

FLIGHT SIMULATOR AROUND-THE-WORLD RACE
2014 Race Administration
(See FAQ at Bottom)

February 9, 2014

The 2014 Race will be administered by an inclusive organization. This is a work-in-progress. Please be aware that we may need to make improvements on-the-fly or as we move on to future races.

1. Race Administration.

In 2014 the Race will be administered by an overall Management Group made up of (a) an Executive Committee, (b) a Racing Committee, and (c) a Resource Office. (See Figure 1 below for a schematic presentation.)

a. Executive Committee.

The Race is administered and its rules set by an Executive Committee. This committee has the final authority over all aspects of the Race. They are responsible for setting and interpreting the rules and insuring a fair application of Race principles. In extreme cases, they may be asked to serve as a final appeals court or they may need to make interventions in the best interests of the Race. The Executive Committee consists of the following people:

Michael MacKuen
Rob Ibey
Ed Keller

b. Racing Committee.

The Racing Committee shall take primary responsibility for the conduct of this year's Race. The Racing Committee's members monitor race events, confirm bonuses, assess penalties, and handle appeals. The members, up to two per team, are selected before the race by the teams for a renewable term that will cover each year's race.

Daily administration will be led by a daily Race Master, selected by and from the Committee. The Race Master takes responsibility for managing the day's Duty Roster and handling routine administrative chores. In matters of contention, the Race Master will constitute Appeals Boards, comprised of Racing Committee members, to resolve the disputes.

This year's members are:

Paul Beaudoin, Klas Björkqvist, Roman Stoviak, Joseph Thompson, Gunter Teson, Martin Ward

c. Resource Office

Under the rubric of a Resource Office, the Executive Committee may convene special officers and advisory committees to aid them in research and development and in administering certain parts of the race. This office is made up of volunteers appointed by the Executive Committee to execute specific functional operations. For example, in 2014 we have a Communications and Technology Officer and an Aeronautics Committee.

While serving, the members of this Resource Office are full-fledged members of the overall Race Management Group in the sense that, in general deliberations, they will be consulted fully for their expertise and judgment. These members do not serve on the appeals boards nor make rulings on the administration of the race. Their main duties are in carrying out vital functions of the race. These volunteers' efforts are key to the race's success.

Chief Communications and Technology Officer:

Eamonn Watson

Aeronautics Committee:

(Names to be selected)

2. Management Group Participation and Deliberations.

a. Management Group Race Participation.

All members of the Race Management Group are encouraged to participate in the Race. While Executive Committee members limit their team-specific leadership and planning functions, other Group members are encouraged to play as vigorous a role as they wish. It is important that the members be directly involved so as to understand what pilots think and want – people often have different ideas about what makes for a good event. The goal of race governance is to provide a challenging and enjoyable experience that reflects the views of all participants.

b. Deliberations and Responsibility.

In all matters and whenever practicable, decisions about the Race's design and administration will be broadly deliberated among the members of the Management Group. The primary decision-making responsibilities vary, of course, but good decisions reflect an open sharing of expertise and judgment. That being said, the final responsibility for the conduct of the race remains with the Executive Committee.

3. Duty Officer.

The Racing Committee will attempt to have a Duty Officer available to provide on-the-spot resolution of problems, clarifications, and initiation of the appeal process. The system works in the following way:

The Duty Officer will take whatever action necessary to resolve any problems that arise during the race, including, but not limited to: failure of the Bonus Bank, failure of the Tracking System, failure of a team's forum. He may proactively ask teams to properly document aircraft and authenticate legs in a timely way.

For routine issues, the Duty Officer will make rulings on bonuses and penalties. When decisions require further investigation, complicated rules interpretations, the weighing of penalties and circumstances, or other deeper deliberations, the Duty Officer will refer the matter to the Race Master who will immediately constitute an Appeals Board (see below). If necessary, the Duty Officer will make a provisional ruling to allow the race to proceed; everyone will understand that the final decision will be made later.

