Guide to organizing a Hebocon competition

Introduction

Hello all. I am Daiju Ishikawa, the father of Hebocon.
You shall call me Hebocon Master.

This file has been created to explain to you all the steps involved in organizing a Hebocon competition. It is my sincere wish for Hebocon to be enjoyed by many people all over the world. You will not have to pay any license fees to organize a Hebocon competition, so read this guide and organize Hebocon competitions freely!

This file will reflect the ideas and opinions I get from you all, and will constantly be updated.
Please find the latest version from the link below.
http://portal.nifty.com/hebocon/files/all_documents.zip

What I ask of organizers

First off, please let me ask three things of you!

1. Before you organize a Hebocon competition, please read the file titled "What is Hebocon," as it offers important pointers to make your Hebocon competition as fun as it can be.
2. Please let me know that you are going to organize a Hebocon competition. As it is my wish for Hebocon to be enjoyed by many people, it would bring me joy to know that it is being held by others. I would also be pleased to help promote your Hebocon competition, even if it is a small competition held among a circle of friends!
3. Please send me anything and everything documenting your Hebocon competition—photos, videos, reports, articles, whatever! The address to which you should send such items can be found at the end of this file. All documents I receive from you will be put up on Hebocon Facebook page.

Steps to organize a Hebocon competition

Although the steps required in organizing a Hebocon competition differ from case to case,

I would like to share with you the know-how unique to Hebocon which I have acquired through my experience of organizing competitions in Japan. I will not touch upon all the necessary knowledge needed in organizing an event in general, as there is not enough space to do so here. Should you be one inexperienced in organizing events, it might be a good idea to find someone with experience hosting hackathons or sporting competitions, and seek advice from them.

1. Decide the scheme
   - Decide the scale of competition. I would recommend a tournament of 8, 16, or 32 contestants. The first Hebocon competition featured 32 contestants.
   - Decide if your competition is going to accept entries from the public, or if it is going to be a closed-off event held among a circle of friends. Decide whether or not you are going to let in an audience, and if so, decide whether or not you will be selling tickets.
   - Decide other features your competition is going to have. It might be a good idea to host for example a competition for kids, or one with a workshop. The second Hebocon competition featured a workshop element, which I will talk about later on in this file.
   - Decide whether to have the participants bring their completed robots to the event site (this type of event is simply called "Hebocon" or "Normal Hebocon"), or have them build the robots on the spot (this type is called "Hebocon Workshop"). First, I will explain the kind where the participants are to bring their completed robots. The other kind will be explained later.

2. Decide the budget
   - A Hebocon competition can be organized with a very limited budget. To organize a small tournament between 8 contestants, the only things you really need are: a piece of plywood to use as the ring, and a whistle for the referee to blow. The only requirement for the venue is that its floor is flat. Piece of cake.
   - If you are going to organize a large competition, you will need a PA system and a camera crew. In the case you will have a large attendance and the venue is large, you may need to allocate a part of your budget to advertising. Since in Hebocon, both the robots and the ring are small, you will need to project the matches onto a large monitor. It would be a good idea to consider the scale of your competition based on your budget.

3. Decide the date and the venue

- It is recommended that you secure at least a month from when you begin accepting entries to the actual day of the competition. Please plan a feasible schedule.
- The venue can be anywhere from a college, a school, a public space for rent, an office meeting room, a Maker space, a hacker space, a garage, on the street…you name it. The first competition in Tokyo was held in a tavern with a stage, and the audience watched the matches while they enjoyed their drinks. The second competition was held in a booth within Maker Faire Tokyo. We'll get into that later.

This is the venue of the first Hebocon competition. At the center, in the background is where the ring was placed. The screens on the walls were used to project the live match feed from handheld cameras. This venue was big enough to hold 120 people.

- In the case your competition is to move along without wasting any time, and you have a tournament between 8 participants, the event is going to take around 30 minutes. In the case you have 32 participants, it will take about two and a half hours. Each match will take about 5 minutes, and you will need to also factor in the time needed to set up and clean up.

