

# FLIGHT SIMULATOR AROUND-THE-WORLD RACE

## 2014 Special Rules FAQ

V1.00

February 9, 2014

### *Summary of Legs Types: Time, Distances, Aircraft, and Restrictions*

- Normal Leg: 2 hours, 750 nm. Normal race aircraft. The only restriction is the limited number of times a "Thoroughbred" may be used
- Wildcard Legs: Unlimited time with a total distance not to exceed 5,000nm. A maximum of five legs of which none may exceed 1,650nm and no other may exceed 1,200nm. Minimum aircraft weight 30,000 pounds Gross. Types limited to "normal" race-eligible aircraft or sponsored jets.(See both White Lists.)
- Special Continental Jet Legs: Twin-engine regional jets for a distance of less than 1,000nm. (See Jet White List.) The Departure and Destination airports must be on the same continental land-mass. The time limit is 3 hours.
- Extra Aircraft Availability. Cessna Citation X limited to 2 legs and Northrop Grumman B-2 Spirit limited to 1 leg; both aircraft are eligible as options for wildcard legs only. North American F-86E/F Sabre (Section F8) limited to 4 legs which may optionally substitute for thoroughbred legs.
- Special Aircraft Legs and Team Flights: 3 Special Flights, to be completed by the baton carrier in a particular aircraft over a particular distance, which may optionally be designated Team Flights. All are augmentations to legs otherwise flown. Team Flights may earn a maximum 1½ hour bonus each to TOTAL maximum bonus of 2 hours (that is achieved by 8 participating pilots @15 minutes bonus per participating pilot—other than Baton Pilot). Types restricted. Time and distances vary.

### *For Rookies.*

Welcome to the 2014 running of the Around the World Race, the RTWR. For many, this is the premier team competition in flight simulation. As a serious challenge to the individual pilots' airmanship skills and to the teams' planning and organizational abilities, the RTWR aims to bring out the best in all of us. That said, it meant to be a both rewarding and enjoyable. As one grizzled veteran put it: "It's the most fun you can have with your pants on."

You will discover that this is a competitive event. The race is run round the clock, through darkness and miserable weather, to circle the globe in anywhere between three and five days. The intensity of the challenges, along with the continuous need to keep the baton moving, means that each team is under constant pressure to mobilize as many fresh pilots as they can. Even as a rookie, you will play a critical part in your team's success. If you are a veteran flight simmer and feel comfortable flying the fastest of the prop planes and/or jet liners, you should step right into the mix and start flying legs right away. If you are transitioning to racing types of aircraft, you may want to first exercise your new-found skills flying in the team events and in the ever critical role of wingman. Before too long, everything will seem natural and you can proudly take full part in the teams' baton legs. All that said, there is no substitute for practice – to acclimate yourself to getting the Duenna running, to making efficient baton handoffs, and to thinking your way to quick and safe takeoffs, climbs, cruises, descents, and landings.

Even so, as a rookie you will have one added bit of security. When you take the baton, flying with one of your teammates as a wingman, you will have the comfort of knowing that if you crash then you can transfer the baton to your wingman without any penalty. This "Rookie Mulligan" allows you to fly while knowing that your first "crash" will not hurt the team.

Finally, you may be wondering about the seemingly massive set of rules. Please understand that these have grown up over the years to handle all sorts of ambiguities and complexities that have arisen. And we have pages of extensive "FAQ" material to explain just how those ambiguities and complexities need to be handled. (Sometimes what seems to be a perfectly clear rule ends up being misinterpreted by others. And, to be fair, many participants are reading English as a second language. The subtleties of "legal" expression are a challenge for everyone and especially for you who are working in another language.)

So if you are in your first year, please ask your teammates how to proceed. They will help you pick a favorite aircraft and they will help you find racing slots where you can help the most. From an individual pilot's perspective, the real task is flying fast, clean, and safe legs. Please feel free to leave the complications of planning and rules interpretations to your teammates. Or not.

The main point is that you are most welcome to our little community.

### **The Setup.**

*Q. Why is the Duenna required?*

A. We're requiring the Duenna for a number of reasons. The software has reached a level of maturity at which we are confident that instability on its part will not affect the race. We will be able to track the race's progress online if all participants use the Duenna. Finally, the Duenna allows us to keep closer tabs on race pilots, giving everyone involved in the race additional confidence that competitors aren't attempting to gain an unfair advantage.

*Q. Which version of the Duenna is needed? I already have an older one?*

A. You need version Rev. 131 or later. (Rev. 131 was available on January 30, 2010. If you already have a version installed, you merely need the update.) Earlier versions do not have the same flight tracking capability. If this is your first race, install Rev. 44 (Feb 2005) and then install version Rev. 131 to update everything. Go here: <http://johannesmueller.com/fs/web/duenna/>

*Q. What about FSUIPC?*

A. You should get the latest version. (You can pay for it, and support Pete Dowson's efforts. Or you can use the freeware version.) You can find the software here: <http://www.schiratti.com/dowson.html> . Please update if you have not done so recently.

### **1. The Prize.**

The main prize goes to the overall winning team. This year, we award two extra prizes just for the fun of it. The *Roadrunner Prize* goes to the pilot who flies the fastest normal leg. (Minimum 600nm, normal racing aircraft, speed measured by average ground speed in knots.) In addition, the pilot pair who records the most nearly perfect leg in a Formation Flight will win the *Gemini Award* to honor their skill.

Teams are asked to identify and nominate their top qualifiers in each category. The Committee will examine the records and award the honors.

*Q. How do we measure average ground speed? The Duenna number is not exactly accurate on this matter.*

A. Take the Direct distance and divide it by the Flight Time, both as indicated by the Duenna. [The time is the Flight Time, not the Forum clock time. We are focusing on fast flying, not on the baton handoffs.] Yes, the Duenna calculation of the "Average GS" is not exactly correct by this measure. However, the teams can sort on the Duenna calculation to identify the top contenders...and then do the correct calculations to determine the team's best performance. The numbers should be very close unless the pilot takes a very circuitous route from departure to destination.

## **2. Start Time.**

*Q. Why start at 1400 UTC?*

A. The timing represents a compromise between opening the Race in local daylight and the need to accommodate the real life schedules of our pilots across many times zones.

## **3. Routing Requirements.**

*Q. Is this year's continental requirement different than the standard rules?*

A. Yes. The teams need record only one full stop landing on each continent – rather than the previously required two full stop landings.

*Q. What is this latitude requirement?*

A. The team records the latitudes of their most northern stop and their most southern stop. If the absolute difference is at least 60 degrees latitude, they will have satisfied the requirement. Note that a 60 degree difference may be more or less northern or southern in its extreme anchors. Note also that the special restrictions limit landings to between 80° N and 60° S.

*Q. The rules require six Winter Olympic airport landings. The required airports clearly include three fixed points. But what about the other three required airports?*

A. The team lands at the three explicitly-designated airports (LOWI, RKNN, and CYVR). In addition, each team must land at three more airports. They must land at another listed Winter Olympic airports associated with each of the designated continents: Asia (RJAF or RJCC); Europe (LFLJ or ENHA or LQSA or LSZS); and North America (CYYC or KLKP or 36U or KTVL).

*Q. What does airspace denied mean? What constitutes the airspace of a country? What about landing in the country?*

A. Race aircraft may not cross the airspace of, nor land in, these nations for any reason. For RTWR purposes, the restricted airspace is defined by the boundaries of a nation's main landmass plus any explicitly designated offshore islands. Small islands and overseas territories and departments do not count for the airspace. Pilots should give these national boundaries a wide 10-20 mile margin because maps can be imprecise. In addition to the airspace, pilots may not land at airports in the nation *nor* in any of the nation's outlying islands. Any race aircraft which crosses the boundaries of, or lands in, those nations may not score a completed race leg or wildcard leg. Should both the baton carrier and the wingman violate the restrictions, the leg should be abandoned and restarted at the airport of the last successful baton landing.