The Duty Officer is the point of contact for initiating a challenge or appeal on any rule for the 2014 Race.

Any member of the Race Community may contact the Duty Officer by posting on the special FSRTWR Forum dedicated to the Duty Officer: [here](#). The Duty officer will frequently check that forum for new messages. Please note that the Duty Officer Forum is open to all race participants: the official Duty Officer communications are public to all team members. If necessary, you may send a private email to the Executive Committee at rtwrace@gmail.com. This email will be checked only occasionally. It is not your main contact point for routine business.

The Duty Roster will be staffed by volunteer members of the Racing and Executive Committees, under the daily supervision of the current Race Master. Given personnel limitations, the committee members may not be able to staff the Duty Officer on a 24 hour basis for the entire duration of the race. On occasion, some delay in response might be expected.

4. Rules Enforcement and Appeals.

a. Routine Rules Enforcement.

The Racing Committee is responsible for monitoring the race and enforcing the rules. If race participants or spectators feel that a rule has been violated, they inform the Duty Officer who will then determine if a routine violation has indeed occurred,

take appropriate action, and issue clarifying NOTAMS. If matters are more complicated, he may make a provisional temporary ruling and refer the matter to the Race Master for immediate action.

b. Appeals Board.

The Racing Committee handles appeals and difficult decisions through its Appeals Boards. Most commonly, cases are referred by the working Duty Officer. In addition, race participants may appeal any decision to the Racing Committee by submitting a brief document that outlines the facts and reasoning that support the appeal.

The current Race Master will immediately constitute a special independent three-member Appeals Board as a subset of the Racing Committee. When practicable, the board will be balanced among the teams, exclude the original decision-maker, and include at least one board member from the team bringing the complaint. When necessary, the Race Master may ask a member of the Executive Committee to serve on the board. The Race Master creates a different Appeals Board for each case – trying to spread the responsibility for service among the different members.

The Appeals Board will expeditiously conduct an investigation, establish the facts, and adjudicate the controversy. The Duty Officer, or the Racing Committee more generally, may ask that an appeals board consider special situations, including rules interpretations and possible conflicts, the calculation of compensatory penalties, and the existence of aggravating or extenuating circumstances. When there is uncertainty about the intent of the rules, the board will consult with the Executive Committee for clarification. After the investigation, consultation, and deliberation, the final decision is made by a majority vote of the Appeals Board. Only in extreme circumstances, when fundamental issues are at stake, will a second appeal to the Executive Committee be entertained. The goal is that decisions be fast, fair, and final.

5. Penalty Guidelines.

The following guidelines suggest basic principles and how they might be applied. In reality, each case involves a particular set of facts and circumstances and thus may require a special ruling.

- In most cases, a time penalty will suffice and the leg need not be re-flown.
- Good and timely documentation is key to proper race order. Poor or tardy documentation concerning operations such as the declaration of aircraft or the authentication of legs will be assessed an automatic documentation penalty of five (5) minutes.

- Rules infractions, even inadvertent ones, will incur penalties. The penalties include a compensatory and a punitive component. The aim is to neutralize any advantage gained and to deter future mistakes. With regard to the first goal, care should be taken to estimate fairly the magnitude of the advantage. The punitive portion should be proportionate to the violation. Serious violations will receive a "major" thirty (30) minute penalty.
- The punitive portion includes an escalator to encourage renewed attention to the rules once a mistake has been made. First-time violations due to innocent mistakes will typically receive a five (5) minute penalty. However, if the team repeats the same type of violation, the team will automatically and thereafter receive a penalty at the "normal" level of 15 minutes. The escalation provision applies to the team and not merely the individual – one pilot's error will affect all teammates. A shift from the "normal" to the "major" penalty level is not automatic; it is imposed by an active decision of the Racing Committee.

Exception: The ordinary documentation penalty is not automatically subject to this escalation. That said, the Racing Committee may escalate when faced with recalcitrance.

- Violations due to gross negligence, or violations intended to gain advantage, or violations that threaten the integrity of the race, will earn much more severe penalties.

