

A New Method for Project-Based Learning in International Design Workshop Setting

Narashino, Chiba, Japan

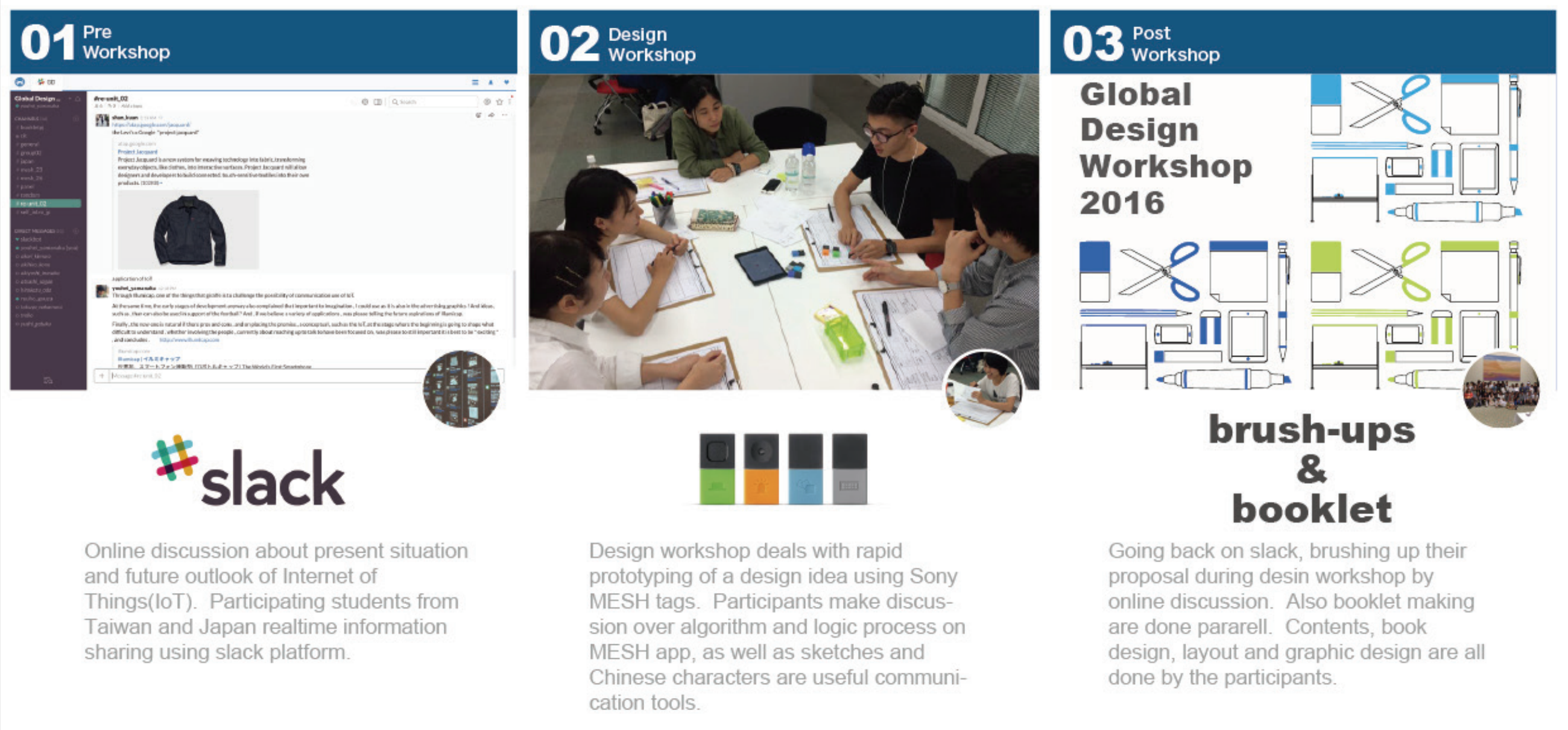


figure 2. Overall outline of the design workshop

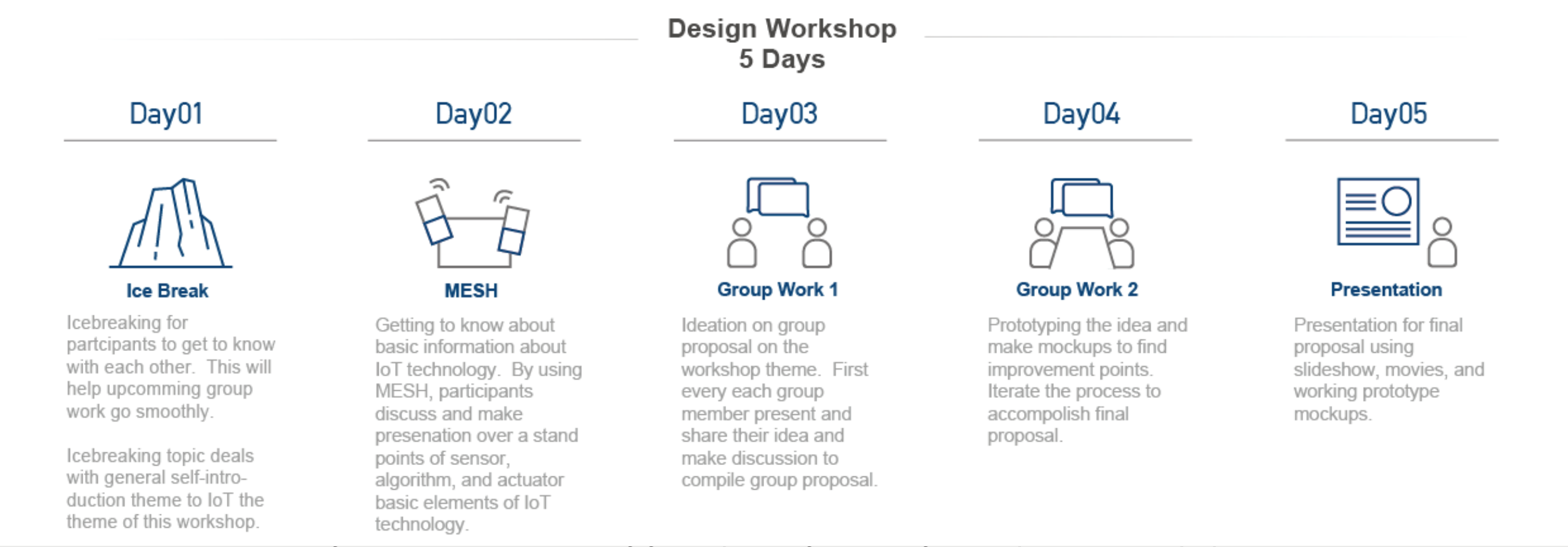


figure 3. Outline of five days "face to face" design workshop

Overcoming Communication Difficulties in High Context Culture

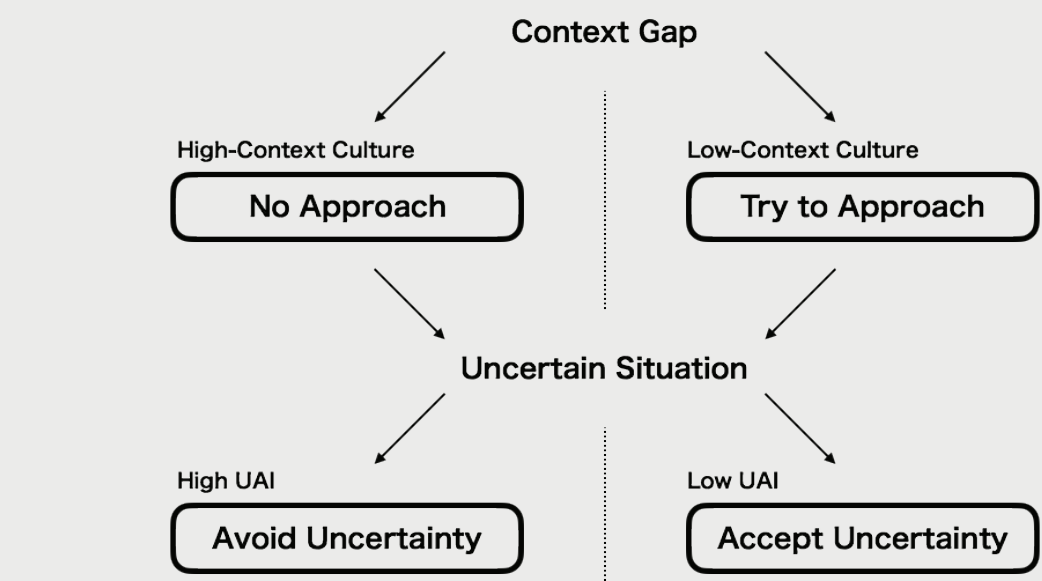


figure 1. Communications in High and Low Context Culture (UAI: Uncertainty Avoidance Index)

Conclusion

In this study, we have proposed a new method for project based learning in international workshop setting. As a result, there are two parts. Firstly, for communication, using online group communication tool such as SLACK is effective in high context and high uncertainty avoidance index culture. Sharing idea and information and doing discussion beforehand during the online pre-workshop will help participants to share idea and make discussion immediately and smoothly transfer into face to face workshop phase. Especially, when participants are from high context culture like Japanese and Taiwanese are most helpful which results in upgrading quality of the workshop program itself.

Secondly, using prototyping tools such as SONY MESH will help simple and easy prototyping. Presenting the actualized idea using prototyping tool will help other members to understand the idea presented with minimal verbal communication. By looking at actualized prototype tell more than describing it verbally and will help minimize the mental stress of feeling difficulties in verbal communication.

In future studies, we want to test the method with the members from both high and low context culture to make comparison studies. The communication difficulties will be more apparent in this situation. Also, consider the development of method to observe the situation to acquire evidence data and qualitative and quantitative analysis method and test statistical significance to make this method more versatile.