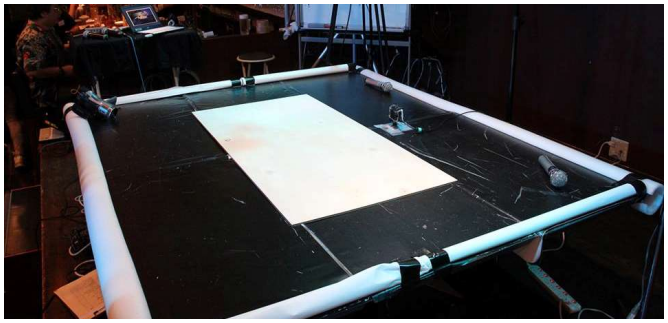
4. Send details about your competition
   - When you have decided on the general scheme of your competition, don't forget to send me information about it! The address you should send such information to can be found at the end of this file.
   - Please send me the name of your competition; the time, date, and venue thereof; the URLs of the sites you are promoting your competition on; whether or not you give permission for us to mention your competition on our website or Facebook page; and also a word from you, the organizer, explaining a little bit about your competition.

5. Gather participants
   - Let people know about your competition.
   - It would be great if you could provide a link to the Hebocon Facebook Page from your page so that those viewing can have a look at what past tournaments were like, and get a clear idea of what Hebocon is all about!
   - If you let me know about your competition, I will of course help promote it. Just send me the info, as stated in Paragraph 4.
   - Other than promoting your competition on your own website, blog, or other social networking services, it would be a good idea to talk to media outlets that may find your competition interesting. If there are Maker communities or artist communities in your area, you should talk to them about your competition as well.
   - It is recommended that you have all participants read the Rule Book and "What is Hebocon" before they participate. It is very important that everyone shares the concept of what Hebocon is, or else you might have to deal with a confused participant who brings a missile-fitted robot, armored in titanium on the day of the competition.

6. Leading up to the competition
   - In order to keep the participants excited until the day of the competition, it is recommended that you provide a place where participants can interact with each other (such as on Facebook Event). Providing such a place would allow participants to show each other the robots they are working on, and have a good time. Such a place would also give participants the chance to check in advance

that their robots would not be subjected to the High-Tech Penalty.

- If there are many beginners of making among the participants, holding a robot-building workshop beforehand will help them construct their robots smoothly.
- As the organizer, you should have prizes ready. No matter how small the competition may be, it is important to prepare more than just the prize for the champion, but also several more for other Heboi robots, such as one granted by the jury, or one given by the audience. In Hebocon, the most wonderful robot is the most Heboi robot. However, the most Heboi robots more often than not end up losing in the first round. In order to praise such Heboi robots for being so Heboi, there is a need for such prizes. In the Tokyo tournament, the audience voted to decide who was to receive the Most Heboi Robot Prize, and guests decided on who was to receive the four Jury Prizes.
- The kind of prizes you prepare gives the participants a message as to what kind of robots you wish to see in your competition. That's why it would be a good idea to let people know about the prizes that are going to be awarded in advance.
- Prepare trophies too. A Heboi prize would be more appropriate than an impressive one. In the Tokyo tournament, I asked my friend's son in third-grade to build a trophy, and he did so using empty snack boxes.
- Don't forget to prepare the plywood board to use as the ring, and the whistle for the referee to blow.



This is the ring used in the first Hebocon competition. The board was placed atop a large table, and cushions were placed on the edges to prevent robots from dropping to the floor. However, there is no need to go this far; as long as the board is at a position where everyone can see it, you are all set.

