





ART <sup>2</sup> **DRONE** is a catalog exhibition that brings together the work of artists who investigate drone technology and its cultural implications. The artworks will highlight political, social, scientific and artistic impacts of drone technology. The catalog is distributed by the College Art Association and **v1b3** as a printable PDF.

v1b3.com collegeart.org/art2drone

#### A SPECIAL THANK YOU GOES TO THESE ORGANIZATIONS WHO HELPED TO MAKE THIS PROJECT POSSIBLE.



ART WORKS.



Columbia



ARTspace was initiated twelve years ago by CAA's Services to Artists Committee. It has grown into one of the most vital and exciting aspects of CAA's annual meeting. A conference-within-the-conference, ARTspace presents programming designed by artists for artists and is free and open to the public.

ARTspace is made possible in part by funding from the National Endowment for the Arts.

v1b3 is an artist group that develops international curatorial projects that aim to present media artworks in various locations.

Columbia College Chicago is an international leader and recognized pioneer in arts and media education, teaching creative students to develop authentic voices and meaningful skills.

Design is the driving force behind La Salle's DArt digital arts program. The program offers students opportunities to become professional designers. At the heart of the program is the belief that media artists have a special role to play in making the world a better place.

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ART<sup>2</sup>**DRONE** is a catalog of art project that explore diverse and critical approaches to "drone" technologies. In recent years radio controlled and mobile application driven quadrocoptors have become ubiquitous toys simultaneous with greater public awareness of commercial and military uses of UAVs (unmanned autonomous vehicles). Artist have adopted and adapted these tools to their practices.

ART<sup>2</sup>**DRONE** is the fourth in a series of experimental catalogs that explore artists' responses to new technologies. Previous project include **Scan<sup>2</sup>Go**, **Art<sup>2</sup>View** and **Art<sup>2</sup>Make** which focus on QR codes, augmented reality and 3D printing respectively. Each publication includes a feature for each project with links to a rich media web site and critical essays that extend the viewing experience.

ART<sup>2</sup>**DRONE** would not have been possible without the dedication of many collaborators. My thanks and appreciation goes to Professors Meredith Hoy, Abigail Susik and George Monteleone for contributing critical perspectives that shape how these works are understood. Artist Michelle Graves designed the ART<sup>2</sup>**DRONE** logo, a work that simultaneously references the tension between the mechanical and the organic. The logo, featured on the cover of this catalog and the website, has also been made into vinyl stickers that will be distributed at the College Art Association Conference.

The Services to Artists Committee of the College Art Association sponsored this project as part of the 2015 Annual Conference. I would like to express my gratitude to Conrad Gleber, Chris Manzione and Gail Rubini from the media arts collective v1b3 who organized the project, designed the catalog and companion website. Finally I would like to thank the administrative staff of CAA for sharing this four-year journey that gave critical representation to forms that often seem fringe.

Mat Rappaport Associate Professor Columbia College, Chicago

> KEY WORDS DONE, DRONING, ATTACK, FLY, UNITE, SELFIE

# **George Monteleone**

LaSalle University

#### LIMINAL AIRSPACE

It is a constant sound. A set of tones, a complex hum. An ambience, perhaps becoming part of what we perceive as the noise floor of our environment. Eventually, it might cease to be differentiable: the refrigerator, outside traffic, midnight sewer maintenance, urban helicopter rotors, cicadas. It also works visually: a field of gray as the gestalt product of a random array of millions of bits of black and white, an undetectable signal.

#### What did you see? A face or a word?

it is a global component of spiritual and musical history: the om, Hundustani and Carnatic music, Japanese gagaku, the Australian didgeridoo, Scottish pibroch, La Monte Young, doom metal.

#### Sunn O)))

It is a harmless apian familiar. Fatherless in origin, straight from the queen bee's egg. Slow, he gathers no resources, a little sex machine, furry and without a stinger, to be softly petted with a gentle fingertip, a docile meme.

#### CARL MY COUSINS PET BEE

It is a military killing machine, an international controversy. It has recently become an ubiquitous colloquial vehicle. A light spectacle at clubs and raves, a hovering, illuminated, anthropomorphized voyeur; it is noticed briefly, easilyaccepted, considered non-invasive and more fun than a concert photographer.

#### Thursday Rave (pt.3 FT A Mini Drone)

The satellite image has become a commonplace access tool, as is dropping down to a virtual street view, which provides limited virtual routes through terrestrial space. The aerial intermediate, in our current virtual landscape, is a liminal space between the familiar satellite map and the street view. An oft-blogged quote from Wikipedia is apt enough: Liminality is sacred, alluring, and dangerous. With personal, small-scale flight, there exists the prospect of access to liminal airspace, to explore and map it, in putative anonymity with minimal risk. The sky-dreaming earthboun no longer need flight simulators,



# planes, or licenses. We can explore and demystify the sacred and alluring while evading the danger, though in doing so, the space may not remain liminal for too long. Perhaps this is the nature of mapping frontiers.

