The Exemplary WPI PAX Booth 2018

An Interactive Qualifying Project

Submitted to the Faculty of

WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the

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Abstract

The purpose of this Interactive Qualifying Project is to do all the logistical and physical legwork necessary in order to successfully design, set up, and run a booth that showcases student-made games, as well as WPI's Interactive Media and Game Development major, at PAX East 2018. These tasks included, but were not limited to, designing the physical layout of the booth, designing t-shirts and buttons for both volunteer uniforms and giveaways at PAX, working with WPI's marketing team to gather the necessary materials for advertisement of the program, and selecting student volunteers to do art demonstrations and show off games at the booth throughout PAX. We managed to run the booth very successfully and we gave out a large quantity of marketing material to prospective students.

Table of Contents

List of Figures

Introduction

PAX East is a convention held every year in Boston that focuses on gaming. WPI has hosted a booth each year at PAX East for the last six years, starting in 2013. The goals of hosting a booth at PAX are to attract prospective undergraduate and graduate students to WPI's IMGD program, to raise awareness about WPI's IMGD program, and to bring in potential employers are networking opportunities. Each year since 2013, the IQP Team in charge of running this booth has selected volunteers to help them staff the booth from a pool of students who submit their game projects to be shown off at the booth during the convention.

1. **Attract prospective undergraduate and graduate students to WPI's IMGD program**

   We find that a lot of people at PAX East are interested in game development programs whether they are high school students, looking for a change in career paths, or are currently enrolled in another college's program and want a master's degree in game development. High school students' parents are also often times brought along to PAX, and they may be interested in scoping out colleges for their children to attend. Advertising WPI at PAX increases our chances of attracting these students to WPI's program over other colleges' programs, many of whom also host competing booths at PAX. We also distribute materials about WPI's summer programs for interested parents and students. Unfortunately, PAX East occurs after the deadline for application to the current year's summer programs, so we ended up advertising for the year after.

2. **Raise awareness about WPI's IMGD program**

   Since PAX is such a huge event, it is very important to present the WPI brand to all the convention goers, prospective student or not. Our IMGD program is one of the highest ranked game development programs in the country so it would be a wasted opportunity for us not to make an appearance at PAX. We we believe it is important to show that our students are professional, driven, and more than capable of producing polished games and art to show at PAX East. By showing up at PAX East and showing off our students' work, we gain the positive attention of con-goers. Likewise, it is expected within the industry that WPI host a booth at PAX. WPI graduate students and people from the companies they work for often seek out the booth.

3. **Bring in potential employers and networking opportunities**

   Given the popularity of PAX East, there are large quantities of industry professionals roaming the floors. By giving our students a platform to showcase their work, we offer them a unique opportunity to network with possible employers who see their work. As a reimbursement for volunteering students are given passes to explore PAX outside of the WPI booth where they will have more opportunities to network beyond general show hours. We also find that many individuals will also approach the booth with sponsorship ideas or programs involving partnering with WPI (such as having WPI students run a game jam at a local high school, or investing in a scholarship program for virtual reality development, for example.)

We went about designing the WPI booth to accomplish these three goals in the best way possible. To make sure we could create the best booth possible, we studied the last 2 years' papers and booth layouts to see what issues they struggled with and what designs they improved upon from years before. We worked with the IT department extensively to get the machines that we brought to PAX set up for showing off student games as well as art demos. We also worked with marketing to collect the necessary materials to hand out as well as the WPI banners and backdrop we decorate our booth with. We also designed t-shirts as a pseudo-uniform for student and faculty volunteers to wear. Additionally, we designed buttons that fit the theme of our volunteer shirts to give out at the booth. A group of student projects were chosen to display at the booth as well. We had games ranging from freshman game jam games to senior MQPs and even a master's thesis by one of our grad students. We also selected candidates to perform art demonstrations at the booth. These art demos included 3d modeling, technical rigging, digital painting, and texturing.

This document holds information on all the different methods we used to achieve our goals as well as all the decisions we came to and the struggles we faced along the way. We also have critiques on how we ran the booth and suggestions for next year's group of students.

Literature Review

As previous IQP groups have done, we began our project by reviewing the last two years of PAX IQP projects. We wanted to take the experience of the previous groups into account so that we could be better prepared to deal with any challenges they faced as well as incorporate their critiques and suggestions into our booth.

PAX East 2016 IQP

From the 2016 IQP team, we were able to gather advice about many topics, including booth design, and advertising materials. In the design of their booth, they focused on professionalism as a key aspect and use WPI's brand to attract the as many people as possible. Like the 2017 team, we instead decided to go for a different approach and tried making our booth as inviting as possible to attract the maximum number of passersby to great success. Another point touched on by the 2016 team was the importance of advertising materials for WPI. They stressed that it was important to have a sufficient supply of fliers as well as to make sure all giveaway items directly talk about WPI both to point people to the booth and serve as an advertisement rather than cool free shirts and buttons.

PAX East 2017 IQP

The 2017 IQP team also gave us great insight into booth design, paper structure and preparation of the booth before setup. The 2017 team decided to focus on openness for their booth design, but seemingly contradicted their own intent with the actual execution of the booth,

as a large table in the front middle of the booth completely destroyed any sense of "openness"

the booth would have had. We made sure to take this into account in our booth design. The

advice given by last year's team on booth setup largely encouraged setting up transportation,

hotels, and storage of materials early.

Background

About WPI

Worcester Polytechnic Institute (WPI) was founded in 1865 as an engineering school by Ichabod Washburn. WPI aims to provide a project based experience to students as indicated by their motto; "lehr und kunst" which the average WPI student can tell you translates to "theory and practice." Under WPI's educational system, students are taught the theory half of the motto in class, then must complete large projects to complete the practice half of the motto. All students must complete one Interactive Qualifying Project (IQP) as well as one Major Qualifying Project (MQP) to graduate. Interactive Qualifying Projects are often done outside of the confines of a student's major to broaden their experiences while Major Qualifying Projects must be completed within a student's major. This plan was an innovative model of education adopted in the 60's that is now being emulated at other institutions of higher learning. To these ends, WPI has established countless student project centers around the world as well as many domestic projects, such as the PAX East IQP.