The trophy made by a third-grader

7. Competition day

- If your competition is fairly small, you will only need two staff on the day of the competition. One person is to emcee and referee. The other is to film archival footage. If your competition is big, you may want to consider bringing in a commentator, staff to exclusively referee or emcee, bring in separate people to photograph and film, or bring in a sound engineer.
- Refereeing can be a little difficult at first, so it is recommended that you referee several scrimmages before the actual tournament. If you referee about five scrimmages, you'll be able to referee well.
- In order to minimize the work of the referee, please use the audio files Zipped together with this document. It is of the buzzer to signal the start of a match, and a gong, which comes a minute later, to signal the end. Using this will enable the referee to referee without worrying about the clock.
- Before the tournament begins, make sure you film photographs and movies of special moves and features of each robot for archival purposes. Once the tournament begins, the robots will break one after another, so it's best to capture them on photo and video while they are still in one piece.
- Before each match, after both robots have been set up in the ring, a short interview of both contenders is to be held. Besides asking for the participant's name, and that of his robot, it is recommended that you ask the following two questions. Also, telling the contenders beforehand what you will ask at the interview will ensure that the interviews proceed along in a smooth manner.

  - Question 1: What are the unique features and special moves of this robot?
    Reason for asking: In the case the robot does not function properly in the match, the audience will know exactly how it is failing, and knowing that will give the audience a richer experience of watching failure.

  - Question 2: What is Heboi about the robot?
    Reason for asking: This will let the audience know what it is about the robot that should be laughed at. Thus, the audience will be able to enjoy the match even more.

  Interview the contenders on their thoughts after the match as well.

- Please refer to the Rule Book for match rules.
- In the case you are filming the matches, using a handheld camera will enable you to capture the most exciting footage. If you do not have a cameraman available, setting up a GoPro at the ringside is another great option to consider.
- The High-Tech Penalty rule is something I came up with to lead the robot makers to build their robots with Heboiness in mind. Therefore, the rule is not something I have actually had to rigorously enforce (actually, no robots in the Tokyo competitions came anywhere near the vicinity of being high-tech).
  I think the application of this penalty should only be considered at extreme cases where a robot is clearly too high-tech for Hebocon.
- The organizer and the emcee should proactively seek to praise contenders who demonstrate acts of Heboiness! Acts of sublime Heboiness include: forgetting to bring batteries, accidently breaking the robot upon attempting to conduct pre-match maintenance, etc.
- The same can be said about robots that demonstrate Heboiness. A Heboi robot may instantly drive itself out of the ring, or may just stand there, unable to move at all. Such Heboi ways to lose a match is considered supreme elegance in Hebocon.

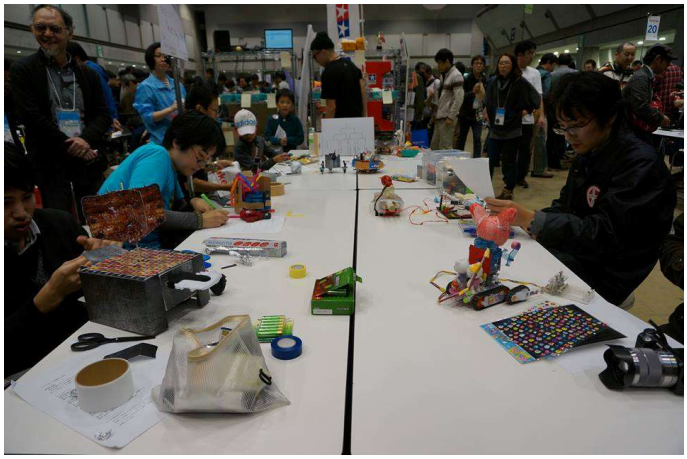
8. After Hebocon
   - Please upload the videos and photographs you have taken to the Internet. If many people see your Hebocon competition, we'll have that many more people who will want to organize Hebocon themselves!
   - And please do not forget to send me your videos, photos, and URLs of reports, etcetera, because seeing such items will make me very happy! In addition, I would love to hear any thoughts you may have after organizing a competition, and your ideas or opinions regarding the Hebocon files I am handing out.
   - Hebocon is not a one-off event; it has the potential to attract audiences repeatedly. Please go ahead and organize Hebocon competitions on a regular basis.