#### DroneTube.tv

There is also, of course, the push to commercialize, and Hollywood is a proponent and catalyst of civilian and commercial use, enjoying recent exemptions from the FAA. Drones have recently found their way into scripts as well as onto film sets. In Interstellar, Christopher Nolan's aviation engineer protagonist (Matthew McConaughey) hijacks and salvages a former military UAV to supply his dying terrestrial farm, not long before being sent off to the dark corners of space and time to help save humanity.

#### Amazon Prime Air

Unmanned craft have played the hero for decades, having been sent on exploratory missions to areas humans do not yet have the means to control: millions of miles to planets and moons, beaming back data about uninhabitable, theretofore imaginary landscapes. Well, they have not been considered "drones" so much as "probes." Though the latter is a bit of a disagreeable term, they have been given far more agreeable names: Messenger, Pathfinder, New Horizons, Pioneer, Venera, Voyager, Spirit, Opportunity, Curiosity. Scientific machine vessels of positive affect, easy to root for as they struggle along through harsh territory, sending us marvelous images despite now-obsolete photographic technology, like images from some forgotten past. We have cheered them on as they have covered land distances equivalent to a moderate bicycle ride.

## Out Of This World Records! (NASA)

They are adorably, tragically inept in the face of the most basic of terrestrial problems. Spirit, disabled for nearly a year after getting stuck in soft soil, was recommissioned as a stationary unit before succumbing to a harsh Martian winter. NASA abandoned contact attempts in 2011. If only it had been equipped with a quad-copter, or even a balloon.

#### Rotorcraft as Mars Scouts

As rare explorers of unknown territory, unmanned craft in space cannot yet overwhelm the liminal spaces they visit. This makes them endearing: persistent workers in the face of adversity, out in the terrible unknown, sampling specimens and computing data until they can sample and compute no more. This sensibility is not limited to the extraterrestrial: we can send them to the limits of nature, lava flows and polar ice caps, bursting and dripping with equal parts objective curiosity, spectacle, and romantic tragedy.

#### Watch This Drone Fly Right Into An Erupting Volcano (Buzzfeed)

As for government sanctioned commissions, they are less kindly branded in nomenclature: the notorious X-37, surrounded by internet speculation on its surreptitious role in systems of control: space-to-space surveillance, an eye on China's space station, jamming satellite signals, and so on—a more sinister turn on the notion of Curiosity. As things comes back down to earth, the names become considerably less cute: RQ-7 Shadow, RQ-12 Wasp, MQ-1 Predator, MQ-9 Reaper, RQ-4 Global Hawk, RQ-3 Dark Star, RQ-14 Dragon Eye, RQ-11 Raven, MQ-1C Warrior, MQ-8B Fire Scout. For vehicles whose operations are shrouded in classification, the names seem to make the intention clear enough. So, the aura of liminality remains after all, but with menace. Without a clear context, liminal intrigue can just as well give way to practical anxiety, from cloaked U.S. military operations to our neighbors' hobbies. Images crop up on social media, through the focus-softened mesh of a window screen:

Man test-flying a drone outside the apartment #ohno #bushwick #bushwhack (mdubs888)

A flying lens. A ghost in the noise, as in the film Poltergeist, the titular "noisy ghost" of German folklore historically revised for a media future, emerging from random video signals. What is it about ghosts? Perhaps the otherworldly ability to move uninhibited, to occupy all corners of space and time. Invisibility. The sense of lurking, the fear that we might turn around to suddenly find it, on the other side of the window, at the foot of the bed, seemingly undeniable but gone without evidence with a blink and a whisper, blending with the surroundings, difficult to detect, a quality shared by birds, aquatic life, and military aircraft.



#### Countershading

Should one find a drone loitering around the apartment window, it would seem perfectly reasonable to haul it in for questioning. Get This: Drones that Attack And Take Over Other Drones Find out it if it is up to something, or if is just carrying an innocent payload of Pamperstm. Pull its data and have a look, or if that is not possible, swallow hard while wondering if it was streaming. What does this call for? Are drone detectors, hijackers, and jammers our latterdaytin foil hats? Or is this only reasonable? The West does experience the horrific physical potential of this technology firsthand; the pressing issue here tends more towards privacy. Does this portend an aesthetic, social, and political future in yet another liminal space mediating utopianism and paranoia? We can consider how best to respond: in dialogue, in protest, in poetic appropriation, in attempts at redefinition, in nihilistic exhibitionism, in a defiance of the surreptitious, in a process of ever bolstering awareness. It is time to consider the Spirit and Opportunity of this technology, to counteract the objectives of the Shadow and Reaper, and to establish an imperative to send these drones where they belong: if not in full view, to be accepted or rejected by a knowing public, then at the very least, to the ends of nature, poetry, and critique.

#### **Abigail Susik**

Associate Professor Willamette University

#### The Drone in Social Imaginaries

As new technology impacting the cultural sphere, the drone distinguishes itself in its unusually disparate applications as an amusing hobby toy, a banal commercial tool, and a terrifying prosthetic weapon. The drone has a double affective potential to appear as both laughable, endearing, and pet-like— or— as nightmarish, uncanny and symbolic on a primal level. If the drone itself currently possesses a riven identity given these wildly divergent applications, then it is no surprise that social imaginaries about the drone are likewise fragmented. Given the incredible quotidian proximity of advanced technologies to our bodies in the current moment, and also the heightened pace of the production, development and obsolescence of these technologies, the manifestations of what might be called technological social imaginaries are possibly more conflicted and illegible than in previous spans of modern history.