About IMGD

The Interactive Media and Games Program (IMGD) at WPI is a course in which students can learn the technical and artistic aspects that go into the design and creation of interactive gaming experiences. It was first established in the year 2005, and was one of the first programs of its kind. It is an interdisciplinary major that combines many aspects of the Humanities

department with the Computer Science department. The program has gone through some large changes over the past few years. Students used to have to choose between receiving a Bachelors of Science in either IMGD Tech or IMGD Art. Now, the choice is between a Bachelors of Science in IMGD Tech or a Bachelors of Art in any of the artistic specifications of IMGD Art. These specifications include digital art, audio, design, and technical art. Students who were previously enrolled before the changes may choose to continue along their previous path without adhering to these changes.

About PAX

Penny Arcade is a webcomic about video games. In 2004, the creators of *Penny Arcade*, Jerry Holkins and Mike Krahulik, decided to host the first Penny Arcade Expo to create a convention space for gaming and all things relating to gaming. The convention was announced in April of 2004 and occured in August of 2004. Exact numbers are rough, but sources confirm that over 3,000 attendees came to the first PAX event. The PAX website indicates that exactly 1337 (LEET) people pre-registered for the first PAX.

After this, PAX expanded into different areas with more Penny Arcade Expos each year. Before long, PAX North, PAX South, PAX East, and PAX Aus (PAX Australia) ran annually in their respective locations.

The first PAX East was held in Boston's very own Hynes Convention Center, the same location that hosts Star Trek Boston and Anime Boston. Afterwards, PAX East moved to the Boston Convention and Exhibition Center (BCEC), where it has been held ever since. PAX East quickly became the largest gaming convention in the USA and still is to this very day. Each year

about 60,000 people gather at the BCEC for what used to be three days of gaming. This year, they expanded the time to four days of gaming.

Methodology

Information Gathering

When we started this IQP in B Term, a lot of our time was spent accumulating the data and information that we would need to understand in order to design and run a successful booth; after all, none of us had any experience with having a booth at a convention before now. We needed to research how exactly to go about it before we just jumped in. We often talked with students from last year's IQP group as we knew them from within our major. They gave us a lot of good advice which we followed throughout the year. We also communicated with marketing to receive advertisement materials as well as a banner and the WPI backdrop for the booth. Finally, a large amount of our time was dedicated to talking with IT to work out bugs with the functionality of the machines we were bringing to PAX to show student games and art demos.

Talks with Marketing

Marketing was extremely helpful all throughout this year's PAX IQP. We established communications with marketing very early into the year in order to properly know what was expected and needed of us, and what we could expect to receive from the marketing team as well. They provided a backdrop with monitor stands, a banner to decorate the back of our booth, and advertising materials. They also graciously funded the shipping cost of getting the monitor stands over to the convention center for us:

Alex – here is the shipping info from last year. Freeman Co did it and it cost about $645 round

trip. Let me know how I can help!

Jillian

Hello Jillian,

Would marketing be covering the shipping cost, or would the IQP team be covering it if we went

with the shipping company?

-Alex

We will pay.

Alex – I will need more details on shipping dates and times, though. I need you to tell me when to

get everything there and when to schedule pick up. Need that info today.

Thanks,

Jillian

We handled getting the rest of the materials to PAX.

Along with all the different physical materials they provided us, they also helped us on

the digital front. We worked with them to put together a landing site that could show many of the

games that were submitted this year. We were only able to get them the materials for the site

very close to the deadline of the convention due to communication problems with our volunteers,

but they pulled through and got the site up in time for the convention.

Future years should talk with marketing early so that they will get an explicit notion of what is and isn't being paid for by marketing. A few times in communication, we had some misunderstandings that made it seem like we were going to have to pay hundreds of extra dollars since we thought we misunderstood what marketing was willing to pay for, but in the end they did fund the purchases we thought they were going to. Similarly, there were multiple items which came up in conversation that we were under the assumption marketing would pay for that they did not. Explicitly laying out what will and won't be paid for early on will prevent any scares like this from happening in the future.

Talks with IT

As suggested to us by last year's IQP group, we started conversations with IT very early in hopes to get everything functional on time. We were told by previous IQP groups that there were problems getting the lab machines connected to the PAX Wifi in previous years, so we should aim for all functionality to work just as well offline as it did online.

In January, 4 months before PAX, we reached out to the IT department asking for **a.)** 5 machines to bring to PAX, **b.)** a way to log into the computers offline, and **c.)** a way to connect to the licenses for various art demo software while offline. This art demo software included Pixologic Zbrush 4R8, Adobe Photoshop, 3DS Max, and Autodesk Maya. After a thread of clarifications, IT responded on February 6th with this;

> Ok, so looks like pulse'll work so we'll get some lab machine's made and then pull them off the
> domain with local admin accounts. You can then install the games/art display and log into pulse
> with your wpi creds to get access to our network.

Assigning ticket to desktop services for figuring out how the computers are going to be put

together. You have a machine count?

Thank you,

WPI ITS

IT was successfully able to create local accounts on the five machines they set up for us to take to PAX, however, upon testing these machines, we found that IT had done nothing to make the required art demo software accessible on any of the machines while offline. This problem was due to a miscommunication in our earlier emails. When we informed IT that our computers would need some kind of remote access to licenses for software, they assumed that we meant we would be able to connect to the wireless internet at PAX to do so. Our understanding as the IQP team was that we should never bank on a secure internet connection at PAX, and we wanted all our functionality to work completely offline. By the time we were able to bring this issue up with IT, we only had two to three weeks left before PAX. As we had specified that we needed this functionality back in January, we were very perplexed as to why it had not been implemented. After a long dialogue with IT, we were told it could not be done despite the fact that we outlined a plan for how to set up the software to them. It was at this point, that we decided to fix the issue ourselves.

