There's an App for That

December 2020

I want to provide you with a year-end update on the happenings in the world of GPS timing and scoring and a peek at the enhancements planned for 2021.

<u>2020 App Usage</u>

Rallymasters of 56 events used the Richta GPS Timing and Scoring System, timing 812 cars through 1,911 checkpoints.

Over 32,000 timeslips were generated in 2020, bringing the total number of timeslips created since April 2019 to over 45,000. The speed of adopting this system has been very gratifying to me personally, and I view it as an indication that we got many things "right" in the system design.

Road rally programs from coast-to-coast have adopted the Richta GPS Timing and Scoring family of apps! SCCA Regions include Cal Club's Santa Monica Sports Car Club, Milwaukee, Detroit, South Jersey, Northeast Ohio and Southern Indiana. The Cascade Sports Car Club, based out of Portland, Oregon, used the system for their TSsD (Time Speed Social Distance) Saturday Series throughout 2020 and their annual events. Three Porsche Club of America Regions have been using the system successfully. With apologies to any club I may have missed, we are grateful for each of you! I am especially heartened to see the SCCA San Diego Region, which is new to the sport of road rally, the Texas Region, which has reintroduced TSD rallying, and the Mercedes Benz Club in Atlanta start their programs with our system. As well, we have many testing and training events, as Rallymasters and organizers evaluate the system.

<u>Thank You</u>

The Richta GPS Timing and Scoring System is the product of more than me alone. While I do take credit for the overall architecture and design of the system and all Android programming, we would not be where we are today without several key individuals' contributions.

My oldest son, **David Bireta**, is an iOS (Apple) developer in Chicago. He is responsible for the Apple implementations of both the Competitor and Rallymaster apps. David also deserves credit for several key system design decisions: the use of the Google Firestore database, the design of the Map in Rallymaster (which shows CP and entrant locations in near real-time), and the design of the Competitor app user interface. By the way, I shamelessly copied that design for the Android version in the summer of 2019.

David also designed the Apple version of Rallymaster from a clean sheet of paper. His implementation is easier to use than the Android version (Cars and Checkpoints, to name two). More on this topic under <u>Planned 2021 Enhancements</u>.

Jim Crittenden, 2020 SCCA RoadRally Board Chair from the SCCA Milwaukee Region, has been instrumental from the very start of development, participating in the system's design, testing, and support. Many new Rallymasters were tutored in the use of the system under his guidance.

Gary Starr has spent his time and professional skills testing the system, and he has made several useful suggestions for the system design. Gary has also found several bugs in the system, which avoided discovering them in production use. Gary uses his attention to detail and his extensive rally experience to explore the boundaries of the system's use.

Thank you, David, Jim, and Gary! We would be where we are today without your contributions!

2021 Planned Enhancements

New releases of Competitor, Rallymaster, and Scoreboard are planned for release in 2021.

Competitor App

The next version of Competitor will:

- Be released in December or January. The actual timing will depend on the scheduling of events. I don't like to publish a new release within two weeks of an event, and we have three events in California in December and January, and Son of Sno*Drift in Detroit in early January.
- Be changed minimally in 2021. I plan to restrict new versions of Competitor in 2021 to minimize new bugs creeping into the system. Other than essential bug fixes, I hope to avoid adding a major new function in 2021.
- Include help for lost rally entrants. These features are based on suggestions from the Santa Monica Sports Car Club and NE Ohio. Entrants will be prompted for a phone number when registering for an event so the person watching the event on the Map can call them if they head way off course. They can also display the **Help Line** provided by the Rallymaster – a number to call during the rally for assistance. There will also be an **Emergency Broadcast Message** enterable through Rallymaster, which is immediately displayed to the entrants with data connections. This is intended to broadcast information on missing signs, road damage or closures, and other last-minute information.
- Include support for time allowances greater than 19m 30s. Another request from a Rallymaster, this feature allows event TA values up to 1440 minutes.
- Honor the precheck offset, which is set by the Rallymaster when checking CP open and close times. The precheck offset is used to alter the CZT Restart times so that the pre-check can occur at any time of day. The current version does not alter the CP open or close times according to the precheck offset.
- Implement other internal changes not visible to the casual user.
- Allow you to send your detailed timeslip data via email. At the end of an event, I like to review the legs I scored poorly on to understand where I went wrong. I want to see all of the timing data (out time, ideal leg time, TA time taken, in time, delta from ideal time, and the score). This capability has always been in Rallymaster (Timeslips -> Send Timeslips). This change to Android Competitor will allow you to email your detailed data at any time. Note that you may only review your teams' detailed data.

Rallymaster

In addition to changes to support the new features in Competitor (Help Line, Emergency Broadcast Message, …), Rallymaster will include these changes:

- Import and Export of events. I've wanted to implement this change for a long time. We can now use Rallymaster to export an event to a comma-separated-values (.csv) file, which opens in most spreadsheet programs. This file describes the event, all CPs, registrations, and timeslips; it can

be created and emailed to yourself. The archived file could also retain the event for possible reuse.

- The file can also be used to allow the offline definition of CP locations. Entering times of day for CZT Restarts is admittedly awkward with a spreadsheet, and it should be done using the Rallymaster app. Be aware that Microsoft Excel will clobber the resolution of times of day, such as restart times and time-of-day data in timeslips. Open Office and Google Sheets do not clobber the time-of-day values.