Surveying the contributions to the Art2Drone exhibition, it becomes clear that what I call in a sociological sense "social imaginaries," or the intersection of shifting collective and individual imaginative attitudes, are accordingly divergent and impassioned in relation to the drone at present. As evidenced by these curated works, drone technology awakens a remarkable range of ethical, anachronistic and psychosomatic reactions. Art2Drone conjures mythologies and prophecies from ancient religion and myths; anticipates apocalypses, dystopias, and techno-futures; suggests the genetic evolution of technology as anthropomorphic, zoomorphic, or A-life; revivifies profound metaphysical fears and fantasies of omniscient surveillance, fatal overexposure, and imminent mortality.

Beyond the question of art shaping social imaginaries, apprehending and comprehending some of these diverse iterative paths of drone art offers the opportunity for rapport with and implementation of a kind of drone technology that escapes the dominance of media rhetoric and also the pragmatism of the commercial sphere. Between the extremes of technophilia and technophobia await myriad avenues of possibility, if not necessarily promise. The Art2Drone works come together as a kind of inadvertent think tank for the extended pro-suming or DIY applications of drone mechanisms, just as they condense and clarify latent and explicit cognitive reactions to the wave of drone production— in particular the unique concatenation of dread and wonder that often accompanies new technologies that have evolved out of war cultures. While the drone is now obviously a war machine, reconnaissance tool, hobby toy and vehicle of commerce, among other things, Art2Drone conjectures: might it not also in the future be a dancer, landscape painter, musician, friend, pestilence, savior, god or



#### pranksterish vandal?

Like the Italian Futurists, who fervently responded to the advent of automobile, aeronautic and bomb technologies in the first quarter of the twentieth century, contemporary artists recognize the dialectical implications of the drone as a remarkable novelty that paradoxically also signals the waning of a range of cultural phenomena. The cultural relevance of the landscape tradition as defined by the horizon line, the privileged physical mastery and training of the artist's eye, and the aesthetic insularity of "represented" reality, among other things, are all put into further question by the drone's imaging capacities. For the Futurists, the car, airplane and mortar presented an immediate redefinition of aesthetics on both a macro and micro-level, proclaiming the destruction of the edifice of tradition as such, but also unveiling stylistic effects like blurred motion, all-over composition, and radically disproportionate scale. Yet, whereas the Futurists dogmatically identified with the advantages of these new technologies and celebrated the hybrid aesthetics of beauty and violence resulting from them, contemporary artists are unable to assemble in a unified avant-garde to take a unanimous position on the ramifications of the drone for culture and art. Certainly the aesthetic qualities of the drone as ghostly, uncanny, automatist and hypnotizing are explored in artistic responses such as the examples included in Art2Drone, however as of yet there have been understandably no proclamations comparable to the radicalism of the Futurist orientation. The vagaries of historical relativism considered, the current aesthetic equivocation about the drone is productive. This is the case even if the equivocation does not for the most part stem from a position of social agency but rather from the confusion of the media vortex, a now-entrenched cultural habit of techno-pessimism, and most importantly, the extensive deployment of the war drone by the United States in a sequestered manner.

However, the question of agency does play a part in the expression of social imaginaries about the drone through art. Unlike the Futurists, who did not employ their favored emergent technologies to make art itself, probably due to the fact that these technologies were either unobtainable or unwieldy, contemporary artists just as frequently make art with drones as they do about them. Accessibility and adaptability are vastly increased in the case of the drone, hence art and techne are able to merge once again to a notably heightened degree— and with that art and warfare also become more proximate. The ability to utilize the drone for art production offers a historically unique opportunity for artists themselves to shape the evolutionary path of this technology. Due to its prosthetic and visualizing capabilities, the drone is readily assimilable to the artist's practice as a method of shaping and reflecting the physical world. This practical application of the drone for art is highly significant, but nevertheless such developments have not yet outweighed the immense psychological impact of the other kind of drone unavailable to artists— the spying and killing war drone. This twofold identity of the drone as approachable tool and foreboding, distant force, render it complex and explosive aesthetic material. A relative of the balloon, the unmanned submersible, the security camera, the helicopter and the satellite, the drone is not so unprecedented in its traits that it exceeds historical associations. Yet, the implied potential of the drone to achieve an alarming level of ubiquity, oversight and mortal dominance in the atmospheric layer between earth and space, sways its appearance in social imaginaries and also therefore in art.