We logged into the machine we chose for art demos and installed locally licensed versions of the required software ourselves. Adobe Photoshop worked offline already, which was very lucky. We installed student versions of Autodesk Maya and 3DS Max for free since student licenses are absolutely free. A close acquaintance granted us access to his key for Zbrush 4R8, with which we installed and ran Zbrush with no hiccups.

Booth Design

The booth we purchased for PAX was a 10 x 20 foot area in which we had to display 4 student games, an art demo, and have space for fliers and other marketing material. Just over 1 of the 10 feet of depth was taken up by the backdrop provided by marketing, so the operable space we had to work with was 9 x 20 feet. With the input from previous years and our advisors, we wanted to give the booth an "open" feel, and tried to provide as much space for convention-goers and booth volunteers to walk around the booth as possible.

Last year's booth had a table in the front of the booth with the program fliers, buttons, and materials so that passersby were able to grab them as they walked.

Figure 1: 2017 Booth

This was a good idea in theory, but it meant that people were not encouraged to enter the booth. The table at the front seemed to be blocking access to the booth instead of making it feel more welcoming. This year, we instead opted for a 'U' shaped booth, but without the cumbersome table in the middle front of the booth, that required people to enter the booth's space in order to grab fliers and materials. This consequently allowed us to much more easily invite people to play games, and made the booth much more open and inviting. It was incredibly easy for people to walk into the space and ask questions, either about the program or about the games being shown.
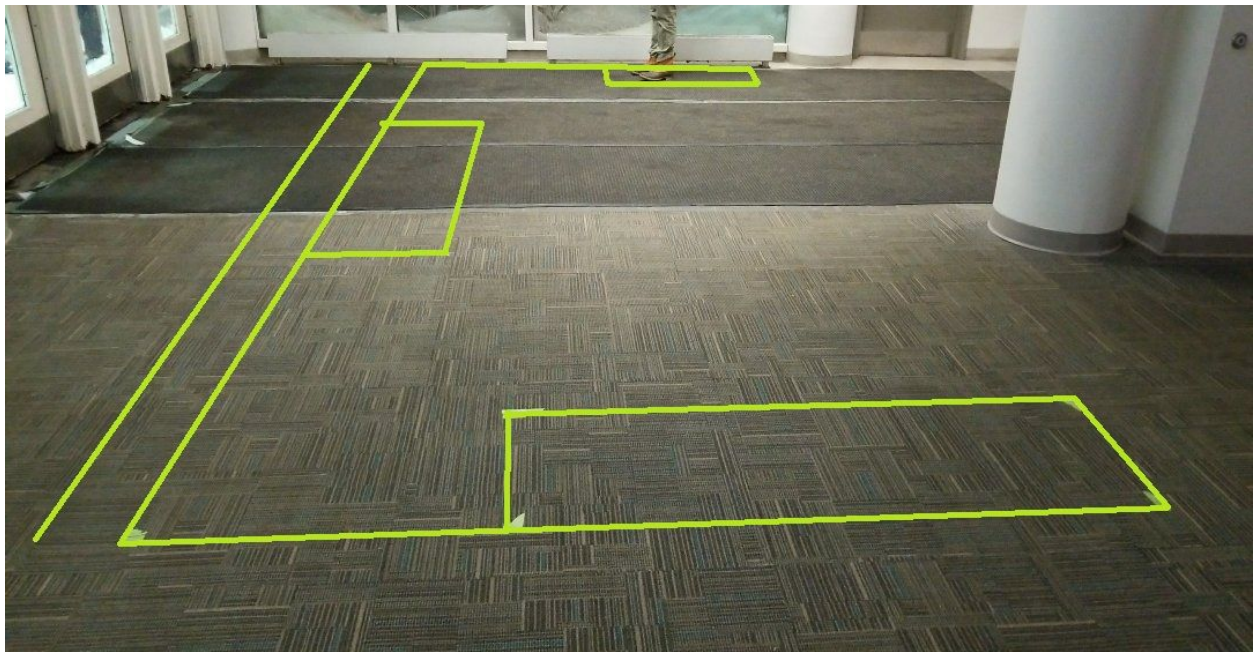

