

Q&A at the ARC briefing session

(November 29, 2019, in Tokyo)

Q are questions from the participants

A are answers by Dr. Kenzo Nonami, Chairman of the Foundation

About the Flight Area

Q. Can we use the runway, when using a fixed-wing aircraft?

A. There is a runway in Namie-machi, located about 13 kilometers south of the RTF. It will be completed in March 2020. We will prepare to be able to use it.

Q. There are many no-fly zones between Namie-machi and the RTF. How should we fly?

A. It will be better to go out to sea and then return to the flight area.

Q. Where is the take-off point for the rotary-wing?

A. We assume the point of about 5 kilometers south-southeast of the RTF. We want competitors to control the drone from there. However, this may change.

Q. How high is the flight level?

A. By Japan's aviation law, flying robots should fly less than 150 meters from the surface.

Q. With the fixed-wing aircraft, sufficiently measures are difficult if trouble happened at less than 150 meters from the surface.

A. If you want to use a fixed-wing aircraft, please let us know in advance. We will apply individually to the Aviation Bureau.

Q. Is it acceptable for flying robots to fly over railway lines?

A. All competition areas are located on the east side than the railway line (JR Joban Line).

Q. Are there any high-voltage lines in the area?

A. There is a high-voltage line of 500,000 volts. It's 50 - 60 meters high. The flying robot must fly at least 10 meters above it, preferably 30 meters above.

Q. Will a map showing the specific take-off location be released at a later date?

A. It will be announced just before the competition.

About the Facilities

Q: Can all teams use the installed communication towers unconditionally?

A: We want to be so. However, since those communication towers have never been used in such competitions, it is more robust to prepare the communication device on its own.

Q. Can we bring our Wi-Fi and mix communication signals?

A. No problem.

Q. Is it allowed to set up tents at take-off points?

A. We are going to set up it.

Q. How do we charge the robot?

A. We will provide enough power supplies.

About the Details of the Rules

Q. Is it acceptable for team members in the flight area to observe the aircraft?

A. It is not acceptable. However, for safety reasons, there will be people observing the aircraft in the competition area. We will prepare it.

Q: Should the flying robot return to the take-off point?

A: You don't necessarily have to come back, but all the data must have been sent (In other words, it's fine that if a flying robot has a one-way battery). However, if the aircraft returns, it may be a higher score.

Q: If competitors carry out Phase 3 continuously from Phase 1, can we go to pick up the landed flying robot by car between each phase?

A: No problem. However, it is necessary to do within the time limit.

Q. It's a question about the mission of delivering supplies. How distance away should we deliver from the rescuer?

A. We assume it's 15-30 meters.

Q. Should the competitor prepare the supplies to be delivered to the rescuer?

A. No. It's our job.

Q. Does rescuer request different supplies for each one?

A. That's going to be the case.

Q. Does it mean that the weight and size of each supply goods delivered will be different?

A. Yes. But we will take care not to be unfair. Also, we don't think too heavy supplies. It's a kilogram at most.

Q. How the size of the supplies to be delivered? I want to know the approximate guide.

A. It will be announced at a later date. To a degree, we will consider being able to deliver by both large and small aircraft.

Q. Can we read the message about the supplies that rescuers need when we discover rescuers in Phase 1?

A. The main mission of Phase 1 is to a route formulation for the rescue team. Part of the Phase 1 mission, "Discovery of the rescuers" means identifying their location.

Q. Is it only in Phase 2 to confirm the request of the rescuer?

A. Yes. That's right.

Q. Are the rescuers a human being or a mannequin?

A. We assume it's human. Taking temperature is an important factor in disaster relief.

Q: What is the definition of the crash?

A: The situation the flying robot fell to the ground and became uncontrollable. For example, in Phase 3, if a flying robot hits a wall but is controllable, we will not consider it crash.

Q. In Phase 3, the use of ground robots allowed. But is it possible that the robots run on the ground and enter the facility?

A. Please imagine a typical home. It's possible. However, it is necessary to consider that the facility has a staircase and the not large aisle.

Q. Is it possible to approach a distance of 5 kilometers only by a ground robot without using a flying robot?

A. It's no bad. But in Phase 1, it will be difficult. It should be much faster to use a flying robot.

About the Schedule

Q. If it rains, will the competition be held?

A. If it's not heavy rain, we want to hold it. As for the wind, if the ground wind speed is less than five meters per second, we judge it possible. If the weather is worse than those, arrange the schedule.

Q. When do we have to stay in the venue during the 8 days?

A. We are going to hold a festival the night before the opening ceremony and decide on the order of the competition (and also provide GPS data, etc.). We hope that the competitors participate in the gathering (even it's OK with one of the team members). And, of course, the day you participate in the competition. Also, we want all teams to participate in the closing ceremony (which will announce the results of the final judge) on the last day.

Q. Can we leave the venue on other days?

A. No problem.

Q. For the order in which each team flies, will it be decided just before the competition, not 1-2 months before?

A. We are thinking so. It is hard to decide 1-2 months before due to weather problems.

Q. When will the teams to participate in the competition be confirmed?

A. It will be confirmed in mid-January 2020 and will be announced on our website.

About the Proposal and Grants

Q. How much corrections are acceptable to us after we submit a proposal?

A. Allow unless malicious (for example, if you submit a plan that you know can't carry out it).

Q. For the research grants, the Application Overview shows that it will not provide for the teams that are organized by only companies. But what about mixed teams between private and corporate companies?

A. We will like to provide for the teams that do not have sufficient development costs as much as possible.

The Other

Q. Should participants be covered by insurance?

A. Yes. Please take out insurance in case your team's aircraft damaged others (Compulsory liability insurance).