### Meredith Hoy, PhD Assistant Professor University of Massachusetts, Boston

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Meredith Hoy, PhD Assistant Professor University of Massachusetts, Boston

Nadav Assor Ophan

www.nadassor.net/2014/10/ ophan/



#### STATEMENT

Ophan is an installation incorporating a physically restrained, customized hexacopter as a mechanized cantor, flying and reciting all 28 verses of chapter I from the biblical book of Ezekiel. When Ophan is at rest, with no people present at the center of the space, the hexacopter softly hums, whispers, or even sings to itself (its favorite song is "Someone to Watch Over Me"). When a presence is detected in the space, the hexacopter's rotors turn on and it takes flight, struggling against the cables that restrain it, singing and gesturing its way through all the biblical verses mentioned above, as sung in Hebrew in the Yemenite tradition by the Cantor Dan Jacobi. The Yemenite style of Cantorial singingchanting (cantillation) is monotonous - that is, there is no melody, rather a droning recitation similar to other eastern musical traditions. The cantor who recorded the verses for Ophan tuned his voice to the pitch of the buzzing generated by the hexacopter's rotors, so that they create a harmonized droning sound when combined. At random intervals during the flight, Ophan's chanting is interrupted by a live broadcast of the Israeli Defense Force radio station (Galei Zahal). When the broadcast takes over, Ophan's gestures change as well, it wildly flashes its lights and enters a semiepileptic seizure. Ophan is in the air only for a short while, and thus takes many flights to finish reciting the entire chapter as it usually manages only 34 verses before landing again. Ezekiel 1 is one of the main roots for a branch of Jewish Mysticism called "Merkabah mysticism". This name refers to the esoteric tradition concerned with achieving visions of the chariot of god and it's component angels, usually via a shamanic outofbody experience. The installation is named after one of these angels in particular – the "Ophan" (a spoked wheel in hebrew). The Ophan as described by Ezekiel is essentially a mechanical being, a flying entity that is a wheel within a wheel, both of whose rims are covered with eyes. It is remotely driven by the spirit of an anthropomorphic angel, the Cherubim, that is "within it"...



# Andrej Boleslavsky Crash!

http://id144.org





#### STATEMENT

What happens if you connect the Drone and the Bitcoin exchange?

AR Drone 2.0 is controlled by a patch connected to Bitcoin exchange BTC-E. Real-time trading data control the thrust of the drone engines. Ifyou like the thrill of on-line trading of cryptocurrencies, this data eventification tool gives even more drama to it.

Andrej Boleslavský is an independent artist purposing technology in the fields of new media art, interactive design, physical computing and 3D printing. His primary inspiration comes from cross disciplinary interaction and the free exchange of ideas among collaborators. His work also maintains a strong fascination with the entanglement of nature and technology

# PAUL CANTANESE VISIBLE FROM SPACE

www.paulcatanese.com/ www.paulcatanese.com/artwork/visible/index.html



#### **STATEMENT**

Visible From Space is a thought experiment (2009 - present). It is an open series that exists in multiple materials video, relief prints, installation, projection, handmade paper, artist's books, found objects, field notes, interviews, essays, and site specific events. In this work, I am conducting a thought experiment about the phrase visible from space which erupted from a fanciful supposition to create drawings on the Earth so large they would be visible from the moon. For Art2Drone, I am presenting a field report outlining those speculative actions in response to this point of departure conducted in October 2014 while working at the Playa Artists' Residency in Summer Lake, Oregon. This project is funded in part by a grant from the Efroymson Family Fund. Additionally, this program is supported by a grant from the Illinois Arts Council Agency.

Paul Catanese is a Hybrid Media Artist, Author, Associate Professor, Director of the Interdisciplinary Arts & Media MFA Program at Columbia College Chicago, ISEA International Board Member, and President Emeritus of the New Media Caucus. His artwork has been exhibited widely including at the Whitney Museum of American Art, the New Museum of Contemporary Art, SFMOMA Artists Gallery, La Villette and Stuttgart Filmwinter. Paul is the recipient of numerous grants and awards, including commissions for the creation of new artwork from Turbulence.org and Rhizome.org.





# STERLING CRISPIN CHARON

www.sterlingcrispin.com/charon.html www.sterlingcrispin.com/

#### STATEMENT

Charon is an interactive installation and sculpture intended to physically embody the tension between humans, robotic autonomous agents, and the virtual models which these agents rely on to understand the world.

A quadcopter was programed to fly autonomously in a motion capture lab while aggressively, defensively, and playfully tracking a human body within the space. The video documentation of this interaction has a performative, dance-like quality, but is unrehearsed and spontaneous because of the unpredictable nature of the drone's behavior. Interacting with the drone gave me a sense of cautious curiosity as our behavior ebbed and flowed between combat and cooperation.

A motion capture system and computer simulation recorded the drone's flight path and rendered it as a 3D form based on the drone's velocity and orientation during flight. As I evaded and lured the drone through the lab its virtual representation collided with the previous flight path which then sculpted the form in the direction of the flight. This feedback loop gave the sculpture a kind of memory and responsiveness which allowed for the complexity of our interaction to be faithfully embodied.

These physical and virtual forces created a two-way boundary crossing between the internal world-model of the drone, and its external physical surroundings. The resulting sculpture can be considered as the shadow of this boundary crossing, fueled by the complex exchange between a sentient human and a robotic proto-lifeform.

# Joseph DeLappe IN DRONES WE TRUST, 2014

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#### STATEMENT

A Crowd Sourced, Participatory Rubber Stamp Currency Intervention.