Figure 2a: Booth Layout Planning

Figure 2b: 2018 Booth

The 'U' design involved placing all the tables and games around the edges of the booth. Two smaller tables were placed along the edges, and one long table was placed along the back. The VR game that was shown was placed in a wide space in the back corner. This layout allotted plenty of table space to display all of the games, program materials, and art demos, and had a large amount of walk-in space. There were spaces for the volunteers running the booth to stand when they were trying to attract new people in, as well as when they were explaining games to the convention-goers.
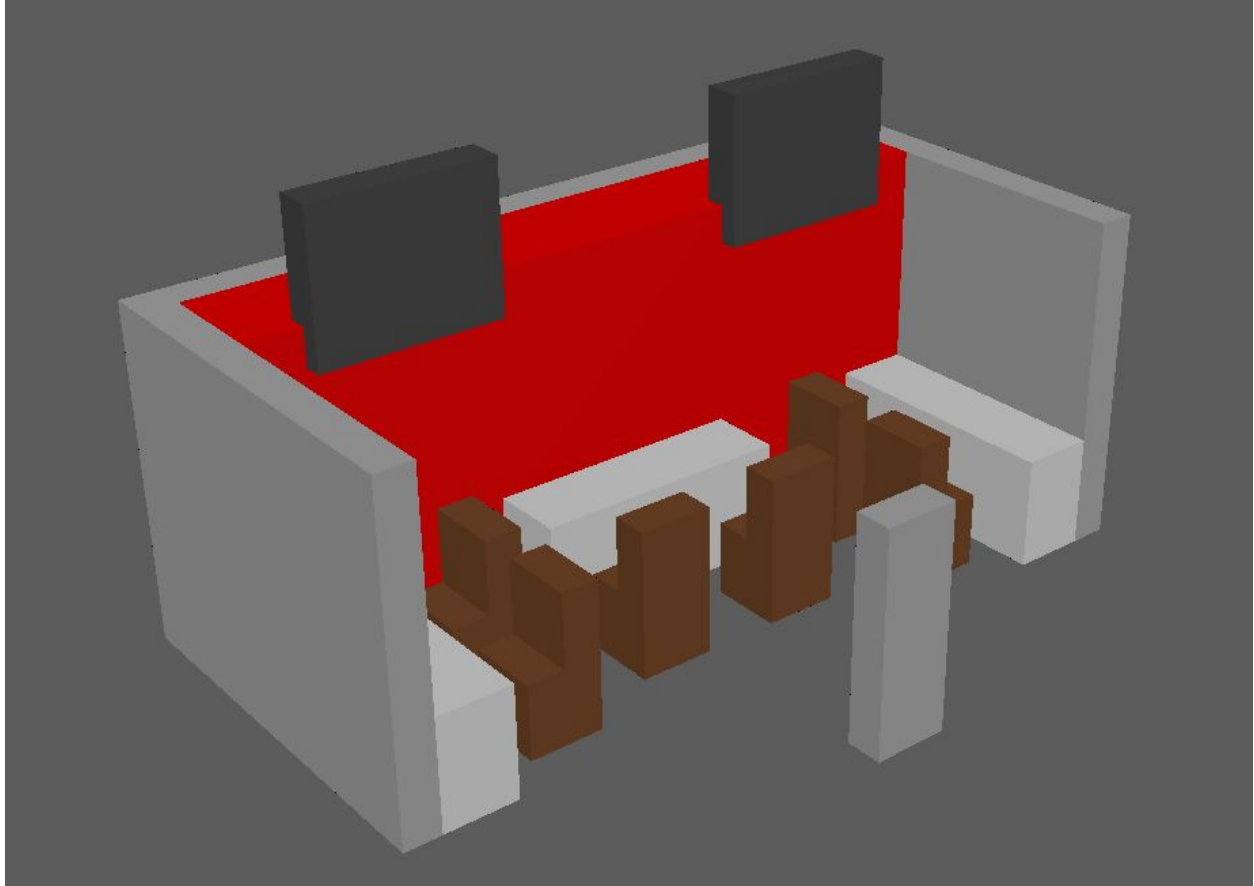
Figure 2c: Early Render of Booth Design

Like last year, we used a banner and backdrop provided by marketing for our booth. The backdrop was a great draw for people walking by, as they were able to see many different aspects of the IMGD program on display, and people interested in the program were drawn in as a result. The banner did a great job of making the booth look more official and professional, and broke up the mono-black coloration of all of the other tables to really catch people's eyes.

Advertisement

Advertising is excruciatingly important for spreading the awareness and outreach of the IMGD program. Even though the IMGD program at WPI has been gaining a lot of attention

recently for its successes and high standing among other game development programs at other institutions, it is still highly important to advertise directly to prospective students and their families. We did as much as we could to advertise at PAX through handouts, t-shirt contests, buttons, and social media. Most of our efforts towards advertisement went overwhelmingly well, especially the T-shirt contests as we gave away all our shirts during PAX.

Program Advertisement

The program advertisement is one of the key areas in which our projected diverged from the norm of the previous PAX projects. Every team before us has purchased an advertisement for WPI in the PAX East pamphlet that is handed out to con-goers. This advertisement would have cost around $2100, which is around a quarter of our total budget for this project. This year, we wanted to experiment and see what would happen if we did not spend a large chunk of our budget on this advertisement.

Throughout PAX, we determined that it would have been an utter waste of our budget to purchase this advertisement. Our booth was incredibly busy for most of PAX, and we were able to physically hand out any promotional materials to those who came to our booth. We were able to spend the $2100 that we would have spent on that advertisement on other important parts of the booth. Overall, our suggestion to next year's group (and all other subsequent groups) is to avoid purchasing the advertisement in the PAX East program. That $2100 dollars will be better spent on T-Shirts, tables, buttons, or banners for the booth.

Frontiers & Summer Programs

For the PAX booth, we were given several materials to put on display and give out at the booth. A significant portion of these were related to various different programs at WPI, including many summer programs such as Frontiers and Touch Tomorrow. Our goal with including information about these programs in the booth was to get potential students and parents of potential students aware of the programs so that, come application time for next year's programs, they would be able to apply for them if interested. This effort was met with a decent amount of success, as several PAX attendants expressed interest in the summer programs and took the pamphlets as reminders of the information they were told.

T-shirts

For PAX we repeated the example set by previous years and designed custom t-shirts for the booth. The shirts served both as uniforms for the booth volunteers as well as giveaway items to draw people to the booth and advertise WPI's IMGD program. Ensuring all volunteers were wearing the booth shirts or other WPI apparel greatly benefitted the professional representation of the booth and giving away extra shirts at the booth drew in a lot of people.

The design of the shirt was done internally within the IQP unlike some previous years. We were advised not to use bright red as the base color of the shirt and to consider a color other than the light grey used for last year's shirts so we opted to print a light grey or white design on a maroon shirt. The first design for the shirts was completed over the break between B and C term and featured a goat playing games at a computer. This design was deemed unfitting for the booth shirts because it was an unexciting design and it wasn't clear that the goat was playing games at

the computer, defeating the purpose of the design. The second design featured space invaders

shooting down at the letters "WPI". This design was much more well-received by the IQP team

as a whole and was finalized by adding "IMGD" to the design of the shirt. As an added touch,

we printed the WPI seal on the right sleeve of the t-shirt. Though the sleeve-printing was not

necessary, we believe it increased the appeal of the shirts.