So that's it! Those are the steps required to organize a Hebocon competition. I hope that you will take them into consideration to create your own version of Hebocon!

Building robots on the spot (Hebocon Workshop)

A Hebocon where the participants are to build their robots on the spot is called a Hebocon Workshop. For this kind of Hebocon, you will need to prepare the work tables, tools, and materials.

Tools and materials provided for contenders to use



Contenders modifying their robots

Here, I'll introduce the materials I purchased when I organized a Hebocon Workshop at the Maker Faire Tokyo.

Movement source

- In Japan, the Tamiya Robocraft assembly kits are often used for this purpose (http://www.tamiya.com/english/kousaku/k_item/robocraft/kit71101.htm).
  While you can reliably create something that can move with them, the long assembly time is a disadvantage, especially if children were to do it.
- If the participants skills are relatively high (like for events intended for HackerSpace and such), it's fine to prepare some junk electronic goods; e.g. items with electric motor installed.
- It's also a good idea to procure some cheap Chinese-made toys from Aliexpress or ebay. Especially if there are children among the participants, items that can move without doing much work to it will make the building process easier.

Other materials

- With the covetousness of the participants, whatever you prepare for them, they'll start using them in various ways.
- Prepare small quantities of as many kinds of items as you can. It will make the robots more varied. Wood pieces and boards, cardboard, and wires are obviously good, but prepare other miscellaneous daily items such as forks, dustpans, or clothes hangers as well. Those items can be used in various ways, perhaps as skeletal frames, as decorations, or even as weapon materials. Even if it's an item that you couldn't think of a way to use it, the participants will think about it themselves.

Reference: Example of items that have actually been used

- This is a list of materials and tools I actually used at the Maker Faire. (This was for holding 6 tournaments with 8 participants each, totaling 48 participants worth of materials.)

Tools	Amount
Screwdriver set	2
Drill	1
Drill bit	1 set

Jigsaw	1
Scissors	6
Utility knife	6

Pliers/Nippers	6
Permanent markers	3
Plastic cutter	1

Consumable goods	Amount

Paper masking tape	6
Hot glue	4
Wood glue	2
Instant glue	1
Hemp cord	3

Binding wires	3
Assortment of screws and nuts	1
Work gloves	24
AA batteries	30

AAA batteries	30
Aluminum foil	1
Polyethylene masking tape	3
Duct tape	3

Material	Amount
Corrugated cardboard box	10
Card stock	10
Assortment of waste wood boards	1
Plastic board	3
Felt (various colors)	10
Rectangular lumber (1–2 cm thick)	3m

Round timber (1–2 cm thick)	3m
Origami paper	3
Clay	3
Paint	1
Artist's brush	1
Palette	1

Copier paper	100
Twist tie	1
Flat steel bracket	18
Copper wire(10m)	2

Moving toys	Amount
Robocraft giraffe	2
Robocraft turtle	2
Robocraft dog	2

Robocraft ostrich	2
Robocraft beetle	2
Toy train	5

Remote-controlled toy car	5
Wind-up mouse	5

*I bought dozens of toys via Aliexpress in addition to the above mentioned items. I'll show example later.

General goods (example)
Plastic baskets and cases.
Saucepans
Caster wheels

Dolls
Gift-wrapping ribbons
Empty boxes

Glass marbles
Absorbent cotton
Sea shells

Dustpans and mini brooms	Jumping frog toy	Lego
Stuffed dolls	Balloons	Clothespin
Ornaments and decorations	Savings box	Paper plates and cups
Forks, knives, and chopsticks	Kitchen sponge	Toy propeller
Artificial flowers	Tupperware	

*The above mentioned are just examples. I bought about ¥20,000 yen worth of items at 100 yen shops.

Cheap toys purchasable from Aliexpress

- URL to the sales page frequently changes, so please look it up by yourself. You may also be able to find similar things on ebay.

44WD Racing Toy Car (around US$2)

This is a toy car running on batteries. Only moves in a straight line. Fast.