Routine rulings may be applied on the spot by the team itself or by the Duty Officer. More difficult decisions, involving judgment about the severity of the penalty or the amount of advantage gained, will be referred to Race Master and an Appeals Board for resolution.

The Race Rules are intended to set out a challenging and balanced contest. The penalty structure aims to encourage pilots to follow the rules and create a fair competition. The goal is for an enforcement regime that clearly identifies and disciplines rules violations. Punishments should be sufficiently light that routine penalties do not determine the outcome of the race. But at the same time, the enforcement regime needs to be sufficiently strong to discourage indifference toward the rules and, more seriously, deter attempts to subvert the spirit of the race. (For some hypothetical examples of the penalty regime, see the Appendix below.)

6. A summary of how incidents will be resolved.

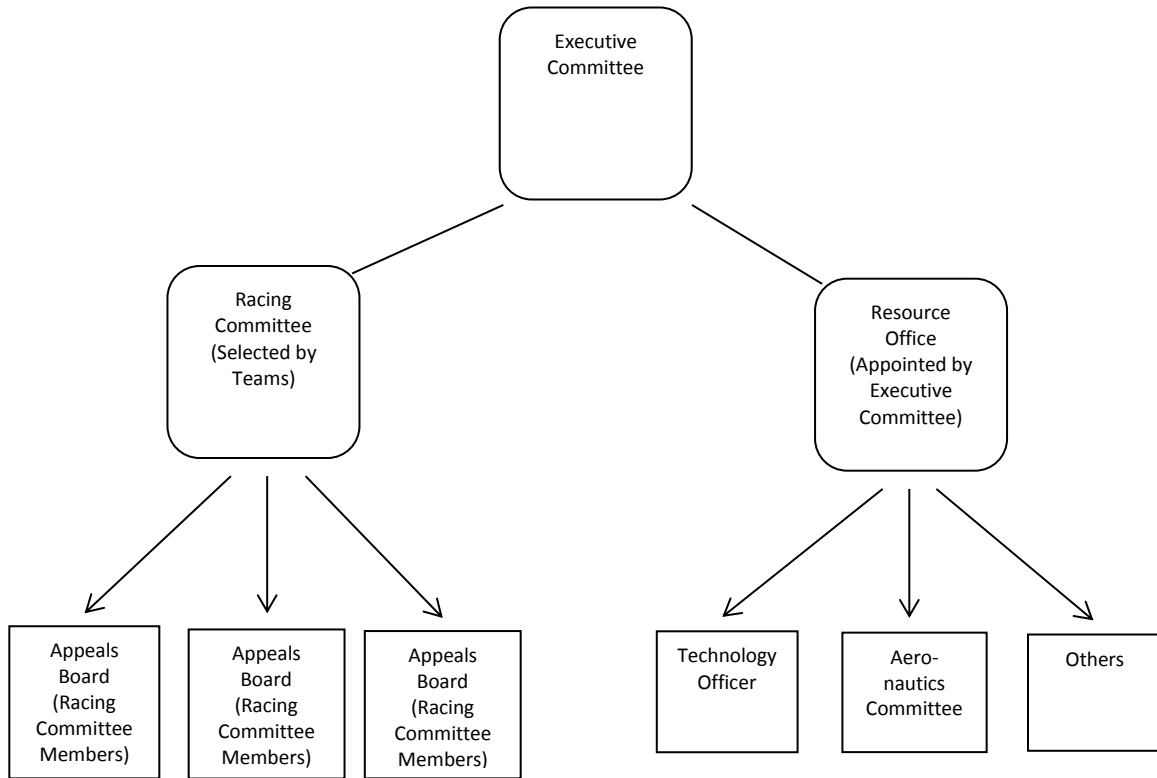
1. The Duty Roster will be staffed by volunteers from the Racing and Executive Committees. The Duty Officer serves as a contact person, handles routine administrative tasks, and makes routine rulings.
2. Any possible rules violation or troublesome event will be brought to the attention of the Duty Officer. The Duty Officer will evaluate the case. If it is a routine

rules matter, the Duty Officer will issue a ruling, perhaps assess a penalty, and notify the race community. If it is a more complicated matter, the Duty Officer will refer the case to the day's Race Master. If it is a technical problem, he will refer the case to the Technology Officer.