For practical reasons, the rule is slightly different for airspace restrictions and landings. We cannot precisely monitor overflights of small outlying islands while we can surely identify landing at airports on those islands. The weaker "no military landings" restriction also applies to both the mainland as well as the offshore islands. (Our not enforcing the prohibition on overflying small islands is due to our inability

to track such overflights with precision. The landings are recorded so that we can enforce a landing restriction.) For example, Iran's Kharg and Kish Islands are offshore and we cannot truly know whether an aircraft flies over the islands and we don't want to penalize teams who inadvertently fly over an island chain. However, both the pilot and the race marshals can know with certainty if the pilot lands at Kharg Island's airport OIBQ.

Finally, we shall make every effort to ascertain whether a leg has violated prohibited airspace. The standard will be a direct great circle path between the departure and destination airports. If there is additional evidence that the flight made a wide berth of the restricted airspace, we shall take that into account. (The online tracking might help.) The bottom line is to leave a goodly margin of error when you are flying near a restricted airspace. Those Iranian interceptors may not be willing to give you the benefit of the doubt. And we hear the food is terrible.

*Q. What does "airspace is open but no military aircraft may land" mean? What is a military aircraft? The WWII based fighter I fly is modeled on a US registered private aircraft.*

A. (The Military Aircraft restriction does not apply in 2014. We leave this FAQ sequence here for future races.) Two questions—two answers.

A military aircraft may fly over these nations, but that aircraft may not land (or takeoff to begin a baton leg) at any airport in those nations. If you are forced down for fuel, then you should transfer the baton, restart the leg, or abandon the baton. Please do exercise care with the "foreign military sensitive" countries.

A military aircraft is any aircraft designed and built primarily for military usage. This includes all fighters, bombers and military only trainers and cargo aircraft. Warplanes that are now in private service are considered military aircraft.

The DC-3/C-47 is a civilian aircraft for our purposes—but cannot use a military repaint in these nations. Also those many prop liners which began life as WWII transports but their primary role was as an airliner after the war. Along these lines, the Howard 500 is clearly a civilian aircraft. (The On Mark Marksman serves as a modified A-26 Invader and thus as a military aircraft.)

*Q. There seem to be fewer "foreign military sensitive" nations this year.*

A. Yes. Though some special negotiations and a sense of international goodwill, a number of sensitive nations have agreed to allow the RTWR to pass through their territory. This condition holds for this year, but the future remains uncertain.

*Q. The continental landmass is a tricky concept for some cases. Can you clarify Turkey and the Ukraine and Kaliningrad as being either European or Asian?*

A. For most cases, Russia's western national border from the Arctic to the Black Sea will serve as the demarcation between Europe and Asia. For Turkey, the Bosphorus Strait is the dividing line. Istanbul (LTBA) is in Europe, Samandira AB (LTBX) is in Asia. The Ukraine, including the Crimean Peninsula, is on the European continental landmass. Similarly, Scandinavia is part of the European landmass. Kaliningrad, the Russian enclave between Poland and Lithuania, is treated as part of Asia. Obviously, these are detailed and somewhat arbitrary interpretations of the RTWR continental landmass requirements and not proclamations of deep geographic principles. The French DOM (*départements d'outre-mer*) are not part of the European landmass...!

*Q. May we use airport scenery addons?*

A. Yes, you may use realistic scenery addons. Be sure to check the author's intent. No "fictional" or "futuristic" runways or navigation aids are allowed.

Be careful, though. You may use only airports that are in the MSFS data base. Your observing this restriction is especially important when you are meeting the routing requirements because some add-on packages include many extra airports. (This warning is especially relevant for Russia, China, Australia and New Zealand.) You should check with your teammates to be sure that your critical airports are in the MSFS data base. Typically, packages that realistically enhance existing airports are just fine.

*Q. The runways in the Azores Islands are closed for 2014. Is this important?*

A. Hmmm.

*Q. I still have a few sceneries from previous RTWR races, ones that were released by the Executive Committed for that year's events. My I use those addons (with extra night lighting and parking slots) in this year's race.*

A. No. Please take care to disable those no longer valid sceneries.

#### **4. Sponsored Aircraft**

*Q. The AlphaSim B-2 is available for one wildcard leg. Do we need to fly that aircraft?*

A. No, it is optional. However, you may find it about a half-hour faster on a longer leg and might well consider flying it. (This aircraft option is meant to move the baton along more speedily in 2014.) While developed for FS2004, it works in FSX. Be careful here as many pilots will want to explore its limits, some of which can bite.

*Q. This year the Cessna Citation X is eligible for two wildcard legs. Why only two legs?*

A. The Citation X is a good option to increase the variety of aircraft used by the teams. It should not be the *only* jet aircraft used. In principle, of the five wildcard legs you could choose to fly one (1) B-2 Spirit and two (2) Citation X legs, leaving two more legs to be flown in the usual wildcard types. Or you could fly five B747-400 legs. Or some mix of these aircraft types.

*Q. The use of jets in 2014 is limited to a White List. That means that many excellent simulations will not be available for use in the race. Is that right?*

A. Yes. The White List is an important restriction. Not all interesting aircraft are eligible. Plenty are.

*Q. Which models/simulations of these sponsored commercial transport jets are legal for the 2014 RTWR?*

A. Only those models in the Whitelist (Appendix B) are allowed. We include a large number of transport jets here, but not every possible jet is available. In addition, we limit you to well-known modelers who, in our experience, are likely to get the flight dynamics close to correct. (Happily, with these popular commercial transports we find fewer "optimistic" flight models than for other categories of aircraft.)

Other considerations include the comparison of the simulated Mmo/Vne with the FAA Type Certification numbers, the actual performance of the aircraft, and the competitive balance in the full racing fleet.

Models that were originally designed as FS98/FS2002 or as "AI" aircraft are not suitable. (The David Hanvey model of the Hawker Sea Fury is a current exception.)

Any jets with a Mmo>0.92 or Vne/Vmo>400 will likely not be accepted. In the special class of twin jet regional transports (used in the Continental legs), no aircraft with a Mmo>0.84 or Vne/Vmo>350 will be accepted. There may be exceptions. (The relevant parameters are those found in the MSFS aircraft.cfg file: Vne/Vmo is "max\_indicated\_speed" and the Mmo is "max\_mach".) Further, some perfectly good and

realistic simulations may not be accepted simply because their performance does not maintain the competitive balance in this year's race fleet.

The Duenna text file records the aircraft's Mmo and Vne. During the race, authentications that show higher values than those marked in the White List will cause the flight to be ruled invalid and require that it must be re-flown. Additionally, the team will incur a major (30) minute punitive penalty. Note that if your aircraft does not have an entry for Mmo and Vne, then it is illegal. Further, take special care that when you install your aircraft, or any paints or conversions, you check that the flight dynamics are not altered. There exist some "repaints" that will actually change the flight parameters. These are illegal.

We realize that mistakes will happen during the long race. But for these relatively few but critical jet legs, pilots and teams are responsible for strictly following these unambiguous speed-limiting restrictions.

*Q. There are two Jet White Lists in Appendix B. This is confusing.*

A. To qualify, an aircraft model must appear on *both* White Lists. The aircraft type must appear on the "type" White List *and* the aircraft modeler must appear on the "modeler" White List. We thus end up with a restricted number of aircraft types that are modeled by a restricted set of modelers.

A detail. On the Modeler White List, some modelers qualify only particular aircraft. The meaning of this will be clear when you examine the options.