Outline of Interenational Design Workshop

Participants consist of three university, 14 students from Tunghai University (Taiwan), 7 students from Chiba University(Japan), 16 students from Chiba Institute of Technology(Japan). Along with the participants, 8 teaching assistants and 2 faulty members from Chiba Institute of Technology for facilitating the overall workshop program. The theme of the workshop "New Design of Work Place, Work Space, and Work Style using IoT(Internet of Things) Technology." Through out the workshop, slack is used for communication tools and SONY MESH for rapidly prototyping design idea for actualization.

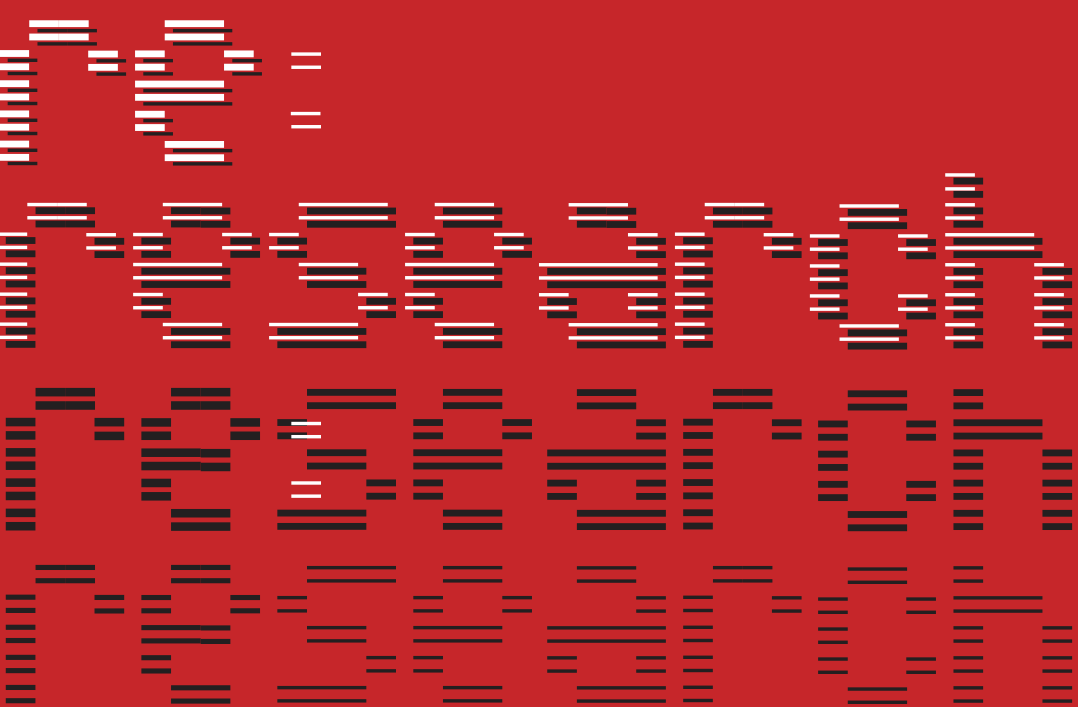
The program consists of three phases. Figure 2 shows the outline of the overall design workshop. First phase was Pre-Workshop, which started on SLACK platform from beginning of July, 2016. Here, the following discussion topics are given to all the participants: "research and share information abo ut present situation and future outlook of IoT(Internet of Things) technology in design field." Second phase was Design Workshop, which all the participants meet face to face for five days at the workshop venue in Chiba Institute of Technology(Japan) from August 29, 2016 to September 2, 2017. Figure 3 shows the outline of the five days workshop program. And the last phase is Post Workshop which all the communication goes back online on slack. This phase started right after the phase 2 face to face workshop, continue on with their discussion on the proposal which they made for further brush-ups to apply for some arbitrary design competition. Also archive booklet making are done parallel, contents, book design, layout and graphic design all done by the participants.

Recording and Sharing idea using SLACK

Though out the whole workshop program, SLACK acted as not only a chat tool but a media for communication. During the face to face workshop, in the first instance, communication difficulties appeared among all the members. Especially speaking in English is the hardest. But as workshop get underway, they started to text the idea. First they write the idea with their own native language and by using online translation service translate the idea to tell and text on SLACK and or write them on paper or stickies to share. The merits of this method are they can share and record the ideation process at the same time so that they can occasionally look back to trace the discussion and also generate some time lags during the communication which helps member to have time to understand what other member is thinking. Demerit is having difficulties to make immediate discussion over a topic. But to share idea avoiding the uncertainty of the contents, slow discussion is better to make the situation robust idea sharing is important to develop and make sophisticated proposal.

SONY MESH Prototyping Tools

During this workshop, SONY MESH are used to prototype and actualize the idea that they come up with. Most of the members are not very used to this prototyping tools, so first half of the workshop program was simple prototyping workshop. They learn the function of the tools as sensors, actuators, and algorithm in between to actualize their idea. The logic flow are visualized and actualized with the MESH(electronic tags) and visualized on graphical programming MESH application on Apple iPad. This helped participants to discuss and share their idea by not using the verbal communication which is the biggest barrier between them. Actual moving prototype made instantly and shared in front of them help accelerate the members to understand, discuss, and develop their ideas closer to actualization.



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