3. Any team (including the uninvolved competitors) may appeal a Duty Officer's decision by notifying the Duty Officer and/or the Race Master and submitting a written brief.
4. The Race Master will immediately constitute an Appeals Board made up of Racing Committee members.
5. The Appeals Committee will quickly conduct an investigation, communicate with the parties, consult with the Executive Committee on rules interpretations, and adjudicate the dispute. The decision will be made by a majority of the Appeals Committee.
6. In extreme cases where the fundamental nature of the Race is at stake, the Executive Committee will entertain a final appeal.

Most routine decisions, even ones including penalties, will be handled by the Duty Officer. Everyone will know what to expect. On occasion, it may be necessary to constitute an Appeals Board for a complicated case. (There may be several Appeals Boards over the course of the race.) Thus the more difficult decisions, ones involving investigation, consultation, and judgment, will be made by the Racing Committee. Only in extreme cases will the Executive Committee be directly involved in specific judgments.

Figure 1.
The RTWR Administrative Structure
The Management Group



Appendix Examples of Penalties.

Below are examples of how a routine application of the penalty guidelines might work. Of course, every situation is different. There may be extenuating, or aggravating, circumstances that lead the Racing Committee's Board to administer a more lenient or a more strenuous penalty regime. The hypothetical examples are drawn from previous case histories.

Documentation Penalties.

- A pilot forgets to post a timely authentication and the team later produces the explicit tracking record that confirms leg. (This is really a failure to do proper accounting.)
Finding: The leg is now valid. No advantage. Automatic documentation penalty. Penalty escalation only on active decision of the Racing Committee.
Penalty Assessed: 5 minutes.
- A pilot neglects to announce his aircraft properly and thus leaves in doubt its legality. If the aircraft's status can be discerned from the posting, then there is no penalty; otherwise there is a documentation penalty. (If the aircraft is deemed illegal, see below.)
Finding: The leg is valid. No advantage. Automatic documentation penalty. Penalty escalation only on active decision of the Racing Committee.
Penalty Assessed: 5 minutes.

Standard Penalty Regime.

- A pilot has his simulation time out of synchronization with the time zone in which he is flying – and the incongruity gains no discernible advantage. The leg is good as flown. If the difference is entirely minor, say a few minutes on the clock, then there is no penalty at all. Similarly, there is no penalty if it appears that the pilot has made a good faith effort and the anomaly is due to clock problems or time zone changes or daylight saving time other unusual irregularities having to do with time.
Finding: No advantage. No rules violation. No punitive penalty.
Penalty Assessed: None. Not subject to escalation.
- However, if the pilot flies in daylight when it should be darkness then there arises a question of racing advantage. When the weather is fine and the airport is lighted and the mountains are distant, then there is no advantage. (In 2009 FlightSim was heavily penalized for a similar event.) A penalty is in order because the pilot should be able to tell darkness from daylight. The possibility of advantage is a judgment of the Duty Officer and ulti-

mately the Appeals Board. If there is serious advantage gained, see major penalties below.

Finding: No advantage. A punitive penalty of 5 minutes to mark the first rules violation, 15 minutes on subsequent violations.

Penalty Assessed: 5 minutes. Subject to escalation.

- A pilot flies what appears to be an illegal aircraft that, on investigation, is exactly equivalent to a legal aircraft. (As in the AVSIM 747-8 instance – the flight dynamics were of the legal 747-400 while the external visual model and title were for a 747-8.) Again, this is a technical error that violates the letter but not the spirit of the law. (Teams may appeal to the Committee *before* the first usage and probably receive a waiver if the deviation from eligibility is merely cosmetic.)

