A SHORT AND SUPERFLUOUS GUIDE TO YOUR NEW NEW MEDIA ART PROGRAMMER/TECHNOLOGIST

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ABSTRACT

Thank you for your interest in a new technologist or programmer. While every effort has been made to bring you a defect free instrument with the latest technology, don't bet on it. Communication between new media artists and the technology minded seems like a straightforward endeavor as they presumably share the same common language but, in truth, that's not always the case. Like working with any evil genie or the devil, you will need to be very particular about how you phrase your request to the programmer or technologist. Using technical jargon can slow things down appreciably as the programmer/technologist is required to use such words with precision, and will be compelled to explain such terms at great length when they are not used correctly. Likewise, being much too specific about requirements can eliminate interesting possibilities or conversely, lead to an error condition whereby some elements will eventually found to require technology that "simply isn't possible" with current (or even possibly future) technology. Erring in the opposite direction is even worse –– using a vague or general description tends to put any development on hold until a concrete goal becomes clear. Where's the common ground then? The language many artists and technologists have in common is pictures. block diagrams, structural illustrations, charts, maps, schematics, stick figures, etc. Draw first, ask questions later. This gives way to a lengthy series of discussions and drawings, tests, fixes, and new features but expectations don't always align –– questions arise of creative input and when, for example, is the project is finally complete. This guide presents one limited perspective navigating the artist/technologist collaboration from the other side.

PAPERS

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THE REALITY

It would be nice to have a manual outlining a simple set of procedures in order to facilitate collaboration between an artist and a programmer/technologist but, like any human relationship, things often progress in unexpected ways. As a programmer specializing in electronic art technologies for Indiana University's Advanced Visualization Lab, I often field requests for technological assistance from artists and musicians. These requests range from simple requests for equipment to solving small scale problems, from building hardware and software tools, or devices, to full-blown collaborations within a multi-disciplinary team. Each of these tasks is fundamentally different, but each begins the same way – with a request.
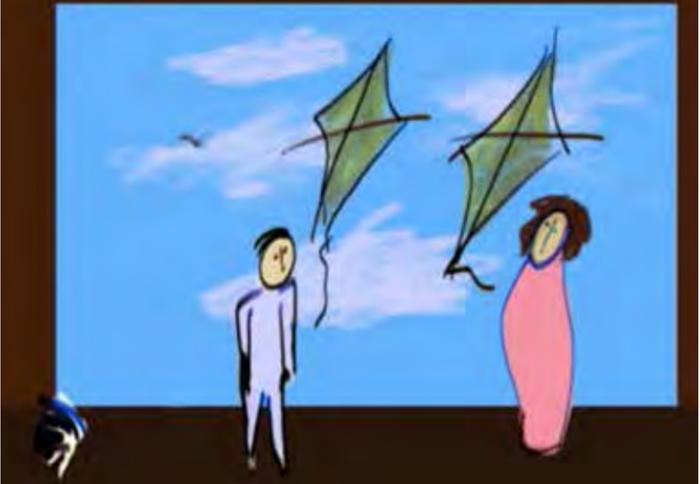
A 0000010000000000 Mile Journey Begins with Step 00000001

Put simply, requests begin with the statement of a problem. Computer programmers and technologists are used to the idea of building things based on a specification defined by a clearly defined problem. Requests can be quite specific such as, dumping a box of Arduino components out onto a desk and asking to have them put together to, for example, wirelessly collect calibrated flex and accelerometer sensor data from a dancer and send it to MaxMSP (Tip: never underestimate the value of presenting a fun technological challenge). Or requests can be something more general and bigger in scope. This is where things can get very interesting.

Since most artists and musicians don't often arrive at my door with a box containing everything necessary for building a very particular thing, there's the important preliminary matter of refining the specifics through a series of discussions, questions and answers (aside from the dreaded "can you list what can you do for me" question), and suggestions. A narrowly defined and easily described goal would make things quick and easy, but we can't always have everything. To make sure everyone is working on the same goal, it's good to start with the general idea of a finished product performing some specific, but simple and limited function. Focusing on one particular technology (one year everyone wanted Wiimotes) or jumping right off into technical aspects and jargon isn't necessarily going to speed things up.

