GPS Timing and Scoring for RoadRally

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ABSTRACT

There are multiple automated systems available for timing and scoring road rallys. The first half of this session will provide a comparison between two of them, Richta GPS Checkpoints system and the MiRally system.

The second half will be an open forum to discuss your experiences, problems and questions regarding the use of these systems.

Please ask questions via the chat window.

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SIMILARITIES

Both systems …

… time cars at checkpoints and calculate their scores for time, speed, distance road rallys.

… eliminate the need for checkpoint workers to time cars at checkpoint locations.

… significantly reduce the time and effort required to determine the winners of the event.

ARCHITECTURES

Richta:

Entrants are required to run the Competitor app on a dedicated smart phone or tablet.

All information needed to produce a score at a checkpoint is stored in the app. Scoring is done on the device in the car and shared with other contestants and public a few seconds after passing the CP.

MiRally:

Entrants are required to run one of several devices that collect their location and time information on the route. That information is sent to a central collection computer.

Scoring is done on a central computer, not on the device.

SCORING - RICHTA

All information needed to produce a score at a checkpoint is available on the device.

At a checkpoint, score is determined and shown to the entrant immediately. All timeslip data is shared with the rallymaster, entrants and public.

Scores and entrant location can be shared with the public via the Scoreboard app.

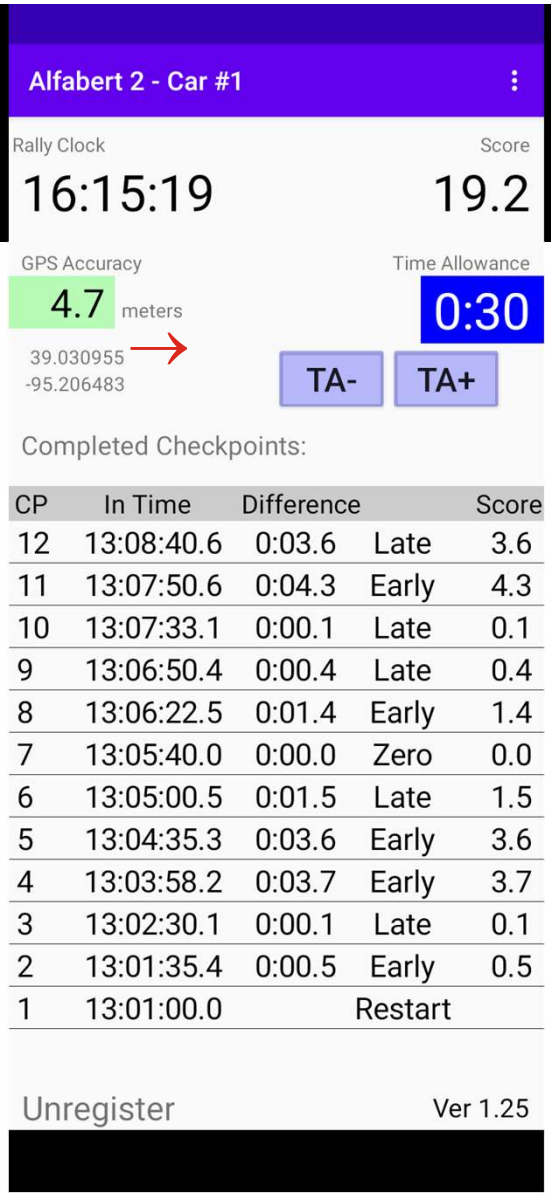
SCORING - RICHTA

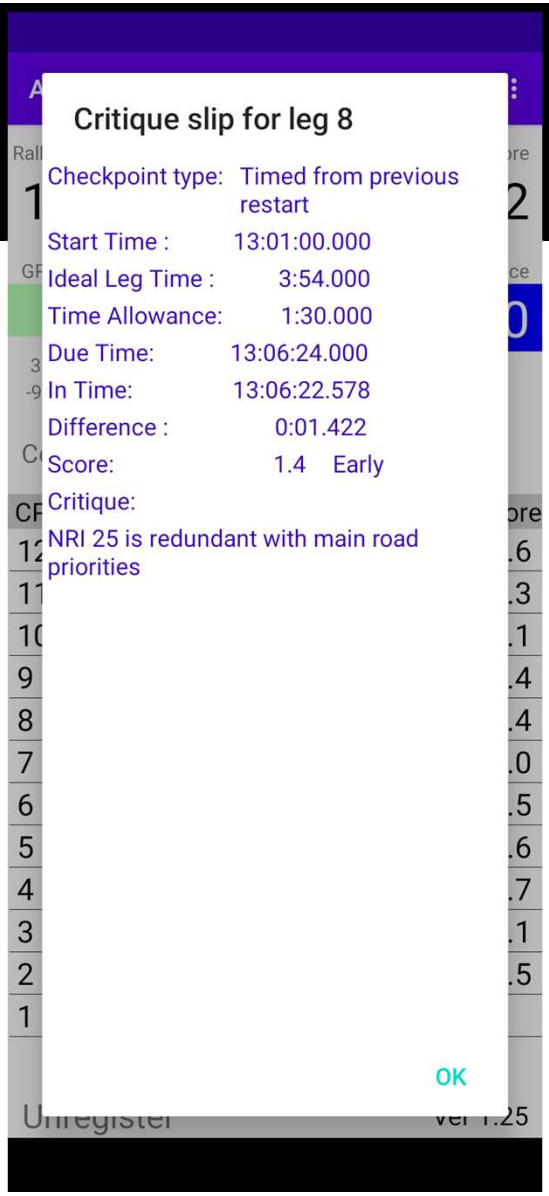
Organizers access scoring data via the Rallymaster app.