Finding: No advantage. Plus a punitive penalty of 5 minutes, 15 minutes on subsequent violations.

Penalty Assessed: 5 minutes. Subject to escalation.

- A pilot leaves two (2) minutes before the arriving pilot posts "baton is free." This is a common in-the-rush-of-events mistake. The small advantage is easily compensated for and the race can be set right. The penalty marks the rules line to enforce proper handoffs.

Finding: Advantage of 2 minutes plus a minor 5 minute penalty, 15 minutes on subsequent violations.

Penalty Assessed: 7 minutes. Subject to escalation.

- Illegal aircraft/weather/environmental settings that yield unknowable but minor advantages. For example, flying with aircraft "stress causes damage" disabled or weather "winds aloft" or "turbulence" disabled. The Duenna should red flag these violations. In a typical instance, the advantage due to this incorrect setting will be unknowable. Nevertheless, a rough estimate should be calculated with care taken not to underestimate the possible advantage. For this example, say the disabled winds aloft were strong headwinds and would have added 11 minutes to the leg.

If the Board assesses the error to be an inadvertent mistake, the leg need not be re-flown. Otherwise, the leg is ruled invalid and the normal remedies are in place.

Finding: The leg is valid. Add estimated advantage (here 11 minutes) plus a first time punitive penalty of 5 minutes, 15 minutes on subsequent violations.

Penalty Assessed: 16 minutes.

- A pilot's computer freezes just after landing a completed leg. There is no Duenna file nor tracking record nor "flight analysis screenshot" available. The supporting evidence is merely the testimony of the pilot and online teammate witnesses that the flight was flown successfully and that the landing rollout was completed. The Board finds the testimony persuasive

and consistent with circumstantial evidence such as a partial tracking record. For illustrative purposes, posit that the tracking record shows a slow final approach and touchdown but no roll out. Thus the evidence supports the observers' validation but it does leave open the possibility of a last-second crash.

(If there is no partial tracking record coupled with corroborating testimony, then the Board is likely to decide that the leg is invalid and it must be re-flown as outlined in the rules. With only very weak supporting evidence, it is impossible to distinguish a valid leg from a crash on landing. Pilots who genuinely complete a leg but discover that they have no evidence may just have to accept a hard decision here.)

Finding: The leg is valid. Impose a normal penalty of 15 minutes to account for the lack of hard evidence. The Committee may tolerate only one such instance and warn of an escalation to 30 minutes on the next leg that cannot be fully authenticated.

Penalty Assessed: 15 minutes. Subject to explicit escalation.

Major Penalties

- A pilot uses an incorrect "daylight" time setting when flying a leg through mountains or heavy weather or into an unlighted airport during what is really nighttime. (AVSIM did this in 2006 and decided to re-fly the leg.)
The advantage here is a matter of the board's judgment. For this example, say the board estimates the need to add 12 minutes for a climb to higher altitude and a slow descent and careful approach.
If the airport is impractical to reach in the combination of darkness and the current weather conditions, the leg is invalid and must be re-flown.
Finding: Advantage is 12 minutes. Plus a major penalty of 30 minutes.
Penalty Assessed: 42 minutes.
- A team misses a required airport or a continental 1,000nm requirement (as AVSIM did in 2012 and almost did in 2011).
The advantage may be calculated by comparing legal and illegal routings. In this instance, for example, the advantage might consist of the extra time/distance to be traveled via a legal route plus a slightly slower landing. Say 15 minutes here.
Finding: Add 15 minutes plus a major penalty of 30 minutes.
Penalty Assessed: 45 minutes.
- The pilot's aircraft speed is unbelievably fast on a leg (as happened on an SOH leg several years ago). Advantage is calculated as the actual time minus time when flown at normal speed (for example, say 8 minutes in this case).
Finding: Advantage of 8 minutes plus a major penalty of 30 minutes.
Penalty Assessed: 38 minutes.

