow an arbitrary number of players to be setup.
2.2. Each player must have an arbitrary number of fields that can be configured and named, which will always include name, country and team. Other fields, as an example, may include over-18 status, newcomer status, previous name, gender and over-50 status.
2.3. *Allow a picture to be stored for each player.*
2.4. Each player must be assignable to one team per tournament.

2.5. Provide a method of exporting player information for player badge production, including (if the host desires) a unique ID for each player. *Optionally, provide a method to export badges in a way suitable for immediate printing.*

3. Team Setup

3.1. Allow an arbitrary number of teams to be setup.

3.2. For each team, store the country, team name, and official v unofficial status, *as well as optional extra fields such as flag graphic*.

4. Result Entry

4.1. Allow the right/wrong/partial-marks status of each puzzle to be stored on a per-tournament per-contestant/team (depending on round type) per-round per-puzzle basis, producing a live score for each contestant per round for easy checking against manually totalled tournament papers. Entry method must allow rapid and easy entry of results without any unnecessary key or mouse presses. Players must be selectable as a minimum via name, ID, or via a choice of members of their stated team (to handle situations where competition paper identity details are not correctly filled in).

4.2. When giving partial-marks status to a puzzle, allow the recording of an arbitrary number of points to be awarded for that puzzle.

4.3. Allow changes in ranking positions to be entered for play-off rounds.

4.4. *If implementing 1.7 above, calculate the bonus for each contestant based on configured rules.* If not implementing 1.7 above, allow manual entry of round bonus for arbitrary contestants.

4.5. *If implementing 1.7, allow puzzles to be marked as partially-correct-only-for-the-purposes-of-bonus-calculation.*

5. Result Extraction

5.1. Produce overall result tables both for overall totals and with per-round breakdowns, which must include ability to include/exclude and label official v unofficial status.

5.2. Produce overall result tables for teams, which must include ability to include/exclude and label official v unofficial status.

5.3. Allow results to be sorted by arbitrary criteria, and be selected based on arbitrary criteria (e.g. to extra over-50 results).

5.4. Provide a breakdown by round on most-answered questions, most-correct and most-incorrect questions.

5.5. Allow the information from 5.1 to 5.4 to be easily viewed at any time during, before or after result entry.

5.6. *Provide a breakdown by puzzle type, if implemented in 1.7 above.*

6. Result Output

6.1. Display results (as per section 5) directly on a webpage, hosted as to be determined via agreement, but potentially immediately live-published to both the WPF site and to the tournament host's site. Please propose a method for this to be implemented. This must be viewable both on desktop and on mobile screens.

6.2. Display results (as per section 5) in a paginated printable form for tournament hosts to print on-site.

6.3. Export results to Excel (as per section 5) in an easily usable form (if not already available immediately within Excel, if implemented in Excel).

6.4. *Export results to XML (as per section 5) for easy import to other software or systems.*

6.5. *Export results to CSV (as per section 5) for easy import to other software or systems.*

Optional Requirements

The following sections are optional, but their implementation is highly desired.

The software will ideally allow the host to:

7. Tournament Timer

7.1. Provide a screen for display during tournament rounds showing remaining/elapsed time and with place for logos (championships, WPF, sponsors). The screen should size to the host's precise screen size, within reason.

7.2. Allow the timer to be configured off-live-screen for use as countdown with free choice of round length, or as stopwatch (elapsed) timer.

8. Tournament Website

8.1. Provide a template website for the tournament host, which may or may not be hosted on a dedicated domain. This should support mobile-screen usage.

8.2. Allow the website to directly display live results from the tournament score system, when chosen to be published by the host.

9. Play-off System

9.1. Provide software for the organiser to setup and configure the contestants for limited-played play-offs, including both a name and a starting delay for each contestant. *Optionally allow a flag and/or country/team for each contestant.*

9.2. Software to keep track of and display the progress of each finalist during a play-off, including which puzzle each finalist is solving. Operator input should not be visible to spectators. The screen should size to the host's precise screen size, within reason. *Optionally show competitor elapsed solve times, checking and correct/incorrect status.*

Example:

	1. Scrabble	2. Slitherlink	3. Tapa	4. Neighbors	5. Cave	6. ABC-Box	7. Pills	8. Find the Pair
Ken Endo 1	CORRECT 14:12	CORRECT 16:37	CORRECT 19:42	CORRECT 31:54	x 44:14	CORRECT 48:48	CORRECT 54:35	CORRECT 57:31
Ulrich Voigt 2	CORRECT 06:27	CORRECT 11:01	CORRECT 19:23	CORRECT 27:02	CORRECT 34:05	CORRECT 39:44	CORRECT 45:24	CORRECT 54:31
Palmer Mebane 3	CORRECT 06:54	CORRECT 10:17	CORRECT 15:41	CORRECT 28:29	CORRECT 33:43	CORRECT 39:50	SOLVING 40:50	
Kota Morinishi 4	xx 18:47	CORRECT 30:00	CORRECT 35:00	CORRECT 44:07	CORRECT 51:53	SOLVING 52:53		
Przemysław Dębiak 5	CORRECT 16:58	CORRECT 21:52	CORRECT 34:20	CORRECT 46:03	CORRECT 52:21	SOLVING 53:21		
Martin Merker 6	CORRECT 11:34	CORRECT 20:04	CORRECT 26:51	CORRECT 41:12	CORRECT 49:44	CORRECT 54:48	SOLVING 55:48	
Robert Vollmert 7	CORRECT 10:21	CORRECT 15:13	x 22:30	CORRECT 37:06	CORRECT 43:27	CORRECT 50:47	SOLVING 51:47	
James McGowan 8	CORRECT 09:15	CORRECT 13:49	CORRECT 20:25	CORRECT 31:18	CORRECT 41:20	CORRECT 46:31	CORRECT 52:01	CORRECT 55:07
Michael Ley 9	CORRECT 16:39	CORRECT 21:15	CORRECT 30:57	CORRECT 40:57	CORRECT 49:39	CORRECT 53:47	SOLVING 54:47	
Matus Demiger 10	CORRECT 14:54	CORRECT 18:45	CORRECT 22:34	CORRECT 30:26	CORRECT 37:16	CORRECT 48:37	CORRECT 54:14	SOLVING 55:14

Extension Requirements

The following requirements are desired but not compulsory.

10. Historical Results

10.1. Extend requirement 1.1 to allow storage of an arbitrary number of tournaments, each with an associated year. Maintain these records across hosts.

10.2. Allow players from previous tournaments to be chosen as contestants in future tournaments, thus tracking these players across multiple years and tournaments.

10.3. Allow historical results to be viewed for past tournaments, as per sections 5 and 6 above.

10.4. Provide online historical results on a per-player basis, allowing users to view player's performance over time.

11. Comparative Results

11.1. Provide an online method for the performance of one player to be compared with another player on a per-tournament, per-round, per-puzzle or per-puzzle-type (if implemented) basis.

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