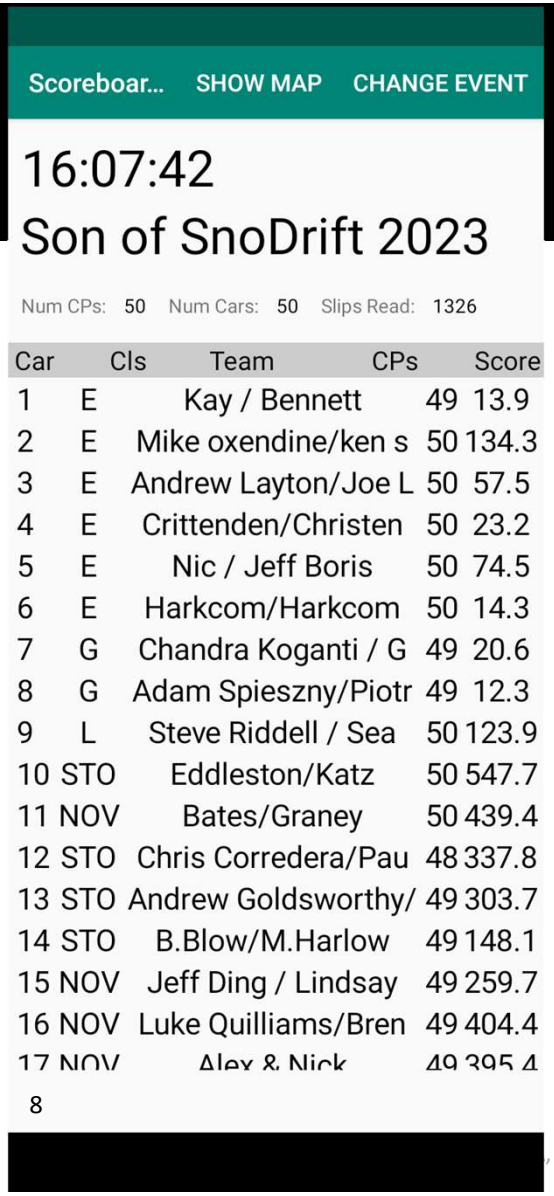
Scores are accessed by exporting a spreadsheet (.csv file) and sending via email.

Any spreadsheet program can be used to format and present the scores.

Full timeslip data for each leg can be accessed by Rallymaster or entrants.


Alfabert 2 - Car #1
Rally Clock
16:15:19
Score
19.2
GPS Accuracy
4.7
meters
39.030955
-95.206483
Time Allowance
0:30
TA-
TA+
Completed Checkpoints:
CP In Time Difference Score
12 13:08:40.6 0:03.6 Late 3.6
11 13:07:50.6 0:04.3 Early 4.3
10 13:07:33.1 0:00.1 Late 0.1
9 13:06:50.4 0:00.4 Late 0.4
8 13:06:22.5 0:01.4 Early 1.4
7 13:05:40.0 0:00.0 Zero 0.0
6 13:05:00.5 0:01.5 Late 1.5
5 13:04:35.3 0:03.6 Early 3.6
4 13:03:58.2 0:03.7 Early 3.7
3 13:02:30.1 0:00.1 Late 0.1
2 13:01:35.4 0:00.5 Early 0.5
1 13:01:00.0 Restart
Unregister
Ver 1.25


Critique slip for leg 8
Checkpoint type: Timed from previous restart
Start Time : 13:01:00.000
Ideal Leg Time : 3:54.000
Time Allowance: 1:30.000
Due Time: 13:06:24.000
In Time: 13:06:22.578
Difference : 0:01.422
Score: 1.4 Early
Critique:
NRI 25 is redundant with main road priorities
OK