- The pilot flies an explicitly illegal aircraft that yields an advantage or is serious breach of rules.
 Advantage to be calculated. Say 9 minutes on the leg.
Finding: Advantage of 9 minutes. Plus major penalty of 30 minutes.
Penalty Assessed: 39 minutes.

Penalty Escalation

It is understood that pilots will make mistakes during a long and demanding event. The intent of the rules is that penalties encourage compliance with the rules without knocking a team out of the race. However, if a team repeatedly violates a rule, the Racing Committee (through the Race Master) will escalate the penalty regime for future violations. The escalation is not automatic for documentation errors such as the inadvertent failures to post authentication for what can be confirmed to be successful legs.

For example:

- A team "jumps the start" by departing before the baton is relinquished. Normally, this incurs a correction for the advantage plus a minimal 5 minute punitive penalty. The team then repeats this mistake. It *automatically* incurs a 15 minute punitive penalty – added to the advantage correction. On the third instance, it continues to receive another 15 minute punitive penalty. At some point, the Racing Committee may choose to give warning and thereafter escalate to a major 30 minute penalty regime.
- A pilot fails to post authentication but his flight is confirmed by the Duenna tracker – the team automatically earns the 5 minute penalty. Then the pilot (or another pilot) makes the same mistake: the penalty remains 5 minutes. However, after four instances, the Racing Committee decides that the team is unwilling to exercise diligence, it gives warning, and thereafter penalizes the team 15 minutes per violation of the authentication rule.

Other Situations and Remedies

At its own discretion, the Racing Committee's Appeals Board may consult with the Executive Committee and other members of the Management Group to devise appropriate penalties and remedies to fit unusual situations or matters of serious consequence for the running of the Race.

- A team exceeds a leg length restriction (or a wildcard total distance restriction) when it could have shortened the leg and satisfied the limit. The Board will have to assess any advantage due to the extension of the leg. This advantage may be trivial or it may be serious. (The alternate airport may be easy enough. Or it may be unlighted in darkness or in bad weather, or the runway length may be forbiddingly short.) In our example, say that the only

legal airport is dark and has a very short runway. The Committee might rule that it requires a slower aircraft and a very careful approach and landing. The Committee adds the time to fly a leg from the alternate to the actual destination airport. Say the advantage is 45 minutes.)

Finding: Advantage of 45 minutes. Plus major penalty of 30 minutes.

Penalty Assessed: 75 minutes. (If the violation is caught immediately, the baton is placed at the alternate airport with a reduction in the compensation part of the penalty.)

- A team exceeds the distance restriction and there is no possible alternate airport. (Say the leg covers an ocean.)

Finding: The leg is invalid.

Penalty Assessed: The team must restart from the original departure airport.

- A pilot flies an illegal aircraft to gain advantage and a full investigation by the team and the committee indicate that the act was an intentional subversion of the rules. The team will receive the usual penalty (see above).

Finding: Advantage of 9 minutes. Plus major penalty of 30 minutes.

Penalty Assessed: 39 minutes.

The pilot will be asked to leave.

2014 Administration FAQ

1. Race Administration.

Q. What is going on here? Why this?

A. The 2013 Race tested this decision-making structure and it seemed to work reasonably well. This year we shall continue to see if we can implement a more inclusive race governance structure. The Race now has many sophisticated veterans who can helpfully participate in all the ways that the race must be governed. Let's see if we can make this work.

Q. Management Group, Committees, Offices...that is a lot of organizational gibberish. I just want to race.

A. Fine.

Q. So who is involved here? We have an Executive Committee, a Racing Committee, Duty Officers, a Race Master, and Appeals Boards. How many people are involved?

A. There are nine people who are involved in the rules and administration: three members of the Executive Committee and six members of the Racing Committee. Simply speaking, the Executive Committee sets the rules and the Racing Committee enforces the rules.

For daily administration, the Racing Committee chooses a daily Race Master who is responsible for coordinating matters that day. To provide hourly contact, volunteers from the two committees staff a roster of Duty Officers who fill designated time slots (perhaps six hours each).