A note of courtesy here. We do NOT mean to imply that any modeler not listed in our White List is somehow inferior to those that are listed. We are working from common but imperfect knowledge. If you know of a superb modeler of jets who is not on the list, please let us know. We shall adjust accordingly – probably in the future. (For example, pilots have asked about the MilViz 727-200, the "Fly the Maddog" MD-80 and the Sky Simulations DC-9. They seem fine at first glance. A matter for the future.)

*Q. I understand that the sponsored jets are civilian commercial transports and that their military equivalents are not allowed. What about a normal civilian sponsored transport jet painted with a military livery? Say a DC-10 portrayed in the colors of a USAF KC-10?*

A. The spirit of the RTWR says "yes" but we shall have to say "no." We are worried that we will confuse the matter if we allow military paints. (It is easy to imagine someone who sees a military aircraft in the race might want to install a similar military aircraft—one which might not rely on the civilian flight model.) It will be safer if we keep things simple: civilian transport jets with civilian liveries in 2014.

## **5. Special Aircraft Requirements for the 2014 Race.**

*Q. Why an explicit White List?*

A. In response to participants' requests, we are limiting choices so that pilots can concentrate on flying rather than on scouring the libraries seeking an edge from some marginal flight model. The White List includes the race aircraft that have been popular over the years. We add a few more.

*Q. Aren't there some aircraft flown in previous years that are not on the list? Are these currently eligible aircraft sure to be eligible in the future?*

A. This list applies to the Special Rules of 2014 and is intended both to simplify pilots' aircraft searches and selections and to create some competitive balance among a larger number of interesting aircraft.

Please note that this continues as an "Interim White List" for 2014. The White List concept will surely be subject for further review in the coming year. There are several difficult issues to be resolved: we in the community all have work to do in the future.

*Q. The Sabre Flights are new this year. They are limited to a single aircraft, the Section F8 F-86 Sabre. What is going on here? I have a favorite F-86 and it is not the Section F8 version!*

A. This option allows teams to fly up to four of their thoroughbred legs in a F-86 Sabre. We limit usage to the Section F8 Sabre because it is a very high quality much-acclaimed simulation for FS9 that ports very well to FSX. It is freeware so that all pilots have access to it. Racing the aircraft over 750nm requires the pilot to make some decisions about trading range for speed. It should prove an entertaining and interesting ride.

The Sabre Flights of 2014 may serve as a harbinger of further transonic jet usage in the future. Much work needs to be done to realize that hope. This coming Summer would be a good time. Volunteers to work on the project would be much appreciated.

*Q. Where do I get the Section F8 F-86 Sabre?*

A. You can find a download link at <http://www.sectionf8.com/> . For the RTWR, we have pre-assembled packages for both FS9 and FSX. These are intended for private, not public, distribution. See your teammates for a link.

*Q. What about repaints of the Section F8 F-86 Sabre? Do I have to fly the defaults? How about repaints that mimic the FJ-3 Fury (the Navy/Marine version), can I fly those?*

A. You may fly any repaint that you wish – as long as the repaint does not alter the flight dynamics. Some of the FJ-3/FJ-4 repaints have the title "FJ-3" in their title. That is just fine. Is is not another aircraft but instead a Section F8 Sabre in another livery. (It might be a good idea to say that your SF8 Sabre with the "FJ-3" name is merely a repaint. Informing others will avoid controversy.) We aim to please our Navy and Marine pilots.

*Q. I have a friend who is trying to find a racing edge. (Not me, you understand.) Would it be possible to substitute more F-86 Sabres into the mix and pay a mere 30 minutes "maintenance" penalty for each?*

A. No. The "maintenance" penalty is designed to handle cases where a team accidentally overuses the thoroughbreds by miscounting. If you are having trouble counting to four... nevermind.

*Q. What about port-overs, from FS2004 to FSX? Are they eligible? Under what conditions?*

A. Straightforward port-overs from FS2004 to FSX are governed by the same rulings that apply to the original model. For example: porting the FS2004 A2A P-51H is legal, it is implicitly on the "White List," and it is treated as a thoroughbred.

But note well. You may not make "corrections" to the FS9 flight dynamics (in the airfile or the aircraft.cfg) to fit FSX. When you fly a FS2004-native aircraft in FSX you must fly it with exactly the same flight dynamics parameters that were modeled into the original FS2004 simulation. If necessary, read this last sentence again.

Further, you may not fly "port-overs/corrections/updates" by Mark Rooks or Bob Chicilo or any other author who often alters the flight dynamics. (These "port-overs/corrections/updates" have their proper place in our hobby. But they are not suitable for RTWR use.) Any alterations to the flight dynamics parameters will make the aircraft illegal and invalidate any legs completed in the aircraft (and earn a serious penalty if the illegal usage seems intentional).

The only exception, and this is a minor exception, is that you may alter the starter torque (normalized\_starter\_torque=xx) slightly upward to allow you to start the FS9 engines in FSX and idle friction (idle\_rpm\_friction\_scalar=xx) slightly downward to keep the engines running. But these changes should not affect the performance of the aircraft in any measurable way. (If it does, then the alteration is illegal.)

*Q. There are several Hornets on the list. And in different places with different restrictions. What is going on?*

A. We are happy to have two quality simulations of the DH.103 Hornet, the older AlphaSim payware Hornet for FS2004 and the newer Rob Richardson freeware Hornet for FSX. The AlphaSim version is now freeware.

The FS9 AlphaSim/Virtavia DH.103 Hornet is the now familiar aircraft, a favorite during many previous races. The older simulation includes several versions of the Hornet under the same flight dynamics. All visual cues aside, this is a single model for RTWR purposes. It falls under the thoroughbred category.

In 2010, Rob Richardson produced an excellent FSX-native DH.103 Hornet. For our race, it will require special attention—team members should be sure that their teammates are careful about this. First, the original flight dynamics are not suitable for the RTWR. Happily, colleagues from SOH (Larry, Tom, and Dave—we use the "SOH Group" name designation) produced a flight model that is suitable. To be eligible, the Richardson DH.103 Hornet must use the SOH flight model. Call it the RR-SOH Hornet. [http://www.sim-outhouse.com/sohforums/local\\_links.php?action=jump&catid=4&id=3564](http://www.sim-outhouse.com/sohforums/local_links.php?action=jump&catid=4&id=3564)

Second, the specific aircraft model matters. There is a distinction between the (RAF) Hornet F.1 and the (FAA) Sea Hornet F.20 and NF.21, on the one hand, and the (RAF) Hornet F.3 on the other. The RAF Hornet F.3 does not have external tanks modeled. Although it is technically possible to do so, when flying the Rob Richardson Hornet F.3, pilots may not use the external tank capacity. (Note that the Duenna records the fuel on takeoff and landing. Usage of the external tanks for the Hornet F.3 will invalidate any completed leg.) In practical RTWR terms, this means that pilots should probably choose the F.1 Hornet and not the F.3 Hornet. (Please check to be sure about not only the type but also the model of Hornet that you are flying.)

We make this extra effort to allow teams to use this splendid freeware FSX-native aircraft that is rather good for RTWR flying. The DH.103 Hornet F.1 is very competitive in the "normal racers" category. It represents a much needed freeware addition to the native-FSX racing stable.

We ask teams to take special care to comply with these restrictions. In particular, pilots flying a Hornet should take the time to announce that they are flying either the "Alpha Hornet" or the "RR-SOH Hornet F.1" or the "RR-SOH Sea Hornet F.20" or the "RR-SOH Hornet F.3." If there is any ambiguity, we will assume that the pilot is flying the "Alpha Hornet" and count the leg against the "thoroughbred" limit. (Neither the Executive Committee nor the community of fellow competitors have time to investigate every usage of the aircraft. It is the responsibility of the pilot, and team, to make the proper announcement while the pilot holds the baton.) If you have a teammate who is casual about these sorts of things, please work to be sure that he is in compliance with the rules.