Scoreboar... SHOW MAP CHANGE EVENT
16:07:42
Son of SnoDrift 2023
Num CPs: 50 Num Cars: 50 Slips Read: 1326
Car Cls Team CPs Score
1 E Kay / Bennett 49 13.9
2 E Mike oxendine/ken s 50 134.3
3 E Andrew Layton/Joe L 50 57.5
4 E Crittenden/Christen 50 23.2
5 E Nic / Jeff Boris 50 74.5
6 E Harkcom/Harkcom 50 14.3
7 G Chandra Koganti / G 49 20.6
8 G Adam Spieszny/Piotr 49 12.3
9 L Steve Riddell / Sea 50 123.9
10 STO Eddleston/Katz 50 547.7
11 NOV Bates/Graney 50 439.4
12 STO Chris Corredera/Pau 48 337.8
13 STO Andrew Goldsworthy/ 49 303.7
14 STO B.Blow/M.Harlow 49 148.1
15 NOV Jeff Ding / Lindsay 49 259.7
16 NOV Luke Quilliams/Bren 49 404.4
17 NOV Alex & Nick 49 395.4
8

SCORING - MIRALLY

Scoring is done on one computer/web site and available to all on a webpage. Scores are not shown on the device in the car.

You can be scored to the second or tenth of second.

Timing points are typically split up in Regularities or Control Zones. For example TC 1 may contain many timing points (cp), each of which is part of that Regularity. Each CP has a maximum score. A Regularity can also have a maximum score.

Passage controls can also be used as well as WinPoints to assign penalties or in the case of GTA extra points.

SHORTEST DISTANCE RALLIES

MiRally now supports distance controls. A distance control measures the distance fro a start point to the control by collecting contestant GPS data and plotting on Google maps.

Typically the winner is the car with the shortest distance.

Organizer enters GPS coordinates either manually or uploading a spreadsheet.

Points are assigned for each missed waypoint.

DEVICES / BACKUP DEVICES – RICHTA

Entrants are required to use a dedicated smart phone or tablet running the Competitor app, Android or Apple.

Competitor monitors location, determines when a CP is passed, scores the leg, reads your score aloud, and shares the scoring data with the rallymaster.

A second (or third) device may be used as a backup. Registered as a different car number. Rallymaster can pull and rescore any missing timeslips from the backup device.

DEVICES / BACKUP DEVICES - MIRALLY

GPS data can come from one or more devices. If organizer provides transponders the contestant does not need any devices thus freeing up device for other uses and saving power outlets. Nice for classic cars with no power outlets.

The Crono app also provides input from a phone or tablet.

Rabbit GLO Transponder:

TIME ALLOWANCES

Richta:

Time allowance (additional time for ideal leg time) entered on entrants device, immediately factored into leg score.

MiRally:

Entrants request time allowances (at a particular mileage) on a provided timecard. Scorer manually enters them on the MiRally web site. TAs are eventually reflected in the scoring.

COURSE LAYOUT / ROADBOOK - RICHTA

Richta GPS Checkpoints provides no tools for road book generation or display. Events are planned, laid out, measured and calculated per the traditional way.

Once planned, use the Rallymaster app to enter checkpoint locations, checkpoint types, ideal leg times.

COURSE LAYOUT / ROADBOOK - MIRALLY

A complete editor app (Designer) can be used to create a roadbook and provide all data needed to stage the rally. Both pdf and digital roadblocks are created.

Mileage input can come from either GPS or pulse input via a box connected to car or a GPS box (Rabbit GLO) or the device GPS.

Rabbit boxes also have a remote control with buttons for better input. These boxes work with both Rabbit and Designer.

FEES

Richta:

$3 per car for entry fee < $50

$5 per car for entry fee >=$50

Special pricing for small events, multi-day events

MiRally:

Charge per event for RoadBook Designer and per entrant

RoadBook Designer: About $30 per event

Actual cost varies with the exchange rate. You purchase credits for entrants in advance, about $6 per car. When we rent Transponders the credit is included and about $10 per car.

SUMMARY DIFFERENCES

Richta:

- Lower fees for use
- Immediate feedback of scores on entrants' devices
- Geared toward North American event styles

MiRally:

- Roadbook generation
- Digital roadbook
  - Navigator need only set start times
- Geared toward continental European event styles

MORE INFORMATION

Richta:

First step: www.richtarally.com > Documentation > Essential Information for New Rallymasters

Facebook Group: Richta GPS Checkpoints

MiRally:

First step: www.rabbitrally.com/docs/content/roadbook-designer-organizers/

Facebook Group: MiRally US

Support done via WhatsApp

BEST PRACTICES

Both Systems:

Review the “best practices” for using both systems for experienced-based hints and tips to avoid “rediscovering” issues already discovered (and solved) by others.

OPEN FORUM

Questions welcome on this presentation or any question related to GPS Timing and Scoring.

Please share your questions, experiences with either system, problems you've experienced or suggestions.

PLEASE GIVE US FEEDBACK!

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the Whova App!