Boy & Girl Cute Windup Crawling Crawl Toy (around US$1.3)

This is a baby-shaped wind-up toy that moves forward. (Not reliable to use as a main engine.)

Remote Control RC Rat Mouse (around US$3)

This is a remote-controlled toy mouse running on batteries.

Rolling Motor Ball Pet (around US$3)

A battery-powered ball that will roll randomly, with a toy animal attached.

DIY Wooden Car Model (around US$3)

Prefabricated car kit. Runs on batteries.

Music Luminous Universal Wheels (around US$1.5)

This is a toy car running on batteries. It moves randomly while flashing lights and playing music. Cannot move in a straight line.

Dogs Toys (around US$2.5)

A battery-powered toy dog. Will bark occasionally. For some reason the eyes light up green.

Compromise idea: Have the participants build the robots beforehand but prepare the workshop as well

- It's a good idea to set up a workshop even at events where the participants are to bring completed robots. The reason for that are the following:
  - Robots built by people with lower technical skills can break easily during transportation. This way, they'll be able to fix their robots.
  - Participants can revise their robots after confirming their opponents. They can arm their robots to strike at their opponents' weaknesses, giving strategical values to the robots.
  - Contrary to making the robots from scratch, there is no risk of incomplete robots due to time limitations.

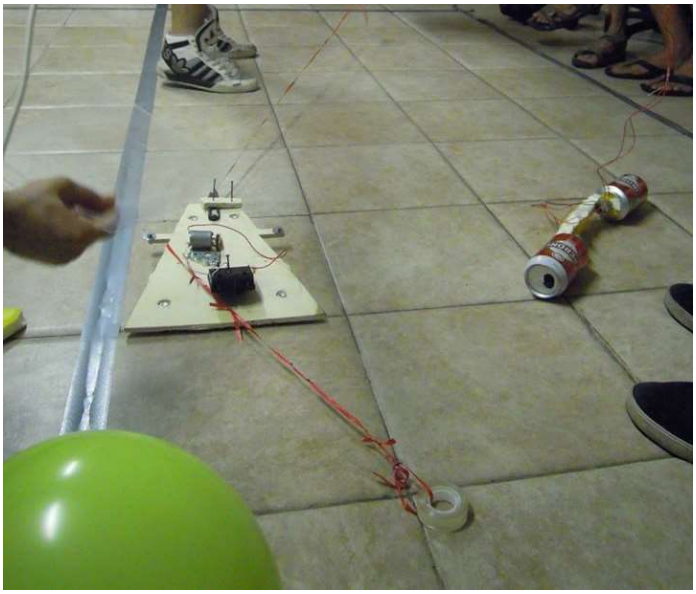
Derived competitions

Hebocon is normally performed under the robot-sumo rules, however some different

rules are currently being devised I'll list some examples below. Ideas by other organizers will have their names written.

- Giga Hebocon
  - The rules are the same as the standard sumo rules, but it's limited to only robots over 1 meter, and they can even have pilots riding on them. It's a high-intensity event.
  - Because there is no need for delicate works, there is more freedom in the robot design. A wide variety of robots appeared, such as robots that launch balloons or ensnare the opponent with metal nets.
  - It is forbidden to move the robot and attack using the pilot's own physical strength. The pilot is only allowed to operate the robot.