Figure 3 - Last Year's T-Shirt Design

Figure 4 - This Year's First T-Shirt Design

Figure 5 - This Year's Final T-Shirt Design

We ordered the shirts online through a company called ooshirts. This ordering option

ended up being the cheapest with and without sleeve-printing but apparently at a cost. Shortly

after the shirts arrived, we noticed a small misprint on the 'M' in "IMGD". It wasn't a major issue but when we attempted to reach out to the company's customer service about the issue we were unable to get a response. Our order consisted of 50 shirts total, 24 medium, 20 large, 5 extra-large, and one extra-extra-large for $396.68. This order gave us enough shirts to give each of our 16 volunteers, both of our faculty advisors, and all three members of the IQP group a shirt while keeping another 29 to give away at the booth. Though we gave out all of our shirts (as well as the remaining shirts from last year) we found that our size distribution was less than ideal. We ran out of extra larges immediately and larges shortly after. We would recommend that future groups order a much higher percentage of larges, extra larges, and extra-extra larges than mediums. It was not a problem for us due to the excess shirts from last year's booth but we would also recommend ordering a couple XXXL shirts. One of our volunteers needed a shirt of that size and we had made our order before finalizing our roster of volunteers.

Buttons

After finalizing the t-shirt designs for the booth we created a smaller derivative design for the buttons. The design featured a 3D rendering of two space invaders destroying the letters "IMGD". In addition to the custom button design, we also ordered a set of buttons featuring the WPI seal on them. The reasoning behind this decision was that we would be able to reuse extras of these buttons every year and that it would be good to have buttons for WPI specifically. Both designs ended up being equally popular and we gave out roughly a third of our supply of each. The buttons were a great success at PAX and many people came by the booth to grab them and put them on their bags. We ordered the buttons online through a company called JustButtons

which was the same company last year's group ordered through. We ordered 1000 1" buttons of each design for a total of $380. We would advise next year's team to order 1.5" buttons instead next year because the buttons' small surfaces can make designs hard to see and concerns arose with how small the buttons were physically. Laying them out on the table for people to take with the rest of the informational pamphlets was an effective strategy for giving them out.
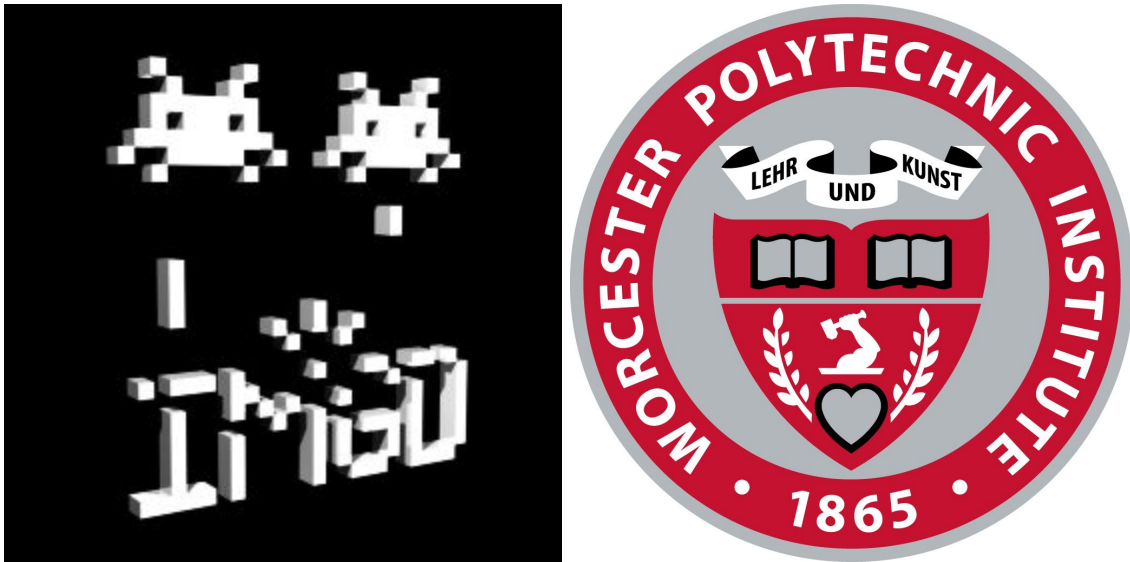
Figure 6 - Button Designs

Social Media

We attempted to follow the trends that previous IQP groups have followed in regards to social media. In the past, IQP students have used WPI IMGD's Twitter to tweet out trivia questions for people to answer for a free shirt. Unfortunately, we found that no one was coming to answer the questions we tweeted out on IMGD's Twitter account, despite how easy we made them. Our first question was "Who is the president of WPI?" and our second was "What version

of ZBrush is about to release?" Both of these questions could be answered with 1 quick Google search, yet we found no one was interested enough to take the initiative and do so.

It can be difficult to predict what kinds of attractions and advertisement will be popular at each year of PAX. Attractions develop and fail on the convention floor and people running booths need to adapt and overcome to these fast changes.

Giveaways

After our social media outreach flopped, we switched tracks for giveaways. We began a contest with one of the games at our booth, *Night Fright Flight*, in which players would win a free shirt if they beat a certain score. On Friday, players who got the high score received a free shirt. On Saturday, players who beat the score of fifty received a free shirt. On Sunday, players who beat the score of thirty received a free shirt. Through this giveaway, we gave away all of our shirts, creating walking advertisements for WPI's IMGD department.