A participatory project inviting volunteers across the United States to rubber stamp a tiny image of an MQI Predator Drone on the back of their money. The idea came after closely examining U.S. currency - all but the \$1 dollar bill feature a pastoral depiction of a notable government building or monument on the back of the bills, albiet with lonely, empty skies. It seems appropriate, considering our current use of drones in foreign skies, to symbolically bring them home to fly over our most notable patriotic structures. I've created 100 of these laser etched and hand assembled rubber stamps which are currently being shared with volunteer participants throughout the United States and a few internationally.

I've invited participants in the project to each send me one image of a stamped bill, noting location and date where the bill was stamped and put back into circulation. The project has been created as part of my work as an Artist in Residence at Instructables.com/Autodesk Inc. Further images will be posted in the coming weeks.

Joseph DeLappe is a Professor of the Department of Art at the University of Nevada where he directs the Digital Media program. Working with electronic and new media since 1983, his work in online gaming performance, sculpture and electromechanical installation have been shown throughout the United States and abroad - including exhibitions and performances in Australia, the United Kingdom, China, Germany, Spain, Belgium, the Netherlands, Mexico, Sweden and Canada. He has lectured extensively regarding his work, including the Museum of Modern Art in New York City.





ART<sup>2</sup> **DRONE** 

www.abelardogfournier.org/projects/ sanguine-crowd-colorations www.abelardogfournier.org

#### STATEMENT

The use of colored water cannons against participants in a demonstration is an old police force technique increasingly widespread. Apart from dissolving the group, it aims to tag the individuals for subsequent identification. It is a primitive form of current digital tracking technologies, as the ones that have come to light parallel to the massive demonstrations of citizenship all around the world these last years.

The installation stems from this double nature of the digital: on the one hand, it helps collectivities to emerge; but on the other, it has an unusual power to track the individuals. Next to an image of a colored water cannon against groups of people, a vertical projection lightens an aerial photograph of a demonstration. Over it, a layer of fragments of colored petals cover the area occupied by the people in the picture. The projector, with the aid of a computer, maps the petals over the image and, while making them glow, fictionally introduces a surveillance-like moving shadow, a hovering elliptical drone-like presence as an ubiquituous scanning machine.

Artist and educator. His work is settled around the crossings between the abstraction of systems and the specificness of social and cultural objects. His projects are elaborated as platforms -installations, devices, tools, games and workshops- that mimic open laboratories where to erode, distort and transform standard production processes.

# NATHANIEL HARTMAN ASM FRAG:

www.nathanielhartman.com/projects/asmfrag/ www.nathanielhartman.com/



#### STATEMENT

3D printing technology allows me to explore object abstraction in a very intimate way. Objects, places, data, and moments all become fodder in 3-Dimensional software that can be remixed, reprinted, and experienced in a sculptural form. ASM\_frag creates a reanimated, 3D printed object from photographic documentation of a drone strike. A hellfire missile fragment was smuggled out of Pakistan, photographed, sent through the web, and became viral documentation of a very destructive and violent moment in time. The virtual lifecycle of the missile itself was completed by the person who took the photograph. Physical missile, to exploded fragment, to virtual fragment, to exploded physical form once more. The abstraction evokes a sense of a desolate landscape; craters feel vast and peaks like crumbling buildings. The structure had to be supported during the 3D print, layer by layer, which created, strings, webs, and imperfections straying from the original 3D model. The singular object for me creates a space for contemplation and reflection. It is not shiny and perfect like many other 3D prints, but delicate, messy, and violent. Year of Creation: 2014 Materials: PLA 3D Print

Nathaniel Hartman was born in Cleveland, Ohio in 1988. He received his MFA from The Ohio State University in 2012. His work has been shown internationally and nationally, notably at the Boston Cyber Arts Gallery, P.S. 142, the Seattle Center, MIXLab Gallery, Robert and Elaine Stein Galleries, and the Argo Film Festival in Volos, Greece. He has received numerous commissions and awards including a Seattle World's Fair art commission, NPR's best classical albums of 2013, and accolades in the New York Times, The Boston Globe, The New Yorker for his performances and albums. He lives and works in Columbus, Ohio.



JIM JEFFERS (FANTABIOGRAPHY) FLYOVER 16, 2014

www.Fantabiography.com http://fantabiography.com/flyover I 6 Logein@gmail.com



(Fantabiography) Flyover 16: World Map Without Crossing Pa



When thinking about a drone (UAV) as a stealthy killing machine, surveilling, targeting, and assaulting ground targets, I pondered the inverse, a peace drone—a fantasy drone surveilling and protecting locations on the earth. I picked 16 locations important to me to 'protect', either because I've been there or because I fantasize about going there. Mapping the locations with web-based applications, gathering the longitudinal and latitudinal coordinates, I starting creating relational timeline flowchart drawings digitally; connecting geographical locations time, action and thought. The pre-visual output from this project is manifest literally as Art to Drone; these are (mostly) navigable points. Formally, this project will be a website displaying the coordinates, and the images created from my personal unpacking of these 16 flyover points.