Finally, and this is confusing, the Rob Richardson Hornet F.1 has a default paint that depicts the Prototype Sea Hornet F.20. This appropriately uses the F.1 flight dynamics—the prototype did not have the folding wings and de-rated engines of the active duty F.20. You may legally fly this "aircraft" as an F.1 aircraft because it represents nothing more than an alternative texture.

If all this extra effort is not worth your while, please do not fly the Rob Richardson FSX Hornet.

*Q. The David Hanvey-Peter Forster Sea Fury (v2.3) is eligible. How do I use the version with external tanks?*



A. Please consult with your veteran teammates. You will need to make two edits to your aircraft.cfg file to enable the external tanks and point to the correct airfile. Normally such edits are prohibited—so please work with your knowledgeable teammates to understand what is legal and what is not.

Note that this aircraft will not port to FSX. (Its model was designed for FS2002. It is legal for race usage, but not a practicable choice for FSX pilots.)

*Q. Why the limitation on the fast aircraft, the Thoroughbreds?*

A. Again, we wish to constrain but not eliminate the role of these very fast aircraft in the race. (To paraphrase a long-honored member of the community, they have served very well over the years and have by now paid off any investments.) Teams will fly about 30 normal legs in the race, of which nearly a third may be in thoroughbreds. These 10 fast thoroughbred legs constitute valuable strategic resources, to be used to advantage. The remaining 20 or so legs will be flown in normal racing aircraft. (Note well: you have 10 legs total of thoroughbred aircraft—not 10 legs each.)

Veteran racers will appreciate the push toward variety. With 10 thoroughbred legs, including wingmen, we have 20 slots for their usage. So they are not banned. But the active participant will surely want to develop alternative "rides" among the many competitive aircraft in what is now the top tier of "normal racing aircraft." The use of thoroughbreds may be further reduced in future years.

*Q. Do all legs flown count for the thoroughbred frequency of use restriction?*

A. Yes. For example, if you could use a thoroughbred for a Wild Card, that usage would count against the limit.

*Q. The thoroughbred aircraft collection is leg-limited to 10baton legs. How about an aborted flight, does that count? A wingman flight?*

A. The key here is "baton leg" – which is defined by a takeoff, en route flight, and a successful landing while delivering the baton. The wingman flight does not matter here unless the wingman flight is substituted for the original lead pilot's flight and thus becomes an official "baton leg."

*Q. What is an aircraft "type"? Are the Spitfire Ia and Spitfire XIV different "aircraft types"?*

A. An aircraft "type" is determined by its characteristic airframe and propulsion system. A "model" or a "variant" is a variation of a "type", perhaps with an extended fuselage, different canopy, maybe refined wings, an improved powerplant, and so forth. (The propulsion "system" means one of the following: piston, turboprop, or jet. Changes within a category of piston engines, turboprop engines, or jet engines do not constitute a change in the "propulsion system".)

The Spitfire Ia and XIV are different "models" of the same aircraft "type". The root idea here is to cluster together aircraft whose main airframe remained similar over time even if the design and motor changed considerably. Further, one aircraft adapted for different roles counts as one "type." The Beechcraft/Raytheon King Air C90, B200, B300 and B350 are of the same type. Ditto for the Douglas A-26 and B-26K and Marksman; the Hawker Typhoon and Tempest; and the Focke-Wulf Fw-190A-2, Fw-190D-9 and Ta-152H. Of the same family but of a different "types" would be the Grumman F4F, F6F and F8F; or the de Havilland Mosquito and Hornet; or the Cessna 421 and 441 (different propulsion). As a rule of thumb, if it seems plausible that two aircraft are actually of the same type, then they are likely to be judged so. If you are in doubt, ask. At the end of the day, the Executive Committee will make the final judgment.

The word "type" is used variously in aviation. For our rules, we use "type" to mean a broad category that allows us to measure aircraft diversity.

A special exception that reflects the special speed restrictions: the thoroughbreds are of a different "type" than their cousins that would otherwise be of the same type. Think P-82B, P-51H and P-47M.

*Q. The FSX Acceleration P-51 Racer is eligible this year. Are other "racers" also eligible?*

A. The FSX P-51 Racer is a special exception that incorporates a unique form of variety into this year's race. The normal rules apply otherwise: no other special racers are allowed. (On race-eligible aircraft, racing "liveries" or "repaints" are fine as long as the flight dynamics are race-eligible.)

*Q. Are all repaints of eligible normal aircraft automatically legal?*

A. As far as we can tell, yes. Sometimes a repainter will provide a visual impression of a slightly different model. This is not a problem as long as the flight dynamics are correct. The aforementioned DH.103 Hornet has repaints of the prototypes, of which no 10 were in regular service. Flying those "paints" is fine because they merely decorate the legal model. Similarly, John Terrell has a nice "Gulfhawk" repaint of the Alpha Bleu Ciel Bearcat. It is fine, despite the fact that the "Gulfhawk" Bearcat was technically a different aircraft of which 10 were not in service. CR-1 use repaints to depict slightly different Do-335 models. They are legal. Our intent of allowing repaints is that you can enjoy your favorite visual representation while flying your perfectly legal race eligible aircraft. Please do not take advantage of this ruling by sneaking in a different flight model under the claim of flying a mere repaint.

The only exception is that for the sponsored civilian transport jets you are limited to civilian liveries. (No military liveries for the civilian jets. This is just a matter of race rules' practicalities.)

*Q. The White List indicates that otherwise-eligible realistically modeled aircraft with a maximum speed of less than 350kts are legal. Is that at level flight?*

A. Yes. The speed limit here is 350kts true airspeed (350 KTAS) measured while in level flight at critical altitude (under MSFS "Clear Weather" which approximates ISA). For turboprops, for which there is no critical altitude, the relevant altitude is that which maximizes true airspeed. This provision means to allow usage of a large number of slower aircraft (including four-engined transports) that have their place in the race but are not competitive as "racers".

## 6. Normal Legs.

*Note the discussion about aircraft identification is placed in the Special Rules and in the General Rules. For the moment, take this dual message as a signal that you want to identify clearly your aircraft.*

*Q. Why do we have to announce the aircraft type and model and modeler? In years past this has been an unobserved formality.*

A. This year we have two special restrictions on aircraft. First, the aircraft must be on the "White List" of eligible aircraft. You must fly an aircraft that is on this list—and announce that you are doing so. Second, we have restrictions on the usage of some very fast aircraft (the thoroughbreds). When you announce your aircraft type and model and modeler, you are also announcing the status of that aircraft as well. Finally, we have a very specific distinction involving different simulations of the DH.103 Hornet—which require knowing the type, model, and modeler. The title of the aircraft, as retrieved by the Duenna, does not identify the actual aircraft. Thus, you are required to announce the type, model, and modeler.

For example, "RedGreen has the baton flying the WBS P-51D," has a different meaning than "Moses03 is flying the A2A P-51H." The latter counts against the thoroughbred leg limit. Obviously, "flying the Mustang" will not do the job. Other examples include: "salt\_air has the baton flying the FS2004 default DC-3," or "apollosmith is flying the dcc P-38M," or "buzzbee flying the FlightOne B727-200." Please make

the announcement in good faith—typing the extra word or two is not much extra effort. A repeated failure to identify the aircraft will quickly lead to penalties.