Budget

Our budget for the organization of the booth this year was $8000, most of which went toward getting the booth running at a minimal capacity. The fee for registering the booth with PAX was $3700. In order to ensure our booth was staffed we opted to purchase 20 exhibitor badges for $2500, bringing us to a total of 25 badges to cover the 3 members of the IQP team, 2 faculty advisors, 16 volunteers, and keep 4 additional passes for additional faculty members who were interested in picking up shifts at the booth. The final setup cost for the booth was the rental of two additional tables for $356.10, bringing the total setup spending to $6556.10.

Between the t-shirts costing $396.68 and the buttons costing $380, the total cost of giveaway items was $776.68, bringing the total spending on the booth up to $7332.78. Due to surplus of materials from last year, we did not have to devote as much money to extraneous parts of the booth as previous years have. Going into PAX, the inventory from last year already had a sufficient supply of sanitary wipes, paper towels, hand sanitizer, and tissues. As such, the only extraneous purchases the IQP team had to make were extra water bottles for $10, small snacks for volunteers at the booth $10, and extra candy for the booth $11. This left our remaining budget for the booth at $636.22. We decided as a group to use the remaining budget towards the cost of a hotel room which we shared with one of our volunteers. Though it did not entirely cover the cost of the room, it greatly reduced the monetary burden on each of us. That being said, we would not readily recommend using the budget for this again. Unexpected costs during the event such as fees from Freeman Shipping Co., the company that handles exhibitor services at PAX, ended up falling to us to pay out of pocket. We suggest that next year's team plan from the beginning to pay the costs of a hotel room and parking (this ended up being $1420 for our group including the money that went toward it from the budget) because this will leave more flexibility for unforeseen expenses.

Selections Process

Game Project Selection

In January, we sat down as an entire group to make our selections for games that we would show at the PAX booth as well as which candidates we would be selecting for art

demonstrations at the booth. We were aiming to include a wide variety of games to show diversity in what our students can create. We gathered a vast amount of submissions from students. Earlier in the academic year, we had sent out an email requesting student game submissions to show at PAX. The email we originally sent on December 5th is listed below for reference;

Hey IMGD Majors,

We want to invite everyone in the major to submit games they may be working onto be shown at PAX East as part of the WPI booth this year from April 5th to 8th.

We're looking for your awesome games! Your MQPs, your class projects, your game jam games, and your personal passion projects. If you're proud of it, we'd like to see it.

Put this date in your calendar! The deadline for these submissions will be **Friday, January 19**. Even if we don't have room to feature your game at the booth, we may host it on our WPI PAX Landing website so that anyone who stops at our booth can play everyone's games later.

Even if your game isn't finished yet, we'd like to see two minutes of you demoing gameplay. Walk us through it, show us your stuff, tell us what the final product will look like, show us the concept art. If your game is selected to be shown, your team (or most of your team) will be expected to be at PAX for at least 2 days to take shifts at the booth to present the game. The rest of PAX is yours to experience!

We will also be scheduling art demos in one station in our booth. These art demos will include 2D and 3D animation as well as 3D Modelling and maybe digital painting. Each block of an art demo will run for 2 hours. If you'd like to volunteer to do an art demo, keep January 19 in mind too, all you need to do is send us some screenshots of your models and we'll put you on the team!

Still have questions? Email PAXIQP2018@wpi.edu if you need more information!

Aidan Buffum

Alex Hebert

Aaron Graham

(The PAX IQP Team)

We later sent out a reminder email to all IMGD students which read very similarly as we grew closer to the date. Submissions were due on January 18th, and shortly after, we met as a group to select the games that we would be showing at PAX. Our goals were to include at the very least one MQP game, one graduate game, and one VR game. We succeeded in those three goals as we showed *Doldrum*, a VR MQP by Henry Wheeler-Mackta, Kent Fong, Laurie Mazza, Kelly Zhang, and Matt Szpunar, *Unseeable*, another MQP by Drew Tisdelle, Isaiah Cochran, Tommy Trieu, and Alex Horton, *Obliti*, a graduate thesis by Mitchell Stevens, and *Night Fright Flight*, a freshman project by Henry Stadolnik.

Art Demonstration Selection

Art demonstrations were a new implementation that the 2017 group heavily considered implementing but never completely set up. Complete implementation of artistic demonstrations was one of our main goals from the time we started work on this project. As evident in our above email, we asked IMGD students to submit their portfolios to us so that we could select students for art demonstrations. We had six submissions including one from one of the IQP members. After reviewing each portfolio, we decided to ask for some supplementary material from the

candidates if they wanted serious consideration for an art demonstration slot. We asked each

candidate for a short demo video of what they would want to do during their art demonstration.

Of the six candidates, four sent demonstration videos. We were aiming to accept four students

for art demonstrations so after reviewing each video to make sure that these four candidates

would give a professional art demonstration, we accepted all four of them into the booth. The

four students giving art demonstrations were Aaron Graham (one of the PAX IQP members),

Brian Keeley-DeBonis, Kate Olguin, and Karen Royer. Ralph Sutter (a professor at WPI as well

as the co-advisor for the PAX IQP) also gave an art demonstration.

Aaron demonstrated 3D modeling in both 3DS Max and Autodesk Maya, Brian

demonstrated modeling and texturing in Autodesk Maya, Kate demonstrated digital painting in

Photoshop, Karen demonstrated facial modeling and texturing in Autodesk Maya and Photoshop,

and Ralph demonstrated technical rigging in 3DS Max. Overall, the art demonstrations generated

a fair amount of interest and questions from the crowds, and we suggest that next year's team

tries to implement them as well, with one caveat; try to have an extra chair beside the art

demonstration for someone to sit in and watch. Often times, we found that if someone was very

interested in an art demonstration, they would come into the booth and sit next to whoever was

performing the demonstration to ask questions and converse. However, they would always sit in

the chair assigned to the *Unseeable* game demo, creating a situation where we would need to

remove them from the chair to allow others to play the game. Additionally, we would also highly

recommend that next year's team brings a much larger screen to mount over the art demo. We

used the same size monitor as the rest of the games and we found that several visitors to the

booth had trouble seeing what was happening due to the size of the screen. The monitor stands

that come attached to the banner wall will support larger monitors and we should have taken advantage of that fact in our design of the booth.