The Appeals Board is the most demanding job for members of the Racing Committee. The committee, through the serving Race Master, constitutes a separate Appeals Board to handle each controversy. The board investigates the facts, interprets the rules, weighs particular circumstances, and so forth. Normally, each board includes three members. Depending on events, it may be possible to have several appeals boards made up of different, perhaps overlapping, memberships.

So the Race Master and Duty Officer and Appeals Board are just jobs executed by members of the two committees.

Q. Who are the "Resource Office" people?

A. These are volunteers who will perform vital functions for the race. The Technology Officer runs the website, handles immediate technical problems, and develops applications that will make the race even better. The Aeronautics Committee tests and evaluates aircraft and, more importantly for 2014, is charged with developing systems for future years that will allow pilots to enjoy a variety of aircraft while at the same time maintaining competitive balance.

3. Duty Officer.

Q. What do I do if the Duty Officer does answer my messages?

A. Please understand that there will be times when there is no Duty Officer on the roster. And at other times the Duty Officer may be called away to deal with other matters. The Duty Officer and the Management Group will try to maintain continuous coverage, but there will be gaps.

Q. The Duty Officer acts to help avoid mistakes. What? Isn't it the responsibility of teams to conduct their own race?

A. The purpose of the Duty Officer intervention is to mildly remind teams of the requirements and restrictions. If he sees a pilot initiate a leg without declaring his aircraft type, model, and modeler, he may remind the team before the time limit has expired. Similarly, if he sees a leg go unauthenticated he may remind the team of the need for proper documentation. (In these cases, the objective is to encourage clear and proper documentation rather than penalize failure.) The ultimate responsibility for team operations lies in the hands of the team members, not the Duty Officer.

4. Rules Enforcement and Appeals.

a. Routine Rules Enforcement.

Q. So most of the time the Duty Officer can issue rulings on routine matters. That will save a lot of hassle.

A. That is the hope. The Race needs to move along and the pilots want to enjoy the event. The less lawyering, the better. However, issues do arise that might require more deliberation.

Q. If the Duty Officer makes a provisional ruling that is later contradicted by the Appeals Board, what happens?

A. The Appeals Board ruling governs the case. The initial provisional ruling should be understood as a "place holder" until the case receives closer scrutiny. For complicated cases, the Duty Officer will typically make it clear that his ruling will be considered tentative and subject to change.

Q. Who is the Race Master? Is this just another term for Duty Officer?

A. The Race Master is a member of the Racing Committee, selected by the Racing Committee, who will take administrative responsibility for the race on any given day. He manages the Duty Officer roster and coordinates efforts of the Management Group. When a racing dispute or penalty needs adjudication, he will constitute the particular Appeals Board, selecting its members to best judge the case. (The Race Master may not be present all of the time, so there may be moments when there will be a delay in action.) It is important to have someone in charge so that matters do not "fall through the cracks."

b. Appeals Board.

Q. If our team wants to appeal a decision, can we just say "We appeal." Or do we have to submit a written document? (That is a lot of work.)

A. You have to submit a written document. You are asking three of your fellow racers to take time away from the event, organize themselves, and work hard on evaluating your case. In your appeals brief, you should lay out the facts (as you see them) with the best evidence that you have. You should also explain the reasoning behind your appeal, including your interpretation of the rules and the history of Race precedent when applicable. Because the Appeals Board will rely on your written submission to understand the merits of your case, you will want the document to be comprehensive and persuasive.

Q. Why not appeal every decision? What is to lose?

A. The Racing Committee does not have enough members to form an Appeals Board for every decision. Everyone here is a racing pilot and is involved for the fun of flying the event – not for the fun of making administrative judgments. Please do not take advantage of your colleagues. If the teams overuse the Appeals Board, then the Executive Committee will put in place an institutional filter that will reduce the number of appeals.