Jim Jeffers is an intermedia artist and designer working with computer mediation, web-art, performance, photography and video in conjunction with conventional media. Working with cultural material and material culture, He finds the meta-spiritual and psychoactive critically important as incredibly elusive in making art. Jim exhibits and performs his work both in the United States and internationally. Jeffers' performance work has been in public for over a decade, with his Superhero Actions (and other performance iterations), as well as, performing in numerous pieces by other artists. Since the early 21st century, Jim has maintained a presence in cyberspace with Fantabiography.com: a shifting blend of digital / computer art, artist portfolio, and truthful lies. He teaches Graphic Design and Digital Media at Indian River State College in Fort Pierce, Florida. Jim works in Port Saint Lucie, Florida where he lives with his amazing wife and son.



# **Richard Johnston** Weightless

hCps://vimeo.com/105189344 www.richiejohnstonline.com



#### STATEMENT

The weightless project was a big undertaking because it was my first music video and the song already had alot of hype around it. "Weightless" was created in collaboraAon with the briAsh insAtuAon of sound therapy and Mindlab UK. The track is scienAfically proven to reduce the listeners heart rate and help with stress. I was glad to be part of such a posiAve scienAfic experiment and to be creaAng a work of art that referenced the current drone boom the UK has recently seen. I chose to use a drone because its precise flight capabiliAes and ease of use made it very easy to choreograph a three dimensional "dance" for the drone to perform to the song. Once I had the shot I wanted I then used a technique called "Ame displacement" to map the flight paCern of the drone and make the choreography I used to make the video visible. It was alot of fun and it was great to be using a new piece of technology. I hope drones stay around for a long Ame because they are a great tool for creaAng art and gathering data for alot of posiAve reasons.

I am a videographer from the lake district and studied BA Hons Fine Art Photography at the university college Falmouth. Since graduaAng I have been working freelance on various projects including music videos, viral markeAng campaigns and promoAonal material. I use my drone alot for aerial photography / video and it was great to have the machine as a subject for this video. I constantly try to push my pracAce / art in new and exciAng direcAons.



# Music composition: Mária Júdová Tracking system: Andrej Boleslavský

http://mariajudova.net/works/composition-for-a-drone/ https://vimeo.com/96177923





#### STATEMENT

Short music piece composed for AR.Drone 2.0 Parrot Quadricopter. It consists of the sound synthesis generated by Drone's movement in the space as well as the sound of engines. When the tracker detects the drone flying in defined area it generates data, which is then interpreted using a pre-defined algorithm in an open source visual programming language Pure Data. In this way the Drone shapes and structures musical material and becomes an instrument. Drone is controlled via FreeFlight application running on iPad. Depth image from Kinect sensor is evaluated by a patch in vvvv which detects the drone's location in the space (more precisely its relative position inside the bounding-box). A vvvv is sending it to Pure Data, which are transmitting it to a music system. When a quadcopter flies into the defined area it generates musical pattern sequences based upon a predefined algorithm. In this way the drone takes control over the sound synthesis.

Mária is a cross-disciplinary artist from Slovakia. She received a Bachelor's of Digital Media at Academy of Arts.. She is currently doing a Master at FAMU Center for Audiovisual studies in Prague, researching on a dance-tech and technologically informed dance practices, more precisely on the use of bio-sensors in the field of contemporary dance.

Andrej is an independent artist purposing technology in the fields of new media art, interactive design, physical computing and 3D printing. His work also maintains a strong fascination with the entanglement of nature and technology. He has developed many interactive installations and lectured on open source softwares, programming platforms.

**R. LEE MONTGOMERY** (with Sheldon Bess, Kevin Bott, and Ryan Davis) *CONSTELLATIONS OF THE CITY* 

http://www.lee-web.net/droneart/cotc/ Artist website: http://www.lee-web.net



#### **STATEMENT**

*Constellations of the City* is the final embodiment of a series of drone based experiments with abstract line drawing, data visualizations and mapping. It started with experiments between Collaborative Art Program(ICAP) class at the University of New Mexico and visiting artist Denis Kolokol. Initially we experimented with trying to use a Parrot AR drone to draw shapes related to data obtained from the Very Large Array in Socorro, NM. After being invited to participate in a show at 516 Arts "Heart of the City" I worked on drawing data based forms related to more terrestrial maps. After identifying points on the map of downtown that contained transitional spaces, we connected the dots on the map using the shortest distance between each point in order from top to bottom. The resulting abstracted form became the flight path for our drone. After numerous trials, and many gorgeous failures, we eventually managed to draw the form in the air with the long abandoned Albuquerque Railyards as a backdrop. There is also an image a in collaboration with students in Leah Modigliani and David Demplewolf's Tyler School of Art at Temple University classes. The Tyler photograph is an attempt to apply this methodology to images created using maps of other cities as their source.

Lee Montgomery is an Assistant Professor of Electronic Art in the Department of Art and Art History at the University of New Mexico where he has served as the Director of the International Collaborative Arts Program which he established in 2011.