*Q. What if I forget. Can I add that information later? Is that a documentation penalty?*

A. Good form suggests identifying type, model, and modeler on takeoff. If you forget, you may post that information at any time within an hour after you release the baton. (Your teammates may help out by posting the information while you are flying.) If you forget entirely, you are subject to a documentation penalty. If you need constant reminding to identify your aircraft, you may find yourself penalized for an inability to provide timely documentation—all this at the discretion of the Racing Committee. It is your responsibility as race pilot to inform the race monitors about your aircraft. (They do not have the time to conduct an investigation of every leg.)

*Q. How good does the aircraft "declaration" need to be?*

A. Good enough. From your declaration, an observer must be able to tell immediately that you are flying a legal aircraft. That said, the purpose here is not to create a "gotcha" opportunity. A good faith effort will in most cases suffice as long as you are willing to work with the race monitors to get it right. If you are unwilling to provide the information, then expect a penalty. The purpose is to make everything clear to all concerned.

## **7. Wildcards.**

*Q. The wildcards impose weight restrictions on the aircraft used. How does that work?*

A. The aircraft must have a takeoff weight of 30,000 pounds. (You can check your takeoff weight in the aircraft/fuel menu in MSFS. The takeoff weight includes the empty weight plus fuel and payload.) You may not overload the aircraft. If you have any questions, ask. (Due to a modeling mistake, the FSND Citation X for FS9 is not heavy enough. We allow it as an exception.)

*Q. The wildcard legs this year are restricted by an overall total limit of 5,000nm. The maximum leg is 1,650nm and no other leg may exceed 1,200nm. How are these distances calculated?*

A. Distance is officially measured by the MSFS flight planning facility in your simulator. In most cases, any good flight planner will give a good approximation of the distance in your legs. For the total, you merely add up the legs. If a leg is very close to 1,650nm or 1,200nm or if the total is very close to 5,000nm, then you must use the official MSFS flight planning facility to do the calculations. (Getting a precise reading can be time consuming.)

*Q. How do I use the MSFS Flight Planner as a precise Measurement Tool?*

A. Note that the MSFS flight planner will give different distances between airports – distances that vary by the placement of the aircraft at the airport and the current runway. When the differences matter, then follow this procedure. Using the MSFS Flight Planner, plot a flight plan that includes the relevant airports as intermediate points. Then display and/or print the Navlog – which will show the distance between the airports. For example, you want the distance between airports A and B. Generate an MSFS flightplan from X-A-B-Z, where X and Z are the arbitrary departure and destination airports. The navigation log (Navlog) will give the intermediate waypoint distances, including that between airports A and B. The distance is given in tenths of a nautical mile. Retain the precision in tenths. We do not round down, we do not round up.

For example, the limits of a single wildcard leg, or the total of the wildcard legs, are set as a mathematical expression. A "longest leg" of 1,650.0 is fine but 1,650.1 is over the limit. A total of 5,000.0 is fine but 5,000.1 is too much. No rounding.

*Q. Is there any limit on how we combine the wildcard legs, as long as the total is less than 5,000nm?*

A. Not really. You may spread the 5,000nm over your five legs in any way that suits your strategy – keeping in mind the 1,650nm and 1,200nm leg maximums. You could do five 1,000nm legs. Or you could do one 1,600nm and four 850nm legs; or any other combination. You need not fly five legs nor fly a total of 5,000nm. These are strategic options.

*Q. One wildcard leg may be flown in the B-2 Spirit by AlphaSim. Is this required? Is the AlphaSim the only model allowed?*

A. The Northrop Grumman B-2 Spirit is an option and not a requirement. That said, flying the B-2 will add considerable speed over a long wildcard leg and reduce the overall race duration. It is also a very nifty change-of-pace for 2014. We restrict usage to the (now freeware) AlphaSim B-2 Spirit to insure that the teams have identical choices for this potentially critical leg. Note that the "agreement with the USAF" requires that a "B-2 leg" departs and lands on a paved runway of at least 6,000 feet in length. (Pavement means concrete or asphalt, not gravel. Take care of your ship. These are billion dollar aircraft!) You may wish to practice flying the B-2 before taking the baton...

## 8. Special Continental Jet Legs.

*Q. Why two-engined regional jets?*

A. This year features these ubiquitous workhorses which do not normally get much attention in the RTWR. (This is just a special "flavor" for the 2014 event.) Thus, 2014 is the year to "shine" for our proud pilots of the PMDG NGX or the Aerosoft A320X. If you are a POSKY or Project Airbus or a (new) TDS driver, then great. Old timers will appreciate the chance to fly the BAC 1-11 or Caravelle. All pilots have easy access to the default B737-400 (FS9) and B737-800 and A321 (FSX).

*Q. The Continental Jet Leg must be less than 1,000nm. What if I fly 999.9nm (as carefully measured by the tedious official way)? What if it is 1,000.0?*

A. The wording is precise in the mathematical sense of "less than". That is to say: 999.9 is less than 1,000 – we do not round up. And of course, 1,000 is *not* less than 1,000...by definition. We do not round down, we do not round up. If you are running within a couple of miles of the limit, please be *very* careful to measure, and re-measure, your distances. You are responsible for getting the calibration right. See the FAQ section 7 above.

*Q. Does the "continental landmass" requirement mean that I have to fly all the special jet legs on a single continent?*

A. No. Each instance of the legs needs to begin and end on the same continent. The first may begin and end in Europe, the second in Asia, the third in North America and the fourth in South America. However, if you wish, you may fly two or more on a single continent.

Please be sure that your departure and arrival airports are on the *landmass* of the continent. (Offshore islands, including Singapore, Hong Kong and Japan, are not on the *landmass*.)

*Q. Why a 3 hour time limit?*

A. That will give a pilot plenty of time to execute a leg of nearly 1,000nm in a relatively slow transport jet. Racing pilots will probably not need that much time.

*Q. Is there any strategic advantage of the continental jet legs?*

A. They are fast, of course. But in addition to speed, these legs have a special strategic value of allowing longer legs than normal. This feature may be especially helpful in traversing sparsely populated regions where there are only unlighted airports or no airports at all.

## 9. Formation Flights

*Q. Another event? Lots of extra stuff to worry about?*

A. These are "normal baton legs" flown more-or-less as any normal leg. The difference is that the lead pilot and the wingman coordinate their takeoffs and landings so that they are in close proximity. If the lead and wing are both ready to go, then the formation flight will take little longer than a normal leg. Not much extra here other than an increased attention to the lead-wingman relationship.

*Q. Why has the maximum bonus for each Formation Flight been reduced from 30 minutes to 15 minutes?*

A. This change reduces the opportunity cost of failing to score at all on a fifth Formation Flight. (Imagine two computer crashes.) The opportunity cost of losing 15 minutes is less punitive than losing 30 minutes. Note that the spread of Formation Flights, from sloppy to precise, is almost always within a couple of minutes. Thus, in effect, a reasonably serious attempt at a Formation Flight has at stake only a minute or two difference from the mark that other teams are likely to accomplish.

Note that the race committee will award a special prize to the two pilots who most nearly perfect a Formation Flight. (The standard is a spread of zero seconds!)

(This move to a 15 minute rather than 30 minute bonus is part of an overall approach that reduces the absolute size of penalties and rewards – to reduce the impact of any single event on the ultimate race outcome.)

*Q. If the lead pilot crashes, can the wingman take the baton and complete the leg? If the wingman crashes, can another pilot become wing?*

A. If the lead pilot enacts the Wingman Transfer rule, the Formation Flight is automatically terminated and the leg becomes a normal leg. The normal rules and penalties apply. If the wingman crashes, then again the lead would terminate the Formation Flight and follow the normal leg rules.