Q. How many Appeals Boards are there?

A. For every case, the Race Master will appoint a specific Appeals Board. In practice, the Race Master may have a single collection of members serve as the board to hear more than one case – if the members are readily available to meet quickly and deliberate again. However, the Race Master should mix up the composition to be sure that he levels out the burden of adjudication. In particular, complicated cases that require investigation and consultation may tie up a particular appeals board and require some maneuvering of personnel to handle other cases.

Q. Do the Executive Committee members serve on Appeals Boards?

A. Normally, no. The Executive Committee will consult with any Appeals Board to elaborate on the intention of the rules and how they are meant to be applied. Normally, the EC members will not play an active part in the board's substantive deliberations. However, when personnel run short, the Race Master may have to ask Executive Committee members to fill in and serve. (We expect that this eventuality will be rare.)

5. Penalty Guidelines.

Q. Why these long and complicated guidelines?

A. It is important to set out some guidelines. It is good to have a well-understood regime for several reasons. (1) Transparency – everyone knows what is likely to happen when there is a violation; (2) Consistency – the application of the rules will not depend on the personalities of the particular decision-makers; (3) Efficiency – the Racing Committee and the Appeals Board won't have to make a new rule for every instance; (4) Balance – we set a balance between severity and leniency that will reflect not only the need to enforce the rules at the moment but also the need to keep all pilots, including the violators, feeling good about the experience.

These guidelines will allow the Duty Officer and Racing Committee to handle most rules violations in a semi-automatic manner. If there is no measurable advantage gained in the first violation, they simply apply a five minute punitive penalty. The penalty marks the difference between getting things right and making a mistake. Five minutes is not a lot. But a pattern of mistakes will eventually prove costly. And a repeat violation escalates to normal penalties of 15 minutes each.

The stronger penalties mark those cases where the mistake might affect the race outcome. Here the guidelines take a firm view of the amount of time gained – putting the interest of the competing teams first. The guidelines add a punitive penalty to discourage violations of this sort. First-time mistakes receive a minor penalty that escalates. Cases of more serious errors earn stronger penalties. And of course, when a pattern of violations arises, or evidence of sharp practice appears, the guidelines suggest applying much stronger penalties.

Q. I see the purpose of the documentation penalties for missing a leg authentication or describing an aircraft. But these sure seem annoying.

A. Yes. Please understand that the committee and all participants are watching hundreds of legs. If they have to stop and examine every leg, asking for verification, then the event will grind to a standstill. It is your responsibility to make the appropriate information visible and clear. That said, the documentation penalty is only 5 minutes – so one or two will not likely change the race outcome. Persistent indifference to documentation will have an effect.

Q. These penalties are too light. Only five minutes! Hey, my competitors are going to cheat!

A. Our experience over the past decade is that almost all violations, and penalties, are associated with inadvertent mistakes. Given the complexities of the rules and the number of events in any given race, we are bound to have several instances of glitches. (Most pilots are human, after all.) The aim here is to provide a firm demarcation between legal and illegal operations while making the penalties fit the transgression.

First time offenders, when it seems that the violation was due to a simple mistake, get a five (5) minute punitive penalty. Added to the penalty is a compensatory time to account for any advantage that the mistake might have gained.

Repeat offenders automatically receive a 15 minute punitive penalty. This applies to the team, not merely the individual pilot. So if a teammate mistimes a baton handoff the team gets a 5 minute punitive penalty. If you later make the same mistake, the team incurs a 15 minute punitive penalty.

Q. What about more serious cases?

A. Serious offenses receive a 30 minute punitive penalty. A team might survive one 30 minute penalty (plus any compensatory time), but not more than one.

Q. Anything in between these minor and major penalties?

A. It is up to the Racing Committee and the Appeals Board to shape a penalty to suit the violation. They may choose to go directly to a "normal" 15 minute penalty if it seems that the violation might be somewhat serious but not of major magnitude. The race officials must maintain some flexibility here.

Q. And truly severe penalties?

A. We do not expect to have to impose severe penalties. These are reserved for what appear to be intentional violations of the rules. Nevertheless, we are prepared to maintain the integrity of the Race.