# Ian Paul and Ricardo Dominguez CRASH INCCIDENT

http://www.ianalanpaul.com/drone-crash-incdent-2012 www.ianalanpaul.com and http://bang.transreal.org//



#### STATEMENT

In December of 2012, the artists Ricardo Dominguez, Ian Alan Paul and Jane Stevens performed as researchers and consultants for the fictional UC Center for Drone Policy and Ethics and simulated a "Drone Crash Incident" on the UC San Diego campus. The drone crash, as a form of critical fiction or disturbance theater, was enacted over the course of one week through the distribution of press releases, documents, photographs, and other forms of 'evidence' which were subsequently published in various media in and around San Diego. The simulation culminated in a public town hall to discuss the simulated drone crash with students, faculty and various members of the public. The stated mission of the UC Center for Drone Policy and Ethics was articulated in press materials as:

"The UC Center for Drone Policy and Ethics (UCDPE) is a new research institution founded by the UC Office of the President (UCOP) to explore the emerging implications of drone research, use and production within the UC system. Bringing together a group of interdisciplinary scholars and researchers from across the UC campuses, the center is involved in several collaborative research projects involving students, faculty and policymakers at the cutting edge of Unmanned Aerial Systems studies."

Before the town hall, University of California officials disavowed the occurrence of any drone crash and denied the existence of the UC Center for Drone Policy and Ethics. At the town hall event, Ricardo Dominguez and Ian Alan Paul presented records of the crash and discussed various theoretical and political concepts related to drones, as well as discussed the research and production of military drones in San Diego and on UCSD's campus. Jane Stevens then gave a presentation.

# SIMON REMISZEWSKI DRONE CONDITIONING

www.droneconditioning.com



#### STATEMENT

Over the past few years, it has become ever-more apparent that the interest in a global integration of drones is picking up speed. Unfortunately, the surveillance and destruction invoked by contemporary drone use in Pakistan and Yemen has left individuals with a perpetual fear of the drone itself - the never-ceasing buzzing of a U.S. drone a constant reminder of such horrific events that could arrive at literally any moment.

Will you be prepared when the drones make it to your home?

It's scientifically proven that sound conditioning works. By introducing you and your loved ones to the sound of the drone long before they're hovering above your neighborhood, you can preemptively eliminate such stress and anxiety! Please use this drone sound generator to prepare yourself for an imminent future. Leave it playing while you cook a delicious dinner, spend time with your children, go for a walk in the park - build your own positive associations!

By the time the drones arrive, you'll hardly even notice the difference.





# KATHLEEN ROGERS Dronies

http://www.celesteprize.com/portfolios/idu:64025/idn:6627/

#### STATEMENT

The selfie is a widespread phenomenon of recent times that in and of itself carries many social meanings related to identity, egotism, celebrity status, privacy and more. Now combine the drone and the selfie. The drone frees the selfie to go beyond arm's length. It can take in the landscape, and the person can become small. Images from way up high shrink the drone operator into a small figure with no clear identity. But there still are closer images, even close up's. Most of the figures in these images appear anxious. They are leaning to and fro. Their eyes are not directed at the lens. These are not the smiling conventional faces of selfies. They are people aware of the oddity and possible hostility to their drones. As a result, some strike combative poses. Others are tentative. Drones can spy and be weapons, and the images capture the anxiety of the potential accused. On the other hand, the children are unaware and therefore carefree, more like the only subjects in most of the images are the drone operators. They are alone and chose that setting, almost always secluded. But the images were posted on and taken from youtube. You don't want to laugh at the subjects because they look vulnerable. The premise on youtube is that these are their firsts "dronies". So add the additional anxiety of first time images. We are left with mostly images expressing society's anxiety about drones in the faces of proponents of drones.

Kathleen Rogers is a digital artist and photographer in the metropolitan NYC area. Kathleen uses internet media and cameras to create groups of images both as art and social commentary.

# Carlos Rosas

http://dodo.emitto.net http://rosasstudio.com http://carlosrosas.cl



#### STATEMENT

Project DODO: Mission: Revelry Revealed The Drone Operated Discotéque Offensive Objectives: Seek, Engage and Activate.

In the Revelry Revealed initiative (2014 -Current), the DODO drone teams have sought to identify, confront and (if necessary) instigate acts of revelry in public and private sectors. Using a range of overt and covert operational strategies (usually more overt than not) the field research teams have been able to uncover arange of coordinated and spontaneous acts of celebratory exuberance with the help of our "dangling mirrored ball of delight" a concept (not so) loosely borrowed from the deep sea Anglerfish. While these documents should probably remain classified-we think not. Initial DODO research files, field notes, images and running archives will become Declassified Documents and open to the public on November 28th, 2014. Stay Tuned.

"I got to go where the people dance I want some action, I want to live, action, I got so much to give I want to give it, I want to get some too Oh I, I love the night life I got to boogie on the disco 'round, oh yeah Oh, I love the night life I got to boogie on the disco 'round, oh yeah" -Alicia Bridges (I Love The Night Life) Have a Quadcopter? Like to Disco? Submit your best

Have a Quadcopter? Like to Disco? Submit your best images. Free The Drones and the People Team DODO(birds)



# Nicholas Sagan For the Love of..

www.nicholassagan.com/interdisciplinary/installation-and-performance/for-the-love-of/ www.nicholassagan.com/

ART<sup>2</sup> **DRONE** 

#### STATEMENT

In 2012-13 I was awarded a HATCH Projects residency at the Chicago Artists Coalition and I made it a goal to generate new work. Not just explorations of familiar topics but the complete investment in a totally new line of inquiry. In particular I had been interested in the public conversation of UAV, or drone, warfare. As complex a topic as it is, I chose to address certain aspects: general perception as well as what it means for surveillance tactics and technology, a portending of a particular existential state, or even as an extension of my hobby practice of scale modeling.