*Q. What if I do not crash but instead have a computer failure? How about a technical error? What if I forget to start the Duenna?*

A. Sorry, a pilot error crash and a computer failure are equivalent here. Equally, a leg that is ruled invalid due to a consequential setup error will also forfeit the FF bonus. The same applies for a failure to use the Duenna...or a Duenna crash. Both pilots must satisfactorily complete and document their legs to earn a bonus. (If you cannot use the Duenna, do not take on the optional Formation Flight.)

*Q. Is there a penalty for failure to complete a Formation Flight?*

A. There is no explicit penalty. However, the team will forfeit one of its 6 chances at the Formation Flight bonus of 15 minutes.

*Q. This could be awful. If the wingman crashes, then there is an opportunity cost of 15 minutes.*

A. Yes, you are correct. The Formation Flight encompasses some risk and should be planned accordingly. However, your team does count only the top five of six attempts...so you can tolerate one bad outcome without it's being a disaster.

*Q. Sometimes the weather will make things very difficult. Can the team cancel the Formation Flight and try another time?*

A. Once declared, the Formation Flight is active and subject to failure. If things look dicey before the leg, you might choose to postpone the FF opportunity until a later time.

*Q. In a Formation Flight, the baton may not advance on the next leg until both pilots have posted their landings. Do both pilots have to post their authentications before the baton advances?*

A. No. The authentications and claim of bonus time may follow in the usual timely manner. You are right, however, that the baton may not be advanced until *both* the lead and the wingman have landed and posted that they are down safely. If the baton is passed prematurely, the Formation Flight fails. For this reason, a formation flight might take a few minutes longer than a normal baton leg.

*Q. I ain't no math wiz. How do I figger out this high falootin' formula?*

A. This is easy. FF Bonus = 15 - |D1 - D2| where D1 and D2 are the Duenna-indicated durations of the first and second pilots. You take the absolute value of the difference; you round fractional minutes up to whole minutes. Note that you earn a full maximum bonus when you and your wingman are within a minute of each other. (For example, say you stop 59 seconds before your wingman. Then FF Bonus = 15:00 - 0:59 = 14:01 which rounds up to 15:00.)

*Q. Do we use the Duenna "Flight Time" or "Baton Time?"*

A. Flight Time.

*Q. What if I forget to use the Duenna's "Auto-arm" feature?*

A. You will have to certify the takeoff and landing times, and thus the exact duration of the flight. This information lies in the Duenna's logfile. You should declare your mistake and show all the information in your thread. (You will want to show both your logfile and your partner's logfile. You may ask your teammates for help here.) As long as the Duenna record is complete, and there are no irregularities, all should be well. Repeated failure to use the "Auto-arm" feature will attract a skeptical eye and possible committee action, including voiding the bonus.

*Q. Can the pilots cheat to create a false impression of equal flight durations?*

A. It is possible to compare the flight durations directly by examining the detailed Duenna flight logs. Those logs show the exact time that each flight took off and landed. Any instance of a team's artificially manipulating the results—such as delaying the Duenna "landing" report or "taxiing" to keep the Duenna alive—will forfeit the Formation Flight *and incur a severe deterrence penalty*. Such actions will be considered an intentional violation of the rules and a breach of the mutual trust that makes the race so enjoyable. (The lead pilot may legitimately delay his landing by circling over the destination airfield until his wing arrives. He may not land and keep the Duenna running until the wing has landed in order to claim a simultaneous arrival.)

## **10. Special Aircraft Legs and Team Flights.**

*Q. These are not extra legs in jets and so forth? Or are they?*

A. No. A team merely augments a leg that it might otherwise fly – and designates it a "Team Flight." Thus, a team must have available a Sabre Flight or a Continental Jet Leg to transform it into a bonus earning team flight. If the quota of those legs has already been used up, then the corresponding team flight option has been foregone.

*Q. Do teams have to fly every one of these special aircraft legs?*

A. No. These are optional ways to transform a leg (a normal leg, a Sabre Flight, or a Continental Jet Leg) into a team flight.

For example, your team might fly the *Cats on the Third Wire* on the very first leg Saturday and the *Cold Warriors* on Sunday night. On the first team flight the team gets six participating pilots and on the second

gets two participating pilots. It thus obtains the a total of 2 hours bonus (6 pilots \* 15 minutes @pilot plus 2 pilots \* 15 minutes @pilot). You are finished with this feature and can focus on the rest of the race.

Alternatively, you might fly *Cats on the Third Wire* on Saturday evening with 4 participating pilots and then *Cold Warriors* on Sunday night with 3 participating pilots. The team now has earned 1:45 bonus time (7\*15 minutes). The team might then augment a Continental Jet Leg on Monday by having 2 participating pilots fly a regional jet along with the baton to complete the *Doing the Continental* leg. You now have earned 2:00 bonus time with a little to spare. It would be more efficient to earn the full bonus time in two legs, but your team has three opportunities available if needed. (You may eschew the extra chances if you judge the extra bonus time not worth the effort.)

*Q. Why does the team need a total of three pilots (a baton carrier, a wingman, and at least one participating pilot) to designate the event a Team Flight? After all, the team might need only one more bonus to complete the maximum and the wingman should count as a "participating pilot?" THIS SOUNDS NEW?*

A. This is a new requirement to mark the event as a "team" event rather than the normal baton-pilot-plus-wingman combination. It also provides a bit of security in case the wingman is needed to carry the baton.

You are right. This is a new provision for 2014.

#### Details on the Specific Legs.

*Q. The Cats on the Third Wire requires Naval or Marine aviation aircraft. Say more.*

A. The baton-carrier and wingman are limited to the Grumman "Cats". However, as a participating pilot you may fly any race eligible propeller-driven naval aircraft, including thoroughbreds. Aircraft that have direct navy or marine equivalents count here too. (Most relevant, you can fly any DH.103 Hornet – it does not have to be a Sea Hornet or in Navy livery. Might be nice, though, to use a Sea Hornet or a Fleet Air Arm livery if you have one available. The AlphaSim Hornet uses the same FDE for the RAF fighter and the FAA naval night fighter so you might use that one if you can. But the standard RAF version will be fine. Same for the RR-SOH Hornet: you can fly the Sea Hornet, Or you may fly the "Sea Hornet prototype" of the DH.103 F.1. Or simply fly an RAF version of the DH.103 F.1.) Additionally, you may fly other eligible naval aircraft if you like. We want to make this easy, not a "gotcha" exercise. (Please do not pick a "navy paint" for an aircraft that was not in common navy usage. If you discover that the Kriegsmarine had use of a Do335, we are not listening.) Note that the speed of the baton depends on the speed of the Gumman "Cat" an not on the participating pilots aircraft choices.

*Q. We have on our White List versions of the Grumman F7F and F8F. But nothing for the F4F or F6F. Can we fly these aircraft?*

A. For this one Team Flight leg, also eligible are the Grumman F4F by FDG2 (FS2004, CFS2 versions are not eligible), and the Grumman F6F by CWDT (FS2004 payware) or by Vertigo Studios (FSX payware). You may also fly the Seafire by Aeroplane Heaven (originally payware, now freeware). None of these aircraft are competitive in terms of speed over distance.

*Q. The Cold Warriors leg requires the Section F8 F-86 Sabre. Where do I get that?*

A. You can find a download link at <http://www.sectionf8.com/> . For the RTWR, we have pre-assembled packages for both FS9 and FSX. These are intended for private, not public, distribution. See your teammates for a link.

*Q. The Cold Warriors allows a number of jets. Which is the fastest? Why not simply fly faster planes?*

A. The baton holder (and implicitly the wingman) must fly the Section F8 F-86E/F Sabre. The participating pilots may fly other faster aircraft, but doing so will not affect the speed of the baton carrier. Further-

more, participating pilots need to finish within 20 minutes before or after the baton pilot. So there is no advantage to getting the "fastest" flight model and speeding ahead.

