Wave Cave Proposal : Cathode Ray Tubes

Create and upload a PDF with the following information:

1. Synopsis of the Piece (50 to 100 words) – What exactly will we see and hear as we enter the gallery and explore the work.

Four old CRT TV’s are set up on small TV stands each with a clear plastic box that contains a Nintendo hardware emulator (Retron) with its circuitry exposed. The TV’s and the Retrons are all connected in one large 8bit glitch feedback loopAs the interactee approaches one of the TV’s they are able to lay their hands on the bare circuit board in effect inserting their body into the installations circuitry, effecting the video on all four of the displays. The Video from each of the Retrons is sonified in real time using custom circuitry and amplified using hidden monitors.

1. Detailed Description of the Piece (500 words or less) – Tell us more about your approach both aesthetically and technically.

Four Retron NES hardware emulation consoles are removed from their original casing and the critical circuit boards are exposed to the outside and placed in clear plastic cases exposing all the wires and circuitry. When the Retron consoles are turned on with no game cartriges inserted the circuitry ‘floats’ creating interesting simple geometric glitch displays.

Each of these repackaged “video synths” are extremely sensitive to electronic fields and the explosed circuit boards can be manipulated by touch or static electrical fields (created by the CRT TV’s) changing the appearance of the resulting video.

Each of these synths are placed a few inches in front of a CRT TV (close enough for the CRT’s electrical field to start to interfier with the Retrons internal circuitry. Whatever is displayed on the TV in which the synth is placed in frount of will in turn manipulate the workings of the circuitry of that Retrono. Each Retrono’s video output is plugged into the TV on the left thus connecting all four synths and TV’s in one large feedback loop.

While the system will generate interesting visuals and sounds on its own interactees are encouraged to “play” the retronos by either touching the explosed circuit board, bridging multiple retronos with their body or by simply moving the synthes closer or further away from their host TV’s.

Audio is produced in two different ways for the instaation. Firstly the audio from the Retrons is played out of the TV’s speakers directly. Secondly the RF video signal is sonified using custom circuitry is amplified and lightly treated to add more depth and complexity to the soundscape.

Cathode Ray Tube strives to bring people closer to the technology they use and exploit every day by having people hear, touch and even feel electricity. Cathode Ray Tubes seeks to explore our relationship with electronics and electricity by visualizing, sonifying and exposing aspects of electronic circuitry that is usally hidden from our view. are encouraged to literly touch exposed circuit boards to create feedback loops between multiple gutted NES emulation video game consules and old Cathode Ray Tube TV’s.

1. A diagram of the physical layout of the piece in the gallery

Cathode%20Ray%20Tubes%20-%20Gallery%20Layout.ai

1. A system diagram of any electronics

Cathode%20Ray%20Tubes%20-%20Electronics%20Diagram.ai

1. Pertinent links to your current / previous work that may help us understand the work you are proposing

Bitdepth.com – portfolio site –

\*\*\*\* snapperbot footage \*\*\*\*\*

\*\*\*\* all POF videos for this piece \*\*\*\*

\*\* for related work submit the circuit bent SNES footage \*\*

\*\* video of toys \*\*

1. Bio (200 words or less)

Nathan Villicaña-Shaw is a MFA in the MTIID department at CalArts where he obtained his BFA in the same department. A programmer, musician, digital artist and creative technologist Nathan’s research focuses on examining, building, exposing and subverting systems. He enjoys creating work that explores and questions our relationship with technology and living in the ever changing modern world. Nathan’s graduate work focuses on the concept of OpenHacking or the creation of art through exposing systems and creating inheriantly open systems with the intention of subversive insertion by users. Nathan spends most of his time creating installation art, creating new instruments, or hacking electronic systems. You can find out more about Nathan on his website bitdeph.com .