  An export file is created in Rallymaster by selecting Export Event from the Advanced Menu. Importing a file is done differently, as there is no Import Event menu option. You simply email the event .csv-file to your device and open the file. We've coded Rallymaster such that the app tells Android or iOS that it knows how to open a file with the .csv extension. When the file opens, the system will start the Import Event program, and you are prompted for the Rallymaster password if the event is already in the database.

  With this feature, I will be automatically exporting and saving the .csv and validity report for all events 30 days after they are held. Events can be restored and reused, if desired, via an email request to me.

- A new Cars program to replace the current Manage Registrations has been implemented. One screen will show all registrations, the release of the Competitor app installed, and the readiness status of each entrant. Registrations can be updated or deleted from these screens as well.

- An exciting productivity enhancement will be available in a new Checkpoints program. The rallymaster can see all defined checkpoints on a single screen. The main advantage here is that one can now easily insert and delete CPs, and renumbering of CPs is automatic. As events grow to 50, 80, or 120 CPs, the work required to edit CPs is reduced when laying out an event.

Scoreboard

The Scoreboard app (Android-only as of this writing) has been enhanced by popular demand through the addition of a Map and security features.

The Map displays the entrants' recent location, and every 20 seconds, the Competitor app sends its current location to the scoring database. The Map function displays the cars' last-reported locations and the locations of Restart Checkpoints. On Course, Off Course, and Timed CPs are not shown. The Map will automatically update car locations as new locations are reported.

I have found it quite interesting to "watch" an event on the Map. It is surprisingly enjoyable to watch a parade of white icons progress past a series of checkpoints, whether they're in the Hollywood Hills outside LA, forests in Oregon, past dairy farms in Wisconsin, or through the woods in northern Michigan. The designated scoring team can also use the Scoreboard app to track the team's progress and create intermediate results during the event.

The Rallymaster may restrict access to the Map by all users or require a password for viewing the scores. I can see where there could be a competitive advantage to later running teams on a course rally in tracking the other entrants and watching their scores during an event. Restricting access to scores via a password or prohibiting the Map display are intended to correct this.

SCCA 2021 Virtual Convention

I have volunteered to lead two sessions, and I envision an introductory and an advanced session. I welcome your suggestions for topics to be covered in the advanced session.

Facebook Group Reminder

Richta GPS Checkpoints is a great place to reach other user community members and me with questions, comments, and to make suggestions.

Pre-Event Final Preparation Tasks

A great example of the Facebook group's topics was this question, "My event is this weekend. It is done and pre-checked. What do I do to get ready for the event?"

Responses provided by members of the group included:

- Validation Report. Resolve all errors, resolve or understand all warning messages.
- Create an export file to serve as a backup
- Delete any registrations used to precheck the event
- Check that the precheck delay is zero
- At registration, have a knowledgeable person visually check all contestants' devices to make sure Competitor is set up and running properly. (Or soon, verify this in Rallymaster -> Cars).
- At registration, make sure in Rallymaster the car number, Registration fields of email address, Team Names, and Class are filled out.
- Make sure you know how to do Discard Leg (and know the difference between Discard Leg vs. Delete Leg), Rescore Leg, and Edit Timeslip. Practice Edit Timeslip beforehand to get the hang of it as it can be tricky.
- During endpoint scoring, ALWAYS make all scoring corrections using Rallymaster so contestants can use the Scoreboard app to see everyone's scores and corrections in real-time. You can still use a spreadsheet to get nicely formatted scores for the final results emailed to contestants later.

Recent Problems, Hints and Tips, and Emerging Best Practices

I share the following incidents on recent events in the hopes that others can avoid repeating others' experiences.

Roaming Off: One entrant reported that their phone mysteriously stopped uploading timeslip and location information during the event. This magically corrected itself at the breaks and end of the event.

The problem turned out to be that the phone's data roaming setting was turned off. While (literally) roaming during the rally, the phone stopped its data connection, blocking location, and timeslip data reporting.

<u>Time of Day Off by One Hour</u>: Another entrant's phone displayed the incorrect time of day. It was off by one hour.

This problem was quickly resolved when the phone's automatic time zone setting was enabled. The team had traveled to the event from another time zone, and their phone did not automatically adjust the time.

<u>Two Devices Running as Same Car Number</u>: An entrant used two different phones running the same car number during an event. TAs were entered on only one device. Some TAs were not reflected in the scoring database.

This simply will not work. Both devices will send timeslip data to the database, and it is unpredictable which device's data will be stored in the database. Please do not do this.

If you are going to run a second device on an event, please do so as a different car number and with the prior authorization of the event organizer. Ask the organizer to assign a car number to you that does not conflict with any other car.

<u>CP Open Time Ignored</u>: There was a situation at an event where the entrant was timed in hours early at some CPs. The open time set by the Rallymaster for the CP was ignored.

The entrant was running an older release of the Competitor app, a release that did not include support for CP open or close times. It is good practice to mention in the event GIs that entrants should "Contestants should verify that they are running version x.xx." This situation is an example of why I seek to minimize the number of changes to the Competitor app.

<u>Finally</u>

I hope you will all have a safe Holiday Season. 2020 was our year to host Thanksgiving Dinner (12 including four grandchildren in attendance from five different cities), and we canceled those plans in early November. Christmas, being our "off" year, will be similarly quiet.

I am always happy to receive your suggestions and comments. Users requested many of the 2021 app enhancements mentioned above of the system. The best way to contact me is via email – rbireta@gmail.com.

I hope to see you at an event in 2021.

~Rich Bireta

This *There is an App for That* was in the December 2020 Edition of *Road Rally eNews*.