Volunteer Process

In order to keep the booth running for all of PAX we needed volunteers at the booth at all times in addition to the members of the IQP team. Following the example set by previous years we opted to schedule two volunteers at the booth and one member of the IQP team in two hour shifts. To cover all four days of PAX this meant 32 shifts and assuming each volunteer was responsible for two shifts this meant we needed 16 volunteers. Just as previous teams have done we sourced our volunteers from the teams for the games being shown at the booth. Because we chose to present multiple games from one-person teams and one person from Doldrum couldn't make it to PAX we didn't have enough volunteers from the games alone to cover all the shifts. As such, we decided to assign shifts to our art demonstration volunteers and sourced the final two volunteers from the IMGD student body.

Once all of our volunteers were decided we scheduled several training sessions to teach the volunteers about the games being shown at the booth, the structure of how the booth was going to be run, and a brief outline of some questions to expect while working at the booth. A document containing all this information was provided to all of the volunteers for reference before PAX and multiple printed copies were kept at the booth. We found that these printed copies were helpful for volunteers refreshing themselves on everything before their first shift but volunteers were more likely to direct questions to us when they didn't know the answer.

For shift scheduling, we sent out a brief survey asking each volunteer to mark which days they were able to work at the booth as well as to indicate any times they may prefer not to be scheduled due to any events they wanted to attend at PAX. With everyone's availability in mind we put together a schedule with the goal that no volunteer would have to work more than one shift per day. All three art demonstration volunteers were only available for two of the four days and were ok with working two shifts on one of the days so they are the only exceptions to this policy.

Table Key	IQP Member	Faculty Member	Art Demonstration

Day / Time	Thursday 4/5	Friday 4/6	Saturday 4/7	Sunday 4/8
10 am - 12 pm	Aidan Buffum	Alex Hebert	Aaron Graham	Aidan Buffum
	Professor O'Donnell	Professor Sutter	Professor O'Donnell	Professor Sutter
	Matt Szpunar	Tommy Trieu	Kelly Zhang	Kent Fong
	Karen Royer	Kent Fong	Mitchell Stevens	Alex Horton
12 pm - 2 pm	Aaron Graham	Aidan Buffum	Alex Hebert	Aaron Graham
	Professor Gutierrez	Professor Gutierrez	N/A	N/A
	Henry Stadolnik	Mitchell Stevens	Drew Tisdelle	Kate Olguin
	Henry Wheeler-Mackta	Isaiah Cochran	David Allen	Isaiah Cochran
Art Demo: 1 pm - 3 pm	Professor Sutter	Karen Royer	Kate Olguin	Brian Keeley-DeBonis
2 pm - 4 pm	Alex Hebert	Aaron Graham	Aidan Buffum	Alex Hebert
	Drew Tisdelle	David Allen	Brian Keeley-DeBonis	Kelly Zhang
	Dolores Jackson	Henry Stadolnik	Matt Szpunar	Johnnie Jackson
Art Demo: 3 pm - 5 pm (Thursday Only)	Aaron Graham	N/A	N/A	N/A
4 pm - 6 pm	Aaron Graham	Alex Hebert	Alex Hebert	Aidan Buffum
	Karen Royer	Henry Wheeler-Mackta	Tommy Trieu	Brian Keeley-DeBonis
	Johnnie Jackson	Alex Horton	Dolores Jackson	Kate Olguin

Figure 7 - The final shift schedule for the booth

We made sure this schedule was available to every volunteer several weeks before PAX to ensure there were no conflicts. Aaron's art demonstration, initially schedule for Saturday, was moved to Thursday at the last minute. Though we believed at the time this wouldn't cause any issues, we realized a couple days before PAX that Aaron could not be expected to man the booth as normal while also doing his art demonstration but this issue was quickly resolved by assigning Aidan the shift. During PAX, we made it clear that volunteers had to be at the booth 20 minutes before their shifts started and stay until they were replaced. As a result, we did not have any problems with volunteers missing their shifts. We did however notice that by Sunday, our booth was overstaffed by volunteers who had gotten bored of the convention and drifted back to the booth for something to do. We are happy to say this was our only booth-staffing issue.

Results

Execution of Booth Layout

Our booth had two main design principles going into PAX- openness/invitingness, and walking space. We wanted the booth to be as open and inviting as possible, so anyone walking by would feel welcome and inclined to enter and see what the games and program were about. We felt this was an important aspect of our booth, as after studying the booth designs and experiences of the past years, this aspect was severely lacking from theirs. We also felt that walking/standing space would be incredibly important, as that seemed to be a major flaw in the designs of previous years. We designed our booth to have as much walkable space as we could, and it turned out to be a great success. Large groups could gather around and watch their friends

play the games from inside the booth without hindering the experience of people walking by or other people in the booth. This allowed for a much greater number of people to be interacting with the booth volunteers, reading the fliers and information, and playing the games than was possible in previous years.

We planned to have the main, long table pressed up against the backdrop as far as possible, but in execution that didn't end up happening. Instead, there was about 2 feet of walking space behind the table that was used for storage of materials for the booth and belongings of volunteers running the booth (which we originally said we were not going to have). Though this wasn't the most elegant execution, it did end up being extremely helpful. We suggest that in future years, either directly and strictly enforce the no storage space rule, or have a designated storage space in a cleaner, more professional fashion.

In preparation for heading to PAX, we gathered 5 computer monitors and a Cintiq computer screen to display the games. 2 of these monitors were meant to stand high above the booth so that people walking by would be able to see select games people were playing. However, the monitors we brought were not large at all in comparison to the size they should have been. For future projects, we suggest making sure the two monitors going on the monitor stands are of a decent size- adequately bigger than the monitors that are placed on the tables.