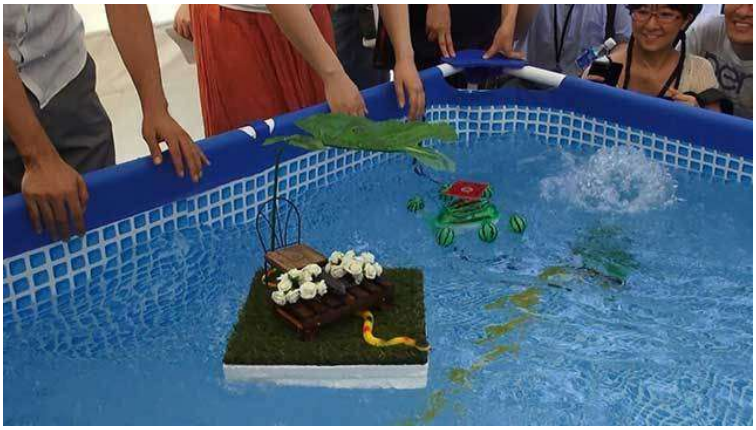
- HeboRace (proposed by: Hebocon Roma / Andrea Rosati & Andrea Barbadoro)
  - A race where the robots battle with speed. There is a penalty for using too proper wheels; using automotive wheels will result in a penalty.
  - See the detailed rules here. https://www.facebook.com/groups/1549454101968986/permalink/1610073065907089/
  - Impressions from the organizer. https://www.facebook.com/groups/1549454101968986/permalink/1628400224074373/



- Hebocon: Paint Edition (proposed by: Hebocon Roma / Andrea Rosati & Andrea Barbadoro)
  - A Hebocon where the robots will fight their opponents while carrying paint. Large paper is placed on top of the arena, and the traces of the battle will be left on top of the paper. Apparently the winner can take the paper home.

- Obstacle Hebocon (proposed by: Yulee Yee Okazaki From Hawaii)
  - A Hebocon that is using an arena with pitfalls and undulations instead an ordinary board.

- Water Hebocon
  - A Hebocon performed on the water using poorly-made boats instead of robots. A stand to place a coin is set on top of the boats, and the winner is the boat that manages to reach the goal without dropping the coin.
  - See the detailed rules here. https://www.facebook.com/groups/1549454101968986/permalink/1624510324463363/



If you have an idea for a new kind of competition, please test it and tell me about it!

Social meaning

Although Hebocon is a silly event I organized just to have a good time, I do think it has a certain amount of social significance.

- For somebody who has never crafted things before, it can be quite challenging to take that first step. Since Hebocon is a place wherein incompetence is considered a good thing, it is an ideal place for beginners to take on the challenge of crafting something.
- There are very few places where a beginner can battle a veteran in the same ring. But in Hebocon, even that is possible. Everyone, regardless of their technical expertise or age, can share a good time together.
- At the base of Hebocon's concept is to enjoy failure, and to enjoy incompetence. That is precisely what makes it possible for anyone to partake in this competition without fear.

  Wouldn't you agree that such an outlook—to not be afraid of failure—has the power to give us courage in living our lives?

A request from me to you

Please feel free to create Facebook and Twitter accounts for the promotion of your Hebocon competitions. However, please avoid naming them in a fashion where they would be easily confused with the official Hebocon accounts. For example, rather than naming your account "Hebocon," please add the unique name of your event to it. Also, please refrain from using words like "Official."

I'd like to request that you do the same for your other social networking service accounts and websites.

Also, I'd like to ask that you provide a link to the official Hebocon page on your website, etc.

Contact

Let me know about your Hebocon competition; send me your videos, photos, and reports; and send me any questions, comments, or anything else you might have to say to any of these addresses below.

Hebocon Master
Daiju ISHIKAWA

E-MAIL:
hebocon@list.nifty.co.jp

Facebook account:
https://www.facebook.com/Hebocon.Official
(Send me a message)

Personal Facebook account:
https://www.facebook.com/ishikawa.daiju
(Send me a message)

Note: You can message me in either Japanese or English. I'm still learning English, so it may take me some time to reply if we are chatting!

There is also the official Hebocon Twitter account, but I'd prefer if you could contact me on Facebook instead.
https://twitter.com/hebocon

I am also currently working on the Hebocon official homepage.
I hope to see you all there!

All right then, I hope that your Hebocon competition will be a huge success!
Most importantly: HAVE FUN!

Update info

2015.01.10 Version 1.0 Daiju Ishikawa
2015.01.17 Version 1.1 Daiju Ishikawa, Addition of license indication
2016.09.30 Version 1.1 Daiju Ishikawa, Hebocon Workshop, Derived competitions added

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