How to ~~hack~~ build something TOGETHER

How to hack something TOGETHER

Doing a project can be extremely intimidating and tough. There is always a lot of factors and things to consider, as the options are limitless. There are several things that are needed to make a project successful. I would like to spread some of the things that made one of the projects I worked on extremely fun and successful.

Projects can be divided into two major sections:
-Projects which need careful planning and only minor mistakes are available
-Projects which are put together in small budget and small time. Projects where you hack something together.

Projects with careful planning need large budgets and lots of intellectually qualified people who know how to do what they're told to do in what seems to be perfection. Projects which have small time and budget are put together usually by a group of volunteers simply for the sake of wanting to. There are very low expectations, and isn't expected to be polished to the professional level.

My personal preference is the second type mostly because when a team who volunteers to a project, they are much more dedicated to the project for their own will. Another reason I prefer these types of projects is that if the project fails there is no harsh consequences, it's more of a hit or miss type of project. Finally it's a great way to explore and execute different ideas.

The favorite project I had done was with a team of seven people. The project is called MakeToMove, and the concept was to create a giant geodesic dome which would encourage people to move, by attaching exercise machines and motion detection to the dome to interact with the user on a physical level. I will be using this project as a major component in explaining what makes a project successful.

Concept of Modularity

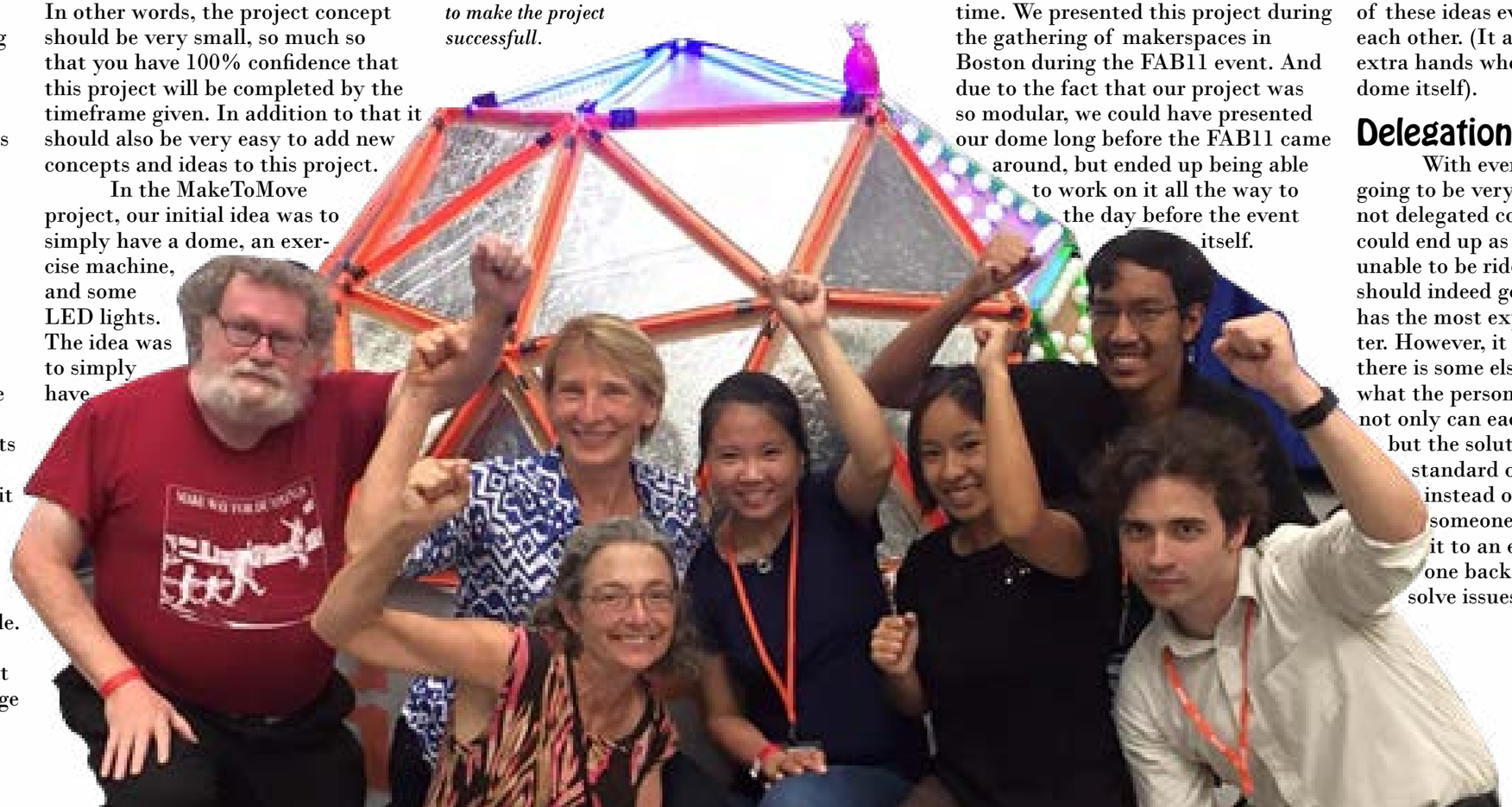
With a time constraint many people have issues on deciding how big of a project they should aim for. If they aim for a big project, you risk not completing it in time, yet if you aim for a small project, it may not reach its full potential.

The key to this problem is that the project should be modular. In other words, the project concept should be very small, so much so that you have 100% confidence that this project will be completed by the timeframe given. In addition to that it should also be very easy to add new concepts and ideas to this project.

In the MakeToMove project, our initial idea was to simply have a dome, an exercise machine, and some LED lights. The idea was to simply have certain lights turn on when a person was on the exercise machine. It was a project we knew we could get done within a month. Later we decided that the LED lights would light up in a line rising from the bottom to the top of the dome, while someone was exercising. Then we added a bubble gun machine that would spray bubbles if the user got all the lights to light up. After having all of that working, we added a projector inside the dome and a camera so that when a person moves around the dome, the project would show water with ripples depending on where the person was. In the end we also ended up adding aluminum pads which would play certain sounds and music when touching them. The idea here is that we started with one dome, and we were able to add more and more to it given the time. We presented this project during the gathering of makerspaces in Boston during the FAB11 event. And due to the fact that our project was so modular, we could have presented our dome long before the FAB11 came around, but ended up being able to work on it all the way to the day before the event itself.

Below is an image of a giant geodesic dome created within a month. Each of these members were an important asset to make the project successfull.

From left to right: Pebol, Jeniffer, Betty, Minxian, Christina, Binam, and Sergey



Importance of Team

The great thing about low budget low time projects is that it gathers people who want to do the project rather than people who want to get payed for doing the project. Our team was constantly motivated and always spent time that we didn't have to this project. Many of us stayed till 3AM on some days to fix issues and add more components to the project.

Each individual contributed to this project in his/her own way, and gave their input without the fear of their ideas being rejected or stupid. Looking back at the project, I can't remember a single time we through an idea out the window. Every single idea we've put on our task list of potential things we could add. Because our project was very modular, very little of these ideas ever conflicted with each other. (It also helped to have extra hands when constructing the dome itself).

Delegation of Tasks

With every project there are going to be very many tasks, and if not delegated correctly, these task could end up as obstacles which are unable to be ridded off. Each task should indeed go to the person who has the most experience in the matter. However, it is also important that there is some else who understands what the person is doing. This way not only can each task be solved, but the solution would meet the standard of at least two people instead of one. In addition if someone were unable to make it to an event, there is at least one back up who knows how to solve issues should they pop-up.