The eligible aircraft include: North American F-86 Sabre (AlphaSim/Virtavia, MilViz, Kirk Olsson) , Douglas F3D Skyknight (AlphaSim), Grumman F9F Panther (Aeroplane Heaven [optionally, modified by "Old Salt"], Vertigo), Lockheed P-80 Shooting Star (AlphaSim, Jens Kristiansen), Lockheed T-33 (Tim Conrad), Northrop F-89 Scorpion (AlphaSim), Republic F-84 Thunderjet (AlphaSim, Sim Skunk Works), de Havilland DH.100 Vampire (AlphaSim, Rob Richardson), Gloster Meteor (AlphaSim, Rick Piper, Rob Richardson), Hawker Hunter (David Garwood, AlphaSim/Virtavia), Sud Aviation Vautour (Barney Bigard, Philippe Penot), Dassault Mystère IVA (André Chancel), SAAB J29B[not J29F] (Tim Conrad), and MiG 15 (Michel Migaud & ABC team).

*Q. The baton holder in Doing the Continental is limited to a specific set of twin-engined regional jets. Can the participating pilots pick another jet from the broader White Lists?*

A. All pilots in this team flight must qualify for the Continental Jet Leg. So you must also fly a twin-engined regional jet from the list – though you need not fly the exact same aircraft as the baton pilot.

#### More General Matters concerning Team Flights.

*Q. Lots of rules here. What is going on?*

A. These are simple affairs in practice. A baton pilot takes a Grumman Bearcat and flies 600nm. Other members of the team take aircraft in the same category (maybe a Grumman Tigercat or a Hawker Sea Fury) and fly alongside. Hence, a Team Flight.

*Q. If I am flying the "Special Aircraft Legs and Team Flights" as a Special Aircraft Leg but not a Team Flight, am I limited by the time schedule for Team Flights?*

A. No. If you are flying one of these flights as a baton holder but without participating pilots (or scoring your wingman as a participating pilot), you may fly that flight under the normal leg racing rules. If you score any participating pilot bonus, you must observe the Team Flight restrictions. (This is a "small detail" question. The team flight restrictions involved here have to do with minimum distances. If you are flying a leg without declaring a "Team Flight" you do not have to follow the specific team flight restrictions.)

*Q. Bonus time is earned by participating pilots. What about the baton holder? What about the wingman?*

A. The baton holder earns no team flight bonus. The wingman may earn a bonus as long as he does not carry the baton during the event. The wingman is always a participating pilot as long as he does not have the baton. (Note that the wingman will want to satisfy the baton pilot's aircraft restrictions just in case he has to take the baton.)

*Q. How many pilots should the team organize for each event?*

A. Probably more than the minimum number necessary. Six extra pilots earn the event's maximum bonus. But the team may, and probably should, mobilize more pilots in case one or more encounter difficulties. In order to declare a Team Flight, the team must have a minimum of three pilots (baton, wing, and one more participating pilot).

*Q. How many bonus hours can we earn? Do we fly one or two or more team flights? This is confusing.*

A. In each event, your team can earn a maximum of 1½ bonus hours. (That is earned by six participating pilots flying authenticated legs.) Your team may earn up to a total of 2 hours for the events that you organize. That is to say, even if you fly three fully subscribed events, your overall maximum remains



2 hours. (Note that in 2014 the magnitude of the bonus has been reduced from the old standard – to reduce the opportunity cost for short-handed teams who are unable to fill all slots.)

You can earn the maximum bonus hours with one event with six extra pilots and a second event with another two extra pilots. (or any combination over all the team flights that produces eight extra pilots). The aim is to allow teams to maximize their Team Flight bonus even if they are not able to maximize all team flights. The slack in the system is intentional. The goal of the Team Flight is to have some fun in a social setting.

*Q. The requirement that the participating pilots land within 20 minutes before or after the baton carrier is new. What is going on here?*

A. The slower participating pilots have some pressure to keep up with the lead pilot. The fastest have a reason to stick close to the lead pilot. All in all, some teamwork is required here. The 20 minute time window is a weak version of the "Formation Flight" exercise – applied to the larger team framework. (In this case, we allow a landed lead pilot to delay "posting his landing" to wait until his teammates arrive. Such a tactic is definitely NOT allowed in the Formation Flights. Of course, delaying a landing announcement means delaying the baton transfer as well.)

*Q. The timing rule says that participating pilots must land and post no more than 20/30 minutes after the lead pilot. What about authentication? That can sometimes take a long time?*

A. As long as you land and make the appropriate arrival post, you are within the 20/30 minute window. But you must authenticate properly within an hour of your posting. Even if six pilots have already landed, you might want to land, post, and authenticate just in case one of those pilots has a bad Duenna. (Participating pilots may land before the baton—though they may not take off before the lead pilot claims the baton.)

Note that the authentication for each participating pilot's flight need include only the Duenna's textfile. (The textfile is sufficient and takes less bandwidth than the map. Everyone is flying the same route.)

The time window for the Continental Jet Team Flight is 30 minutes rather than 20 minutes. This change reflects the greater distances and variability inherent in a jet leg.

*Q. The baton holder may release the baton to the next leg's pilot who may take off. My landing as a participating pilot and my authenticating that flight doesn't affect the progress of the baton does it?*

A. Right. Your role as participating pilot does not affect the progress of the baton.

*Q. What happens if lightning strikes and both lead and wingman crash?*

A. No problem. The current baton holder may restart the leg or abort the leg as per the normal rules. If the leg is eventually completed (by someone with the baton – lead or wing) to the same destination in an eligible aircraft, then all the participating pilots' authenticated legs will count toward the bonus. This is true even if those legs were completed before the successful pilot took off. If one of the scoring pilots subsequently carries the baton (in relief of the initial baton pilot), his scoring leg is voided. The team may substitute another valid leg in its place. (Note that the baton carrier aircraft is sometimes more circumscribed than the participating pilots' aircraft.) The participating pilots' 20/30 minute landing window restriction, before and after the baton pilot's landing, is waived in the case of both the pilot and wingman's crashing.

*Q. So can any participating pilot who completed the flight "carry the baton" retroactively for the team flight if both the lead and wingman crash?*

A. No. The participating pilot would have to abandon his successful bonus leg, and restart from the origin airport and complete the leg as baton pilot in an appropriate aircraft.

*Q. Why the Team Flight summary? Who posts this and when?*

A. The race needs real time scoring: the summary will allow everyone to know each team's standing. The baton pilot (or any substitute) posts the summary indicating the total bonus hours earned during this event—taking care to check the authentications. Then he should provide the total cumulative bonus hours earned in all the Team Flights that have been completed. Finally he should enter the bonus into the official Bonus Bank.

*Q. How do we handle the Duenna's inquiry about Baton Holder or Wingman?*

A. The Baton Holder (Lead Pilot) and Wingman check the box appropriately. The remaining "participating pilots" do use the Duenna tracking facility but do *not* check the "Baton holder" box. They should post their authentications on the forum.

## **11. Pilot Availability Emergency (PAE).**

*Q. Why does the (only) pilot need to wait 30 minutes before taking the baton for the second consecutive leg? Why not just take a 30 minute penalty and takeoff?*

A. We do not know if there is a second pilot who will be able to take the baton – one who might arrive in a short while. The 30 minute wait assures that a true emergency exists.

*Q. Why only once?*

A. This provision is not meant to be a strategic option used routinely. One of the very core features of the race is the team framework with short legs and frequent baton handoffs. Under the normal rules, the team would have to wait indefinitely until a second pilot became available. This change allows for one-time emergency relief. If your team uses the emergency provision, you should be on your toes for the rest of the race.