THE REFINERY

Getting a firm grasp of that basic core idea sounds simple enough, but it isn't always so. During a set of meetings to outline the visual aspects, interactive programming, and hardware requirements of the opera Annunciation + Visitation (2009), the text for the music was provided. As a result, each team members soon discovered that we each all had a completely different idea of what was supposed to be happening during any particular moment during the performance. The director had been remotely discussing his vision with the virtual environment artist who then outlined the resulting ideas to the technical team. The communication problem was a very basic one, resulting from translating a musical concept to a visual concept into words. Once we settled on the idea of using storyboards, the artist provided an image, textual context, and dramatic vision. Then, things proceeded smoothly and came together quickly giving us plenty of time to tackle certain technical challenges.

I. The little boy was looking for his voice. The king of the crickets has it. In a drop of water the little boy was looking for his voice.	**Ancient Voices** **George Crumb**
	Both boy and soprano pick up controllers by which they fly kites. These kites are decorated with some image evoking youth, spring, birth (I'm seeing greens?).

COLLABORATIONS AND DIAGRAMS

Collaborations for a programmer/technologist aren't exactly the same as writing code and setting up hardware to perform certain functions in service of solving a problem and achieving a particular goal. Rather, collaborations involve consuming an idea and adding a certain something extra while building on and transforming the artist's idea to reach a new shared vision owned by all parties. Ultimately, it's a matter of chemistry.

Working on a creative team with a lighting designer, a videographer, and a visual artist to design interactivity for an even larger and much more complex opera was quite a technical and creative challenge. Luckily, a combination of caffeine, adrenaline, lively discussions, and a two month sleep deficit can make a potent spur for tapping into one's unconscious and creative side (although my technical nature still has the suspicion that there must be a better or at least less exhausting methodology for realizing creative potential). Even so still, there has to be a seed to start with and, fortunately, the conductor had already tackled this issue by digesting, analyzing, and condensing the opera's movements into a simpler form outlining context, symbols, etc. – your basic "Cliff Notes", but with links to the music and lyrics providing us with both compass and bible. The results (software is never completely finished, you know… unless there's a hard deadline like ticket holders wandering in to take their seats) somehow managed to combine all the different disciplines into a single whole – the lighting complimented the art, video, and the live performance while also providing cues to the software which collected data from the conductor's baton to trigger interactive effects modifying the art and video.

ONE SMALL LEAP TO CONCLUSIONS

If there's one single suggestion to be taken from our efforts in various multi-disciplinary collaborations, it's to first have someone lay the groundwork by creating visual aids for collaborators before teams from different disciplines meet en masse for extended periods. Experience has shown that storyboards, annotated diagrams, and similar visual aids can greatly speed up the collaborative process by providing a unifying vision and points of focus allowing members to spend more time working together towards clear goals. Programmers, technologists, and many other disciplines routinely use drawings, diagrams, and brief outlines of processes and concepts. So it's no surprise that something as simple as storyboards and diagrams can help to quickly build bridges between the disciplines. While a general purpose manual for collaborations between artists and technologists isn't entirely practical, there are some simple ways to enhance communications.

ENDNOTES

[i] *Annunciation + Visitation* Dir: Margaret Dolinsky, Virtual Environments; David Dzubay, IU Music New Music Ensemble; Timothy Nelson, American Opera Theater; Sponsors: Fundacion Bilbao Arte Fundazioa Bilbao Spain, IU New Frontiers Program, College of Arts and Humanities Institute, Pervasive Technology Institute Advanced Visualization Lab, Jacobs School of Music, Hope School of Fine Arts, Institute Digital Arts & Humanities, American Opera Theater, Bloomington Early Music Festival. For more information see http://dolinsky.fa.indiana.edu/A+V/

[ii] The ultimate collaboration was conceived as an opera Passion with Tropes, orchestra, actors, artwork, and audience on the stage. The house seating was closed off and remained empty during the performance. Everyone there became a piece of the production. May 2011 Indiana University Ruth Halls Theater. For more information see http://www.indiana.edu/~passion/tropes/index.html