Effectiveness

The booth was extremely effective at marketing WPI's IMGD program to prospective students and parents of said students, as well as several people who are interested in working with WPI in terms of sponsoring MQP projects, working on new summer programs, and more.

There was nearly always a steady stream of people interested in the games that were on display, or the program itself.

The layout of the booth allowed for people to both walk in unhindered, grab fliers, and walk out without having to squeeze past anyone or get in anyone else's way, as well as for people to be chatting with booth volunteers about the games on display or about WPI, all while people were playing games at the stations. We greatly encourage future years to also focus on openness and maximizing walking space in their booth designs, as these aspects made our booth incredibly successful.

In terms of game choice, we would like to emphasize something for future years. When deciding what games to bring to PAX, do not only consider the quality of the games being presented. Also greatly take into account how well games will be perceived and demo at PAX itself. If the concept of the game won't get people to understand it quickly, or if even describing the game itself might drive some people away(the topics of certain serious games may do this, even if they themselves are fantastic games), maybe consider using a different game.

We suggest that future years think of novel ways to give away shirts or other prizes. Twitter may not be the greatest avenue for this, as many people aren't browsing social media as they walk around the PAX center, and telling people to go and check twitter just takes their attention away from the booth itself. Instead consider how the games themselves could be used in shirt giveaways. If a game has a score, set a score threshold that people win a shirt if they cross. If a game is short, but difficult, maybe give a shirt if a booth-goer beats the game. Keeping giveaways within the context of the booth is a great way to get people engaged while keeping them interacting with the booth itself.

Conclusion

Post Mortem

Successes

The IQP this year had several major successes. The booth design was greatly successful and did exactly what we set out to do- create an open, inviting space with lots of open walking room. This was a huge positive and beneficial outcome that improved the effectiveness of every other aspect of the booth while we were at PAX. The design allowed us to show all the games and marketing material in an efficient and well received way.

The buttons and t-shirts were very well received by convention-goers as well. The designs caught the attention of people walking by, and since the two shirts and two buttons both had very different designs, there was something to catch the eye of everyone. Having one artsy button that reflects the creative nature of the IMGD program as well as a button with the WPI logo on it satisfied both people interested in the program at WPI and people interested in the projects created by the students.

The new Art Demos were a great success and caught the attention of many people passing by. They served as a great way for students to show off their skills, and for people interested in art and animation to catch a glimpse of the classes and skills WPI teaches in the IMGD program. People regularly interacted with the people demoing their skills at the booth and asked questions about the processes of what they were doing. We highly recommend future years

to also take Art Demos into consideration in their booth plans, as this was a great benefit for the booth.

Communication this year was fantastic, once the volunteers were all gathered together. We set up a server using the service Discord in order to be able to swiftly communicate with everyone involved with the IQP. This server also served as a way for people to communicate when they had problems or issues while PAX was happening, as we had everyone put their contact information on the server. This meant that anyone could contact anyone else whenever there was a problem or issue, and this greatly helped communication while the convention was taking place.

Shortcomings

Though the booth was very successful, there were a few shortcomings we encountered while running the booth. Fortunately, we encountered very few technical issues this year, and were not missing any critical components of the booth (besides two chairs, which would have cost $120 each if rented from the PAX convention center). The technical issues we did have with specific games were solved quickly by contacting the teams.

At the beginning of the organization of the volunteers, before we got the teams onto the Discord server, communication was very poor. Several of the volunteers took extremely long amounts of time to even respond to the most basic questions and requirements, and this hindered our ability to move forward with some steps on our side of the IQP. On the same note, two of our volunteers were underprepared for the convention and did not fully understand what they were supposed to be doing at the booth until the ends of their first shifts.

Our engagement on social media was lacking in some areas as well. Once we discovered

that no one was engaging with the IMGD twitter accounts for our giveaway trivia, we simply

stopped tweeting trivia instead of trying to better find a way to send people to the twitter

(although we later found a better solution to this through having giveaways be directly linked to

the booth). We also worked with marketing to get a website created to display many of the

games that were submitted to PAX. However, this too ended up falling through, as we had no

way of sending people to the website, and the url of the website was too cumbersome for people

to remember and type in manually.

Suggestions for Future Projects

As stated throughout the paper, there are many suggestions, tips, and tricks we have

discovered and would like to partake onto future projects. In terms of booth design, making the

booth as open and inviting as possible worked out extremely well for us. Likewise, larger

mounted screens would be more effective for drawing people into the booth and showcasing

what the booth has to offer. We believe it is important however to make sure to have a

designated storage space, or strictly enforced rules barring volunteers from storing items in the

booth as to keep a more professional atmosphere.

In terms of design for the merchandise, we have several suggestions. It is a good idea to

keep buttons simple, and shirts impressive in their design. The simpler the button, the better it

will look from a distance, as buttons are extremely small. Complex designs, like the one from

this year, might look good from close up, but it would be better if they could catch eyes from any

distance. Shirt designs are large enough, however, that they show details and complex designs very well from a distance, so the more interesting they look, the better.

When working with others, it is important for you to follow up on emails and communication, even if you are waiting on a response from the other party. Do not just wait for replies, as that just decreases the amount of time you will have to fix situations if things turn out to have problems. It is also important to keep tabs on the volunteers before the event. Not all of our volunteers were as well prepared as they should have been for the booth and this could have been fixed with more frequent contact between us.

In regards to securing computers to use at PAX, our suggestion to next year's IQP is to contact IT even sooner than January and be very explicitly clear with what you need. Despite early warnings, IT was unable to completely help us with what we needed. Test the functionality that you requested as soon as it is ready and pressure IT to fix it as soon as possible if it does not work. If there is a problem IT cannot help you with, do not be afraid to work around them with your own solutions.

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