## **12. New Pilots.**

*Q. If I'm a new pilot and take the baton, what happens if I crash or my computer dies?*

A. You simply execute a "wingman transfer" to move the baton to your wingman. Normally, this move would cost the team 30 minutes. But, as a new pilot, you get a "mulligan" so that the transfer is free. (You can do this only once.) Simply declare "rookie mulligan" and all will be well.

*Q. Who is a new pilot?*

A. If this is your first year in the RTWR, you are a new pilot. If you have flown before but are returning after an absence (3 years), then you qualify as a "new" pilot. If your case is ambiguous, please declare your "new pilot" status before you fly your first leg.

*Q. What is the intent here? Can this feature be used strategically by the teams?*

A. The goal here is to give new pilots a little margin of error during their first year. The RTWR can be a demanding event. Any pilot, event grizzled old veterans, will be nervous on taking the baton. We hope to make the first year pilots' experience a little less worrisome. (Teams will likely pair a rookie pilot with a veteran wingman.)

We expect that teams will keep this goal in mind when they give new pilots an opportunity to fly for the first time. Attempts to take advantage of this provision would not be in the spirit of the race.

### 13. Weather.

*Q. Do we have to use MSFS default weather? I love my Active Sky/REX weather program.*

A. Yes. In 2014 we standardize on a single weather engine. We shall all use the default Jeppesen-supplied weather. Each of the different weather programs has many splendid features. But for racing purposes, it is important that all participants compete in identically sourced weather conditions. This is a matter of competitive balance. (You may use your Active Sky/REX cloud and sky textures.)

Veterans will understand that the fact that everyone uses the same weather engine does not guarantee identical weather. However, it is important for the competition that pilots and teams give up the ability to choose their weather by choosing their weather engine.

*Q. What happens if the MSFS weather engine breaks down?*

A. Two things can happen. First, you may have a temporary glitch in your own internet connection. Sometimes this can trigger an error message that MSFS cannot generate the weather. You should simply finish your leg while handling the annoying error messages. (You might want to cut the leg short or abort if you find the problem bothersome.)

Alternatively, the entire system may fail: Jeppesen has occasionally gone down. Check with your teammates to see if they are all experiencing a failure. Look for an immediate reaction from the Executive Committee. In all likelihood, the entire race will be asked to switch to one of the default weather schemes: Fair Weather. (Not Clear Weather.) When Jeppesen comes back up, teams will quickly switch back to the standard race settings: Real-world weather (updated every 15 minutes).

### 14. Bonus Bank

*Q. Besides team flights and formation flights, what other bonus opportunities exist?*

A. In 2014, none. We leave the language to remind us of this provision in future years.

*Q. Who does the accounting work here? The pilot will be busy after landing and may forget to make all the entries.*

A. The book keeping is the team's responsibility. Teams may assign duties among their members to make sure everything is in good order. For example, teams may want to appoint a "Bonus Banker" to take responsibility here. Or they may form a "Banking Committee." The intent is for everyone to keep current public records so that everyone else knows where we all stand. You can see why this is so important.

*Q. What information do I have to enter into the Bonus Bank?*

A. Provide the team name, the nature of the bonus/penalty, the minutes earned or penalized, and the details. For a team flight, provide the name of the team flight ("Cats" or "Continental"), the location, and the number of successful participating pilots. For a Formation Flight, provide the destination airfield and the bonus score.

*Q. What happens if we make an honest mistake in our accounting? After all, we are dumb pilots.*

A. There is no penalty. If you make a good faith effort in posting, then you may make corrections without a problem. It is vital that you keep your accounts current – hence the one hour rule on posting time. (If you miss the timing once, you can appeal to the Committee and expect leniency. If you miss your posting time more often, you might expect to pay a price.) Normally, once a record has stood for 24 hours it will not be subject to revisions for any reason. (That is, we do not anticipate reexamining the books from previous days. We do not want to change the race standings upon discovering an ancient accounting error. Check your work.)

*Q. How do we make corrections if we enter the wrong numbers?*

A. You go into your team page and hit the "X" marker. That action will cause the entry to turn "purple" to mark a change. While the original entry will remain visible, the bonus/penalty numbers will be eliminated from the accounting. You may then make the correct entry and all will be good.

This system allows everyone to see the error and correction. The transparency reduces the chances of really fouling things up.

*Q. The Bonus Bank is open to all. Why don't I just enter a bunch of withdrawals in the other teams' accounts? No one will ever know that I am responsible.*

A. Are you angling for a career in finance? While nothing is proof against a determined effort, please note that we now have a password protection system to remind you of your better self. :-)

## **16. Communications.**

*Q. Why have a separate NOTAMS Forum and a NOTAMS section on the website?*

A. The NOTAMS Forum is intended for a quick notification. The Duty Officer or Race Master or Appeals Board member can immediately post decisions and warnings and so forth. It may take a few hours for the quick notifications to get put into clear formal language and then posted on the NOTAMS page on the website. This system mixes the need for speedy notification with the need to get the language and format right in the more permanent record.

*Q. The Duty Officer forum is the main way to contact the Duty Officer. That means that anything that I say will become visible to all. How can I complain about the other teams if they know what I am saying?*

A. You obviously want to be thoughtful about how your words will be perceived. "Say, Team xx's leg seems a bit fast. I don't understand," is much better than, "That Team xx is full of cheaters. Look at what they're trying to get away with." We are all grownups here. Just be careful to reread what you write to be sure that everyone will understand the intent behind your words.

*Q. I want to communicate privately with the Duty Officer. What can I do?*

A. Most routine matters can be handled by the Duty Office in open public discourse. That is the right way to conduct professional discussions. If you have something that is very sensitive, then you want to ask the Duty Officer to escalate. He may ask that you establish an "off site" email contact, or he may choose to raise the issue with the Race Master who will contact you directly. (This may not happen right away. But if it is a truly sensitive matter, then we don't want to act hastily in any case.) As a last resort, you can contact the Executive Committee via [rtwrace@gmail.com](mailto:rtwrace@gmail.com) but you will understand that that email will not be under constant monitoring.

## **Warning about obscure bits.**

Here is a list of some of the rules that may be obscure but may be important. We want to avoid "gotchas" in the rules interpretations.

- *Continental Requirement.* The 2014 RTWR requires only one (1) full stop landing on each of the continental landmasses. (But be sure that you do pick an airport directly on the landmass.)
- *The North-South latitude requirement* is easy to understand. Do not forget it as this is a requirement of your team's race routing.

- *Required Winter Olympic Airports.* It is absolutely essential that your team hits the minimum number of required airports distributed properly. If there is any confusion at all, ask.
- *A Team Flight Declaration* requires at least three pilots: a baton-carrier, a wingman, and one participating pilot. (This is new in 2014.)
- *Hidden Overspeed.* A flight with over 90 seconds of "overspeed" as marked by the Duenna is an invalid leg. This provision compensates for FSX not counting max\_mach time in its overspeed time. FS2004 pilots will probably have already crashed by this time but FSX pilots should check their Duennas to be sure that a seemingly valid leg accords with the amount of time in overspeed.
- *Repaints* of legal racing aircraft are fine. As long as the aircraft paint does not alter the flight dynamics at all, then it is ok. The only exception is that military paints for civilian commercial transport aircraft are disallowed. (We shall not penalize a first inadvertent use. But will strongly monitor further instances.)
- *Official Distances Measurement* employs the FS Flight Planner of the pilot's simulator. The distances are given in tenths of a nautical mile and we keep that level of precision in our calculations. There is no rounding. "Less than", "equal to", and "more than" are ordinary mathematical relationships without ambiguity.
- *The agreement with the USAF about the B-2 Spirit* requires paved runways of at least 6,000 feet for both takeoff and landing. It may be convenient to pick a shorter runway, but this is not allowed.