The phenomenon of the air show also holds my interest for a number of reasons, paralleling the UAV explorations. As these technologies develop, so does the conversation surrounding these tools. This is a paradox: how can something exist both as a tool to propagate the theater of war and as a function of cultural/global relevancy in a rapidly expanding technological ecosystem? With the case of *For the Love of...* — an installation composed of hundreds of various scales of MQ-9 Reaper UAVs (or drones) and awireless surveillance and projection system — I was curious about the nature of public awareness of these issues. Another aspect of developing these ideas was to gauge viewers' response to the rise of these systems of surveillance. At first entering the installation space, the view might notice the swarms of drones and think back to boyhood bedrooms with model airplanes hanging about. But as they wander further in they might notice a pattern to the swarm; that the viewer is being herded. The climax, so to speak, of the experience is the realization that they are being watched, though the ubiquity of the UAV's prevents a pinpointing of source of surveillance.

LILE STEVENS Flight Simulator

https://vimeo.com/110584854 https://vimeo.com/lilestephens



#### STATEMENT

In *Flight Simulator*, I used the flight simulator tool in Google Earth to 'perform' a series of flights over representative areas of Pakistan, Yemen, and Somalia where drone strikes have been confirmed. I wanted to 'visit' some of these locations in an attempt to view the landscape through the eyes of a drone pilot. It was through this process that I was allowed to indulge in the meditative quality of flight itself, although I felt that the video element required a physical inhabitant. I chose the bald eagle for this form, incorporating a periodically flashing LED circuit to evoke the running lights of modern aircraft. Both the eagle and the enclosure were laser-cut from acrylic. The result is a sculptural object that prompts the viewer to reconcile the beauty and relative silence of a bird in flight with the potential perversion of nature through the use of technology.

Our computer software is modeled on human thought - if not the actual mechanics of consciousness then at least in the way that we have historically recorded, indexed, and utilized information. In this project, I am considering the ability to process the aggregate data of thousands of video game participants in near real-time in order to power the decision-making process of evolving automated systems, of which the 'brain' of an Unmanned Aerial Vehicle may be only one of many applications. The current iteration of CAPTCHA, the distorted letters one is required to translate in order to prove one is human, is used to digitize unrecognizable words from scanned books that our software is not yet sophisticated enough to understand. What if a similar method could be used, unbeknownst to the average user, as military strategy?



# Scott Patrick Wiener

ART<sup>2</sup> **DRONE** 

Landscape Acquisition

http://scottpatrickwiener.com/ section/398431\_Landscape\_Acquisition\_2012\_Present.htmlwww. scottpatrickwiener.com

#### STATEMENT

The ongoing project *Landscape Acquisition* (2012–) is a multidisciplinary exercise in the collision between familiar vocabularies of airborne surveillance and the Western aesthetic history of beauty in nature. Several approaches are necessary to address these contradictory subject matters, which include video footage shot via cameras mounted to a scale model RC (radio-controlled) drone, appropriated and rephotographed stills of actual surveillance missions, and newly constructed archive images used to reorient those histories, to name a few. These are playful processes that work to filter and distill the technological image into its essentially discernable condition as an abstract object, one that is loosely attached to its referent and purified of its responsibility to depict concrete realities.

Through a series of substitutions and organizations, I interrogate these image histories to create a lopsidedness that points directly to the intrinsic connections between them. One is planted on the side of violence, caused by the ever-present sensation of being watched from above without notice. The other stands with the age-old conception of beauty in nature, inherited from painting, carried through to its conclusion by technological imagery, and expressed through the kitsch languages of computer desktops, postcards, calendars, and the like. The seeming incompatibility of this binary addresses cultural dependence on certain image types to express specific conditions of experience. It is here that the possibility of connecting paradoxical image languages might emerge as the very nature of banality.

# Jeff Will and Liz Wuerffel

My Drone Brings People Together

www.mydronebringspeopletogether.com/ www.valpo.edu/engineering/faculty/will. php http://turnscrew.tumblr.com/



#### STATEMENT

*My Drone Brings People Together* (2010-) presents interdisciplinary, community-driven, aerial photography and video using custom-made unmanned aerial vehicles and commercial quadcopters. Drones are often seen as tools for military force and surveillance. Our project shifts this paradigm; we use drone technology to engage and serve the public through community-university partnerships, from documenting county fairs, festivals, and parades, to surveying ecological initiatives and construction sites, to Pollocklike painting. This art effort has also bridged disciplinary silos, drawing together artists and engineers through artistic application of highly technical devices.



### Folks who made this project possible:

V1B3	Folks who think and write about new media projects
Michelle Graves	Meredith Hoy
Mat Rapapport	George Monteleone
Gail Rubini	
Conrad Gleber	Abigail Susik
Chris Manzione	

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